INCLUSIVE CITIES AND REGIONS
TERRITOIRES INCLUSIFS

14° Biennale of European Towns and Town Planners, Naples

Edited by
Marichela Sepe

#Parallel Workshop

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Foreword
Inclusive Places and People

*Marichela Sepe**

The Biennial of European Towns and Town Planners is an event of the European Council of Urban Planners ECTP-CEU which aims at discussing the main issues in the European debate relating to urban planning by sharing them with urban planners, architects, engineers, economists, sociologists, historians of architecture, citizens, politicians, private and non-governmental organizations (NGOs).

Since the first edition in 1995, problems have been debated at the Biennials, experiences have been exhibited and alternative solutions have been proposed.

The theme chosen for the 14° Edition, organized from 22 to 24 April 2024 in Naples with the INU as the main organizer, is Inclusive Cities and Regions/ Territoires inclusifs. Inclusion is understood in its multiple declinations that define the 10 general themes of this Biennial - Regional issues and regional disparity, Metropolitan or city proposals, Urban regeneration and Public Spaces, Migration and cultural inclusion, Cultural heritage, Resilience and adaptation, New economic approaches, IT and the use of artificial intelligence in planning, Ports, airports and other infrastructures, Underground space – and in additional ones proposed by the participants who further specify the general themes namely About Spatial Inclusivity, Urban regeneration and spatial justice with Nature-Based Solution, Inclusive public spaces for water cities facing climate change, Italian UNESCO Chairs vision and actions, A Transdisciplinary Approach to Placemaking and Inclusivity: COST Action Dynamics of Placemaking, Inclusive city Ecosystems, Youthbanism for a New Generation of Urbanists, Fragile geographies. Visions, projects and studies to mitigate and adapt to environmental and anthropogenic risk, Green Oasis for the 15 minutes city model, Making/unmaking urban circular economies with 'otherness', Public space for inclusive cities: the Biennial of Public Space, Universal accessibility and university education, the knowledge network, Findings and Evidences from the PNRR project RETURN, and River Contracts as voluntary and negotiated planning tools.

The works presented by administrators, professionals, academics and researchers who responded to the call concern projects, policies and research that have international interest and, at the same time, attention to the local, all at different scales.

It is possible, from this vastness of topics, to understand the broad discussion that resulted, outlining new interested subjects and involved actors, as well as new possible intersections of themes.

The theme of inclusion is in fact recalled in all the United Nation 17 Sustainable Goals, as well as in the principles of the New Urban Agenda adopted in 2016 during the III Un-Habitat Conference in Quito to underline the need for a holistic vision of this concept.

Among these, the principle 37. "We commit ourselves to promoting safe, inclusive, accessible, green and quality public spaces, including streets, sidewalks and cycling lanes, squares, waterfront areas, gardens and parks, that are multifunctional areas for social interaction and inclusion, human health and well-being, economic exchange and cultural expression and dialogue among a wide diversity of people and cultures, and that are designed and managed to ensure human development and build peaceful, inclusive and participatory societies, as well as to promote living together, connectivity and social inclusion"; and the principle 40. "We commit ourselves to embracing diversity in cities and human settlements, to strengthening social cohesion, intercultural dialogue and understanding, tolerance, mutual respect, gender equality, innovation, entrepreneurship, inclusion, identity and safety, and the dignity of all people, as well as to fostering liveability and a vibrant urban economy. We also commit ourselves to taking steps to ensure that our local institutions promote pluralism and peaceful coexistence within increasingly heterogeneous and multicultural societies".

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In this sense, inclusion must be understood as a set of actions aimed not only at ensuring that each place and/or person is considered adequately within societies and territories, but also at modifying any prejudices that could - in some way - discriminate against places and /or people compared to others. Accordingly, the actions - in their broadest sense - must be both material and immaterial; any policy, if is not accompanied by a participation process within all the involved - even potentially - subjects will not have lasting effects over time.

Accessibility and the elimination of architectural barriers, for example, will be able to guarantee that people with disabilities can enter in a place but not that they wholly feel comfortable and accepted in it if, for example, in addition to being able to access that space, no recreational activities are available, that they can access and make them all feel truly included.

Likewise, urban planning projects aimed at making geographically internal places more inclusive in terms of physical connections will not be able to have the expected results if this is not preceded by actions aimed at creating a greater attachment of people to those places in terms of memory and proximity. traditions.

And this attitude will also have to refer to physical infrastructures and - even more - to the more innovative virtual ones - such as the artificial intelligence - which will increasingly have to support people with different abilities in an equity perspective.

Finally, I return to those who consult this catalogue the wealth of contents expressed in the 14th edition of the Biennale to use, share, and rework them, each for their own interests.

Introductions
The policies of inclusion and the advocacy of urban civilization

*Michele Talia**

The European city has been a great incubator of human history for many centuries. It is still the driving center of economic, social and cultural development, but after playing a fundamental role in socialization, it now seems to have lost its ability to foster aggregation and social inclusion.
This withdrawal from exercising a fundamental role in developing the capacity to adapt to social change and the new challenges of contemporary society occurs paradoxically at the very time when the urban condition tends to constitute the dominant character of our continent. In the European Union, more than two-thirds of the population now lives in urban areas, and this corresponds to a concentration of 85 percent of GDP and about 80 percent of energy consumption.

Since social networks have a significant impact on the formation of the identity of local communities, the crisis of integration and social inclusion processes risks translating at the same time into a profound alteration of identity processes.

As social networks have a significant impact on individual and collective identity, the crisis of social integration and inclusion processes is likely to simultaneously result in a profound alteration of self-representation patterns.

The main crisis spots are caused by the deterioration of relations between the urban center and the periphery, where there is growing social polarization, driven by de-industrialization and increasingly extensive globalization processes. Here we are witnessing the emptying of entire urban suburbs of productive activities and urban provisions that could have played an essential role in fostering improved urban quality and greater social cohesion.

The main crisis spots are caused by the de terioration of relations between urban center and periphery, where there is growing social polarization, driven by de-industrialization and increasingly extensive globalization processes.

In particular, we are witnessing the desertification of entire urban districts, whose productive activities and urbanistic endowments could have played an essential role in fostering improved urban quality and increased social cohesion.

Among the dynamics between the center and the suburbs that the post-industrial crisis has accelerated is a growing impetus to "gentrification," namely the "colonization" of degraded urban areas by economically affluent individuals or households. The cost of such processes is the expulsion of residents, the geometric increase in property values, and the radical change in its social composition.

Therefore, globalization is creating a new emerging class of managers, politicians, scientists, artists, entertainment and sports people who represent a cosmopolitan bourgeoisie that moves easily and marks global cities with its presence. At the same time, it is still cities that absorb most of the impact of emigration from the global South.

Spatial mobility thus concerns the extremes of social classes: on the one hand, the globalized bourgeoisie, on the other hand, people fleeing poverty and wars and settling in the old, pre-existing urban fabric, often affected by deindustrialization and loss of social cohesion.

Although it has happened that public policies have attempted to counter the processes of marginalization, not only the current polarization of economic welfare, but also a crisis in the welfare system that appears beyond repair and a European Union increasingly alarmed by the entry of massive flows of migrants cause us to look with concern at the future of the city on our continent.

* President of the National Institute of Town Planning

For all these reasons, the main topics proposed for discussion by 14th Biennial of European Cities and Town Planners urge us to imagine a different tomorrow, in which the widespread tendency towards the regeneration of the public city can contribute to a paradigm shift, capable of guaranteeing social integration and putting the best energies of society back into motion. To get out of the crisis, we need to change the idea of the city, reconstructing the public city and urban welfare, and identifying some possible paths that could be adopted to make urban society more fair and cohesive.

Starting from an initial consideration of the values and meanings to underpin the redevelopment and regeneration strategies, the policy framework can be articulated to encompass the main welfare measures experienced in Europe today:
a) pursuit of the fundamental objectives of safety and urban well-being;
b) containment of land consumption;
c) implementation of actions to combat climate change;
d) enhancement of sustainable mobility;
e) improvement of the conditions of accessibility to the public city;
f) development of policies aimed at fostering social inclusion;
g) involvement of residents in the identification of urban policy targets and in decision-making processes.

In welcoming the participants to the Biennial in Naples, I believe it is appropriate to underline the importance of a comparison and exchange of good practices that can be valuable not only to promote the sharing of knowledge and experiences, but also to lay the foundations of new European partnerships and policies aimed at strengthening social inclusion and living with immigration.

Inclusion dilemmas

*Francesco Domenico Moccia**

Inclusion topic is a central aim of European Union and its member state territorial policy and, in the meantime, one of the more controverse concept because it lies in a conflicting arena of opposite economic political theory. Neoliberals consider inclusion as a by-product of growth reached with the so-called spill down effect. Only if a country increases wealth, can provide to the wellness of all its citizens and reduce economic and social exclusion and include stigmatized spaces where they live. Criticism on this process highlight polarization effects of economic development. An ESPON study in 2007 explains the lack of correlation between polycentrism and growth in Europe with the privilege of central European regions (blue banana) and monocentric capital metropoles in capturing globalization benefits. So, in contrast with market rationality, welfare state should take responsibility in caring of reclused people and space. In Italy, the passage from the large coalition of Draghi to the Meloni right wing governments follows this oscillation of focus on support to low-income families (citizen income) in contrast with deregulation for firms, targeted to GDP increase.

All statements about sustainable development – politic is full of oxymorons – requests equilibrium among social, economic, and environmental field. However, planners knows that real programs hardly can pursue that equilibrium: on the contrary, may generate conflicts, sometimes as unexpected effect. Fiscal incentives to homeowners to better energetic and ecological house performances eventually privileged the wealthier families increasing exclusion. Similarly, regeneration of neighbourhoods driven by private developers where real estate value increase may assure a resilient and sustainable space just to affluent families, raising divide and reach in the city space. Competitive mode of financial resources allocation met some criticism on the bases of privilege of the stronger public and private applicants in winning the grants. Poor people as well as small municipalities lacking technical expertise and personnel are disadvantaged while the much needed of help. So, while competition give more probability in the efficient improvement of interventions, it feeds the better and let lagging the worst places. To favour the last a planning mode is preferred so that territorial disequilibrium is analysed and, with a combined process bottom-up and top-down, strategies are elaborated helping local resources to emerge with the guidance of professionals, technical assistance of upper tears government organizations. An exemplar of this methodology is the National Strategy of Inner Areas. An apparent paradox of inclusion policy is the place-based approach because it theorizes that inclusion is obtained through development of differences. Its acceptance means a conception of inclusion made of differences, linked by complementarity and cooperation instead of uniformity. While the economic reason of integrated territorial development is based on differences of local resource like territorial capital, knowledge, and assets to develop with tailored solutions in different types of territories, the result is competitiveness for places, a long-term and unique function in the urban and regional network.

Territorial Agenda 2030 advocate for two territorial priorities for Europa: just and green. Two conflicting ends are at work: European territory is pushed to ecological and digital transition, now in a more felt global competition, on one end, and to spatial cohesion, on the other, trying to conceal two opposites. Weakness of cohesion policy is evident in the increasing opposition to European Commission directives, linked to populism politic spread in European counties, and culminating in Brexit. A growing number of studies are analysing personal and contextual factors related to this criticism and mapping a geography of discontent. In places that have been left behind, where there is a long-term economic and industrial decline, brain drain, either the more developed or often dynamic large cities or simply the least developed regions, anti-EU voting is on the rise. It seems that the more recent exclusion harder it is felt, also behind classical dualisms centre/periphery, rural/city, metropolis/town. This research speaks about difficulties of building a European polity because that is at stake in complex dynamics of entrance and

* INU general secretary fdmoccia@gmail.com

exit, acceptance, and refusal of the Union as expression of approval or disapproval of its policy: territorial policy included. Inclusion comes from the Latin *includere* composed of *in-* inside and *claudere* close, and planners are authorized to extend the some meaning to space where segregated neighbourhoods and put-apart territories suffering exclusion. Although a strategic objective for nowadays Europe Union, inclusion is not a final achievement, rather a starting point. Pulling inside an open society builder of millenary complex city and regions cannot avoid conflict calling for a planner's main action of problem solver and dialogue facilitator. This task made more difficult by redundancy of communication of our time where – says Habermas – even identification of public deliberative issues object of civil society sphere conversation is at stake and rational discourse for comprehension among diversities is hard. It implies that one time we are gathered we should comprehend each other.

From Migration & Inclusion to Inclusive cities and Regions

*Giuseppe De Luca**

Inclusive cities and regions are the keywords around which the *14th Biennale of European Towns and Town Planners revolves,* organised by the *European Council of Spatial Planners-Conseil Européen des Urbanistes* (ETCP-CEU), with *Istituto Nazionale di Urbanistica* (INU), as the main co-organiser, and along with *Associazione Nazionale degli Urbanisti Italiani* (ASSURB).
The discussion about Inclusion as the theme for the Biennale started several years ago in the ECTP-CEU Working Groups. It was proposed in the introductory report of 6th November 2018. Since then, the proposal has been progressively improved, with a time schedule that needed to be updated several times. The debate was linked on the one hand to migrations generated by difficult geopolitical and economic conditions, and on the other to the effects of extreme climate events and the outcomes that these were beginning to manifest on European territory, also in terms of public awareness and political perception. The Covid-19 pandemic directs the debate around the fragile conditions of cities and territories, leading to the *Re-Start Europe Manifesto Declaration* (in 2020) for an inclusive and just post-covid future for all communities. Important document, organised into 24 points, the most important of which is No. 6, titled as follows: "The shared long-term European goal for more inclusive, just and sustainable development has been put at risk".

However, the time to implement this was short, very short. Just in February 2022, this discussion crossed paths with the brutal aggression of the Russian armed forces against Ukraine. A large European country is being exposed in nearly every region to a situation that was absent from the European continent since the end of the second world war. The scenario changes significantly and with it a new vision based on inclusiveness begins to take shape in the main places of contemporaneity: cities and regions.

The change in perspective is important, because it moves from the study of a phenomenon to the study of the space within which it takes shape. It is related to the role that cities and regions, and thus their instruments of government but also forms of governance, can play in responding to the new contemporaneity.

Cities play a crucial role in the organisation of human society, providing opportunities for work, education, entertainment and cultural exchange. They are centres of innovation, creativity and economic development, but can also face challenges such as pollution, traffic congestion, limited access to housing and resources, as well as social inequalities. The regions also play a role, not in the sense of institutional areas, but rather in the sense of large areas. While cities tend to focus on urban life and the management of challenges specific to urban areas, regions have a broader and more integrated perspective that includes both urban and rural areas within their territory. Both play crucial roles in people's lives and the organisation of society, albeit in slightly different ways.

Inclusivity has been divided into ten sub-themes, yet, from reading the contributions received, the keywords that intersect them all are, in my view, seven and are held together by a single practical approach: that of cooperative governance.

Diversity and Respect: Inclusive cities celebrate diversity and recognize the value of different cultures, languages, and perspectives. They promote respect and understanding among residents, fostering a sense of belonging for all.

Equitable Access: prioritise equal access to essential services such as healthcare, education, transportation, housing, and employment. They work to eliminate barriers that prevent marginalised groups from fully participating in society.

Social Inclusion: promote social inclusion by addressing issues of discrimination, poverty, and inequality. They implement policies and programmes that empower marginalised communities and promote social justice.

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Accessibility: ensure that public spaces, buildings, transportation systems, and information are accessible to people of all ages and abilities, including those with disabilities.

Community Engagement: for actively engage residents in decision-making processes and encourage participation from diverse voices. They foster a sense of community ownership and collaboration in shaping the city's future.

Affordability: address affordability challenges by implementing policies to ensure that housing, transportation, and other essential services are affordable for residents of all income levels.

Safety and Well-being: prioritise the safety and well-being of all residents, working to create environments where everyone feels secure and protected from violence, discrimination, and other forms of harm.

Overall, inclusive cities and regions recognise that diversity is a strength and are committed to building communities where everyone has the opportunity to thrive and contribute to the collective prosperity. Co-operative governance consists of the mechanisms, processes, and structures through which decisions are made and resources are allocated in cities, metropolitan areas, and broader regions. It involves the coordination of various actors, including government agencies, local authorities, community organizations, businesses, and residents, to address the challenges and opportunities facing urban and regional areas.

This is the main result that emerges from the studies and research presented in this Biennale.

Keynote speeches
Inclusivity in an adaptive planning system

*Janet Askew**

The power of the citizen is confronting all planners across Europe. Inclusivity is a critical concern of spatial planners, and in the UK, public participation in policy and decision-making has been enshrined in law since 1968. Planners, aided by communities and civil society, have been experimenting with how best to achieve inclusive physical, social, and economic environments for all parts of society. In 2024, we have a better understanding of inclusivity.

Has the adaptive, indicative planning system of the UK hindered or helped with the ambitions to involve citizens in decision-making? Does this system allow for a more inclusive society? What has changed? How has it evolved since 1968?

Many communities found a voice in the 1960s, when protests were happening all over Europe. In the UK, people were calling for higher levels of involvement in the planning of their areas. In the 1970s, there were reversals of policies which aimed to demolish communities and their homes. In London, a famous community protest against the demolition of the historic Covent Garden won the battle to retain and regenerate the old market and Opera House, now one of the most successful tourist honeypots.

The early days concentrated on community and individual involvement in meetings, small focus groups, role play, leaflets and advertisements seeking comments on planning applications and policies. There were some exemplary community projects where local people put forward their ideas for a neighbourhood, and radical planners who invented different ways of engaging the public. How to do this has dominated the literature for many years, and UK practice has ranged from radical ideas of citizen control to mere symbolic reassurance or meaningless consultation. It is recognised that methods of consultation and participation do not necessarily reach so called 'hard to reach' groups, people who would not normally get involved in local or national planning issues. Who contributes? Who has the loudest voice? Who hears? Who listens? What changes?

* ECTP-CEU Past-President

Planners have engaged with these issues for over 50 years, and in that time, citizen involvement has evolved. It is arguably more participatory now than before, partly because the UK adaptive planning system makes room for a more inclusive approach.

The planning system of the UK requires public involvement at every stage, depending heavily on negotiation through all stages. In policy-making, there is a hierarchy of plans from national to local to neighbourhood, and at each level there are time limits on inviting public and stakeholder comment – objection or support. The main arena for large-scale public participation is the local plan - the statutory development plan, to which land holders, developers, civil groups, public bodies, utilities, and the public contribute. Neighbourhood planning directly involves communities who participate in the allocation of land in their district, but it must conform with higher plans. There is considerable interest and participation when permission is sought to develop or change the use of land or buildings, and it is in this stage that the public and other stakeholders can have real influence. There is usually extensive negotiation over the details of design plus any value capture payments.

The adaptive system is inclusive because decision-making on how to use the land or building is discretionary – the final decision being made only at the point of granting planning permission for a development. There are no rigid, legally binding plans, nor is the permission granted in perpetuity – it only lasts for 5 years - after which it lapses.

In the 21st century, methods of involving stakeholders have been honed. There is a widening recognition that stakeholders in planning involve many different interests with unique characteristics, which planners need to accommodate. Diversity and inclusivity are higher on the agenda, targeted at certain hard-to-reach groups. Civil society, especially environmental groups are amongst the loudest, along with other interest groups who lobby hard for their interests, including developers, who nevertheless, accept that public consultation is embedded in the system.

Women have long argued for the city to be more suited to their needs. Glasgow has just voted to become the first feminist city, concentrating on public spaces, safety, lighting, public toilets, access. Disability is recognised as a necessity for planning differently. Belfast has a disability strategy for the city. How do we plan for the aged? Age-friendly places demonstrate adaptation for older people. In Taiwan, whole towns are designated as age-friendly. The RTPI publishes guidance on dementia-friendly environments, along with recognition of people with neurological conditions, such as autism, showing how the city needs to cater for their complex needs. The United Nations campaigns for better environments for children. Cardiff has recently become the first UK city to be a UNICEF child-friendly city. LGBQT groups seek their own spaces, and symbolic road crossings are seen in cities as far apart as Vancouver in Canada and Derry in Northern Ireland.

In conclusion, the indicative or adaptive system of the UK offers more opportunities to be inclusive than more rigid imperative systems might do. Planning in the UK, known for its discretion and negotiation at every stage of policy and decision-making, has significantly adapted its approach towards a more inclusive approach in the 21st century.

ECTP-CEU's vision on inclusive cities and regions – territoires inclusifs

*Markus Hedorfer**

Before entering more properly into the theme of this year's Biennale's and how it was conceived and brought forward by our organisation, I would like to spend a few words about the organisation itself.

The European Council of Spatial Planners — ECTP-CEU, in French Conseil européen des urbanistes — is an umbrella organisation that brings together the professional planners' associations and institutes in Europe. Currently, we have managed to recruit members from about 30 countries. It has been founded in 1985 as the successor organisation of the town planners' liaison committee at the European Communities. Later it has opened its door to all 46 countries of the Council of Europe.

Our goal is to promote spatial planning as a distinct profession. For many years, this profession has been encroached upon by other specialists convinced of their competence in this field. The truth is that approaching spatial planning scientifically makes it a separate profession. Moreover it must become a *robust* profession, where 'robust' means that it is clearly identifiable, clearly recognised by society and with clearly defined competences. Therefore, it must have, at least in Europe, a continent-wide common, full-grade initial education framework with common academic and professional titles, cross-border recognition and a common CPD framework for continuous professional development.

Being a member of such an association as ours has the advantage of being able to share ideas and knowledge about our mistakes and learn from each other. To achieve this, we promote a professional approach to spatial planning. Part of this involves fostering mutual understanding among urban planners from different European countries. Despite the strong differences between planning systems in Europe, our workshops and conferences have shown very well how similar the problems are that our colleagues must tackle every day in their professional work. Also, the solutions that our professional knowledge and expertise suggest are very similar in all our countries. Translation from these possible solutions into planning regulations and norms, which are at the centre of many national and regional planning systems, is a challenge we are facing in ECTP-CEU's formal and informal meetings. Another important aspect in our association's work is communicating to other people, such as decision-makers, stakeholders, citizens and, at the highest level, lawmakers, the importance of a correct approach to spatial planning, with professionally skilled colleagues and interdisciplinary planning process teams. We are making slow progress and hope for more successes in this aspect in the near future. We also believe that young students and young professionals are an important part needed to achieve this goal. So in our vision, we want young planners to collaborate with the European Council of Spatial Planners. An opportunity to do this is through our annual Young Planners' Workshop where students, junior and senior planners can meet and exchange their opinions and experience.

The ECTP-CEU and its members are actively getting involved in these issues. We have published case studies of good practice for post-Covid recovery. Exchanging ideas and comparing good and bad practice within an umbrella non-governmental organisation offers security to countries who are facing challenging situations — politically and environmentally. Planners in Ukraine are talking to other European countries, including the ECTP-CEU, about the post-war re-construction of their country, and these links will surely be of benefit. Conferences held by ECTP-CEU offer support to members on issues as diverse as social justice, migration, climate justice, marine spatial planning, and planning for those areas on the edge of Europe. In 2022, young planners addressed how to regenerate the mass housing neighbourhoods of our recent past. In 2023, the first conference was held about small island planning, based in Malta where the issues of migration, density, over-development, heritage were high on the agenda; and in complete contrast, our second conference for members and young planners was in Gdańsk, the theme being 'transforming cities'.

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Inclusion, inclusivity or inclusiveness is present in all these considerations. I think it is correct to say that the European and global planners' professional community is dealing with these aspects for many years now, and that, like in other aspects, decision-makers and lawmakers discover them much later than we do despite our efforts. Recently, we have tried to define — without any claim to completeness — six different kinds of inclusion.

Social inclusion, which is probably the most commonly perceived idea of inclusion, i.e., an inclusive process which involves all members of society in decision-making, regardless of race, social standing, age, ability, gender etc. at all levels of governance and for this to be incorporated into the laws and policies at the ap-propriate scale).

Spatial inclusion at different levels — neighbourhood, urban, metropolitan, regional, in which places are planned and designed to include everyone, to allow equal access to city spaces, public open space, housing, transport, affordable health, amenities and infrastructure.

Migratory inclusion to welcome and/or settle short-term, long-term or permanent new citizens, and to investigate case studies in which migrants have been successfully incorporated into the society that they join.

Cultural inclusion — planning for different ethnic communities and ensuring that the identity and heritage of a place is con-served with sensitivity.

Economic inclusion – planning for employment and commercial developments which reflect the changing economic landscape and the very different nature of work in the 21st century. How can planners ensure that all workers of whatever occupation have equal access to good working conditions, including the location of industry?

Finally, Inclusion to overcome conflict situations, such as natural vs. human landscape, heritage vs. contemporaneity, risk vs. resilience, linearity vs. circularity, permanent vs. temporary residents, port/airport vs. city/region.

Regulatory Inclusiveness and Territorial equipment

*Carolina Giaimo**

In Italy, the construction of a social welfare-system based not on the resolution of emergencies but on promoting people's wellbeing and skills as an engine of development and employment and a factor of social inclusion, has distant roots, dating back to the end of the 19th century. However, these notes make specific reference to the recent phase, following the turn of the 2000s.

About welfare and Essential Levels of Services

Among the innovative contents envisaged by the reform of the Italian Constitution in 2001, there are the Essential Levels of Services (ELS) that are connected to civil and social rights and must be guaranteed throughout the national territory. The constitutional reform had assigned the State the task of defining them, as a matter of exclusive competence. It is well known that this content has remained unimplemented for almost 20 years.

It was only in 2019 that the Minister - of that time - for Regional Affairs and Autonomies resumed this topic by drafting a bill on the implementation of differentiated regionalism to which we must give credit for having conditioned access to the differentiated legislative autonomy of the Italian regions to 3 questions: the identification of the ELS; the determination of standard-costs and requirements; the regulation of the equalisation-fund for regions with tax revenues that are unable to ensure the ELS in practice.

In the current legislature, it has once again become a topical issue brought to the political scene's-attention because it is connected to the definition of the differentiated legislative autonomy of the regions: among the transferable subjects there is territorial government. The allocation of functions over which autonomy is to be exercised requires establishing which services and benefits are to be offered throughout the country to guarantee the same social and civil rights of citizens throughout the national territory. This means that if the State defines an ELS, then it must also guarantee municipalities, provinces, metropolitan cities and regions sufficient resources to provide them.

The ELS are based on a Technical Report wich identifies also the 'territorial government' within which are identified, among others: the National Building Code (Dpr 380/2001); the urban planning law and the sectorial laws that have an impact on spatial planning; and also the Decree 1444/1968 - on urban standards.

Based on this Report, in January 2024, the Senate has approved a draft bill proposed by the government concerning *Dispositions for the implementation of the differentiated autonomy of ordinary statute regions*: a measure that is now being examined by the Chamber of Deputies. So if, on the one hand, the draft bill defines the general principles for the attribution to ordinary statute regions of further particular forms and conditions of autonomy, specifying that the process must take place 'in respect of national unity and to remove discrimination and disparities in access to essential services on the territory', on the other hand, it says that the attribution of further functions, relating to matters connected with civil and social rights will be subject to the determination of the ELS including those related to the fundamental functions of local authorities. The fact that this draft bill attributes the nature of 'essential services' to both 'services concerning civil and social rights' and 'fundamental functions of local authorities', generates a series of possible dangerous misunderstandings in the application of these provisions because the ELS, instead of being transformed into resources destined for the implementation of interventions to contrast urban and territorial gaps and disparities to the benefit of families and activities, it will be aimed at the distribution of resources to cover the costs of the functions exercised by the authorities.

The INU proposal

The importance of recognising in the ELS those minimum endowments that in Italy we call 'urban standards' since 1968, is also recognised by the INU and is an important content of the proposal for a law of principles for the territorial government relaunched with the Bologna Congress in 2022, which has activated a sort of 'work-site' for the finalisation of a proposal.

What connections there may be between ELS and a fundamental activity of territorial government that, like planning, has as its central goal the public and general interest, starting with the relations with the regulation of services defined by urban planning standards?

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Writing the law of principles on territorial government and planning is the correct regulatory context to affirm that the minimum endowment of urban standards responds to the recognition of a minimum essential level.

It is well known that DM 1444/68 still defines minimum quantities of public spaces and equipment to be allocated for the entire national territory for parks, playground and sport, education, parking and facilities of common interest. It means that the urban standards are, therefore, a spatial prerequisite for the endowment of public space and the provision of public services. In that case, it is however a necessary but not sufficient condition for the realisation (and the proper functioning) of quality urban environments and for offering citizens the guarantee of the right to equal social dignity envisaged by the Constitution. The INU proposal i) confirms, after more than fifty years of validity of Decree 1444, the symbolic, political, technical and cultural value of this norm as a milestone for spatial planning; ii) revisits and updates the matter of urban standards; c) confirm the need to pursue social equity and the guarantee of the provision of spaces for the supply of public services throughout the national territory via minimum and mandatory urban and territorial endowments, which find their primary basis in the exclusive competence of the State reguarding the determination of the ELS.

The quantity of public land regulated in municipal plans constitutes, therefore, 'only' the vital premise for the concrete provision of services and the implementation of public policies. The endowment of a quantitative reserve of public areas represents the fundamental minimum basic guarantee that is placed at the beginning of a complex process aimed at satisfying collective and social needs but does not absolve the public actor from its responsibility of formulating and implementing planning and management policies.

Regional strategies for territorial cohesion (OP 5. Europe closer to citizens)

*Bruno Discepolo**

The central theme of the 14th Biennale of European Towns and Town Planners, focused on 'Inclusive Cities and Regions,' plays a strategic role in the urban and regional planning of the Campania Region.

It is indeed becoming increasingly urgent to adapt cities to meet the diverse needs of their communities, designing urban spaces that promote social inclusion, economic equality, and environmental sustainability. This contributes to the formation of communities that must be not only resilient but also cohesive and equitable.

The conference will address several key issues currently prominent in public debate, including how urban planning can be used to counter social exclusion and marginalization. Discussions will focus on integrating vulnerable populations, including migrants, the elderly, and people with disabilities, into the social context of settings. The role of technology and innovative urban design in improving accessibility and participation in city life will also be strategic.

We must not overlook the impact of global challenges such as climate change and economic disparities on urban inclusivity. During these days, experts will present the best practices and case studies of cities and regions from around the world that have successfully implemented inclusive policies and projects.

In the coming days, the contributions of experts and scholars may provide ideas and tools to policymakers and stakeholders on how to design truly inclusive cities and regions, ensuring that all inhabitants, regardless of their background or roles, can thrive.

Very briefly, I would like to illustrate how the Campania Region is addressing the issue of inclusivity, specifically referring to the activities being developed in recent years by the Assessorato al Governo del Territorio, also in the context of the programming of European Union funds for the 2021-2027 cycle, concerning Policy Objective 5, which falls under my responsibilities.

The socio-demographic and economic conditions in Campania are particularly critical. Research conducted by CRESME on behalf of the Region in 2021 presents an alarming vision of the future demographic scenarios for Campania, suggesting that without significant changes, the region risks losing essential elements for its revitalization, such as a solid production and employment base, skilled human resources, a robust internal market, and sufficient local tax revenues.

Projections indicate a loss of over half a million inhabitants over the next twenty years, caused by both low birth rates and migration. The employment situation is equally concerning, with an employment rate of only 44.5% in 2020, well below the European target of 75.0%. Additionally, Campania's per capita PIL in 2019 was only 44.0% of that of Trentino, and its total PIL was only 27.0% of that of Lombardy.

Moreover, in Campania, there are situations of severe settlement and socio-economic gaps, represented by the contrast between the coastal and lowland areas, which are denser in population, activities, and infrastructure, and the inland areas, which are mostly characterized by conditions of depopulation and strong marginality. Three-quarters of the regional population live in the Naples-Caserta-Salerno conurbation, and it is here that housing needs appear to be particularly problematic.

In this general framework, it is clear that the demands that have emerged at the European and national levels to define integrated territorial strategies that can effectively utilize available resources must be clearly defined and delineated as much as possible in accordance with territorial planning tools.

In the face of these prospects, it is essential to adopt a new culture of sustainable development and innovative models to guide Campania through ecological and digital transitions, enhancing local resources while respecting cultural identity and promoting welfare and social inclusion policies. These goals are central to the regional strategic plans for 2021-2027, as outlined in Campania's Regional Strategic Guidance Document (DRIS).

Over the past decades, the Campania Region has initiated a radical transformation in its approach to planning interventions on its territory, moving towards an integrated territorial planning strategy that focuses on a pluralistic vision of Campania, consisting of urban systems featuring medium-sized cities and territorial systems with strong naturalistic, cultural, and industrial characteristics.

* Town Planning Councillor, Campania Region

The Campania Region is currently engaged in the redefinition of land-government strategies, which, for some time now, have no longer been characterized as strategies of expansion but of urban regeneration. This shift aims primarily to rationalize housing needs within already urbanized areas while protecting green, agricultural, and natural spaces.

Regional planning under Policy Objective 5, "A Europe Closer to Citizens," cannot overlook a careful evaluation of phenomena occurring in the territory, notably the aging population, the loss of young people, and the extensive depopulation of entire areas.

The main activities of Assessorato al Governo del Territorio can be summarized into four macro-sectors:

- Updating urban planning regulations;
- Establishing compatibility frameworks for territorial enhancement actions through the development of a new Regional Landscape Plan;
- Integrating financial programming for the 2021-2027 EU funds cycle with urban and territorial planning through the new Territorial Agenda;
- Promoting social inclusion strategies through the Sustainable Living program, which supports regeneration, seismic safety improvements, and energy efficiency of the significant existing public residential building stock of the Region and Municipalities, and the production of new segments of public and social housing.

Twenty years after the approval of the regional urban planning law, it became necessary to intervene to define more effective legal and procedural bases to address the current challenges facing cities and territories.

A comprehensive amendment of the current law will soon be discussed in the Regional Council to ensure the necessary renewal of the legislative framework by introducing themes of urban and territorial regeneration, containment of land consumption, densification of already urbanized areas, upgrading urban facilities, improving seismic and hydrogeological safety, and energy efficiency of buildings.

The Regional Landscape Plan (PPR) results from a complex process of updating knowledge for the interpretation of Campania's landscape. The preliminary plan, approved in 2019, contains over 70 themes and 2,000 GIS-format maps.

The Plan is invaluable to define strategies to protect and enhance the territory, taking into account the social, demographic, economic, and cultural evolution of local communities, identifying and enhancing the environmental and cultural identity to be passed on to future generations.

With an innovative approach, it tackles today's planning challenges, such as soil consumption, climate change, territorial fragility, and regeneration, through an integrated action system aimed at urban and territorial requalification. This includes the reuse of degraded spaces, the reweaving of fragmented urban fabrics, the reconstruction of new landscapes, and the rational use of peri-urban spaces. This contributes to the definition of a Regional Territorial Agenda that focuses not only on the development of urban systems, but on the entire regional territory.

In the process of developing the Landscape Plan, local communities, as custodians of the landscape's identity values, play a strategic role in fine-tuning the enhancement strategies that stem from the landscape quality objectives assigned by the Plan to the territorial resources. In the coming weeks, an intense program will be launched, planning twenty meetings across various territories to start workshops on participatory planning.

In this scenario, the Region's strategy for the new cycle of programming European union resources aims to promote a new approach to sustainable and integrated development and urban regeneration, structured into:

- Twenty-three medium-sized urban areas including the four provincial capitals and major cities of the Region;
- broad territorial systems that coincide with the areas of the Masterplan-Integrated Development Programs, a new concept tool that, in the junction between the forecasts of landscape, territorial, and urban planning and the programming of economic and financial resources, proposes an innovative way of valorizing territorial resources;
- interior areas where the main goal is to counteract depopulation and demographic decline, also through the adaptation of services.

The fourth line of action is the promotion of the Plan for Sustainable Living, urban regeneration, and social inclusion, placing at the center of regional policies those for the right to housing, the requalification of suburbs, safety improvements, and energy efficiency of the building stock, and the regeneration of territories.

We are carrying out significant work with the Municipality of Naples for many peripheral neighborhoods in the city, focusing on numerous public housing districts.

The strategy aims to integrate multiple forms of intervention and resources to:
- increase the number and variety of public and Social Housing units;
- enhance the value of the existing urban building stock also through seismic safety improvements and energy efficiency;
- promote pilot urban regeneration initiatives;
- recover disused urban and productive areas.

Since two 2020, over 120 projects have been funded across the regional territory with total funding of approximately 600 million euros and a goal to invest a total of 1 billion euros by 2030.

In conclusion, I would like to highlight the crucial importance of this conference as a forum for sharing ideas, experiences, and strategies to build a more inclusive and sustainable future for our cities and regions. We face significant challenges, but also unique opportunities to reinvent our approach to urban and territorial development, as well as to redefine the identity and professionalism of technicians and professionals involved in various capacities in design, planning, and administrative processes. Continuous collaboration and dialogue among all participants are essential for translating shared objectives into concrete actions that improve the lives of all citizens. Thank you all for your attention, and I wish each of us a fruitful exchange of ideas and good work in the coming days.

Social housing and benefits in Austria: an approach in creating inclusive and just settlements

*Gerhard Vittinghoff MRTPI**

Austrian housing policy has maintained many features of the post-war housing policy scheme, especially the growing importance of limited-profit housing associations and the focus on supply-side subsidies are mayor tenants of this approach. The affordability has been promoted by reducing the costs of housing through low interest public loans and grants to ensure appropriate supply outcomes and relies far less on demand assistance than other systems.

The universalistic approach towards social housing avoids marginalization and stigmatization of the social housing segment and its tenants. Regulation plays a strong and prescriptive role in the Austrian model.

Specific land use instruments are in place and these include zoning categories which define well suited areas predominantly dedicated to subsidised Housing. These special areas are well situated within the urban framework. In identifying these areas, uniform and transparent allocation criteria allow for a good social mix in social housing estates. At the same time, affordable rents boost purchasing power. The large share of social housing contributes towards more affordable prices for a major proportion of the entire housing market.

Moreover, the sustained efforts towards "gentle urban renewal", too, play a role towards keeping housing in general affordable and also safeguard employment in the construction industry. This reflects a long tradition in Vienna and is likewise strongly supported by the population – a historic achievement that must be preserved for future generations.

Promoting a social mix in neighborhoods and preventing ghettoization has always been a priority of urban governance. In Vienna, municipal housing and affordable housing conducted by Limited Profit Housing Associations (LPHA) are scattered across the city. Compared to other cities the segregation in Vienna has remained relatively low. The local government sees the long-standing tradition of social housing construction as safeguards of good social mix. Social housing makes up 42% of the total housing stock and about 60% of all Vienna households live in social housing apartments, thus the city government remains in control of a large part of housing in the city. There are income limits to determine who can apply for social housing.

Promoting diversity is the major focus and it aims to bring together heterogeneity of various forms of living, working and various concepts of life, understandings of gender roles, values as well as economic, religious, language and cultural backgrounds. The focus is on co-creation of strategies at the local level and bringing various stakeholders into decision-making process such as public institutions, private enterprises, property owners, investors, civil society and individual residents.

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HOUSING CRISIS – after 1980's settlements reconversion and 2024 simplification

João Teixeira, Portugal

There are two periods of housing crisis in Portugal, that suggest solutions for the future, tackling immediate needs of affordable housing in Portugal:

- The illegal settlements constructed in the 1960's and 1970's and their reconversion in the 1980, based on *Vale de Milhaços* neighborhood reconversion.
- the Socialist Government solution, adopted in the beginning of 2024: simplification of processes, along with social housing construction.

Vale de Milhaços housing development

Vale de Milhaços is located 22 km *Península de Setúbal* (south of Lisbon). In the 1960´s several big enterprises were inaugurated in south of Lisbon, such as Nacional Steel Industry in 1961 and Margueira Shipyard in 1967, creating thousands of new jobs. Also, the Bridge, connecting Lisbon to the South bank, was built in 1966. The accessibility from *Vale de Milhaços* to Lisbon was reduced from 2 hours to 30 minutes. The demand for houses and land for construction was much bigger than supply. Illegal settlements appeared, and later, illegal constructions. Government couldn't control the situation.

Vale de Milhaços was an illegal allotment with plots around 300 sqm to 2000 sqm, along informal streets, without infrastructures or social equipment's. The reconversion of *Vale de Milhaços* illegal settlement and construction was based in the following principles:

- A General Plan developed involving new landowners in public meetings, later approved by the Municipality.
- A local technical team was created, paid by the Municipality, to implement the Plan, to help house owners to adapt existing houses according to legislation, to inform the local population about the Plan, and to control construction.
- The larger plots were destined for public equipment's.
- The owners of small lots had to give up 10% of the land area, when possible, for social equipment's and infrastructures.
- The costs of Infrastructures (street paving, water, sewage, electricity, and telephone infrastructures) were paid by the new owners of plots and houses, with installments during five years.
- Infrastructures projects and related works were coordinated by the technical team.
- The illegal promotor had to give away all the land owned and pay a fine for the illegal allotment.

Currently the accessibility has been increased with bus network and the new railway. The nearest station is located 700 meters from *Vale de Milhaços*.

Reconversion and rehabilitation were a very successful operation. It is a 128 hectares neighborhood with 5000 homes, taking advantage of urban infrastructure, domestic waste collection service, public transport, and social facilities: a kindergarten, two public schools (primary and secondary), a private school, a sports center, an Eco Museum, green areas, an urban park, as well as stores for everyday supplies. A house located in *Vale de Milhaços* can be worth between €300.000 (€1.500/sqm), and €700.000 (€3.000/sqm). The vision, the reconversion plan and the coordination of team's work were carried out by Professor Costa Lobo, one of the founders of ECTP-CEU.

2020 housing crisis

To solve the 2020 housing crisis, the Portuguese Government took several decisions during 2023/24, namely a new generation of housing policies (NGHP) with the following objectives:

- Respond to families living in severe housing shortages.
- Guarantee access to housing for all those who have no access to the market.
- Create the conditions for rehabilitation to be the main form of intervention in building and urban development.
- Promote social and territorial inclusion, along with housing choice opportunities.

The main measures to achieve these objectives are:

- To simplify the approval process for construction projects.
- The investment of 3.090 million Euros to rehabilitate and built new homes at affordable costs, financed by the Recovery and Resilience Facility, RRF, corresponding to 26.000 homes.
- To exempt from housing taxes, until 2029, the owners who give up tourist accommodation in favor of urban rental.
- To reduce housing rental taxes at affordable costs.
- To reduce or release real estate capital gains on the sale of second homes or land, to repay a loan for own and permanent housing.

Now and in the future

Recent policy became very expensive and takes times to implement. It doesn't ensure population involvement, by side public minimum participation.

Complementarity between housing policy and new urbanization plans can be strong solution, adequate to present needs:

- Locally, several new municipal, or part municipal developments could ensure large and diversify offer of affordable housing, as claim often by general population.
- New urbanization plans of municipal initiative, producing plot at affordable price, give the possibility to families invest in their own home over several years mobilizes savings and reduces the State's expense on housing development.
- It also allows tailor made projects, able to evolve through time adequate to family needs, adopting different sustainable solutions (Light steel framing, Light wooden framing, among others).

When the nature of the intervention takes the form of self-construction, the intervention of a specialized team is essential during the urbanization plan, design, and construction.

New urbanization plans of municipal initiative, benefiting from lessons learned, appear as a solution to be largely explored in Portuguese reality.

Parallel Workshop

1. Regional issues and regional disparity

Coordinators
Laura Fregolent
Co-coordinators
Valeria Lingua
and Donato Di Ludovico

Discussant
Géza Salamin
Co-discussant
Maurizio Carta

Population concentration
Quantitative characterization by concentration indexes

*Ricardo Alvira**

The exponential population growth since the Industrial Revolution in the late 18th century has been accompanied by a progressive depopulation of rural areas and population concentration in some cities. The emergence of greater job opportunities in cities, along with the scarcity of opportunities and harsh conditions in rural areas, has led to significant migration from the countryside to urban areas, forming large urban agglomerations and emptying rural populations. In response to this emerging reality, from the 19th century, several experts have alerted on several negative impacts on societies of this trend and proposed several approaches to understand it, halt it, and even reverse it. In broad terms, we find three approaches to population distribution across the territory. Firstly, a formal (normative) approach, which can be traced at least to Plato and Leonardo Da Vinci, from which models of how the territory should be occupied are proposed. It is from this perspective that, in trying to improve the quality of cities that were accumulating high environmental pollution and poor sanitation[1], in the framework of the 19th-century hygienist movement proposals, in 1898, Ebenezer Howard[2] proposed a cluster for the spatial organization of the population in the territory. He aimed to improve the internal quality of cities and to balance and integrate cities with the agricultural environment and economy. The cluster was to be replicated throughout the territory.

Second, an empirical-statistical approach, which begins with the German Auerbach (1913)[3] who reviews the settlement system of Germany and compares it with those of other countries, eventually detecting the existence of an underlying "law" that connected these settlement systems and implied logarithmic rules (i.e., involving non-additive and higher-order relationships). Subsequently, this perspective was popularized by Zipf (1949). Thirdly, an approach that combines issues from the previous two, which can be traced back at least to the French Reynaud (1841), reviews the phenomenon by focusing on the more geographical aspects of territorial scale through the theory of location, attempting to detect patterns through the observation of reality that would allow for the formulation of laws. This perspective was later developed by authors such as Galpin (1915)[4] and popularized by Christaller (1933)[5]. It proposes the existence of underlying hexagonal patterns in the distribution of settlements, with hierarchies of nuclei positioned at different locations within the pattern.

Yet the issue still remains unsolved. While, it is still asserted the need to reverse the depopulation in rural areas so as to promote a territorial redistribution of the population, which should be sustainable over time, no widely accepted formula has been proposed that enables analysis and set of redistribution goals. To contribute to this debate, this communication proposes that understanding the biased nature of population distribution in different settlements requires moving beyond the paradigm of the proportion between urban and rural populations and advancing toward its characterization through measures of concentration. Based on this characterization, three samples are reviewed: several formal models proposed throughout history; the evolution of Spain's population throughout the last two and a half centuries; and the current state of population distribution in several European countries. The goal is to determine the validity of concentration indices to measure and analyse population concentration, compare it with other relevant variables, and set concentration objectives.

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1 Fariña, J. & Alvira, R. (forthcoming)

2 Howard, E. 1898. *To-Morrow. A peaceful way to social reform*.

3 Auerbach, F. 1913. The Law of Population Concentration. Translated by Antonio Ciccone. EPB: *Urban Analytics and City Science*, 2023, Vol. 50(2) 290–298

4 Cited in Robic, M.-C.. 1982. Cent ans avant Christaller... Une théorie des lieux centraux. In: *Espace géographique*, tome 11, n°1, 1982. pp. 5-12;

5 King, Leslie J. 1985. *Central Place Theory*. Regional Research Institute. West Virginia University

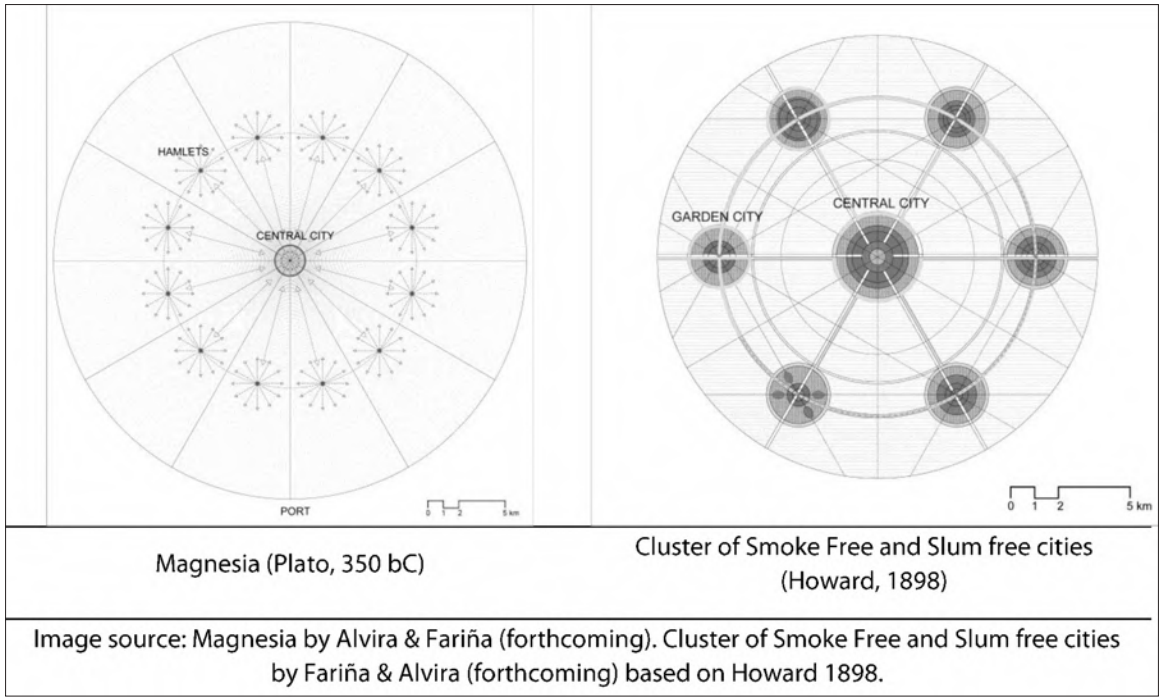

Fig. 1.
Normative approaches to settlements spatial organization by Plato and Howard.

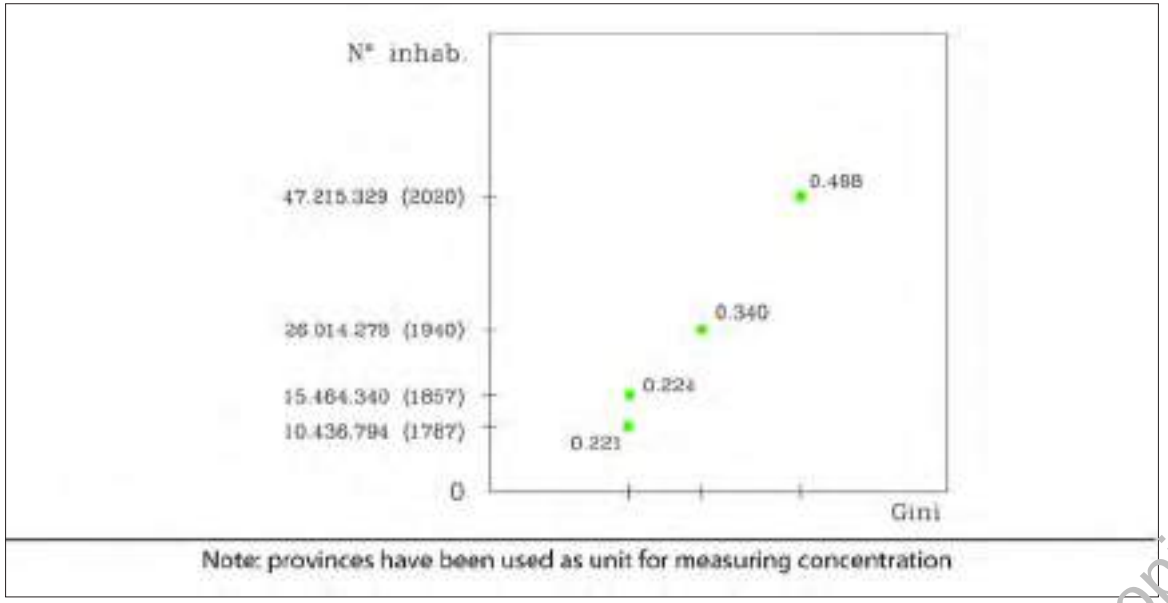

Fig. 2.
Relationship between Population increase and Population concentration as measured by the Gini coefficient in the 1787-2020 period in Spain.

Weak Demand Areas in Italy*
A mapping method according to the Transport Ministerial Decree n. 157/2018

Vito Martelliano, Carmelo Antonuccio***

The attribute "weak demand" associated with local public transport (LPT) relates to the amount of displacement generated in an area and to the degree of fragmentation of mobility demand. This condition indicates a particular difficulty in achieving an implementation of efficient LPT planning, which often leads to the dissatisfaction of users' needs who are forced to fall back on private transport. Mobility in the weak demand areas of LPT (WDA) represents a critical problem for most of the involved realities, both in economic and managerial terms and due to limited and not always predictable flows of movement. The Article 4 of Ministerial Decree No. 157 of 2018 (D.M. 157/18) provides a regulatory definition for these areas, it identifies them as: "territorial entities, including those with a regional, urban or extra-urban dimension, or agglomerations of municipalities with fractions, characterized by low transport demand due to the dispersion of users and the orography of the territory". This definition implicitly contains all the criteria necessary to determine the degree of demand for a territory, later explained within the subsequent subsections. These territorial realities have variable dimensions. In most cases, these are large areas made up of aggregates of municipalities with similar characteristics, but there are cases dimensionally lower, constituted by one or a few neighboring municipalities, that are in a state of weak demand for singular conditions. According to the Decree, the conditions, for a municipality, to be identified as WDA consist in: the simultaneous exceeding of the threshold values of three indicators, defined as *primary,* and at least one of the two indicators defined as *secondary*. The primary indicators are: i. the generative potential of displacements (PI-1); ii. the status of "internal area" according to the SNAI classification (PI-2); iii. the demographic structure by age group (PI-3). Secondary indicators are: i. roughness/elevation range of the municipality (SI-1); ii. settlement dispersion (SI-2).

The spatialization of these indicators (based on ISTAT data of 2020) returns an overall geography, with a detail at the municipal level, of the Italian WDA, which shows that the weak demand for LPT is a phenomenon widely spread throughout the country and that affects 3022 municipalities (out of 7903) and over 7 million inhabitants. It means that about one Italian out of eight lives in a WDA area. Percentage values on the regional scale show that, on average, 47% of regional areas exceed the WDA thresholds, affecting 44% of municipalities and 17% of the population. However, the distribution is not homogeneous and some regions deviate significantly from the mean values. For example: Trentino-South Tyrol and Apulia as regards the percentage of area (80.6% and 18.11%, respectively) or Trentino-South Tyrol and Veneto as regards the population involved (73.4% against 5.4%). Considering the absolute values, the highest numbers in terms of population involved are recorded in Lombardy and Sicily (respectively 805.953 and 795.956 residents in municipalities WDA). The geographical distribution is, also by virtue of the indicators prescribed by the Decree, strongly dependent on the morphology of the territory (roughness). The majority of WDA municipalities fall within the Alpine or Apennine territories, although 247 coastal municipalities are WDA too. This shows that both the fragmentation of urban fabric (SI-2) and accessibility and distance from essential services (PI-2) affect the level of territorial demand. On the basis of the results obtained, it emerges how the status of WDA represents a major problem in Italy. These areas represent a clear example of spatial injustice, stemming from the denial of essential citizenship rights for a large part of the population. Nevertheless, the implementation of the efficiency of LPT's services in WDA finds a limited response within the investments of the PNRR, specifically in Measure 1.4.6 with the experimentation of "Mobility as a Service" (MaaS).

What is the future, then, for the more than 7 million inhabitants in Italy who live in territories unable to guarantee part of the essential services/rights? The impossibility of guaranteeing and managing LTP's services in an economically sustainable way constitutes a further denial of citizenship rights, precluding, in the absence of private vehicles, even access to services located outside the territory. The definition of a standard cost and the incentives provided by D.M. 157/2018, for the support to the provision of services of LTP in the WDA, may not be sufficient to ensure a qualitative and quantitative adequate service. The direction to be taken should therefore overcome the exclusive link with "traditional" LTP systems and focus on the implementation of demand responsive transport systems (DRT). These systems, already widely tested, show greater flexibility and versatility, thus allowing a place-based configuration of the service, which satisfies the user's needs and the "shape" of the territory.

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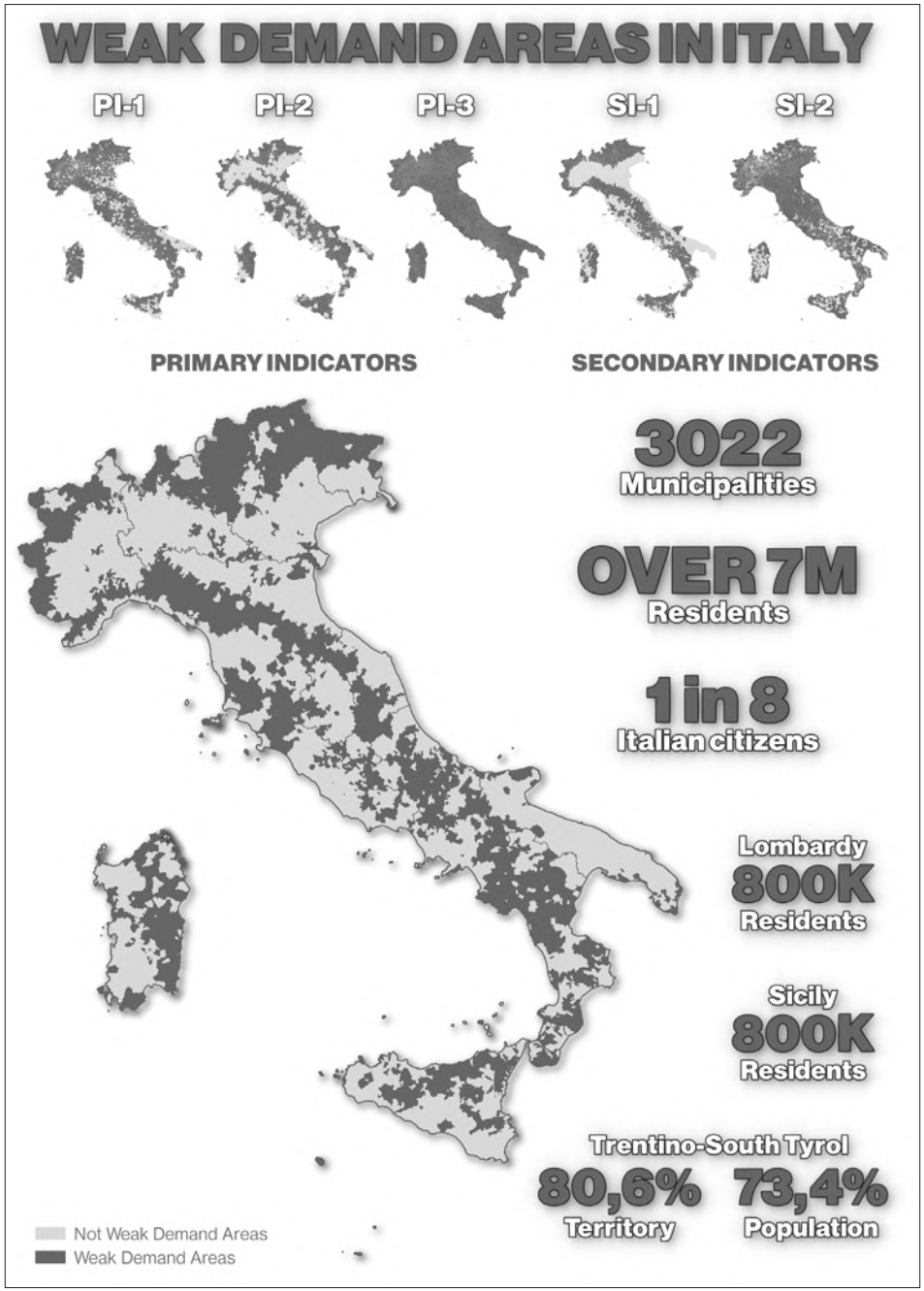

Overall map of weak demand areas in Italy and individual indicators with some meaningful data.

Basilicata Climate Adaptation Strategy: The Province of Potenza contribution to EU Mission on Adaptation to CC

Alessandro Attolico, Rosalia Smaldone*, Francesco Scorza**, Rachele Vanessa Gatto**, Simone Corrado***

The Province of Potenza operates as a Public Administration responsible for urban and regional planning according to the normative framework defined by the Basilicata Region Urban Planning Law 23/99. It holds the responsibilities of "intermediate body" in territorial management operating the connection between Municipalities and the Region in the field of urban planning. According to this role, the Provincial Structural Master Plan (PSP) represents the planning tool oriented to define territorial objectives concerning sustainable land use management, territorial risks reduction, resilience, energy and many other intervention sectors. In the Climate Adaptation perspective, the role of the Province of Potenza is to contribute to the Regional Adaptation Strategy according to the normative framework derived from the National Climate Change Adaptation Strategy (SNAC) in Italy. This work presents the results of the scientific and technical appraisal concerning the main topics related to enhancing climate-responsive and green transition governance in urban and rural systems within a planning-cantered perspective of climate change adaptation. As per the assertions made in the Paris Climate Agreement of the United Nations Framework Convention on Climate Change and the European Green Deal, Public Authorities (PAs) responsible for urban and rural governance play pivotal roles in achieving both mitigation and adaptation goals. EU Neighbourhood Policy, places a significant emphasis on safeguarding the region's natural resources and fostering environmentally friendly growth within a shared renewable vision. It is also acknowledged that the effectiveness of climate mitigation and adaptation actions at different implementation scales depends on the level of awareness and involvement of beneficiary communities in decision-making. In this research, in order to promote coordinated actions between different spatial scales in the implementation of climate change adaptation policies we focused on the territory of the Province of Potenza as part of the Basilicata Region – Southern Italy study area. We closely adopt the methodological schema proposed by the International Geodesign Collaboration (IGC) network. In fact, the research is based on the application of the Geodesign method to support spatial planning, design and decision-making, and is also a component of the wider research "The Global Climate Geodesign Challenge" promoted by IGC in 2023. A fundamental step for Climate Change Adaptation is the assessment of territorial vulnerability. This work presents evidence at the local level regarding the issue to operationally define territorial assessment covering the climate vulnerability analysis through the Land Suitability Approach. The scope of the Regional Climate Adaptation Strategy places particular emphasis on governance processes, horizontal and vertical institutional coordination, and public participation. Such issues benefit from the extensive inter institutional activities of the Province of Potenza delivered in the framework of UN Making Cities Resilient campaign and further international cooperation actions finalised on the 100 municipalities of the Province. The Province of Potenza faces barriers related to limited availability of territorial knowledge and the need for advanced tools to incorporate climate considerations into existing assessment procedures. This paper proposes a framework approach to address these challenges, emphasising the importance of stakeholder engagement and the integration of climate data into decision-making processes. Central to the proposed approach is the integration of participatory processes and Land Suitability assessment across eight main intervention sectors. This work is a preliminary assessment for the Climate territorial vulnerability overcoming spatial knowledge barriers affecting the early stage of the regional adaptation strategy. In facts, beyond the complex elaboration of thematic maps deeply investigating thematic domains included in CC vulnerability assessment, the approach discussed in this work enhances the participatory character of the process based on Land Suitability assessment as a precondition for the participatory design of the Regional CC Adaptation Strategy. Land suitability approaches demonstrate a strong connection among envisaged climate adaptation actions and relevant territorial components (i.e. morphology, land use, settlement structure, infrastructure etc.). Eighth main intervention sectors (namely "Domains") were analysed: Energy, Fresh Water, Agriculture, Transport, Forest, Industry, Ocean, Settlements. Advanced tools were adopted experimenting with innovative approaches to guarantee effective participation in strategic design and the awareness of stakeholders engaged in the process. This approach is part of the wider contribution that the Province of Potenza provides in the framework of the EU Mission on Adaptation to CC. The conclusions seek to align climate adaptation actions with relevant territorial components, such as morphology, land use, and infrastructure. By engaging stakeholders in the co-design of adaptation strategies, the Province fostered ownership and enhanced the effectiveness of consequent implementation actions.

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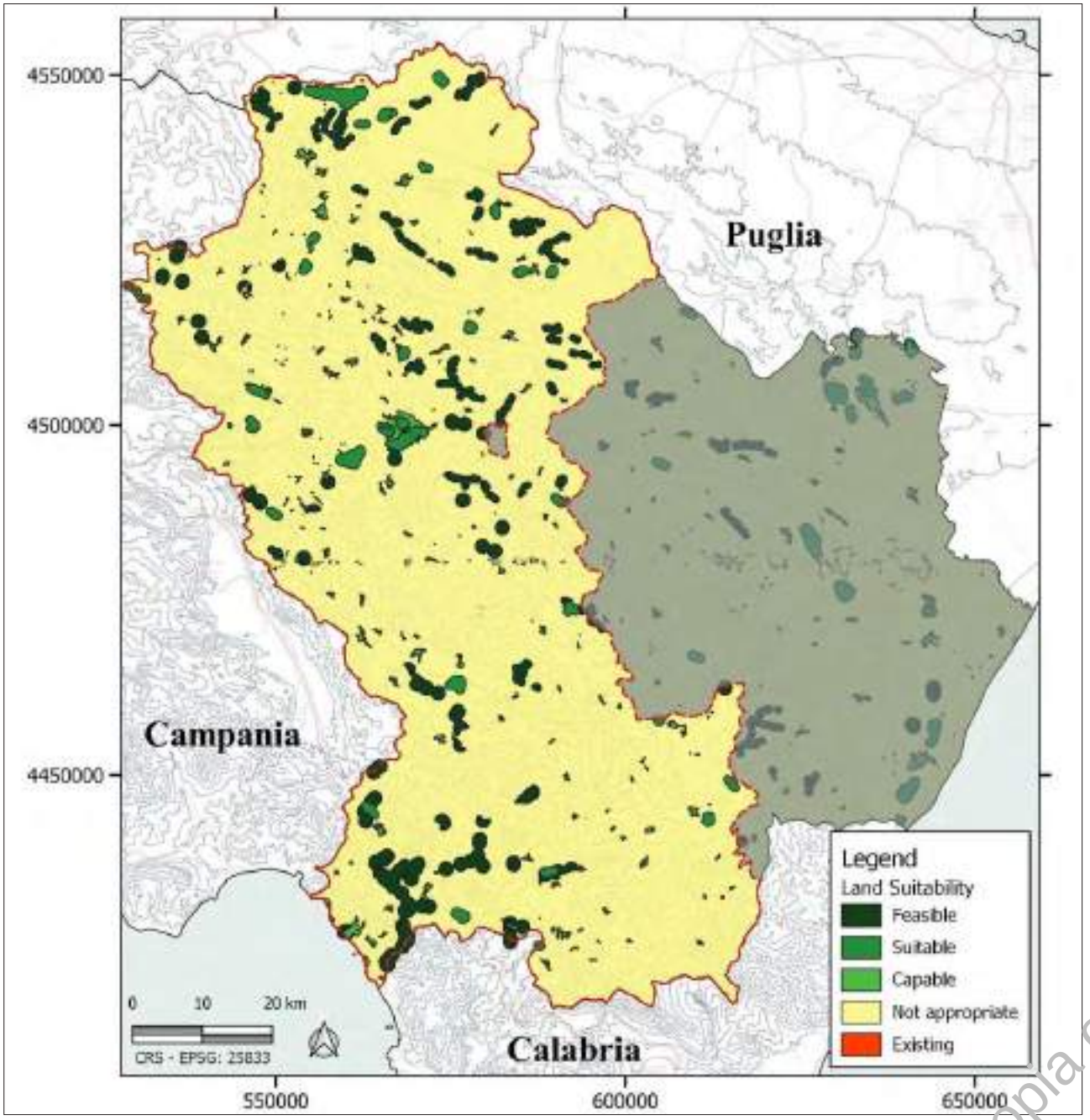

Energy domain - Feasible: areas affected by renewable Energy Sources both in operation and in the permitting process. Mainly photovoltaic and wind power plants; Suitable: all major energy-intensive manufacturing plants and all industrial lots where energy demand is fluctuating; Capable: main urban centres with a population over 5000 inhabitants with high density population.

Local Development in the Inner Areas
The Dominance of Tourism in SNAI Framework Programme Agreements

*Francesco Conti**

The progressive depopulation and underdevelopment of marginal areas is a deep-rooted problem in Italy. Its study has taken on systematization following the creation of the dedicated National Strategy for Inner Areas, the cohesion policy which has strongly promoted scientific and political debate. The strategy aims to counter depopulation with a place-based approach, developed by each area, in two different groups of measures: *services*, with the aim of providing access to the fundamental rights of citizenship to guarantee a short-term brake on the demographic decline, and *local development*, aimed at creating long-term territorial economic growth that can reverse the negative trend. 'SNAI' concluded its first programming cycle in 2020: this research seeks to draw some considerations on the outcome of the local development measures, trying to evaluate them with a view to future advances in the new 2021-2027 programming cycle, which is still in progress. This research investigated only the macro-area related to local development programmes, as the services sector is the one to which more attention was paid, and generally produced more consistent results despite the geographical differences of the various areas involved. The analysis was conducted by evaluating the various investment measures expressed in the Framework Programme Agreements for each of the 72 pilot areas identified by SNAI. The most recurrent investments in the Agreements were gathered within 6 different groups: *Cultural and Nature-based Tourism*, identified by considering all the expenditure programmes aimed at tourism development; *Agricultural, Land and Forestry Chain*, related to investments for territorial production chains in the agro-food or wood system sectors; *Digital Infrastructure*, which includes interventions aimed at the physical creation of digital infrastructure in the territories; *Energy Efficiency and Renewable Energy*, concerning both energy efficiency measures for public buildings and investment programmes relating to enhancement renewable energy; *Labor, Employment and Enterprise,* which covers the set of measures relating to employment facilitation programmes or the promotion of entrepreneurship, in sectors that are not in the first two categories; *Others*, to include investment items that could not be summarised in one of the five categories above. An initial observation on the analysis stems from the complexity of the work of comparing the various Framework Programme Agreements, since unlike in the service sector, where a common strategic framework vision is evident, in the macroarea of local development there are considerable differences and variability resulting from regional policies and from single areas choices. The main result that emerges from the analysis is the absolute predominance of the tourism sector, seen as central for strategic developement. In fact, 36% of the investment funds of the Italian Inner Areas is dedicated to tourism, but the figure is even more polarised considering specific geographical areas especially in Central Italy, where it reaches 57%. In general, it can be observed that tourism is the main expenditure item for half of the areas and exceeds 90% of the investment in five pilot areas. The agricultural and forestry sector is the second most funded and in some best-case areas introduce interesting territorial supply chain reasoning. Energy efficiency, Renewables incentives and Digital Infrastructure, are central only in individual regional realities and not evenly spread throughout the territory, as most of the areas ignore them; hopefully upcoming PNRR and the attention to the themes of ecological and digital transition may help to fill these gaps in the Inner Areas if it will succeed in providing a paradigm shift on a state-wide scale. For Labour, Employment and Enterprise sector, the funding is mainly related to self-employment or the creation of micro-enterprises, without any apparent in-depth study of the local production system. One of the main aspects that unfortunately also emerges is the lack of territorial visions in development, as the FPAs are generally developed with shortage of spatial reasoning at an economic level. Thus, several perplexities and unresolved issues remain on the approach of local development policies. The widespread pursuit of tourism, although it may generate immediate benefits in terms of money flows, can hardly represent a serious form of solid development in the long run, for the intrinsic limits of the sector. Moreover, while touristic is mostly described as 'sustainable', this may very well be a slogan-like claim if the development is not concerned by the social and economic sustainability for the community that lives in the area. Therefore, such one-dimensional programming could make SNAI an ineffective policy for the local development of the Inner Areas, which would instead need guidelines to focus on investments that are more consistent with the features of the territory in order to favour the increase of basic economic activities, or innovative sectors to facilitate new geographies of labour. This is crucial since without basic activities to ensure the economic sustainability of services and the presence of the population, there can be no effective reversal of the depopulation trend. For these reasons, apart from some virtuous cases, a change of pace for local development in the 2021-2027 programming is certainly desirable.

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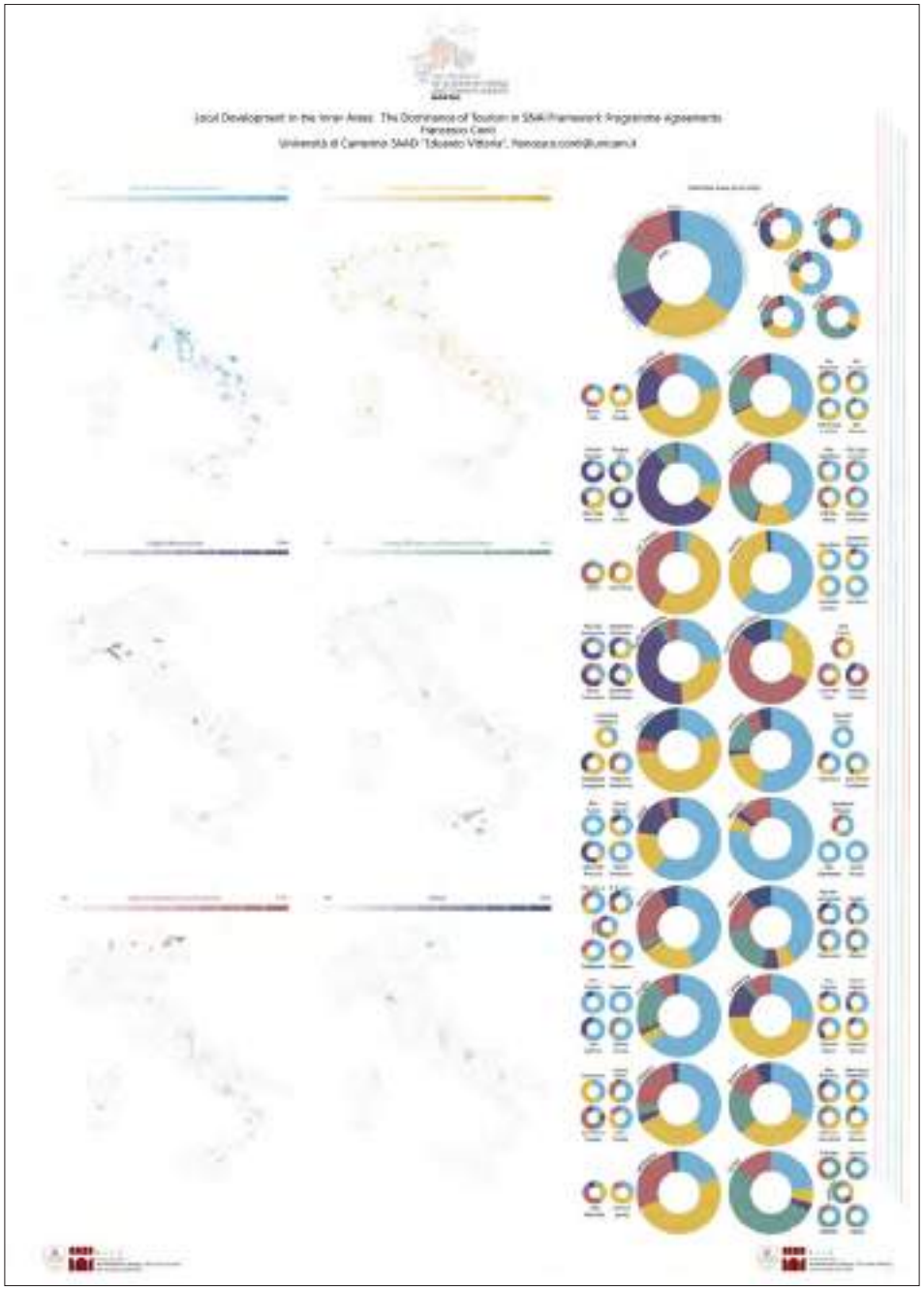

Maps and Figures of Inner Areas Local Development in SNAI Framework Programme Agreements.

Cultural Ecosystem Services and Community Engagement
The experience of Madonie Inner Area

*Annalisa Giampino, Filippo Schilleci, Stefania Crobe**

The present era has witnessed significant changes in production dynamics due to the interconnected forces of globalization and socio-economic factors. These changes have not only affected how goods are produced but have also redefined the interdependent relationship between communities and territories. Consequently, there has been a substantial impact on the way people work, consume, and interact socially, leading to the disruption of crucial relational bonds that play a key role in community place attachment, civic consciousness, and the formation of collective identity.
In this frame, inner areas—often mistakenly referred to as non-urban—are suffering from marginalization, material poverty, social decline, and population decay. In addition to economic and cultural gaps and the absence of essential services, these areas suffer from a significant lack of recognition.

But in the last decade there has been a renewed interest in rural areas, both from institutional structures and policies – SNAI first and foremost, which has brought them back to the center of public policies and has contributed to spreading a culture of attention to areas that were previously considered marginal or residual, and more recently the PNRR –, as well as from the private non-profit sector and academic research, and even from public debate, raising a series of issues related to urban concentration and the crisis of the dominant city urbanization model, which the covid-19 pandemic seems to have given a strong impetus to, to the political weight of territorial inequalities (Rodríguez-Pose 2018) in democratic governance, to the latent potential of these territories.

Despite the renewed interest and attempt to activate processes of co-designing policies, strategies and actions to unhinge rent positions and promote the innovative, as proposed by the SNAI for example, there is evidence of the reiteration of assistive or, at best, compensatory responses and approaches for these territories, still based on the so-called "administrative theory of needs" (Tosi, 1994).

Starting from these premises, this research project aims to critical analyse the challenges identified by the conventional Inner Peripheries framework, as outlined in the National Strategy for Inner Areas (SNAI). The objective is to explore the revitalization of Inner Areas by examining the interconnectedness between communities and territory and analyse methodologies that local policies and planning initiatives can employ to incorporate the qualitative and perceptual dimensions of "living in Inner Areas" into their developmental strategies. In the framework of the capability approach of Amrtya Sen (Sen 1992, 2001) and guided by a bioregionalist vision, our focus is on the Madonie Inner Area with the aim to enhance a capability building mechanism by interpersonal relationships that will become an instrument for individuals to invest in building personal capabilities, producing results in the direction of the growth of communities.

The project aims to strengthen the role of local communities in building "place knowledge" and territorial and human capital through the innovative lens of Cultural Ecosystem Services (CES), studying them as a factor of the quality of life of inhabitants and as a key factor for local development from "inside". We consider the CES in the definition suggested by Fish et al. (2016: 4), «as the contributions ecosystems make to human well-being in terms of the identities they help frame, the experiences they help enable and the capabilities they help equip». As nonmaterial benefits that people obtain from ecosystems, CES can help in understanding how place influences opportunity, in terms of growth as well as individual life chances.

"Place knowledge", together with the recognition and enhancement of informal and grassroots practices and experiences that are developed in the territories, offer elements to enrich and integrate the planning processes according to a logic of institutional

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learning and working on new models of cooperation, shared local knowledge with the goal to bridge the research-policy-practice gap.

The research findings endeavour to fill a lacuna in comprehending the extent to which policies and planning incorporate the qualitative and perceptual facets associated with "living in the Inner Areas."

According with the territorialist approach, which has practised in territorial plans and projects a dense and deep knowledge of the identity and morpho typological peculiarities of the place, constitutive of a heritage interpretation and representation, «the framework of knowledge, in its complexity and multidisciplinary expansion, has become essential to define the genetic and transformation rules of the territory and for the activation of integrated socio-economic models on a territorial basis, through participatory tools aimed at the self-government of the heritage commons» (Magnaghi in Marson, eds., 2019).

Through a mixed-methods approach, whose aim is to give value to the interdisciplinary nature of territorial sciences, the research enhances our understanding of the intricate and diverse interactions between local communities and their surroundings. It plays a crucial role in reshaping the discourse by offering valuable data to assess challenging scenarios. Furthermore, it proposes a reflection about designing a range of tools and strategies to unlock the territorial potential.

Fig. 1.
Il paesaggio madonita © G. Maniscalco.

Fig. 2
Il paesaggio madonita © G. Maniscalco.

From Patrick Geddes to the territorialist approach: the genealogy of inclusive planning

*Federico Diodato**

«In a period of flow, men have the opportunity to remold themselves and their institutions. The great migrations that swept over Europe in the past; the migrations that surged past the water-boundaries of Europe and crawled through the formidable American wilderness-these great tides of population, which unloosed all the old bonds, have presented such an opportunity. To some of us it seems that in America we are in the midst of another such tidal movement of population-and for convenience, we have called it the Fourth Migration» (Mumford, 1925).

These are the opening words of Lewis Mumford's 1925 article on the fourth migration for the 54th issue of *The Survey Graphic*, in which the American historian sees the fourth migratory flow as an opportunity to reconstruct planning that takes regional complexity into account , in an inclusive way

Today, 100 years later, as we grapple with the environmental, economic, and social crises that imperil our very existence as a species, the imperative lies not in seeking technological shortcuts but in rectifying the damage inflicted upon our collective heritage. Recognising the intricate web of relationships intertwining the living and non-living elements within a combined destiny, it becomes crucial to re-evaluate our approach to planning in relation to the territory.

Such "territorialist" path emerges from the theories and experiences of Patrick Geddes and has, in various forms, been passed on to us. In his approach, the planner goes beyond the confines of narrow disciplines, merging specialised knowledge into a holistic perspective that coordinates research and efforts within "civic laboratories", in which, the very act of planning is seen as an educational endeavour: a means to cultivate citizens' awareness of their roles (Geddes, Brandford, 1917). This approach embraces an art of fostering livable environments through a symbiotic relationship with the land, resources, environment, and inhabitants. Following the dissemination and adaptation of this thought from Scotland to the United States, and then to Italy, this territorialist approach has been shaped by influential figures such as Lewis Mumford, Benton MacKay, Adriano Olivetti, Giancarlo De Carlo, and Carlo Doglio. As Doglio himself emphasises, the fundamental purpose of planning is to enable inhabitants "to open their eyes, perhaps for the first time, to the nature of their individual place in the community, to an increased awareness of their individual identity, and to a personal consideration of how they live and how they might live" (Doglio, 1955). Always placing the inhabitant at the core of the planning process, this approach has found fertile ground for practical application since the 1980s within the Italian territorialist school, which considers the territory as a common good (Magnaghi, 2000), and is currently experiencing a renewed interest in the French debate on bioregional perspective: an outlook that comprehensively acknowledges the complexity of the region and can grasp the territory within its dynamic interrelations (Rollot, 2023).

By tracing this path, the aim of this presentation is to reveal the weaving of a complex tapestry of thoughts, actions, and experiences in the side-lines of the mainstream planning culture. This tapestry revolves around the concept of relationships and the founding principles of deep ecology. As these ideas converge, they give rise to an "other thinking" that meanders across nations and continents. This significant body of thought constitutes a valuable resource that we can tap into and actively contribute to, nurturing its growth to enrich our present and shape our inclusive future, enabling us to fully inhabit the earth.

As Geddes indicated in the conclusion of his essay *The Sociology of Autumn* : "Amid decay lies the best soil of Renascence, in Autumn its secret: that of survival and initiative, of inheritance yet fresh variation — the seed ; who wills may find, may sow, and in another Autumn also reap. This last word […]: *'il faut cultiver son jardin'*" (Geddes, 1895). It is in times of crisis that we must prepare the ground on which to build a collective discussion on the future of architecture, emphasising the essential role of responsibility and stewardship in shaping the landscape of tomorrow.

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Fig. 1.
Patrick Geddes, "A perspective map of the European Valley Region", Cities in Evolution, 1949, p 164-65.

Collaborative maintenance of housing quality for social, cultural and economic innovation in marginalised areas

*Katia Fabbricatti, Michela Di Palo and Eleonora Petroni**

Within the broader scientific and political framework of reducing territorial imbalances and social inequalities between areas at different speeds of development, several researchers have pointed out – especially in the wake of the Covid-19 pandemic – how the development model based on quality of life, as opposed to the one based on profit, could lead to a reinterpretation of the 'marginal areas', no longer as places of cultural backwardness but as places in the vanguard, where a new model of society is advancing as a possible option for the times to come (Carrosio, 2019). In such contexts, characterised by a lack of demand for housing and a lack of services, but at the same time by a strong sense of belonging and a consolidated local identity, one of the challenges is to reverse the demographic trend starting with the activation of social innovation processes (Cerreta et al. 2021). To this end, collaborative and shared services can be an engine for capacity building and new opportunities for social, cultural and economic development. Collaborative building maintenance is an approach that actively involves the community in planning, implementing and monitoring preventive maintenance activities. In addition to extending the life cycle of artefacts, it promotes processes of community involvement and empowerment aimed at building technical skills and employment opportunities for young people and adults (Viola, 2022). Financed by the PINQuA National Innovative Programme for Housing Quality (D.I. n. 395/2020) of the Italian Ministry of Infrastructure and Transport, the Re-Habit of Inner Areas project is an experiment in a strategy of collaborative renovation and maintenance of public housing, based on the provision of customised housing with high quality and service standards. The project, developed by a team made up of the Campania Region, the Campania Agency for Public Housing, the Department of Architecture of the University of Naples and local professionals, involved the small municipalities (less than 5,000 inhab.) of Alta Irpinia in the southern Italian Apennines.

The project strategy combined Quality of Living, capacity building and new economies. Starting from the (under-utilised) resources of the small municipalities involved, the project envisaged: specialised social housing offer for young couples, makers, elderly people, immigrant families; functional-spatial and thermo-hygrometric improvement of public housing dwellings; spaces for collective use and proximity welfare based on intergenerational welfare services centre through collaborative forms of management, social concierge services; new economies through provision of maintenance network (hub and spoke), with the training of residents and/or craftsmen for minor maintenance work, ateliers for makers who will help trigger innovation processes in traditional production. The Maintenance Hub is a service hub for the maintenance of public property. It is a peripheral management body for the maintenance of buildings at a neighbourhood or compartment level, which deals with the collection and management of reports of deterioration/failure from residents/users and feedback information from activities scheduled in the maintenance plan, which are then sent to a control room (Fig. 1). The project envisages that the residents themselves, once trained, will take on the management role, which also aims to co-ordinate small teams of residents and/or tradesmen for minor maintenance work. The hubs are designed to function as a front and remote office, training lab, repair shop and storage for tools and vehicles for minor maintenance work. In order to implement the hubs, the Social Housing Scheduled Maintenance Plan (Legislative Decree 36/2023; Caterina, Fiore, 2005) has been drawn up. It defines the maintenance actions (monitoring, control and intervention) for three categories of operators: users, trained users and specialised operators, each with different tasks (Fig. 2). The maintenance plan prescribes a campaign to raise awareness and train users in the correct use of building systems and their components, including green areas and outdoor common spaces. In addition, the project provides for the training of maintenance users (technicians, workers, craftsmen, researchers, etc.) as early as the execution phase of the works, through participation in school camps. To support the collaborative network, the project, which is currently in the implementation phase, has envisaged an alternative and appropriate local mobility system, characterised by electric road shuttles connecting local communities and interchangeable mobility nodes, following old rural roads (Fabbricatti, Colucci, 2023). The strategic model developed by the multi-stakeholder team interprets quality of living as a starting point for triggering processes of cooperation and sharing, integrating the educational and productive dimensions, in a virtuous circle in which places – and the resources that characterise them – are stimulated to generate opportunities for growth and new development needs[1].

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[1] 1. Carrosio, G. (2019) I Margini al centro: L'Italia delle Aree Interne tra Fragilità e Innovazione, Donzelli, Roma, It; Cerreta, M., Fabbricatti, K., Oppido, S., Ragozino, S. (2021) Pratiche abilitanti di innovazione territoriale. Il progetto Monti Picentini Cilab, BDC, 21, 2, pp. 337-357; Viola, S. (2022) Built Heritage Repurposing and Communities Engagement: Symbiosis, Enabling Processes, Key Challenges, Sustainability, 14(4), Fabbricatti, K., Colucci, A. (2023) Urban and territorial Functional Creative Diversity. Innovating models fostering territorial and urban systems resilience capacities, BDC, 23, 1, pp. 103-117. Caterina, G., Fiore, V. (2005) La progettazione edilizia e urbana. Linee guida e prassi operativa, Sistemi Editoriali.

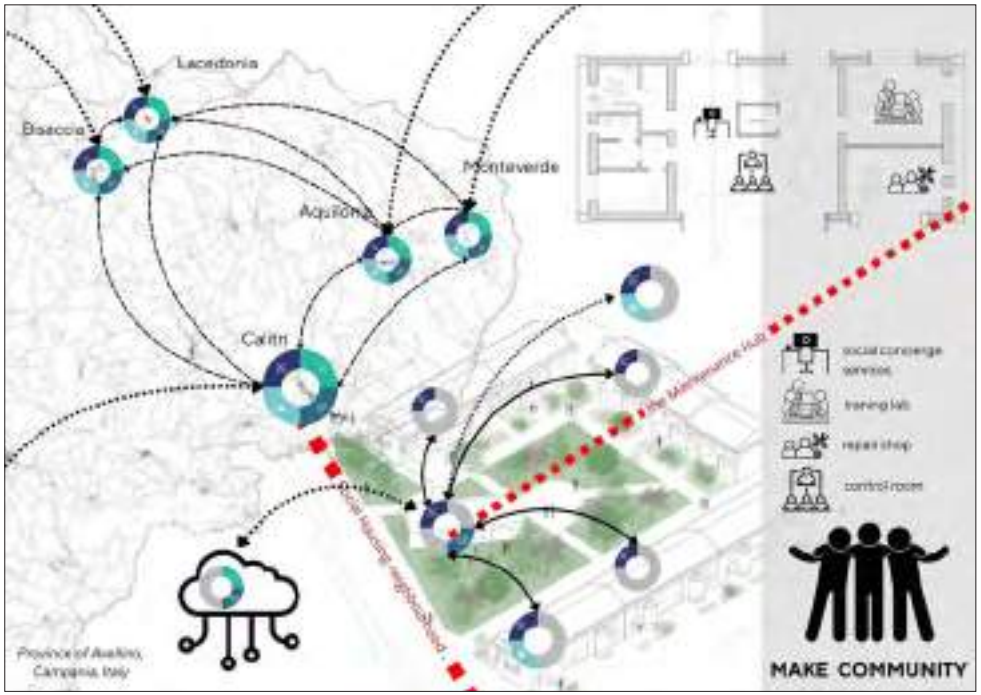

Fig. 1.
PINQuA project. The network of Social Housing Maintenance Hub (graphs prepared by the DiARC team).

Fig. 2.
PINQuA project. The main actors in the collaborative maintenance process.

"Ecopolitan areas" as post-metropolitan model towards the ecological transition

*Sandro Fabbro, Claudia Faraone**

In the late crisis of the metropolitan model[1], "ecopolitan" alternatives have been developing globally in different urban contexts and different forms. In Europe, the Ecopolis scenario is considered, by Espon[2], a scenario for the possible overcoming of Metropolis (the "city" of large cities) and Metapolis (the city of large flows). Furthermore, that of Ecopolis is not a trivial or illusory category: it has an important genealogy[3] and, in particular, in the last century it has continued, like the famous "old mole", to dig well[4]. We therefore analyse, together with the structure and dynamics of Ecopolis, the potential of its diffusion, primarily in the Italian territory, in order to pursue the so-called "ecological transition". To move towards this transition, a concrete and operational concept of "ecopolitan area" needs to be adopted, and its general physical-structural characteristics established. Secondly, there is the issue of the selection of the territorial contexts in which the ecopolitan area model can be applied. With reference to Italy, it is shown, on the one hand, that the ideal context for a systematic application of the ecopolitan model is made up of those intermediate territories of the country which are neither "metropolitan cities" nor "marginal areas". On the other hand, thanks to the exploration of the Italian territory data put forward in collaboration with the Italian Institute for Environmental Protection and Research (ISPRA)[5], it has become clear that at least 70% of the Italian territorial surface and 46% of its population are already included in ecopolitan-like contexts (see Fig. 1), even if they are currently neither recognized, nor valued as such. The desk geographical analysis focused on the territorial data inquiry of Italian Provinces, and it was based on eight relevant structural and spatial planning indicators[6]. Based on the ranking reported by each of the 93 Italian provinces, according to the specified indicators, a composite indicator (a super-indicator) of "ecopolitan performance" has been derived. The super-indicator can be clustered according to three classes of performance: A, B and C (depicted in Fig. 1):

- Class is grade A, when there are good/optimal rankings in structural indicators and presence of some elements of "sustainable spatial planning/governance" of territory and land use. It includes 15 Provinces, 8% of Italy's population and 18% of its surface area.
- Class is grade B when the Province does not fall into Class A but shows good/discrete rankings in terms of territorial structure and the presence of elements of "sustainable spatial planning" of the territory. Class B comes under what can be called average ecopolitan performance and includes 58 provinces, 37 percent of the Italian population and 53 percent of the Italian surface area.
- Class is grade C when provinces are neither grade A nor grade B. There are, in this

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1 See: Soja E. (2000) Postmetropolis: Critical Studies of Cities and Regions. Cambridge, Mass.: Blackwell. Soja E. (2011) 'Regional Urbanization and the End of the Metropolis Era', in in Bridge G. & Watson S. (eds.), The New Blackwell Companion to the City. Oxford: Wiley-Blackwell, pp. 679–689

2 See: Espon (2015) 'Territorial Scenarios for Europe. Working Paper. Annex to the ESPON Policy Brief "Territorial Scenarios for Europe towards 2050"'.

3 See: Fabbro S., Faraone C. (2023) "Verso la 'transizione ecologica': Ecopoli come visione e modello per il governo del territorio", in Moccia D., Sepe M. (ed), *Oltre il Futuro, pianificare nell'incertezza per progettare l'imprevedibilità*, INU Edizioni, Roma.

4 See: Faraone C. (2023) Genealogie ed evoluzioni della dimensione ecologica in urbanistica e pianificazione urbanistica in una prospettiva post-crescita in Tracce urbane. Rivista italiana transdisciplinare di studi urbani, V. 10 N. 14 E-ISSN 2532-6562

5 The Ispra research group included: Francesca Assennato, Angela Cimini, Nicola Riitano.

6 The eight indicators are: 1. a low level of urbanization of soils. Threshold: urbanized area is no greater than 15 percent of the total. 2. limited urban polarization. Threshold: polarization is not excessive when the main city has a resident population of less than half of the total resident population. 3. A not overdominance of the major center. Threshold: major city with population not more than twice the size of the second largest city. 4. A degree of polycentrism. Threshold: there is polycentrism if there are at least five urban centers with at least 10 thousand inhabitants each. 5. A positive, stable or not too negative population trend. Threshold: the % of resident population growing, or with population decrease, is less than the average of the Italian provinces. Indicators of spatial planning governance are: 6. extent of natural or semi-natural land compared to urbanized and cultivated area. Threshold: vastness is appreciable if the land neither urbanized nor cultivated is at least 40 percent of the entire non-urbanized area. 7. Anthropogenic stewardship of ecosystem services. Threshold: preservation is good if at least 40% of the total resident population resides in scattered centers with less than 10 thousand inhabitants each. 8. sustainable land use. Threshold: land consumption is sustainable if it is correlated with population growth (there is positive correlation between rate of land consumption and rate of population change).

Ecopolitan performance class grades of Italian Provinces.

case, modest or poor ecopolitan land resources/supplies, and weak or absent states of "sustainable spatial planning". Class C includes 20 provinces, 18 percent of Italy's population and 14 percent of Italian surface area.

Figure 1 shows cartographic and numerical evidence of the Italian provinces that belong to the three ecopolitan classes A, B and C, together with the same evidence concerning the metropolitan cities. All the provinces that rank in Classes A and B display distinct ecopolitan structural characteristics, and thus clearly identify the Country's ecopolitan areas. Ecopolitan areas represent the largest part of the Italian territory (71%) and population (45%) but they have no political-institutional recognition devoted to this purpose since the Provinces, which represent them, are an institution that appears to be, today, largely depowered and with old functions that need to be redefined. The provincial authority, therefore, is today at the center of a paradox that, sooner or later, national policy will have to address: it turns out to be far distant from what would be needed to regulate the ecopolitan area but, at the same time, also the one that best complies, ontologically, with the structural characteristics of the ecopolitan area itself. We have reason to believe, therefore, that only a reform of this institution in an ecopolitan perspective can, on the one hand, give an energetic push to the ecological transition of the Italian territory and, on the other hand, restore a highly respectable political meaning to an authority that, otherwise, is destined to an inevitable decline.

We conclude claiming that the Italian "Governo del Territorio" should be based on an institutional organization of the territory capable of taking ecological transition and ecopolitan areas in great consideration. In particular, we propose a reform of the Provincial body so that it would be equipped, as its first mission, with the task of promoting the ecological transition of provincial areas through ecopolitan planning modalities[7].

[7] All these theses are developed in the book currently in print: Fabbro S. (2024) "Postmetropoli e Aree Ecopolitane, Dall'Urbanistica al Governo del Territorio nell'Epoca della Transizione Eologica", with contributions from Silvio Cristiano, Claudia Faraone, Giulia Fini, Marcello Modica and ISPRA Research Group (Francesca Assennato, Angela Cimini, Nicola Riitano). Preface by Patrizia Gabellini.

Early school leaving and family risk factor

Melania Verde, Grazia Falzarano***

The *early school leaving* is the lack, incomplete or irregular use of education and training services by young people of school age. The European Union estimates that the rate of school dropout will be below 9% by 2030. In the last decade, 2012-2022, according to Eurostat data, the European trend of young people aged 18-24, who have not completed the second cycle of studies and who are not engaged in vocational courses (Elet, Early Leavers from Education and Training), has been regularly decreasing (about 3.0 percentage points of the total).
The aim of the paper is to stress that the aggregated data minimize the problem of the early school leaving.

In order to understand the completeness of the phenomenon it is necessary to analyse the disaggregated data.

At European and national level, despite the positive trend, two aspects should not be underestimated:
The strong weight of *internal disparities* (9,6% is the European average,15,1% is the average of the South of Italy -2022). In the year 2022, 18 European Countries are below the European target, on the other hand 9 countries are still above the 9%.

Romania and Spain have the highest rate of school dropout. Followed by Hungary and Germany, in third and fourth place respectively. Italy in fifth place. In 2022 the rate of school dropout, of 11,5%, in Italy remains above the European average (of 9,6%). In addition, territorial gaps remain large, in 2022 the early school leaving, before the completion of upper secondary education and training course, affected the 15,1% of young people aged 18-24 in the South Italy, the 9,9% in the North and the 8,2% in the Centre of Italy. In particular, in accordance with Istat data, in 2022 in two regions, Sicily and Campania, more than 15% of young people have left school before the time. In the island the share closes to 19%, whereas in Campania drops to 16,1%.

The *lack of skills* of those who attend but do not learn. Or they learn badly, little or irregularly; this condition is frequent where the socio-economic status is medium-low. As it is known, the phenomenon under consideration is the result of a number of factors, including individual and especially family risks factors (Cannari and D'Alessio 2018; Invalsi aperti,2020). In other terms, the condition of socio-economic, educational and cultural poverty of the family certainly fosters the early school leaving but, at the same time, the school dropout has a strong impact on the general educational impoverishment of the individual (Verde, Falzarano, 2023).

De facto, in all European countries low levels of socio-economic status are linked to high rates of poor skills. In line with the latest report of the European Commission (2022) on the achievement of competencies (Eu-level targets), the level of "poor skills" (Combined underachievement in Reading, Maths and Science) is very high in some countries, furthermore, it is more marked, up to six times more, for those who come from a disadvantage socio-economic background. In all European countries, therefore, low levels of socio-economic status are accompanied by high percentages in terms of poor skills. Romania and Bulgaria are countries characterised by the widest gap in terms of reduced skills depending on the socio-economic status (about 30% on the average); countries like Estonia and Finland, on the contrary, register the lowest level of poor skills (an average less than 10%). In Italy the average is 4.1, with the European average of 5.6.

According to Invalsi data, nevertheless, in Italy the percentages of inadequate skills is 44,1% in 2023 (40,1% in 2018) (ASVIS report 2023). Also in this respect, as regards the Italian panorama, there are considerable differences between the regions of the North and those of the South. The pupils with difficulties in achieving adequate preparation are still numerous, (in Campania there is 25% of students in difficulties (2019/2020 at the end of lower secondary school) (Garante dell' Infanzia, report 2022).

In conclusion, the overall improvement, recorded in recent years at European and national level, of early school leaving should not cause neglect of wide disparities within the countries, both at European level and in our country. Furthermore, while the implicit dropout decreases, the explicit one increases after Covid pandemic. Namely, the students who, after completing the studies, do not achieve adequate skills. An extremely visible phenomenon especially among students with socio-economic and cultural disadvantage. The condition of socio-economic, cultural and educational poverty of the family to which they belong very frequently represents the main "barrier" for a student, feeds (and does not contrast) the early school leaving.

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Fig. 1.
Source: Eurostat 2023.

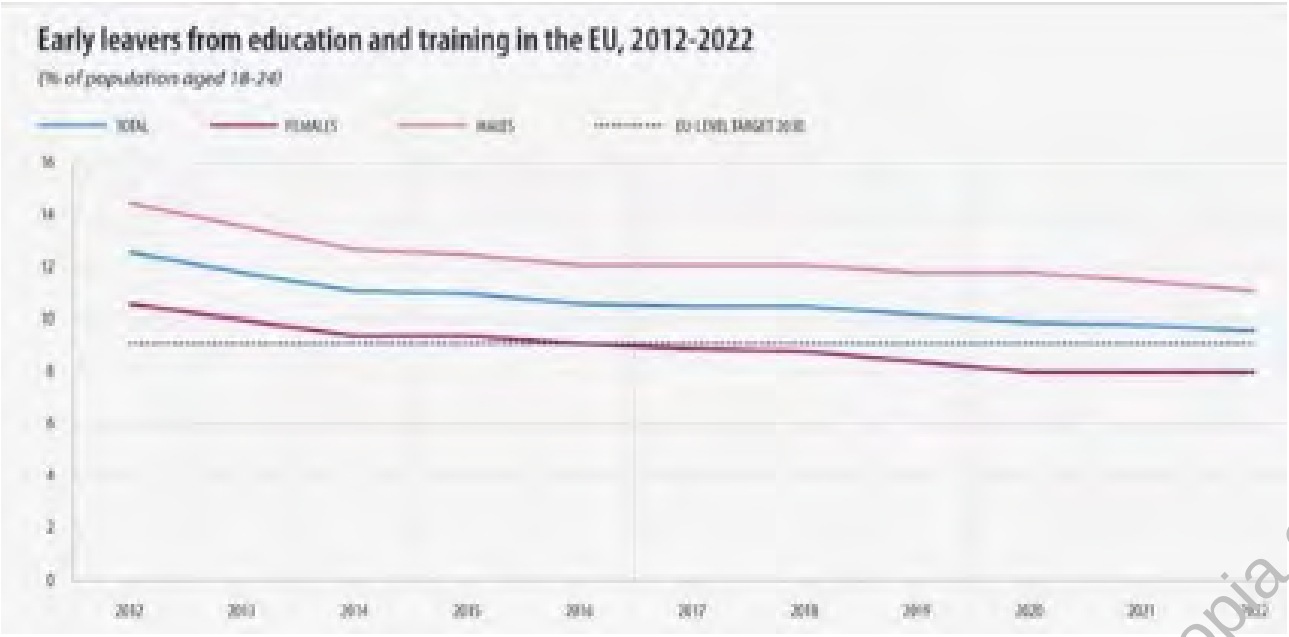

Fig. 2
Source: Eurostat 2023.

Territorial regeneration in non-metropolitan urban regions

A proposal for definition, strategies, and tools of intervention

Giulia Fini, Marcello Modica***

During the last three-to-four decades, urban regeneration has established itself as an 'umbrella' definition for a set of very different planning-oriented interventions on the built environment in predominantly dense urban contexts. These intervention typologies are mainly driven by real-estate developments and realized through the physical transformation of sites and districts aiming at improving living conditions and socioeconomic wellbeing. At the same time, the pressure of ecological discourses such as the scarcity of resources (soil consumption, urban metabolism, etc.) and the impact of climate crisis on the inhabited land are pushing for broader and system-oriented regeneration approaches capable of dealing more with the territorial transition rather than urban transformation. Such a demand is especially felt in those 'peripheral territories' away from metropolitan core areas, whose structure is characterized by widespread urbanization patterns, significant urban-rural linkages and also a limited economic and infrastructural relevance. In the context of the current post carbon transition – and in line with EU policies setting ambitious goals at 2050 in many ways related to territorial sustainability these non-metropolitan regions are increasingly faced with the question of re-organizing their wide-scale spatial structures towards a renewed ecological, social and economic equilibrium. A valuable yet unexplored path towards a feasible planning solution could be to transpose and adapt the concept of 'regeneration' on the scale of the territory. Being not a mere spatial upscale of the traditional 'urban regeneration' approach, 'territorial regeneration' can be thus defined as an integrated restructuring process of interrelated urban and rural systems and their living infrastructures. Specifically, territorial regeneration: (i) addresses the systemic and structural conditions of the territory through a comprehensive, multi-sectoral approach; (ii) replaces real-estate driven developments with a community (collective and political) strategic agreement implemented through 'territorial plans' (dealing with the regional level) and 'territorial projects' (addressed on local level); (iii) is shaped by a few structural 'drivers' such as energy, digitalization, sustainable mobility and ecosystem services. With such characteristics and aims, territorial regeneration sets itself into an interdisciplinary path of regional and spatial design that, by considering territory as a renewable resource, uses ecological thinking and metabolic approaches to pursue continuous adaptation to circumstances: i.e. from territorial recycling to landscape urbanism, through territorial transition design approaches. Operationally speaking, we propose territorial regeneration as a spatial planning strategy builds around ten possible axes of intervention to be declined in the specific contexts: 1) the creation of a regional-wide green infrastructure including the conservation of ecological hotspots, the remediation of critical areas and the improvement of connectivity between urban and non-urban areas; 2) the drastic containment of land take through actions of building/environmental amelioration on the existing built-up areas; 3) the expansion of ecosystem service provision through renaturation of abandoned or marginal spaces; 4) the increase of renewable energy production through the establishment of 'energy communities' and 'energy islands'; 5) the boost of digital infrastructure in disadvantages and peripheral areas, such as mountain valleys; 6) the improvement of sustainable mobility by providing an extensive network of accessible public transport on the regional scale and a slow mobility network at the local scale; 6) the increase of life quality in small and large urban areas through service provision; 7) the environmental and spatial improvement of productive areas of regional importance through multifunctionality, energy adaption and landscaping; 8) the empowering of regional-wide tourism offer and cultural services through specific branding strategies; 10) the activation of new economic policies towards circularity of the built environment. By applying the concept of territorial regeneration to a real-world territory represented by the Italian region of Friuli-Venezia Giulia (1.2 million inhabitants, density 150/km2, polycentric urban system with no metropolitan areas), the research conducted at the University of Udine, DPIA Department, is currently providing useful insights on operational and implementation aspects. Preliminary results indicates that territorial regeneration, as explained in this short essay and other authors' references, represents a novel and adequate strategy for non-metropolitan regions at the interface between urban and rural dimensions. Specific planning tools, capable of codifying and applying regeneration principles at the appropriate scale, are yet to be developed, as the traditional planning system still focuses much on the urban and municipal levels. The research thus identifies different and possibly integrating options: a) "territorial projects" (progetti di territorio), a programmatic local 'landing' of regeneration axis of intervention; b) "regeneration communities" (comunità di lavoro per la rigenerazione territoriale), as participatory and activation platforms to sustain territorial projects and the ultimate implementation of regeneration also through sub-types of communities

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(energy, green, mobility, etc.); c) a regional framework plan to set long-term transition and regeneration goals. The searching, shaping and codification of these operational strategies, experimentally conducted in our research on representative territorial 'transects' and 'situations', is providing an extraordinary discussion base for developing territorial regeneration as a new, alternative planning perspective on non-metropolitan living contexts.

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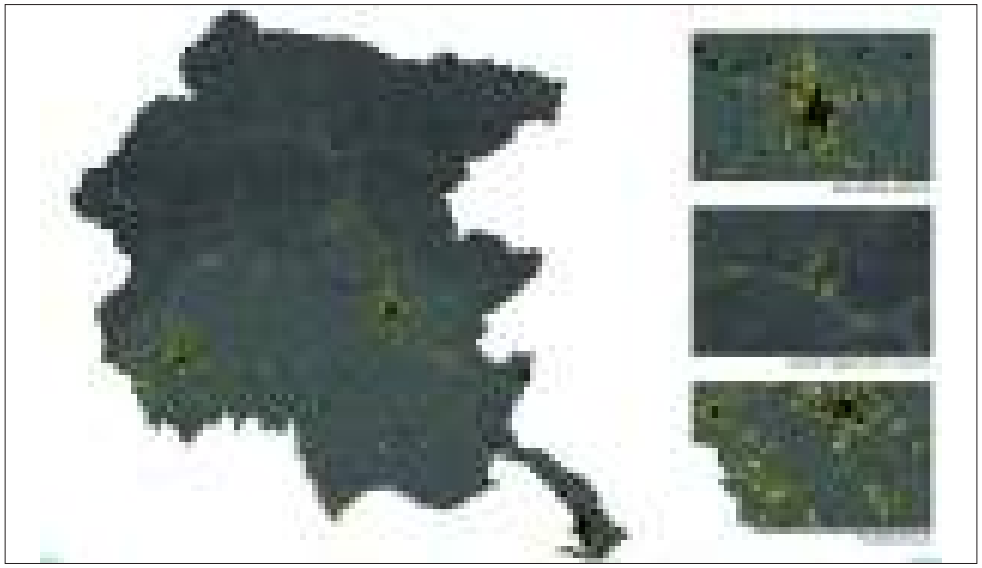

Fig. 1
Structurally weak urban expansions developed in the second half of the XX century.

Fig. 2
Territorial transects as an intermediate scale of analysis and intervention.

Regeneration of fragile territories through the reactivation of local communities: a review of Italian best practices

Valeria Lingua, Valeria Francioli***

Within contemporary cities, many experiments involving various social actors in urban policies and several reflections about the quality and the sustainability of our lifestyle in urban contexts are fueling projects and ideas for renewing and regenerating the city. However, in contrast with this panorama, in a context of rarefied urbanity, it seems urgent to focus on how this bottom-up involvement can take place and, especially, how it can improve the debate on the regeneration of fragile territories. As a matter of fact, 52% of Italian municipalities fall in Rural Areas, fragile contexts characterized by demographic decline, lack of technological innovation and a significant distance from the main poles of essential services (health, instruction and mobility) that also hold a huge availability of both environmental resources and cultural heritage. The National Strategy for Inner Areas (SNAI) focuses both on the restoration of primary services and on the strengths of every singular spatial region to guarantee the enhancement of these areas and the attractiveness for new stakeholders. This contribution aims at identifying best practices of community regeneration with a high transferability index in the national context, as part of a research project involving a National Network of small towns. We propose an initial categorization into seven main macro-topics: Social inclusion, Economic growth, Heritage renovation, Cultural stimulation, Mobility connection, Smart innovation and Sustainable tourism. Whitin this preliminary research phase, we put in comparison different case-studies responding to these latter qualitative criteria in the best way. Exploring the dynamics of how projects can promote the engagement of local communities, exemplary projects can be recognized in those who promoted neighborhood mutual help dynamics with the creation of Community Cooperatives, re-introducing new essential services, as the virtuous example of Ostana and its Welfare House, or new forms of democracy like Food Communities (ex. in Garfagnana, Tuscany), which permits the mutual help between farmers and less wealthy citizens with a facilitated food supply and with non-monetary exchange systems. Social regeneration takes place also with the integration of new inhabitants (ex. new inhabitants from the core-areas or migrants), teaching them to pick up what has been left, re-discover old jobs and traditions and permit them to stay – or to come back – to these "lands of nobody". The NEO Experience, guided by a group of youngers in the Abruzzo Region, or the Community Mill in Castiglione d'Otranto (Apulia) from the volunteering association "Casa delle Agricolture" are virtuous projects based on "old new jobs" finalized to invert the trend of abandonment of these fragile territories. Many projects have started from a public-private partnership in order to increase the presence of private actors, but many others grew up as spontaneous ideas, while others were born as forms of self-government and grew up with forms of self-production and self-financing, also renewing historical heritage in order to host new economic and cultural activities. Priority questions emerge within the sustainable renewal of buildings in small villages: looking forward to a post-recovery fund future, which actions led to an effective and more sustainable building regeneration? Moreover, according to the need of calibration of sustainable touristic offers on the identity of the place, how these new forms of hospitality must be organized? It's evident that a new form of tourism must be promoted, starting from the local traditions and a more experiential kind of journey, that binds tourists to the local communities and the traditions: for example, in Alta Langa the agricultural sector is deeply connected with the touristic experiences, offering products and practices in the vineyards as a form of hospitality and enhancement of the local resources. The physical renovation of inland areas must coincide with an infrastructural innovation, both in terms of transports and network. In particular, the livability of these context must be improved with a better internet connection, in order to increase the percentage of remote workers and the coworking practice, but also transports must be improved in order to increase the accessibility of these context (reactivate dismissed railways for touristic use or as bike and trekking paths, by increasing the public transport with electrical vehicles). Here is a short kick off for the elaboration of a collection of national practices concerning the sustainable regeneration of small villages in inland areas. In the light of the above, the progress of this research is finalized to elaborate a national index of sustainable practices of renovation in order to encourage community projects targeted to offer or reactivate essential services, fuel economic growth, and the consequent repopulation to counteract the phenomenon of abandonment of Rural Areas.

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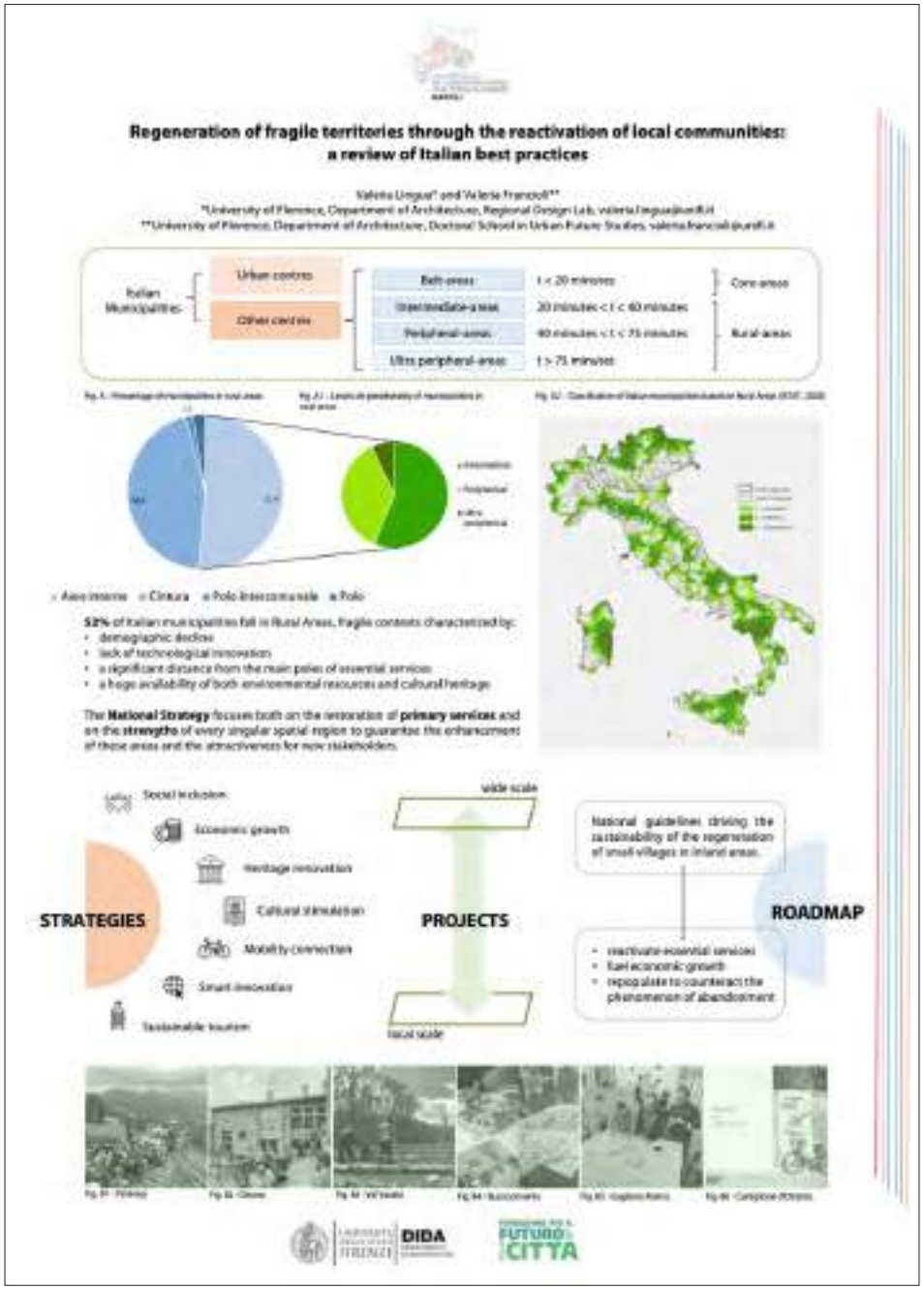

New actors and infrastructures for the Economic & Spatial inclusion and innovation within the European Research Area

A mapping in Italy and in Veneto Region

Vito Garramone, Carlo Federico Dall'Omo** and Francesco Musco***

Italy, in the last decades, focused on innovation policies and Smart Specialization Strategies-S3 (1) (2) (3), inside the European Research Area-ERA (starting from 2000). To reduce its gap from the most technologically developed European regions, Italy worked at enriching its local, regional, and national productive fabric with some innovation networks, hubs and infrastructures (especially research infrastructures-RIs). The efforts have been focused on economic, (technological) thematic, social, and spatial integration between government, production, research, and society, with a view to the Triple-Quadruple-Quintuple Helix approach (4) (5) (6) and a renewed governance at different levels.

To define «the "New ERA" as a researchers-centred, value-based, excellence as well as impact-driven area, in which researchers, knowledge and technology are supported and can circulate freely» (Council of EU conclusion 13567/20, 1 December 2020, p. 5), it is therefore relevant to build a greater network of actors and infrastructures capable of supporting the policies, strategies, programs, plans, projects and actions of public governments at various levels, but especially at regional and local levels, as well as supporting actions in the "soft space" (7) (8) (9), with a "soft planning" and/or functional approach (10) (11) (12) (9) (13). In fact, relevant aspects were cross-border cooperation, continent-wide competition, a critical mass (a critical mass of financial and human resources but also actors and infrastructures) and coordination (governance), and the improvement of national research policies and systems.

Beside Infrastructures for Digital Transformation (IDTs) – defined as technologic infrastructures –, Research Infrastructures (RIs) are defined as a complex system of «facilities, single-sited, distributed, or virtual, that provide resources and services for research communities to conduct research and foster innovation [... that] can include: major scientific equipment or sets of instruments; collections, archives or scientific data; computing systems and communication networks; any other research and innovation infrastructure of a unique nature which is open to external users» (EC site on RIs[1]). At EU level, the majority of RIs are grid network-type of infrastructures with a legal status of Consortium (ERIC-European Research Infrastructure Consortium). In Italy there are 131 (GRID-type) network-RIs (The Italian National Plan of Research infrastructures 2021-27), 21 of them were defined as global level (IR-G), 60 as community level and another 50 RIs as national level. In Veneto Region, 11 RIs (14 RIs, 3 of them European level).

About the actors, ERA considers as "centres of excellence" relevant single actors or grid network-type actors, very often connected to the S3. Among them, important networks of actors are the Digital Innovation Hub-DIHs (14) and Competence Centres-CC. DIHs are a European means of supporting SMEs, under the Digitizing European Industry strategy (DEI) launched in 2016, for facilitating the Digital transformation through technology infrastructure that provides access to the latest knowledge, expertise, and technology. DIHs act as a proximity link, as one of the first regional points of contact and as regional multi-partners (industry and artisan associations, chambers of commerce, incubators/accelerators, universities, regional development agencies, etc.) (14). In the EU there are 226 DIHs entities (EC site on DIHs[2]), in Italy 37 (Italian government site on DIHs[3]) and 1 in Veneto Region. The CCs are the Italian answer to Industry 4.0 transformations (new industrial revolution). They are public-private partnerships (with a strong Helix Academia-Industry) whose task is to carry out orientation and training activities for companies (with different Italian regional networks and catchment areas) on Industry 4.0 issues, as well as to support in the implementation of innovation, industrial research, and experimental development projects, through advanced technologies. Eight national competence centres were selected in 2018 via tender (1 in Veneto region). But at regional level there are other industrial and economic key players, overall, in Veneto Region, which are the Industrial Districts-IDs and Regional Innovative Clusters-RICs. The IDs are historical and place-based form of aggregation between enterprises. In Italy, IDs were an important agent of changes around the Sixties. The RICs are aggregations of enterprises and public and private entities present of the same regional area (but not necessarily territorially contiguous), which operate in some innovative fields with an open multi-sectors approach and with a strong relation to the S3. In Veneto Region, there are 15 IDs and 21 RICs.

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1 https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/european-research-infrastructures_en
2 https://european-digital-innovation-hubs.ec.europa.eu/
3 https://www.mimit.gov.it/it/impresa/competitivita-e-nuove-imprese/poli-di-innovazione-digitale/edih#edih

All the actors and infrastructures are relevant source of knowledge, competences and resources for policies, strategies, programs, plans, projects, and actions finalized for the Economic & Spatial inclusion and innovation within ERA, essential ingredients for effective strategic planning.

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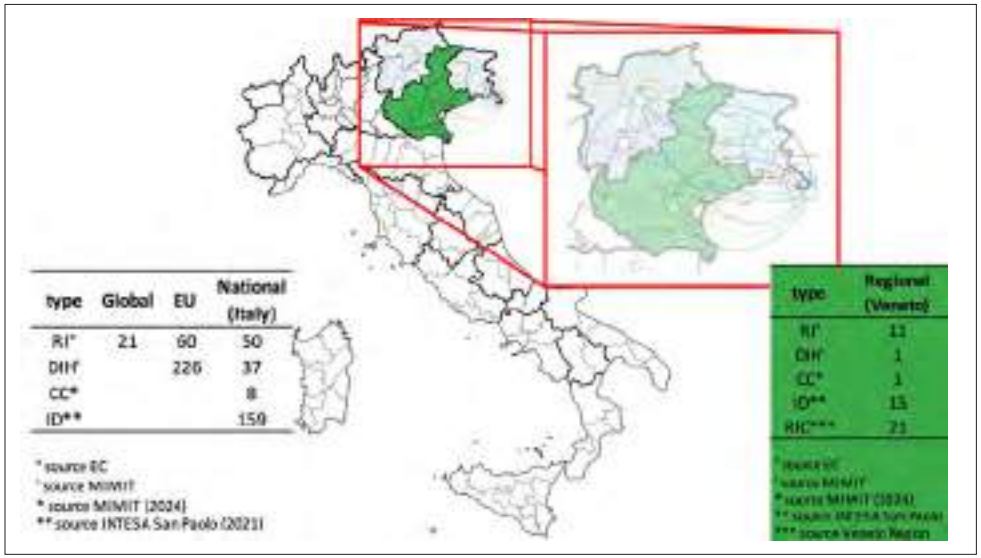

Fig. 1.
New actors and infrastructures for the Economic & Spatial inclusion and innovation in Italy and in Veneto Region.

Exploring Tourism Ecosystem in planning practice

Rachele Vanessa Gatto, Simone Corrado*, Giovanna Andrulli*, Carmen Ligrani*, Maria Teresa Ferrarese*, Teresa Palladino*, Francesca Perrone**, Francesco Scorza**

Despite efforts by various entities and governments to promote sustainable tourism, it emerges a fragmented framework for developing such strategies in an effective and sustainable territorial development scenario. This gap impedes effective information exchange, comparison of approaches, and sharing of insights within the tourism industry. Emphasizing sustainability as a focal point, the proposed approach stands as a crucial tool for supporting territorial planning development. The theoretical and analytical framework to identify specialized tourism ecosystem, part of the research project pilot project conducted by Gatto and Scorza is implemented in the selected case study offering a thorough comprehension of the spatial analysis involved in delineating and overseeing tourist systems at the territorial level. The proposed methodology unfolds in two phases. The first phase involves analyzing the specialized adventure tourism system in the Vulture area of Basilicata region. Such territorial assets are central in the regional development policies related to rehabilitation actions of in-land rural areas. The taxonomy proposed in the analytical framework structures the analysis of the area. Tt emerged that the accessibility sector (15%) appears weaker compared to the attractions (39%) and services (46%) sectors, which are more or less balanced. From stakeholder and SWOT analyses, it is evident that the natural, scenic, and cultural potential provided by the Vulture area contrasts with the lack of valorization of the territory itself. Additionally, it presents an organized system of protected areas (Natura 2000 Network), excellent quality-to-price ratio of local services, and a local tourist identity. Under the lands of the downscaling of the New Urban Agenda (NUA) key sustainability dimensions were extracted: Planning for Persons with Disabilities, Job Creation and Means of Transport, Biodiversity and Ecosystem Conservation, Transport and Mobility, Culture, and Health. The second phase rely in the design of action for strategic tourism planning based on two categories. The Hard Measures are structured in: Transportation and Mobility – Implementation of cable cars, car sharing, bike sharing, carpooling, and electric shuttle systems. Energy – Adoption of renewable energy sources, including solar and electric power for transportation. Water and Sanitation – Revitalization and utilization of existing water sources. The Soft Measures includes: Culture – Implementation of QR codes providing information on biodiversity. Human Health-Encouragement of direct contact with nature and management of environmental impacts generated by interventions. Technology and Innovation – Introduction of zero-impact mobility options, implementation of resilient and efficient sustainable interventions. The result is a territorial intervention plan comparable with other running projects of the same study-area highlighting the alternative perspective for sustainable development centered on residents' and tourists' well-being. The proposed approach, based on the "tourism ecosystem" framework, represents an enabling platform to support tourism policies and multi-stakeholder's decision making in planning public investments for tourism development according to a more effective and more sustainable perspective. Despite the general narrative included in current regional development programs addressing the inland areas development by the means of tourism, proposing new public investments in territorial attractors, facilities and services, an affective place-based assessment of local tourism ecosystems could reinforce both the quality of the territorial design and the effectiveness of territorial income derived from local tourism chains. The recent national policy "Borghi-call by Italian ministry of culture" distributing major investments (20 Mln € per project) on targeted competitive projects assessed out of a robust monitoring impact matrix allowing to compare different regions and designs, demonstrates in the selected case study how better targeted impacts according to tourism ecosystem approach could be gathered with minor public investments. It is a preliminary conclusion that opens to a wider debate on the relevance of tourism as a flywheel of local development everywhere, independently from specific place based structural features to be deeply analyzed in order to ensure the effectiveness of a specific investment policy. It represents a core issue for planning disciplines and the future mainstream policies and programs could deeply benefit from the proposed structured approach intended as a Decision Support System.

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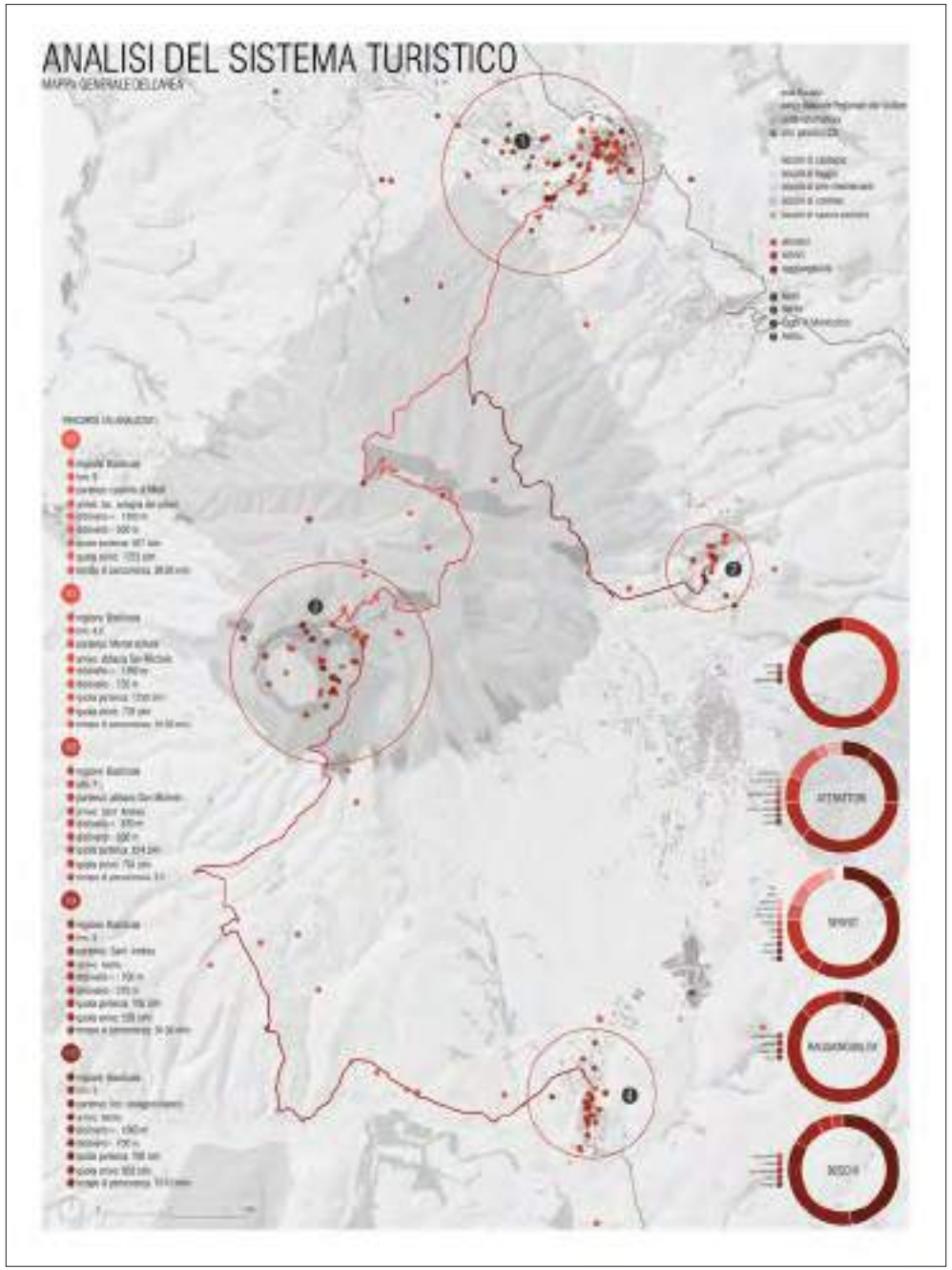

Fig. 1.
Tourism ecosystem.

Inter-municipal plan for an inner area
An experiment for fourteen municipalities in Garfagnana, Tuscany

Benedetta Biaggini, Giannino Biaggini**, Riccardo Luca Breschi***, Andrea Giraldi*****

Some European states, such as France, Italy and, in part, Spain, with their laws pursue ideals in which metropolitan cities have a preponderant role as territorial poles[1]. This model, at least in Italy after an incomplete administrative reform, has generated the risk of a weakening of regional planning in non-metropolitan territories. The Tuscany Region, with its Regional Landscape Plan has given a more in-depth reading, treating Tuscany as a polycentric city-region, where the core urban and metropolitan areas and the less populated green belts are faces of the same coin. Moreover, the Tuscany Region is promoting policies of inter-municipal planning, as an advanced form of local planning, for a more efficient management of the planning practice and to avoid the fragmentation of the strategies. After a first phase of experimentation relating to the Inter-municipal Structural Plans (ISPs, kind of strategic plans), the Region has promoted a season of Inter-municipal Operational Plans (IOPs, which define in detail the actions implemented by municipalities for a five-year time frame, in line with the addresses of ISPs) aiming at a more unified vision and language in a traditionally fragmented field. The Union of Municipalities (Unione dei Comuni) of Garfagnana, consisting of 14 municipalities in an inner area between the Apennines and the Apuan Alps, has taken up the challenge of planning at an inter-municipal level, first with an ISP and after experiencing a coordinated IOP for 14 municipalities. The formula followed sees the coexistence of different levels of planning. From one side, an interdisciplinary planning group has formulated a framework of reference and coordinated the plan. On the other side, local planners, delegated by individual municipalities, have articulated and declined the shared structure of the plan at local level. The coordination group has laid down rules applicable to all 14 municipalities, and a single legend for cartographies, translating the morphotypological interpretation of the territory proper to the ISP, borrowed from the Regional Landscape Plan (PIT-PPR).

A prerequisite for this cooperative governance was the attribution, from the municipalities to the Unione dei Comuni, of the fundamental function of Urban Planning (2.). Among the 14 municipalities of the Union, 13 have less than 5000 inhabitants (of which 3 less than 1000 and only 1 more than 3000): these municipalities are obliged to the associated management of all functions. This does not oblige the inter-municipal planning, but contributes, together with funding for the drafting of inter-municipal plans by the Tuscany Region, to the promotion of a level of voluntary participation to a form of cooperative planning. This constitutes a response to the limited success of incentives for voluntary fusions between municipalities and counterbalances the weakening of Provinces and the strengthening of Metropolitan Cities: indeed, while the core areas of the city region are supported by stronger policies and plans, there is a lack of a complementary coordinated planning for green belts (3.), often consisting of abandoned inner areas.

The result of the experiment in Garfagnana offers multiple aspects of interest. 1) a renewal of the planning process: the plan design and the involved actors are characterized by different planners with a certain degree of autonomy, drawing a common scenario with a shared palette; 2) a shared regulative frame for all administrative areas, as the main tool of this orchestration, that will permit a more efficient actuation of the plan; 3) a shared strategy, stronger than the previous fragmented ones, defined with a pragmatic and fair balance that allows not to renounce the peculiarities of each reality; 4) a participatory process, not without criticality, enriched by the comparison between different technical and political approaches, oriented to a common target; 5) a renewal of the scale at which a community defines its vision: each municipality governs its territory independently, taking into account, however, those with whom it shares the strategies, in harmony with the guidelines expressed by regional planning; 6) the strengthening of a marginalised inner area, through the joint actions of different municipalities, encouraging the development of territorial strategies for inner areas, seen as a coordinated belt that can cooperate with the core urban and metropolitan areas, as part of the same Tuscan city-region.

The unification of planning language, starting from the regional landscape plan to the local scale, and back from the local scale to the regional level, follows the ambitious ideal of a territory in which all the part, not only the metropolitan areas, define Tuscany as a city-region.

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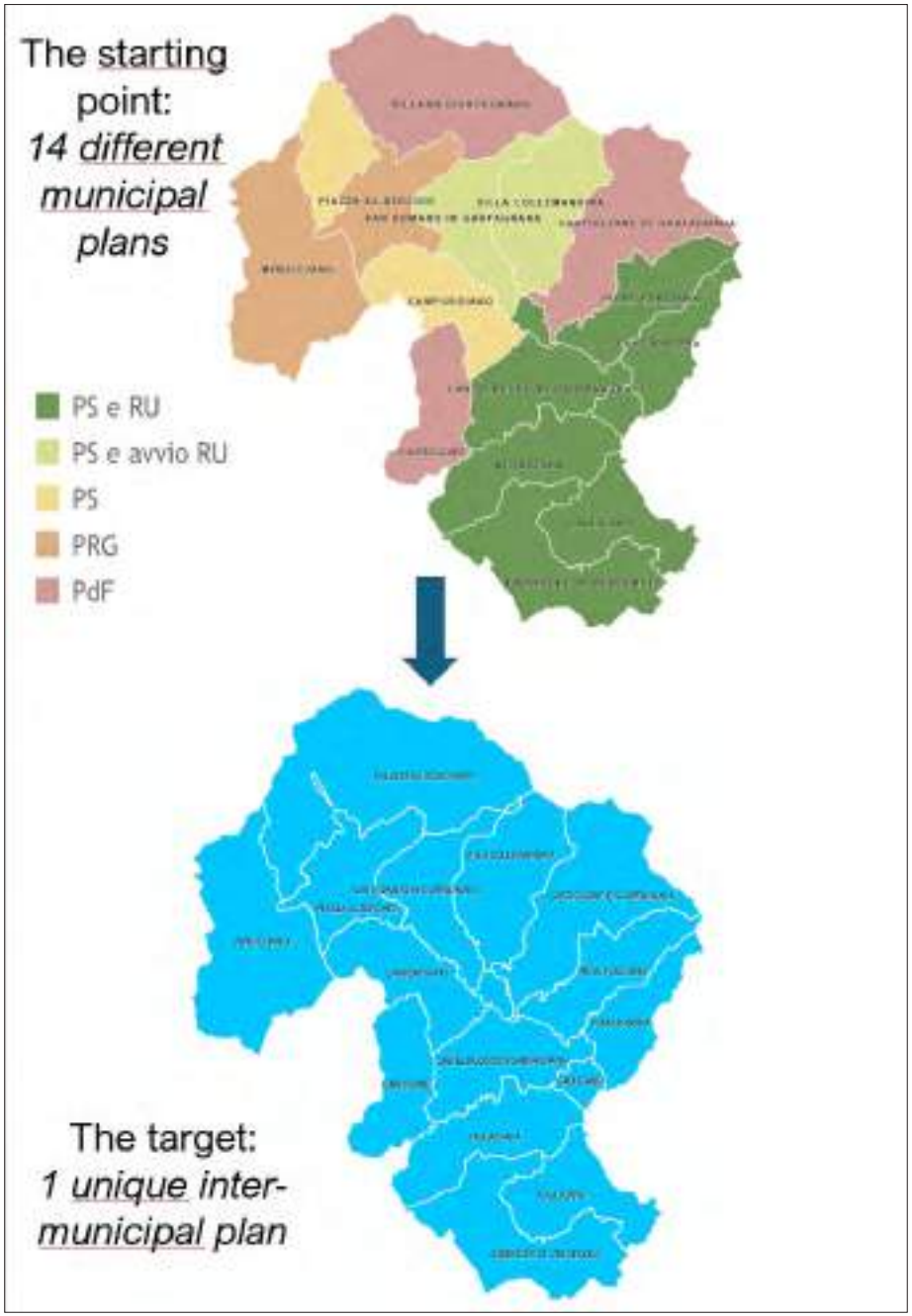

Fig. 1
State of the art of municipal planning before and after the inter-municipal plan in Garfagnana.

Insular regions and MaaS concept Assessing spatial accessibility in Sardinia (Italy)

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Multiple and permanent disadvantages and social inequalities often make insular contexts more vulnerable to contingent and structural phenomena. The principle of insularity, which is already recognized in EU legislation and in the Italian constitution, requires specific policies to face the regional disparity condition. This is the case of the Autonomous Region of Sardinia (Italy), one of the largest islands in Italy (third in Italy), that represents an interesting case study. As a matter of fact, despite numerous attempts to guarantee territorial continuity, the geographical isolation still represents the greatest cost for the population of over 1,500,000 inhabitants (2023). Here, the regional disparities can be correlated to a weak extra and intra-territorial continuity (mutually shaped), due to significant gaps in transport policies (air and maritime), as well as in infrastructure and supply for internal mobility (Fig. 1). Furthermore, similarly to the national scenario, demographic decline, and the aging of the population, especially in the inner areas, represent further regional issues closely connected with territorial continuity (extra and intra). Therefore, the quality of transport infrastructures and services (road, rail, maritime, and air transport) becomes a determining factor in reducing travel times, improving internal connectivity, and guaranteeing the right to mobility of the settled communities and city users. Regional issues and regional disparity are at the core of the "e.INS – Ecosystem of Innovation for Next Generation Sardinia" project***, which proposes a methodological approach to improve the transport offer to and from Sardinia and within the regional territory by Mobility as a Service (MaaS) solutions.

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It is estimated that the most densely populated areas show greater propensity to develop and use MaaS solutions in their conventional formulation, thanks to the high travel demand, the more feasible integration of available modal alternatives and the economic convenience of both public and private operators. However, the implementation of MaaS systems in areas with low population density, such as most Sardinian municipalities, may be further investigated and requires the redefinition of the organizational and management conditions of the consolidated model. In these contexts, accessibility is mainly guaranteed by the private transport system, while the provision of public transport is rare or limited to a few time slots throughout the day or seasons. Therefore, interchange is almost always compulsory. The opportunity to provide a system that facilitates the planning of travel from the origin to the destination, including the booking and purchase of services, is equally useful and advantageous in peripheral areas to reduce the mobility device (low levels of spatial accessibility, loss of motor skill that often accompanies aging and reduced other skills). Furthermore, recent experiences demonstrate that the organization of mobility can produce innovation and positive effects on local economies, creating the opportunity to experiment with innovative forms of organizing services, thus increasing the attractiveness of places, in line with sustainability objectives.

In this sense, the development of a multidimensional accessibility indicator to assess level of accessibility to transport infrastructures, services, facilities, and tourism destinations within a given time (t max) and by a specific mode of transport, considering human, economic and environmental aspects, is among the main objectives of the e.INS project (Fig. 2). The focus is on accessibility to Sardinia airports, the main gateways in the island context, where the passenger traffic is concentrated. In 2023, passenger movements (arrivals and departures) at Sardinian airports were over 9 million, compared to around 5 million recorded at the ports. The methodology consists of 3 stages dedicated to the development of: a multilevel geodatabase concerning the offer of transport infrastructure and services, land use and urban and territorial facilities (Stage I); a transport model, i.e. a demand and supply model for sustainable multimodal transport to/from Sardinia's airports for local community, city user, tourists, which also contemplates the seasonal nature of the tourism consolidated in the Island (Stage II), a MaaS solution to the entire regional transport system to encourage the transfer of shares of transport demand from private vehicles to more sustainable multimodal mobility, with particular attention to the promotion of integrated services with a single tariff (Stage III).

Fig. 1.
The Autonomous Region of Sardinia (ARS), Italy. Mobility gaps and challenges.

Fig. 2.
The "e.INS" project. Objectives and methodology.

Observing the youth housing crisis

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In Italy the continuing disorientation of housing policies and the lack of a strategic vision, particularly with public housing (Wolfgring 2023), left at the market all the answers at the problem. Rising housing costs, (with forms of property rent speculation and high energy costs of the period) now determines a relevant problem of housing affordability (Bricocoli and Peverini 2023). The consequence is the exacerbation of a housing crisis that exposes low- and middle-income social groups and the growth of forms of marginalization, segregation and economic inaccessibility that undermine "the right to the city". Housing affordability touches individuals differentially, depending on household composition, income, and living context. However for young people the cost and quality of housing strongly conditions social inclusion. Affordable housing is more important for young people's mobility (spatially and otherwise), as it is the condition that allows them to seek the best job or educational opportunities. Young people's difficulty in securing adequate housing is delineating a generation gap, with an increasing share of them forced to live with their original household. In the Italian context, the way in which the housing crisis touches younger individuals is so relevant that their housing future is in question. The target's lack of economic independence conditions housing independence, aggravating the situation of the family of origin and limiting access to tertiary education, especially for those from peripheral or economically and socially disadvantaged backgrounds. In fact, 68% of university students in Italy live with their parents, compared to the European average of 34%. Only 5 percent have accommodation in a university residence, against a European average of students with a bed in a residence of 17 percent (Eurostudent 2021). In the face of the perplexities that affect national policies on student residency (L. n.338/2000 and its implementing decrees) (Gainsworth and Peverini 2022), the present work intends to propose a research project that aims to study the affordability condition of housing for young people in the Mezzogiorno, with particular reference to the region of Puglia and the target 18-26 years old. University students fall into this target, as a partial category of it, who together with young workers (knowledge workers, freelancers, creatives...) (Banfi & Bologna 2011) experience the housing problem in a relevant way, having an insufficient response from the Right to Study policies oriented to the realization of student housing[1]. ogether, they represent a social category "politically de-legitimized of attention because they are waiting for a 'more adult' condition" (Indovina 2023) for which urban living conditions are variable and coincidental and equally improper categorization, since very often multiple living conditions coincide (student, worker, city users, parent, etc.)[2]. This research project, from the requirements of the specific target and subcategory of the "college student," based on an analysis of the local housing market (as an Observatory of the Youth Housing Condition), intends to trace the specificity of the target and the complementary unresolved questions. In the wake of previous research and ongoing investigations[3], it aspires to support urban policies that, overcoming the current schematic classification of users, are able to look in an integrated way at the issue of housing policies with reference to public action, with a view to new residential models (co-housing, student housing), but also to guide the private market. Housing affordability, from the perspective of the 18-26 target audience and the social and economic capital this represents, questions the possibility for a young adult (college student, but also knowledge workers) to have access to housing, and more broadly ends up questioning the urban society of the future.

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1 In fact, only 5 percent of university students in Italy live in student housing (a total of 54,000 beds), compared to a European average of 17 percent with peaks of 31 percent and 21 percent in countries such as Sweden and Slovenia.

2 "It thus neglects to consider the college student as a young adult, who alongside to student life may also have a job or family, or may be interested in starting long-term independent living projects." Gainsworth e Peverini 2022:39-40),

3 PRIN RUSH "Responsive Responsive_University_Student_Housing: Innovative solutions for the socio-economic and urban regeneration of neighborhoods in Southern Italy" funded through the PRIN 2022 call, PRU - Puglia region university

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Fig. 1.
La protesta degli universitari contro la crisi abitativa (Roma, 2023).

The Territorial Plan (PTAV) of Forlì-Cesena
A navigation map to generate system policies

*Martina Massari, Valentina Orioli, Altea Panebianco**

The research activity concerns the formation of the Cognitive Framework of the settlement system for the Territorial Plan of the Province of Forlì-Cesena, a new instrument envisaged by Regional Law 24/2017. The scenario in which the Plan fits was defined by a significant set of changes, not least the flood of May 2023. The open issues are the fragility of our way of inhabiting the territory and the need to be prepared for extreme events, the interdependence between territories, the ability to manage economic resources, which require systemic and adaptive policies. A vision of the provincial territory as a Territorial Ecosystem is proposed, capable of holding together a relational vision between the environmental system and human society. The path is based on the centrality of ecosystem functionality (hence on the interdependence and circularity of processes, with obvious repercussions on the issues of ecosystem services and territorial metabolism), but also on the 'territory' as the physical space of repercussion of the strategic choices and policies implemented through the PTAV. The fundamentals that are essential prerequisites of the planning process are therefore:

- Ecosystem functionality, shifting the focus from the environment as an externality to ecosystems and their assets and functions (natural capital and biosphere) as a precondition for economic development for social justice and sustainability.
- The relationship with the Strategic Plan of the Romagna Next vast area, in the conviction that the provincial territory is part of a larger and more complex system, with respect to which coordination is necessary. In particular with respect to certain fundamental strategic choices, such as those concerning macro-systems for mobility, networks supporting territorial metabolism, territorial safety and the capacity to adapt to climate change.
- Preparedness, with a view to "rethinking the problems" and promoting actions aimed at mitigating the effects and increasing the resilience of the territory should they reoccur.
- The innovation of governance, with a new relationship with the socio-economic system and the main territorial actors at the centre, but also a new consideration of territorial balances, under the banner of equity in the representation of all the interests of the hill and mountain territories, or of the smaller municipalities.

The path thus set out tends towards the realisation of 5 objectives:

- containing soil consumption and promoting environmental quality and safety of settlements.
- promote the attractiveness of the territorial system for development, innovation and digital transformation of both production processes and private and public services.
- contribute to the protection and enhancement of environmental and cultural common assets in the territory, so as to strengthen territorial cohesion and identity.
- contribute to the definition of new relational models and territorial cohesion.
- contribute to the preparedness and competitiveness of the territory and support the development and organisation of new learning spaces for young people.
- encourage and coordinate innovation governance among all the actors in the territory and, in particular, stimulate the municipalities to consider the development of their territory in close relation to the vast area dimension.

The PTAV thus assumes a fundamental role as a 'navigation map' to generate system policies that involve different actors and respond to complex territorial challenges. This integrated approach makes it possible to provide clear and evidence-based guidelines to public decision-makers, including the province, unions and municipalities, enabling them to make informed decisions consistent with a shared strategic vision, promoting the overcoming of decision-making atomisation. Similarly, through the active involvement of business representatives and citizens in the planning process (Orioli and Massari 2023), it offers valuable guidance for the private sector and the economy at large, outlining directions in which businesses can invest and operate sustainably, promoting synergies between the public and private sectors for the common good.

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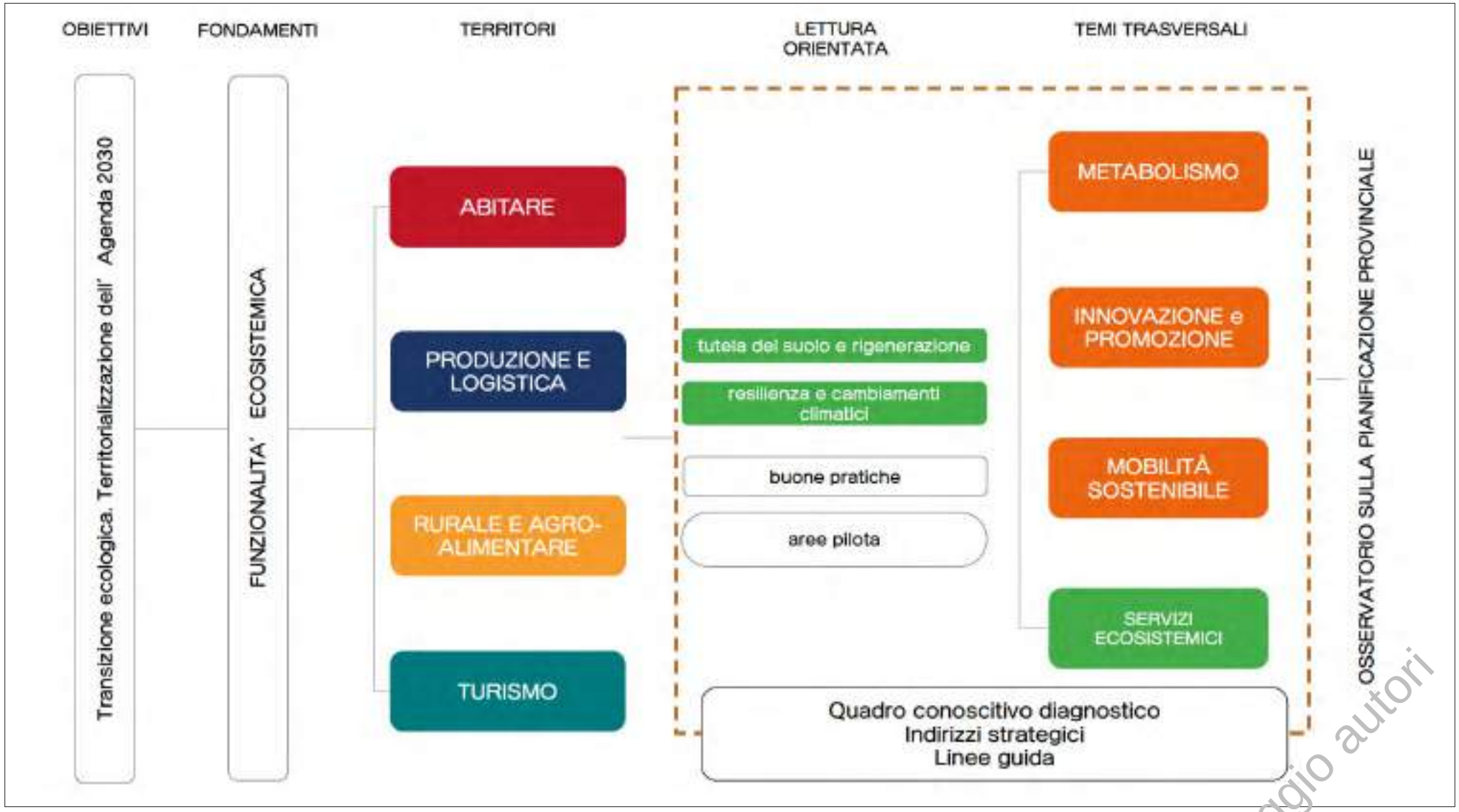

Fig. 1.
General methodological scheme of the FC PTAV.

Fight regional disparities by regulating the practice of collaborative housing

An approach to counteract speculative dynamics in the territories

*Margherita Meta**

In the wake of the pandemic scenario, practices integrating housing policies within urban regeneration strategies must confront a context of heightened criticality. The planning of social policies fits into a continuous and evolving interaction between ordinary and extraordinary plan tools, requiring a continuous reworking of approaches and methods that address current "resilience" issues with renewed attention. The pandemic deeply questions every practice that could be considered consolidated during previous epochs of regeneration, highlighting the deep need to innovate strategies and different modalities for their application in territories: for example, as strategies capable of reconciling territorial transformations with new forms of governance able to synergize ordinary planning and territorial rebalancing strategies. Regional disparities, which will be even more characterized by multiple types of demands requiring integrated responses in terms of regeneration strategy planning, can only be addressed through an approach that can embrace the vulnerabilities and potentials of territories, cooperating with local communities for a concrete restart. Listening, participation, social innovation are just some of the basic concepts needed today to achieve an organic, integrated urban regeneration that is not just morphological-environmental intervention but also a tool for social inclusion, with interventions coordinated with representations of local communities, in order to act effectively in synergy with them. An effective example of a plan that presents suggestions for experimenting with responses to issues influenced by the profound upheaval of demands, needs, habits, and dynamics that occurred during and immediately after the outbreak of the pandemic, is found in the new General Urban Plan (PUG) of Bologna, approved on July 26, 2021: it currently represents an innovative example of urban regeneration in Italy, based on strategies such as the recovery of existing heritage, experimentation concerning new forms of collaborative living, overcoming the ghettoization stemming from monofunctional neighbourhoods through the creation of social mix, and through specific rules for integrating quotas of social housing in the planning of implementing tools. The enhancement of shared housing can be attributed, on the one hand, to the thinning of the family structure and the first welfare, and on the other hand, to the worsening economic conditions that push towards housing solutions allowing a sharing of expenses. The regulation of collaborative housing is conceptually situated in the perspective of the common administration of urban goods, in implementation of the principle of horizontal subsidiarity, as sanctioned by art. 118 of the Italian Constitution, evolving practically in 2014 through the first Implementing Regulation of the practice in Bologna, later extended to about 300 municipalities nationwide. This regulation is based on the core values of collaboration, responsibility, trust, and inclusion, to be concretized through initiatives aimed at promoting people's well-being by intervening in the quality of living and relationships, through good neighbour practices and mutual aid. Collaborative living constitutes the adaptation to the housing sector of the theoretical framework of the city as a common good: some national experiences, with differentiated gradients of collaboration, tend to improve the quality of life of inhabitants, through self-management and self-organization, intervening in the urban fabric by introducing proximity services. The latter is configured as an alternative practice to traditional housing methods aimed at revitalizing social relationships among inhabitants and regenerating urban spaces. In 2020, collaborative housing was included in the Strategy for Urban and Ecological-Environmental Quality of the General Urban Plan (PUG), fully entering among the means aimed at pursuing the habitability and inclusion of the city of Bologna (action 2.1c, Experimenting with new housing forms). Shared and supportive housing interventions can give rise to forms of cohousing, in which the family units involved are at least five, formally constituted as associations with acts registered in accordance with non-profit entities. The implementation of the program is concretized through a Collaboration Pact that substantiates a shared program between the proposing entity and the municipal administration, defining the modalities of management and shared use of spaces for collective activities. In the first days of April 2023, within the three-day event "Living, Health, and Knowledge for a Greater Bologna" on April 5, 6, and 7, the new Housing Plan was presented, which foresees an investment by the Municipality of 200 million euros for the construction in the coming years of about 3 thousand housing units dedicated to those seeking affordable rental housing. The first strategy of the Plan focuses on three areas: the Bertalia - Lazzaretto district, the former Ravone railway station, and the former Stamoto barracks, which will be converted to mixed uses: social housing, student residences, green areas with sports facilities. The second strategy, "Experimentation with forms of collaborative living", will materialize in the recovery of five disused public buildings in the city. The third strategy consists of "Three programs to regenerate Public Housing Settlements", while the fourth

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will coordinate a new governance through incentives for realizing greater social housing quantities than those planned, the establishment of a fund for social housing, and the creation of a Social Rent Agency. The fifth and final strategy envisages the enactment of a Municipality Alliance for a national housing policy. The distinctive element of the regulation of collaborative housing practices is the creation of structured, fixed, and rigorous rules for the provision of housing solutions for various categories of people and the presence of social management of interventions, based on the combination of settlement administration, social support for the community, and involvement of residents in the organization of community life and care for spaces. The experience of collaborative housing in Italy can represent, as it has in other countries, a field of experimentation and growth for housing policies. At present, numerous organizations operate in Italy that encourage and experiment with these practices or offer a shared catalogue of similar services; therefore, the time is ripe for an innovative planning procedure to emerge that can collect the best practices of each, with the aim of creating a common reference.

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Fig. 1.
An aerial view of the Collaborative housing project "Porto 15" in Bologna: the first example of co – housing started from the recovery of an unused building in the city center.

Fig. 2
Internal view of the "Porto 15" co – housing project in Bologna, a public experiment to foster collaborative housing.

Settlement sustainability in less developed regions, a priority for regional balanced development

In providing a RBM framework for evaluating spatial plans

Samaneh Niazkhani, Esfandiar zebardast**, Angela Million****

lities and promoting regional development (Moreno Pires et al, 2020) and suffering from the accumulated negative factors of economic and social development for a long time (Majerová, 2007); Studies show that in these regions, SDG indicators have a lower score than other regions. In fact, the lack of attention to sustainable development in these regions has made its settlements face an unfavorable cycle of socio-economic and environmental imbalances and faced unprecedented challenges such as poverty, declining quality of life, income gaps, social breakdowns and injustice in the distribution of services. Therefore, the proposed models presented in the direction of sustainable development try to maximize the benefits for the development of communities by giving priority to less developed regions (Sherafati et al, 2019). On the other hand, one of the main goals of spatial planning is sustainable development (Koresawa and Konvitz, 2001, FAO, 1993); Considering the commonality of the theoretical background of spatial planning in the principles and foundations of sustainable development (Mastop, 1997; Albrechts, 2017), it is necessary to explain the results of spatial plans as a product of spatial planning in through the sustainability. Considering the cross-cutting nature of settlements, sustainability of them can be followed as a necessity.The sustainability is more understood as a combination of environmental, social and economic performance. According to the International Labor Organization (ILO), more than 204 million people were unemployed in 2015. The 8th goal of the Sustainable Development Goals (SDG8) indicates to promotes sustainable economic growth, higher levels of productivity and technological innovation, too. So, in this research, one of the main axes of sustainability is focusing on the economic pillar with an emphasis on "economic growth and sustainable employment".Therefore, the main problem of this research is to provide a framework that can be relied on to evaluate the quality of spatial plans from the perspective of achieving the sustainability of settlements in less developed region. Because the less developed regions have less resources, it is very necessary to provide a framework that can be relied on to evaluate the quality of spatial plans from the perspective of achieving the settlement sustainability. This framework should be based on a retrospective and on-going approach. On the other hand, due to the complexity and multifacetedness nature of settlement, the transdisciplinary approach in the sciences have been widely accepted. Therefore, the "RBM" approach, which in management sciences, promotes the three fields of planning, monitoring and evaluation in a joint relationship (UNSDG, 2017) and considers the real social and economic benefits of plans at the level of beneficiaries (UN habitat, 2021), equipped with a prior, posterior, and during implementation and not only a posterior focus, will be used in this research. Therefore, the main goal of this research is to provide a framework for elaborating the results of spatial plans in terms of achieving the sustainability of human settlements in less developed areas, in the form of an evaluation based on the RBM approach.

This research applies mix method, in the first phase, with the meta-synthesis method, the results of research related to "less developed regions", "settlement sustainability" and "spatial plans" has extracted to find their factors. Next, to strengthen the first phase, through Directed Content Analysis approach, qualitative content analysis of international documents related to sustainable settlements and less developed regions spatial plans has been done. To select less developed regions to focus on their spatial plans, sampling was done by combining clustering technique and critical case sampling and 4 provinces were selected (Figure 1).In the second phase, by designing a semi-structured interview according to the RBM approach principles, the results obtained the analysis of the previous phase were examined from the point of view of scientific and practical experts. In the third and final phase, interviews were analyzed through "Coding" and "Summative Content Analysis". Interviews have been conducted with experts who played a role in the process of drafting, monitoring, judging and approving the spatial plans of these 4 provinces. These interviews included 7 questions. 18 categories related to the sustainable settlements that were extracted as a result of the implementation of the first phase. Their relationship with macroeconomic, social, environmental, institutional-political and spatial-physical dimensions was questioned in the interview. The categories related to the economic dimension focused on in this research were selected by experts; which included 13 items. Answers of experts were collected and analyzed in Atlas TI platform based on the frequency of codes attributed to quotes. The results show that the penetration rate of the results of the development plans in a wider time range, in four spatial levels, respectively from the big city, the middle city, the village and the nomadic areas, is increasing. This means that planning interventions at smaller spatial levels with higher success direct the results of spatial plans from the Output level to the Outcome and finally the Impact.

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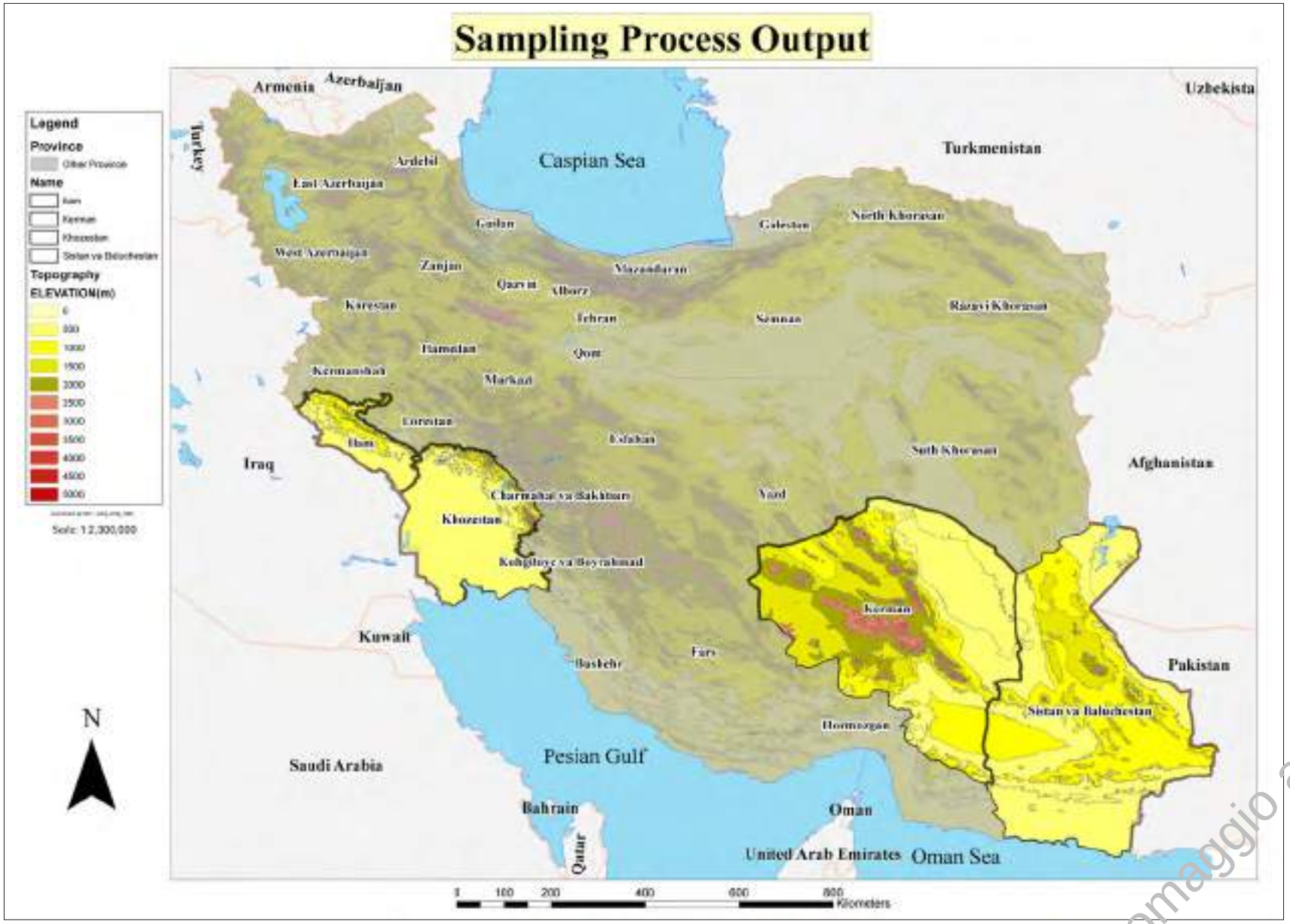

Fig. 1
Output of modeling in the sampling of provinces.

Regional regeneration in disaster-affected areas

*Giulia Pasetti, Donato Di Ludovico**

The research on 'regional regeneration in disaster-affected areas' falls into two innovative areas of research. The first concerns regional regeneration, which extends and completes studies on urban regeneration to the territory; the second, on the other hand, concerns the geographical context of reference, i.e. disaster-stricken areas that present conditions of marginality and, above all, of social, economic and cultural inequality often amplified by their location. The fragility of these areas underlines the importance of plans and programmes that combine territorial recovery strategies with risk prevention and reduction, preparation and the subsequent phases of repair and reconstruction of the affected contexts. The main objective of the research is to identify spatial regeneration policies and strategies in geographical areas that can be considered 'special', since they have been affected by natural and/or man-made disasters and are characterised by fragile conditions. The term regeneration indicates a process that involves not only urban-territorial renewal but also collective interests, with the objective of improving the social, economic, cultural and environmental aspect of the portion of territory concerned. Regeneration, therefore, is a process of re-qualification, since one of its objectives is to improve the existing heritage, but, at the same time, it broadens its action, integrating aspects of sustainability, quality of life, inclusion and participation. Moreover, it is important to underline how in the literature the term regeneration is, in most cases, associated with urban[1]. Currently, however, policies linked to internal areas or to government and territorial development plans suggest a broadening of the concept of urban regeneration by defining practices linked to larger portions of the territory. As G. Lupatelli and A. De Rossi mean, there is a need to take up the overall picture of territorial development, talking about regeneration not only by linking it to the development of an area, but at the scale of the city and the territory[2]. As far as the legislative sphere is concerned, many Italian regions have a law on regeneration which, again, is limited to the urban aspect, not integrating the territory. To date, the only exceptions are Regional Law No. 18/2019 of the Lombardy Region and Regional Law No. 13/2022 of the Campania Region. The Lombardy Region, amending Regional Law No. 12/2005, adds to the definition of urban regeneration that of regional regeneration, defining it as a coordinated set of actions aimed at resolving situations of urban, infrastructural, environmental, landscape and social degradation, restoring and safeguarding the soil. The Region, in collaboration with the provinces, park management bodies and the metropolitan city of Milan, aims to implement a model of sustainable territorial development, completing the regional strategy to reduce soil consumption. Campania's regional law, has included as an objective for zero soil consumption urban and regional regeneration processes aimed at limiting building and renewing the existing urban and building heritage as well as sustainable development processes. The Italian regions affected by the 2009, 2012 and 2016-17 earthquakes, on the other hand, did not consider the issue of regional regeneration in their regional laws on urban regeneration. The earthquakes of L'Aquila in 2009, Emilia Romagna in 2012 and central Italy in 2016-17, in fact, increased a condition of marginality and disparity already present in the territories. Often, the areas affected by these earthquakes are areas identified by the SNAI as inner areas, being in an unfavourable geographical condition because they are far from essential services (health, education and mobility). These areas have seen their demographic deficit increase, increasing the already high risk of depopulation. The crater established following the seismic events that occurred in 2009 is taken as a case study since, 15 years later, it is now possible to analyse territorial fragilities and strategies implemented at the different scales of intervention in the affected contexts. At the methodological level, the research is divided into three phases: i) the study of scientific literature and existing national and international cases on the specific topic of regional regeneration or regional regeneration, ii) the definition of a regional analysis methodology aimed at defining spatial policies and regeneration strategies, iii) experimentation on case studies. At present, the research is in its first phase, the results of which are summarised in Fig. 1. The next steps will concern the second phase, which will be based on a basic analysis taken from the OECD fragility index[3].

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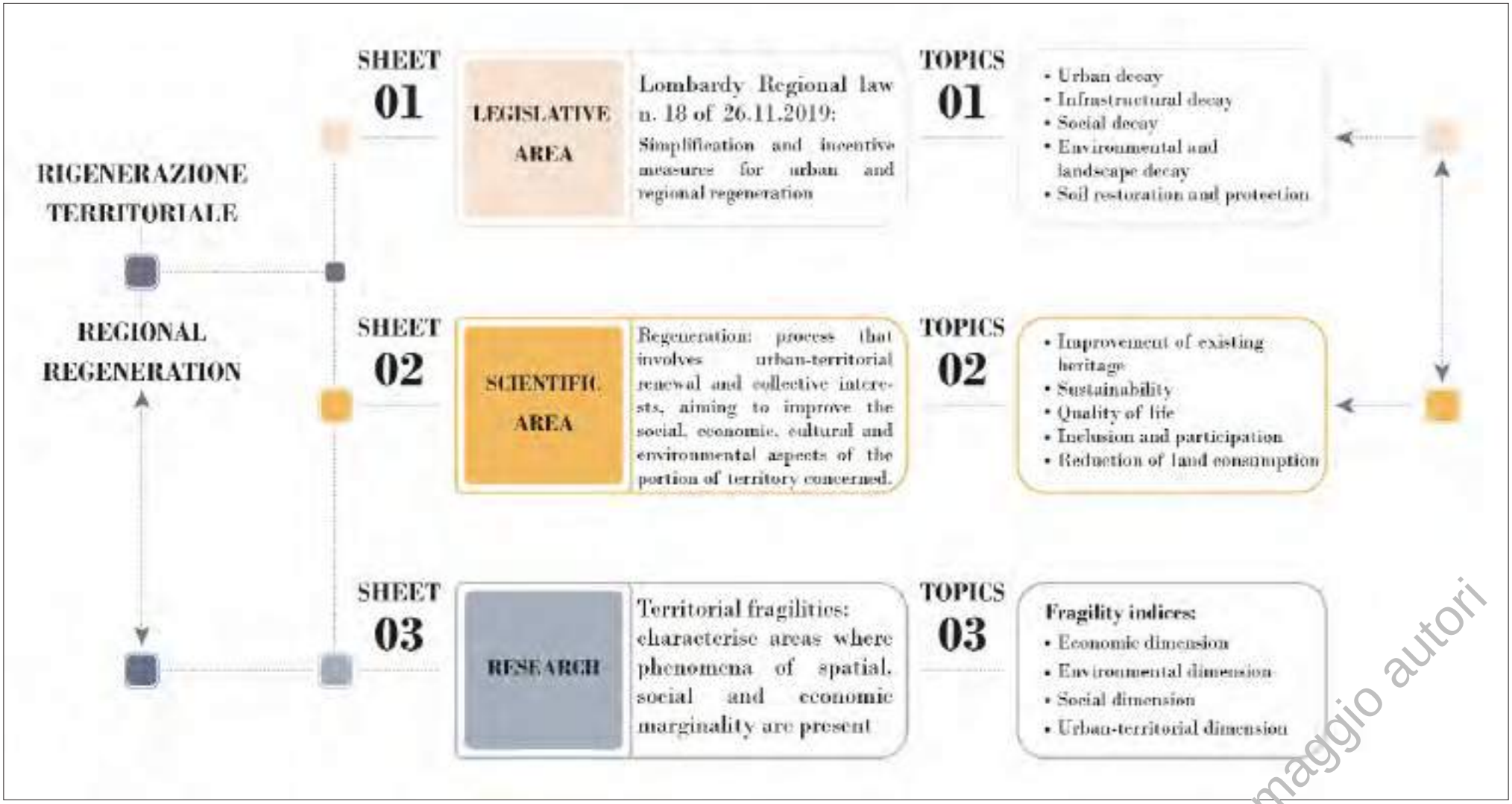

Fig. 1.
Methodology diagram.

Soil sealing as ecosystem services' inhibitor
Processing of satellite data for coastal zone analysis

Annunziata Palermo, Lucia Chieffallo**, Natalia Rispoli****

In recent centuries, the processes of urban expansion have caused or increased the degradation of natural resources and associated ecosystem services. In fact, soil consumption, and more specifically its impermeability, has led to damage to the resource, impacting the services it provides to human well-being and ecosystems. In Italy, in recent decades, construction activity has been concentrated above all in coastal areas, as they are an environment favourable to human settlement. However, these particular areas are characterized by other critical elements such as the presence of fragile ecosystems and natural erosion dynamics linked to the climate. Therefore, coastal areas need sustainable strategies that are based on knowledge of the natural heritage and related ecosystem services. In order to support planners in the construction of an information framework for the urban-coastal heritage, an innovative method has been developed that allows the definition of ecosystem indices starting from satellite data, through three main steps, composed of consecutive sub-steps that provide data processing in GIS software. The first step includes the preliminary phases of the data processing, in particular the definition of the geographic reference system on the software, the loading of the map base, the perimeter of local territorial units (in a number equal to "*n*") and their subdivision into buffer zones (in a number equal to "*m*") with the subsequent computation of the areas relating to local territorial units and buffer zones, indicated respectively with "*Ai*" (with "*i*" varying from 1 to "*n*") and "*Aij*" (with "*j*" varying from 1 to "*m*"). The second step involves both operations in a GIS environment and the definition of operational elements, in particular the loading of the satellite data relating to the item into the software, the subdivision of the item into ranges (in a number equal to "*l*"), the computation of the areas for each local territorial unit – buffer zone – range combination, indicated with "*Aijk*" (with "*k*" varying from 1 to "*l*") and the definition of the calculation of the ecosystem index, indicated with "*Iijk*", which indicates the quantity of territory occupied by the range identified within the buffer zones of the territorial unit. The last step concerns the calculation of the weighted ecosystem index for each buffer zone, indicated with"". The method defines the ecosystem index relating to impervious areas within the 115 coastal Municipalities of the Calabria region. Specifically, as foreseen in the first step, the following operations were carried out within the GIS software: the EPSG-WGS84/UTM 32N reference system was set; the map base was imported, in particular the shapefile containing the administrative boundaries of the Municipalities of the Calabria Region; the perimeter of the local territorial units was carried out by exporting the Municipalities of the Region, and the territory was divided into buffer zones at 300 m, 1 km and 10 km from the coastline; the relative surfaces were calculated, indicated respectively with "*Ai*" (with "*i*" varying from 1 to 115, depending on the Municipality considered) and "*Aij*" (with "*j*" taking the notation of 300 m, 1 km and 10 km) . The implementation of the second step involved: loading of the high geometric resolution raster files into the GIS software, downloaded from the Copernicus platform, containing the satellite data relating to the impermeability of the soil; the division of the impermeability degree percentages into 4 ranges; the computation of the areas for the different ranges present in each buffer zone for each local territorial unit, indicated with "*Aijk*" (with "*k*" taking on the notations of the percentages that define the range); the definition of the ecosystem index, indicated with "*Iijk*". The last step involved the definition of the weighted ecosystem index in each buffer zone relating to each local territorial unit ("") through the calculation of the sum of the products between the indices calculated at the end of the previous step and the weight coefficients. The results of the application of the method have highlighted how the soil impermeability indices are much higher in the territory within 300 meters from the coastline, despite the area was protected by national legislation. In fact, the ecosystem indices inherent to impervious areas for the coastal Municipalities of Calabria decrease as we move away from the coastline. These results are part of a broader research project that involves the establishment of a research group between the University of Calabria, the University of Salerno and the University of Valencia. This project also considers the index relating to the presence of areas vulnerable to climate change as an inhibitory factor of ecosystem services and, instead, the presence of green and humid areas as driving factors. The integration of the results obtained in relation to the four ecosystem indices represents the analytical prerequisite for starting a *cluster analysis* process aimed at statistically identifying groups of Municipalities with similar ecosystem features. Once this phase of analysis at a regional level has been concluded, the project will evolve into the evaluation of local ecosystem services in some pilot Municipalities that represent the clusters, in accordance with the taxonomy proposed by the Millennium Ecosystems Assessment (MEA), in particular provisioning, supporting, regulating and cultural services. This evaluation will lead to the definition of a model for planning sustainable ecosystem services in coastal areas called "Blue Community".

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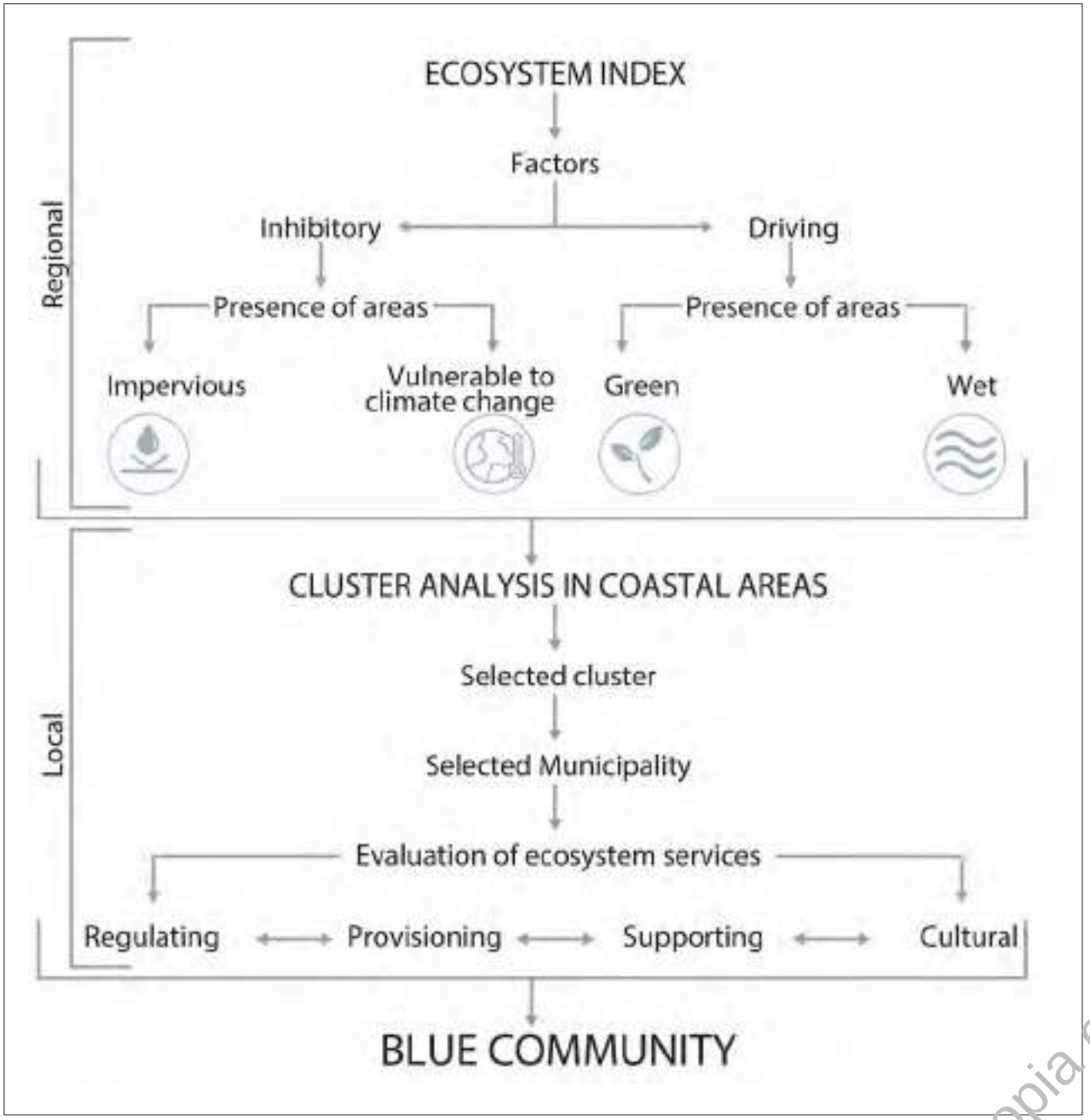

Fig. 1.
Methodological framework.

A gender issue in the urban policy

Lucia Saganeiti and Lorena Fiorini***

Over the past five decades, the occupation of land in Europe has led to the emergence of low-density, dispersed settlements that move away from traditional urban sprawl. This unsustainable development pattern consumes limited resources, causing direct and indirect negative effects such as increased pollution, economic and social inefficiency, dependence on fossil fuels and minerals, and lack of services.

All this affects the quality of life of individuals, sometimes accentuating gender differences. Indeed, it is inevitable that the shape of urban settlements affects the quality of life of men and women. Italy can be considered an emblematic case study for this investigation due to the significant impact of urban dispersion on its urban landscape. The phenomenon of urban dispersion has not only reshaped the physical environment but has also fundamentally altered the temporal and spatial dynamics of daily activities, including work, study, free time, and social interactions. In particular, women face greater challenges in managing their time and navigating the dispersed urban landscape. The proliferation of scattered sites of interest across huge territories requires multiple movements, resulting in an accelerated lifestyle, characterized by constant mobility and fragmented routines.

In the light of the data on European gender inequality, which place Italy exactly in the middle of the European ranking (14th place out of 27 for the gender equality index), the aim of this research is to investigate how women's quality of life can be influenced by the shape of urban settlements and consequently by the presence of more or less efficient urban planning and gender policies.

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One of the central issues stemming from urban dispersion is the limited accessibility to essential services, leading to dependence on private transportation and longer travel times. The increased costs associated with transportation further exacerbate economic burdens, indirectly affecting the overall quality of life. Additionally, the lack of centralized care services, such as nurseries and facilities for the elderly, constrains the opportunities of women to engage in structured and sustainable employment. Analysis from the Italian Institute of Statistics in collaboration with Eurostat reveal a significant disparity between men and women in domestic tasks, with women bearing a disproportionate burden.

Addressing the challenge of urban regeneration emerges as a crucial objective, requiring coordinated efforts across various sectors to navigate complex issues such as climate change, political instability, and the ongoing pandemic. Urban regeneration efforts must prioritize sustainability and inclusivity, reimagining environmental, economic, social, and cultural models to foster equitable and resilient cities. Gender equality lies at the heart of these endeavors, necessitating comprehensive measures encompassing legislative reforms, strategic interventions, and targeted economic support to advance women's rights and opportunities.

The National Recovery and Resilience Plan represents a significant opportunity to integrate gender equality into broader policy frameworks, aligning with its overarching goals of promoting sustainable development and social cohesion. By adopting an integrated and holistic approach, the plan seeks to address gender disparities across all missions, emphasizing the importance of mainstreaming gender considerations in urban planning and development processes.

The investigation of this contribution will focus on the relation between settlement shapes, urban planning efficiency, and gender policies, shedding light on their direct and indirect consequences for women's well-being. The overall goal is to provide suggestion/

input that can inform more inclusive and gender-responsive urban development strategies, aiming to improve the overall quality of life and bridge gender disparities.

Achieving sustainable cities requires a paradigm shift towards gender-sensitive territorial planning, centered on the localization of amenities, improved mobility and accessibility, and enhanced safety measures. By prioritizing the needs and experiences of women in urban planning initiatives, cities can create more inclusive, livable, and resilient environments for all residents.

In conclusion, this research underscores the imperative of addressing the gendered impacts of urban dispersion and advancing gender equality in urban development agendas. By recognizing the unique challenges faced by women in dispersed urban settlements and integrating gender perspectives into policy and planning processes, we can pave the way for more equitable and sustainable cities in the future.

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Flexible geography or instability?
Changing spaces in Hungarian spatial planning

Géza Salamin and Márton Péti***

The change in geographical units of spatial planning (levels, new, often less regulated 'soft' spaces) can be seen as a general European trend. The research summarised in this paper analysed the European dynamics in this field by reviewing the literature and examined the changes in the Hungarian spatial planning system in this light. In Hungary, we have witnessed a multiplication of these spaces and particularly rapid changes in recent decades since the change of political system in 1990.

European trends

The emergence of new spaces of planning at various levels is one of the most analysed topic in the European planning literature of the 21st century studied at local and neighbourhood levels,[1] at metropolitan and urban-region level,[2] at regional level,[3] at macro-regional level[4] and at European level[5] too. This is often connected to the relational conception of space (Allmendinger and Haughton 2015) and the (new) governance shift. However, as many authors highlight, the appearance of new spaces does not result in the elimination of traditional, formal planning spaces (administrative units), but rather supplements them. Allmendinger and colleagues (2015) have identified seven drivers of this trend: the redistribution and rescaling of state power; restructuring based on neo-liberal ideology and competition between localities;[6] the emergence of relational spaces in planning, where spaces are constructed by political interactions or debates and discourses; the creation of a new EU space; the creation of post-political planning spaces.[7] EU policies stimulate new planning spaces by their programmes and instruments (cross-border programme regions, macro-regional strategies, EGTC-s, integrated territorial investments, community lead local development, LEADER, etc.). In EU countries the most common new planning space is the city-region (Salamin 2018).

Frequent changes in planning spaces in Hungary

In Unitarian Hungary, the role of the territorial middle level is rather weak, yet a large number of subnational planning levels appeared (and disappeared). Above the NUTS3 level of 19+1 **counties**, which constituted the territorial self-government**, NUTS2 level regions** (with regional development councils) emerged in the 2000s as development units, which received funding from domestic, later EU grants for their programmes. These regions were abolished by the 2012 amendment of the law and their development functions were given (back) to counties. However, new, rather soft planning areas have recently been defined as larger regional units, which the 2023 reform has indicated by designating macro-region plans. From the 1990s at the **micro-regional level** so-called micro-regional associations of municipalities (from 2004 174 multi-purpose micro-regional associations) were established by the central government. Thus, by the mid-2000s, a unique situation had developed whereby strategic-development planning (with selective scopes), was carried out at 5-6 territorial levels, plus regulatory land-use planning on 3-4 levels in a relatively small country. The 2012 reform ended it with abolishing regional and microregional level planning. In Hungary, there is a longer history of **two functional areas with dedicated national importance** and whose physical plans are approved by the National Parliament. The Balaton Region is a planning area mainly with a tourism function, and the Budapest Agglomeration, which provides urban-regional coordination only through a land use plan. In addition to the above, several thematic zones, regions (with longer or shorter life-span) have been created for development. Meanwhile, cross-border **international spaces** have emerged as a powerful new element in spatial planning, mainly through the INTERREG programmes, but also by European Groupings of Territorial Cooperation, with Hungary being the most active in the EU alongside France. At the settlement level, the main EU impact has been the emergence of integrated urban development strategies, which will cease to exist in their independent form in 2021.

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1 e.g. Counsell et al, 2014.
2 e.g. Levelt–Jansen 2013.
3 e.g. Heley 2013; Walsh 2014.
4 e.g. Gänzle–Kern 2016
5 Jensen–Richardson 2004; Faludi 2013.
6 See Haughton et al. 2013.
7 Allmendinger et al. 2015, 14.

Conclusions

In Hungary, the different territorial levels, the specific planning development spaces, change frequently, although there are also relatively permanent planning spaces. In almost all eras, it has been popular for governments in Hungary to create new spaces without strong functions and regulatory embeddedness. (However the motivation is definitely not post-political.) The emergence – and disappearance – of soft spaces is not in itself a Hungarian feature. However while in Western Europe these changes are mostly associated with the transformation of the role of the state, devolution and the private sector, in Hungary they are more likely to be the result of EU policies and current governmental efforts. It is also not Hungarian-specific that urban and territorial planning-development is becoming more important as a specific (place-based and integrating) common tool for the implementation of functional or sectoral policies rather than as a separate territorial-urban planning policy (Salamin 2021), which is also a result of the relatively weak regional identity. Planning spaces in Hungary are often created for a narrower thematic or functional focus and have a shorter life span, which contributes to the relatively low performance of spatial planning. A systematic co-ordination of functional urban areas has not yet been developed in planning, however, according to the new planning reform, this has recently been put on the agenda.

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Building alliances for territorial rebalancing processes
A case study in Val d'Agri

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Regional disparities result from multifactorial processes linked to spatial and aspatial issues – concerning the social, economic, and cultural dimensions – as well as to the main environmental challenges, requiring interdisciplinary approaches (Kühn, 2015). Starting from an international framework (Oppido et al., 2023) the research focuses on the Italian context where the theme of peripheral areas has rekindled the scientific and cultural debate, also thanks to a specific national policy strategy (SNAI, 2014; Carrosio, 2019; Coppola et al., 2021; Esposito De Vita et al., 2021; Tantillo, 2023). This contribution reports the start-up step and related findings of a listening and co-design campaign developed in Val d'Agri (Basilicata region, Italy) within the research activities on territorial cohesion and rebalancing processes in areas interested by peripheralization phenomena carried out by a multidisciplinary group involving National Research Council and University researchers. The selected context is characterized by a long-time petroleum extraction and is currently facing the challenges of ecological transition. The main goal of the campaign was to activate a dialogue with local Institutions, stakeholders and community to support regeneration processes based on territory resources, thus contributing to social, economic, and cultural development, in a perspective of environmental rebalancing.

The campaign was structured through focuses selected by researchers to identify both the most relevant territorial gaps – in terms of access to health services, education, digital divide, logistics, and accessibility – and the territory resources – in terms of cultural, archeological, and natural heritage as well as local productions. A multidisciplinary and multistakeholder approach was adopted to promote collaborative processes to bring to light the needs and expectations of local community but also the know-how and skills of local stakeholders for a mutual learning, both inside the community and with the researchers. In this perspective, researchers provide competences, methods and tools and serve as facilitators to overcome local conflicts, strengthen local cohesion and build alliances to define shared development strategies.

With the aim of carrying out co-design activities and fruitful discussion with local stakeholders, researchers presented several issues and approaches to deal with them, leaving then the floor to participants and to the listening phase. Discussion was facilitated by questions addressed by researchers for stimulating collective reflections on territorial inequalities and rebalancing processes. Within the specific focus group on territorial regeneration the topics proposed by researchers included ecological transition and energy communities, equity and digital rights, social innovation, capacity building and community empowerment, cultural and natural heritage and the activation of heritage communities (Faro Convention, 2005). Local stakeholders were invited to report, through the use of post-it notes, their observations, needs, expectations, and problems related to their own territory. Researchers, as facilitators of the discussion, contributed to categorize the issues raised by participants in terms of Resources and Obstacles and to localize them – when possible – on a geographical map.

The most recurrent terms emerged from discussion were narrative, cooperation, valorisation. With respect to narrative, participants emphasized the need to change a representation of the context mainly linked to environmental problems (i.e. petroleum extraction) and social problems (ageing population, depopulation, etc.). This narrative is nurtured also by the "insiders", sometimes due to a low level of knowledge and awareness of local potential as well as a poor sense of belonging to the context and the community, thus contributing to feed a negative perception also by the "outsiders". This perception is amplified by a stereotypical idea of marginalised areas, considered as "places that don't matter" (Rodríguez-Pose, 2018) compared to the attractiveness of urban contexts capable of offering more services, job opportunities and personal satisfaction. Participants to the workshop highlighted how these factors negatively affect the attractiveness of the area, also in terms of potential investment and tourism development. Despite the valuable local heritage, tourism is still underdeveloped and unstructured. To overcome a hit-and-run tourism, some strategies emerged from discussion spanning from re-branding representation of the context by enhancing territorial assets to promoting cultural and creative industries and building public-private-civic partnerships. Indeed, cooperation is the second most recurring term stressed by the debate. A general weak attitude to collaborate was identified as a criticality, but some practices, as the first community cooperative established in the Lucania inner areas mentioned by participants, demonstrate how bottom-up initiatives can generate multidimensional impacts, by

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repurposing abandoned or neglected buildings and public spaces, creating places for social interaction and conviviality, creating job opportunities and wellbeing. In this perspective, social capital, through local empowerment and capacity building processes, can successfully support territorial regeneration.

Based on the discussion developed within the campaign, building scientific and territorial alliances emerged as a key factor to overcome the obstacles stemming from the condition of peripherality and identify successful strategies for enhancing local resources. To this purpose, collaborative, multidisciplinary and multistakeholder approaches as well as co-designing protocols turn out to be effective to strengthen territorial cohesion and proactive attitude of local communities to enhance resources and reduce the effects of peripheralization processes.

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Fig. 1.
Researchers and community discussing about regeneration strategies in Val d'Agri in May 2023 (Source: Authors).

Basilicata Climate Adaptation Strategy: a GEODESIGN Experimental Approach

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This paper presents the general overview and preliminary results of the research project GD.CURE, funded by the Italian Ministry of Research, which addresses issues related to enhancing climate-responsive and green transition governance in urban and rural systems within a planning-cantered perspective of climate change mitigation and adaptation. In Italy, PAs with specific responsibilities in territorial planning are actively involved in fulfilling climate neutrality commitments. Relevant implications were oriented to operational activities funded in the framework of the National Program of Recovery and Resilience (PNRR), such as section 3.1, "Protection and enhancement of urban and suburban green spaces." Presently, the challenge lies in testing, monitoring, and coordinating strategies at smaller scales, spanning wider regions, thus necessitating new approaches to decision-making that are closely tied to the socio-ecological system and the behaviour of local contexts. In order to address the major Climate Change related challenges of global warming and climate change during the Anthropocene Era, which impact the planet's ecosystems and biodiversity, there is a growing focus on multilevel territorial knowledge and an increasing interest in Nature-Based Solutions (NBS)[1]. NBS encompasses a range of solutions that prioritise human well-being, contingent on the health of the natural environment, and address issues such as air pollution, uncontrolled flooding, unstable slopes, and other natural and anthropogenic risks[2].It is also acknowledged that the effectiveness of climate mitigation and adaptation actions at different implementation scales depends on the level of awareness and involvement of beneficiary communities in decision-making. Enhancing territorial knowledge about specific ecological components compared to development issues in each implementation site becomes significant, and solutions and best practices can be shared and applied to broader ecological areas, as classified by WWF (https://ecoregions.appspot.com/). In the GD.CURE project in order to promote coordinated actions between different spatial scales in the implementation of climate change mitigation and adaptation policies, three levels were included: the Mediterranean biome, national, and local. These scales are critical for integrating project implementation within the framework of the International Geodesign Collaboration (IGC) network. In facts, the research is based on the application of the Geodesign method to support spatial planning, design and decision making and is also a component of the wider research "The Global Climate Geodesign Challenge" promoted by IGC in 2023[3]. This work presents evidence at the local level regarding the development of a preliminary test of GEODESIGN Methods in developing a inter-municipal climate adaptation strategy involving 4 municipalities in Basilicata Region: Pietrapertosa, Castelmezzano, Albano and Campomaggiore. The strategic design aims to defining the role of regional institutional stakeholders through specific internal consultation mechanisms in the climate adaptation decision making process. It delivers quantitative assessments of sectoral impacts and analyses territorial vulnerabilities in the key sectors considered. For each of the sectors affected by the effects of climate change, it establishes the functional relationship between impacts, general adaptation objectives, and specific measures, considering the overall framework of sectoral and cross-sectoral policies and interventions already in progress or planned by the regional administration. The GEODESIGN workshop delivered a Climate Change Adaptation masterplan identifying priority areas for intervention in response to sectoral planning needs[4,5,6]. The story telling delivered at the end of the workshop according to IGC requirements, includes regional assessment and specific project area maps and final design maps, as well as "by domain" maps of the climate actions applied. It delivered the Final Design solutions sharing it globally in the framework of IGC collaboration partnership and locally in the debate with regional administration. The work was mainly delivered in a real environment involving local stakeholders and engineering master degree students of the Territorial Engineering class at University of Basilicata. The outcome, according to the GD.CURE project will be discussed with the Regional Authority entitled of the responsibility to develop the "Regional Climate Adaptation Strategy".

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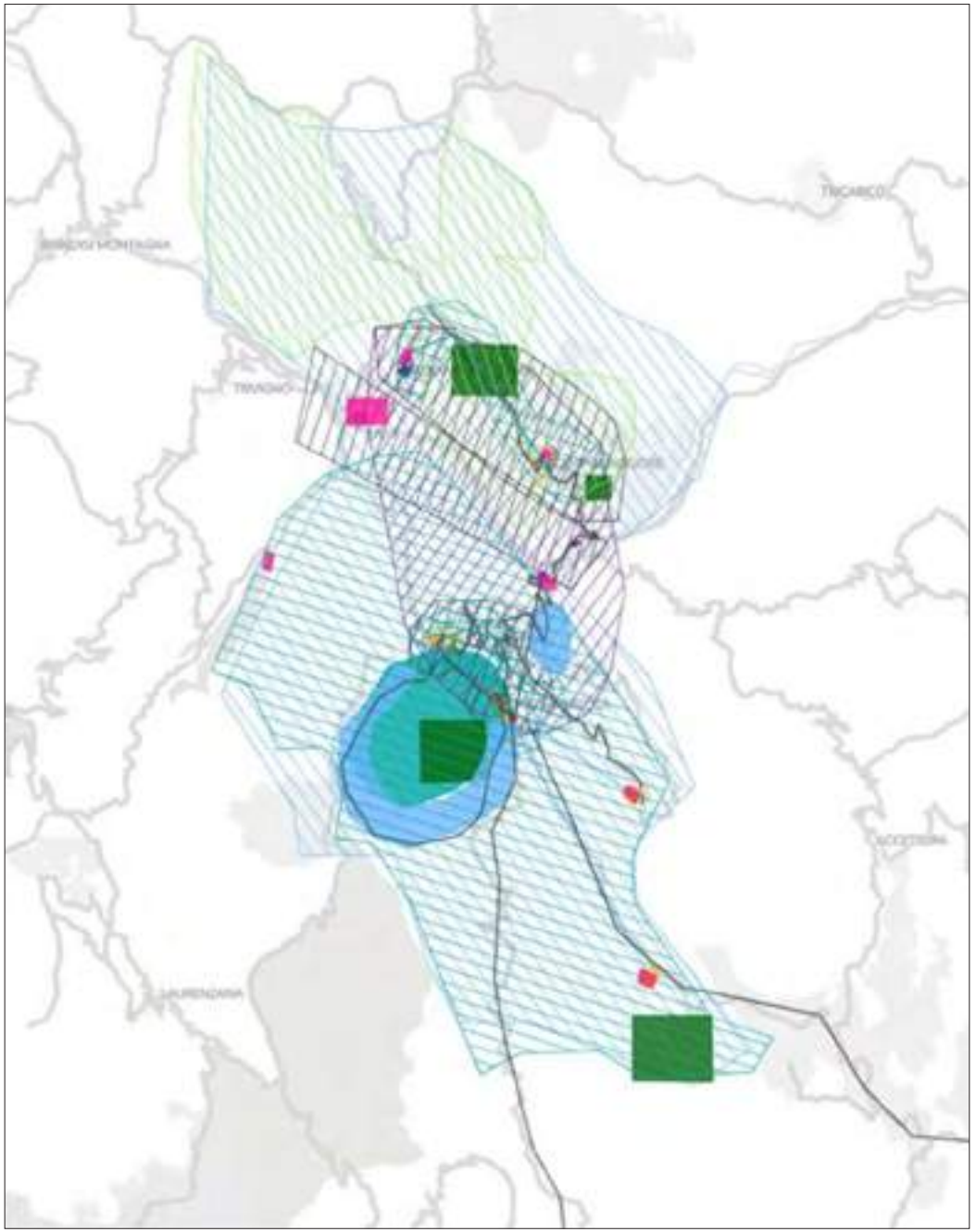

Fig. 1
Visual synthesis from the Geodesign workshop, where colors represent different systems, projects depicted as solid areas, and policies as patterns.

Macro-territorial disparities analysis with a data-driven approach

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The strategic framework of SNSvS22 (Strategia Nazionale per lo Sviluppo Sostenibile 2022) is composed of 5 strategic areas, each corresponding to the 5 pillars (5P) of the Agenda 2030: People, Planet, Prosperity, Peace, Partnership. Among these, the area of People focuses on promoting a social dimension that ensures a dignified life for the entire population, allowing all citizens to realize their potential in a healthy environment. GeoSmart Lab has developed and continually updates about a hundred indicators for all Italian municipalities to understand their positioning in relation to the 17 goals of the Agenda. The sustainability goals most closely related to the People area, and therefore more relevant to inclusivity, are goals 1-No Poverty, 2-Zero Hunger, 3-Good Health and Well-Being, 4-Quality Education, and 5-Gender Equality. These goals have been analyzed and compared to assess their impact and implementation at the local level. A number of data sources have been examined, such as the national institute of statistics, government and ministries, national and European institutions, as well as examples of open community databases like OpenStreetMap. The available information has been selected to be recent, updatable, at municipality scale, and homogeneous nationwide. Five to eight indicators have been calculated for each SDG, according to data availability and thematic consistency, then normalized on a national scale to obtain comparable values in the range 0-100, where 100 corresponds either to a law/regulation minimal requirement or to the average value of the best performing municipalities. Finally, each SDG is computed as a weighted average of its normalized indicators. Through the analysis of the SDGs as a function of the resident population, urban phenomena related to sustainability goals have been highlighted. Italian municipalities ranges from very small towns with roughly 30 inhabitants, to few large metropolises up to about three million people, with a median size of only 2,400 inhabitants. On average, municipalities with populations ranging from 5,000 to 50,000 inhabitants tend to achieve higher values in terms of sustainability goals. Nevertheless, each of the 5P and their SDGs show their own peculiarity. The People area in particular shows an evident increase in the quality index with respect to the size of the city, ranging from a score of 10 points for small towns of 100 inhabitants to about 50 points for the largest Italian metropolises, obtaining the highest scores of 57 points for intermediate size towns with 10,000 inhabitants. The average behaviour reflects those of the individual SDGs: the running averages increase from small towns up to 3,000-10,000 inhabitants, then slowly decreases or remain constant for larger cities. The causes of these trends should be analysed for each single indicator and as a combination of them. Citizen services in SDG 3-4-5, considered here just as a quantitative offer and not evaluating the quality, are limited in small towns, whereas in large cities they are often insufficient to serve the entire community, therefore, intermediate size cities usually reach the best balance of services per person. Economic indicators in SDG 1 are also contrasted since the highest salaries are registered in the largest cities but the home ownership is prevailing in the smallest ones: combining the different behaviours cause the intermediate size cities being the best on average. Agricultural indicators in SDG 2 enhance municipalities with limited urban areas and extended farmlands, which usually correspond, once again, to the intermediate size cities. Also, clear differences are observed considering the geographical distribution of cities. Richness is concentrated mainly in the northern Italy, with a large gap between the average values of SDG 1 in the north (54 points) and in the south (34 points). Nevertheless, the food security analysed by SDG 2 is at the opposite, with a gap of 12 points between south and north. While SDGs 3 and 5 show limited geographical differences, the SDG 4 is on average 8 points higher for central Italy with respect to both northern and southern regions. The combination and the analysis of the different themes in the People area have enabled a comprehensive understanding, clustering, and representation of a geography of inclusivity in the Italian territory, highlighting a general advantage of the central regions over the rest of the Country.

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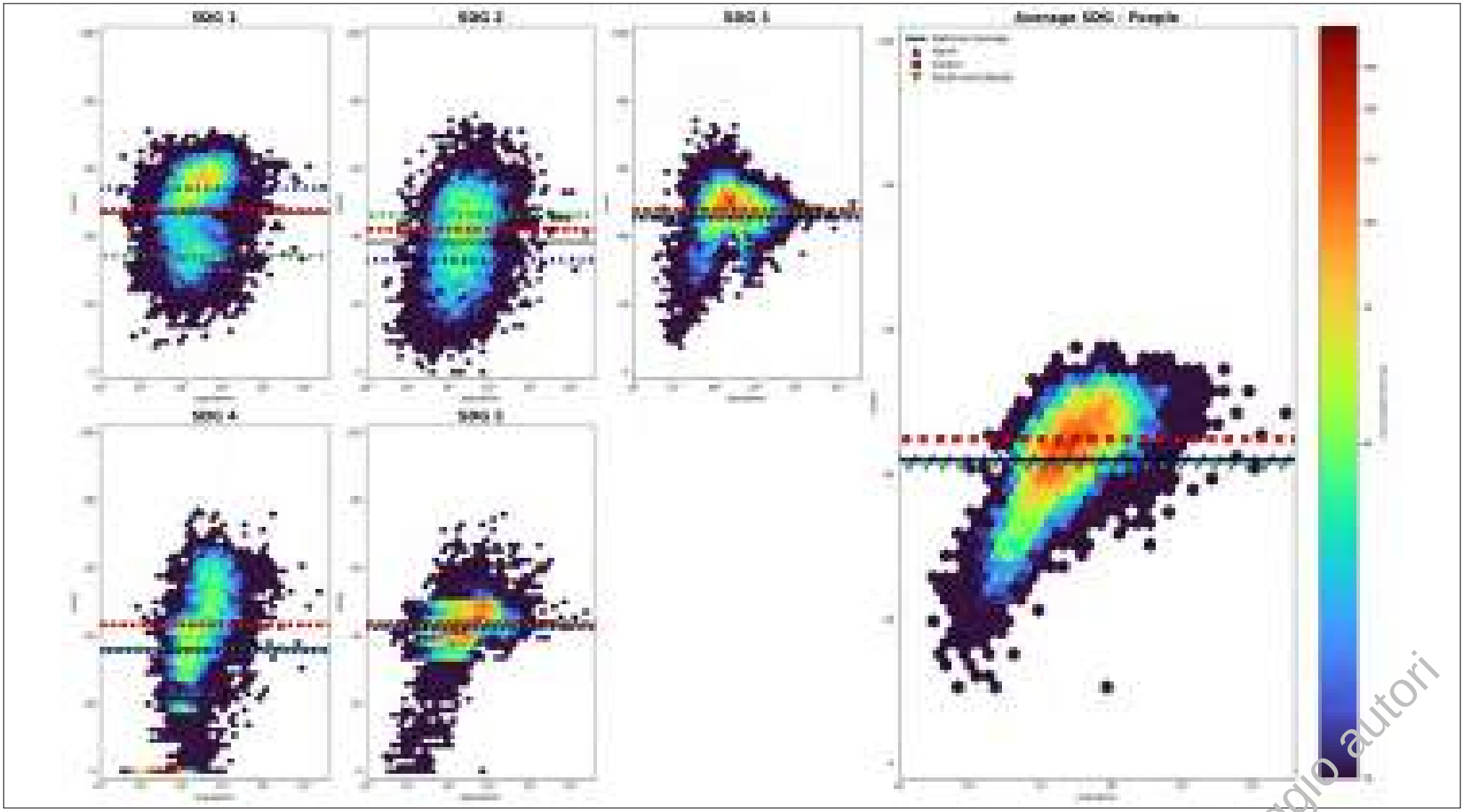


Fig. 1
Distribution of SDG scores given population for all the Italian municipalities (hexagonal bins and colorbar). Average scores for three main geographic areas (blue upward triangles: north – red squares: center – green downward triangles: south and islands) are also represented besides the national average (black line).

Regional foresight for an inclusive local decision making

Rosaria Trovato

The Stuttgart Region is in the centre of the federal state of Baden-Württemberg and composed of 6 counties and 179 independent municipalities. The characteristics of this region are a strong economy, a high quality of life and dense interrelations of land use. One of the mandatory tasks of the Verband Region Stuttgart (the Planning and development agency) is comprehensive regional (supra-municipal) planning with a strong legal instrument. The legally binding regional plan allows all municipalities to provide land use planning at least for local demand. Currently the main challenges are to satisfy the growing spatial demand for affordable housing, sustainable industrial areas and – at the same time – the protection of open spaces and to address climate change. Planning strategies aim at an efficient, high density land use – also to reduce prices for housing and improve the competitiveness of Stuttgart region.

The Verband Region Stuttgart make use of legal competences when it comes to the protection of green corridors and open spaces. As the regulations of the regional plan are binding for all local land use planning, the impact of this regional regulation is very effective. Although coordinating land use is one of the most important tasks of the Verband, land use planning and zoning remains in the competence of local authorities / municipalities. An additional challenge is participation and acceptance for urban development among the neighbours. These allow the local population to stop zoning activities by referendum. Therefore, outreach and information activities have gained importance: The target is to provide a reliable overview of the current spatial situation, showing the actual problems and possible solutions. This information also comprises economic and social requirements as well as risks and opportunities of spatial development – focussed on regional and local level.

In addition to the formal planning activities, the Verband Region Stuttgart provides support for municipalities. Due to the density of the region and the small pattern of local authorities, a perspective beyond local responsibilities is crucial for sustainable development. Following its statutory role, the Verband Region Stuttgart assists municipalities with outreach and participation activities informal planning procedures, current data, research projects and even financial support.

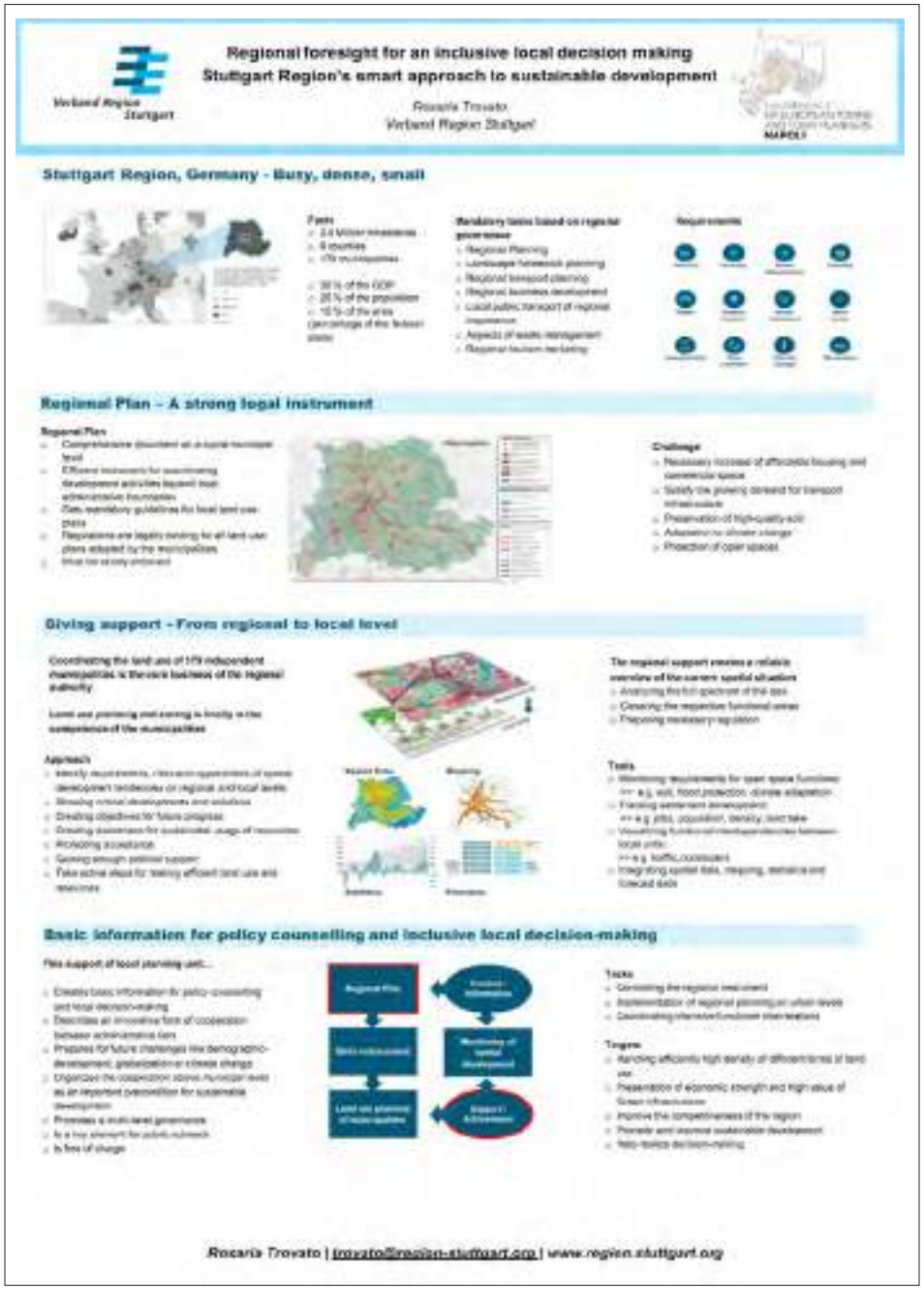
These include, in particular, enabling the designation of alternative areas at the level of land use planning, compensation measures for the ecological impact, but also the necessary expansion of infrastructure. This approach wants to cover both sides: the interrelation between the local and the regional level and the interrelation between the different issues – as sustainable planning has to be integrated. The support also promotes the implementation of regional planning and the cooperation between regional and urban level.

An important aspect is the provision of information and spatial data. It creates basic information for policy consultancy and an inclusive local decision-making. Promoting a multi-level governance and organizing the cooperation above a municipal level are important preconditions for a sustainable development. Urban and regional planning are seen as an integrated tool to achieve a balanced development in heterogeneous settings and competing interests.

The approach shows critical developments and solutions. It creates objectives for future progress and promotes acceptance trying to gain sufficient political support to take active steps towards an efficient land use. The tool shows requirements for monitoring settlement developments and explain functional interdependencies between local units. This continuously updated information is based on spatial data, mapping, statistics and forecasts. A service, that supports helps decision-making on urban level, where necessary development has to be organized.

At the same time, the Verband Region Stuttgart advises the cities and municipalities on the preparation and implementation of formal planning procedures as part of its statutory duties. The necessary information can therefore not only be provided via formal channels and in the form of written statements. Rather, the recognisable supra-local requirements are presented at an early planning stage. Therefore, the (informal) communication of a regional perspective that goes beyond local responsibilities can be helpful in the provision of building space.

Decisions aimed at building new infrastructure and protecting open spaces, are most often political. The Verband Region Stuttgart with its directly elected regional assembly shows how the necessary social discourse on future development can be conducted. So, it is important to implement sustainable policies that ensure and support a productive, integrated and ecological approach. This can only be achieved in cooperation between all the stakeholders – regardless of administrative tiers. It's not about the single parts but how parts work together.



Regional foresight for an inclusive local decision making
Stuttgart Region's smart approach to sustainable development

Rosaria Trovato
Verband Region Stuttgart

Verband Region Stuttgart

MAPEI

Stuttgart Region, Germany - Busy, dense, small

Facts
- 2.4 Million inhabitants
- 9 counties
- 179 municipalities
- 30 % of the GDP
- 25 % of the population
- 10 % of the area (percentage of the federal state)

Statutory tasks based on regional governance
- Regional Planning
- Landscape framework planning
- Regional transport planning
- Regional business development
- Local public transport of regional importance
- Aspects of waste management
- Regional tourism marketing

Regional Plan – A strong legal instrument

Regional Plan
- Comprehensive document on a local municipal level
- Efficient instrument for coordinating development activities beyond local administrative boundaries
- Sets mandatory guidelines for local land use plans
- Regulations are legally binding for all land use plans adopted by the municipalities
- Must be strictly enforced

Challenge
- Necessary increase of affordable housing and commercial space
- Satisfy the growing demand for transport infrastructure
- Preservation of high-quality soil
- Adaptation to climate change
- Protection of open spaces

Giving support - From regional to local level

Coordinating the land use of 179 independent municipalities is the core business of the regional authority

Land use planning and zoning is mostly in the competence of the municipalities

Approach
- Identify requirements, interests and potentials of spatial development tendencies on regional and local levels
- Showing critical developments and solutions
- Creating objectives for future progress
- Creating awareness for sustainable usage of resources
- Achieving acceptance
- Gaining enough political support
- Take active steps for 'making efficient land use and reserves'

The regional support creates a reliable overview of the current spatial situation
- Analyzing the full spectrum of the task
- Covering the respective functional areas
- Preparing necessary regulation

Tasks
- Monitoring requirements for open space functions
  => e.g. soil, flood protection, climate adaptation
- Forecasting settlement development
  => e.g. jobs, population, density, land take
- Visualizing functional interdependencies between local units
  => e.g. traffic,wastewater
- Integrating spatial data, mapping, scenarios and forecast tools

Basic information for policy counselling and inclusive local decision-making

Tasks
- Developing the regional instrument
- Implementation of regional planning on urban levels
- Coordinating intersectoral/cross-level interactions

Targets
- Ranking efficiently high density of different forms of land use
- Preservation of economic strength and high value of Green Infrastructure
- Improve the competitiveness of the region
- Promote and improve sustainable development
- Help realize decision-making

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"España puede" and "Italia domani" against social fragmentation

Territorial planning approach's similarities and differences

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Following the pandemic crisis, the European Union promoted the Next Generation EU (NGEU). The NGEU programs investments and funds in order to speed up the ecological and digital transition, to improve the training of workers, and achieving greater territorial and gender equality. Among the Member States, Italy and Spain were the first to benefit from the support provided by NGEU. Therefore, their experiences play a crucial role in assessing the success of the European initiative and in identifying areas for improvement and replicable management solutions in other contexts. Through the use of these funds, each country is required to prepare a package of investments and reforms that follows the principles dictated by the Union. To this end, Italy drew up the "Piano Nazionale di Ripresa e Resilienza (PNRR) – Italia Domani", while Spain the "Plan de Recuperación, Transformación y Resiliencia (PRTR) – España Puede". The PNRR is divided into 6 Missions and 16 Components. The PRTR is based on 4 axes, 10 policies and 30 components. Outlined the main features of the two Plans, this contribution aims to perform a comparative analysis identifying similarities and differences between the measures to combat the phenomena of fragmentation that have affected especially small and medium-sized centers. In the first place, the choice of the two countries is motivated by their similar characteristics, also with reference to the ability to spend European funds. Secondly, the comparison is possible in relation to the socio-economic peculiarities of the two countries. Italy and Spain have been subject to a devastating contraction of GDP, and which have seen an increase in social and territorial fragmentation, especially in the most fragile and marginal areas with already existing depopulation phenomena. A first element of obvious interest is the title of the Spanish Plan which contains the word "transformation" that already represents a signal of the road that Spain wants to follow, that is that of a new development model, with a very precise vision. This is in contrast to the Italian instrument that is more like a financial mere divided into six years according to experts. The PNRR lacks the perspective of the whole, the direction and future it wants to build for future generations. The governance model is another aspect to be taken into account in the comparative analysis. For the management of the funds, Italy establishes the creation of new governance structures attached to the Presidency of the Council and the Ministry of Economy and Finance. On the contrary, Spain assigns the role of single point of contact with the European Commission to the General Secretariat of the European Funds, which is responsible for the management and implementation of the Structural Funds, in addition to the coordination tasks, supervision and monitoring of the implementation of the measures set up by the PRTR. Another difference is linked to welfare. In fact, the PNRR provides some resources for interventions to combat social fragmentation, but without an overall vision. The PRTR refers to an economy of care, which expresses the desire to link the response to the needs and rights of citizens to the idea that welfare is a coherent public policy, that creates employment, GDP growth and social and institutional innovation. In the PNRR, however, there is no emphasis on giving Italy essential and adequate levels of performance, capable of bridging the inequalities first among all health and social. With regard to the territorial dimension, the PNRR aims to overcome the economic and social disparities that characterize the different regions, favouring the most fragmented areas of the country. In fact, the Plan requires investments to be directed towards the Mezzogiorno for at least 40% of the territorializable resources. Moreover, within Mission 5 a whole component is dedicated to territorial cohesion, with the support of the National Strategy for Internal Areas (called SNAI). Territorial and social cohesion is also at the heart of the PRTR, because this issue is one of the four axes on which the entire Plan is built. Among all, the key instrument in the fight against social and territorial fragmentation is represented by the Plan de Recuperación (130 medidas) frente al reto demográfico, which for the founding principles is comparable to the Italian SNAI. However, it differs in structure and in the definition of the territorial dimension in which to concentrate the interventions, which appears unclear and not well centred. The Spanish Plan also sets out the territorial disparity and the related challenges from a national point of view, with a tendency to place less emphasis than the pursuit of territorial cohesion objectives in relation to the Italian Plan. In this regard, there is not any kind of constraint within the PRTR of resources towards the less developed areas of the country, in contrast to what happens within the PNRR, in favour of the less developed regions of the Mezzogiorno.

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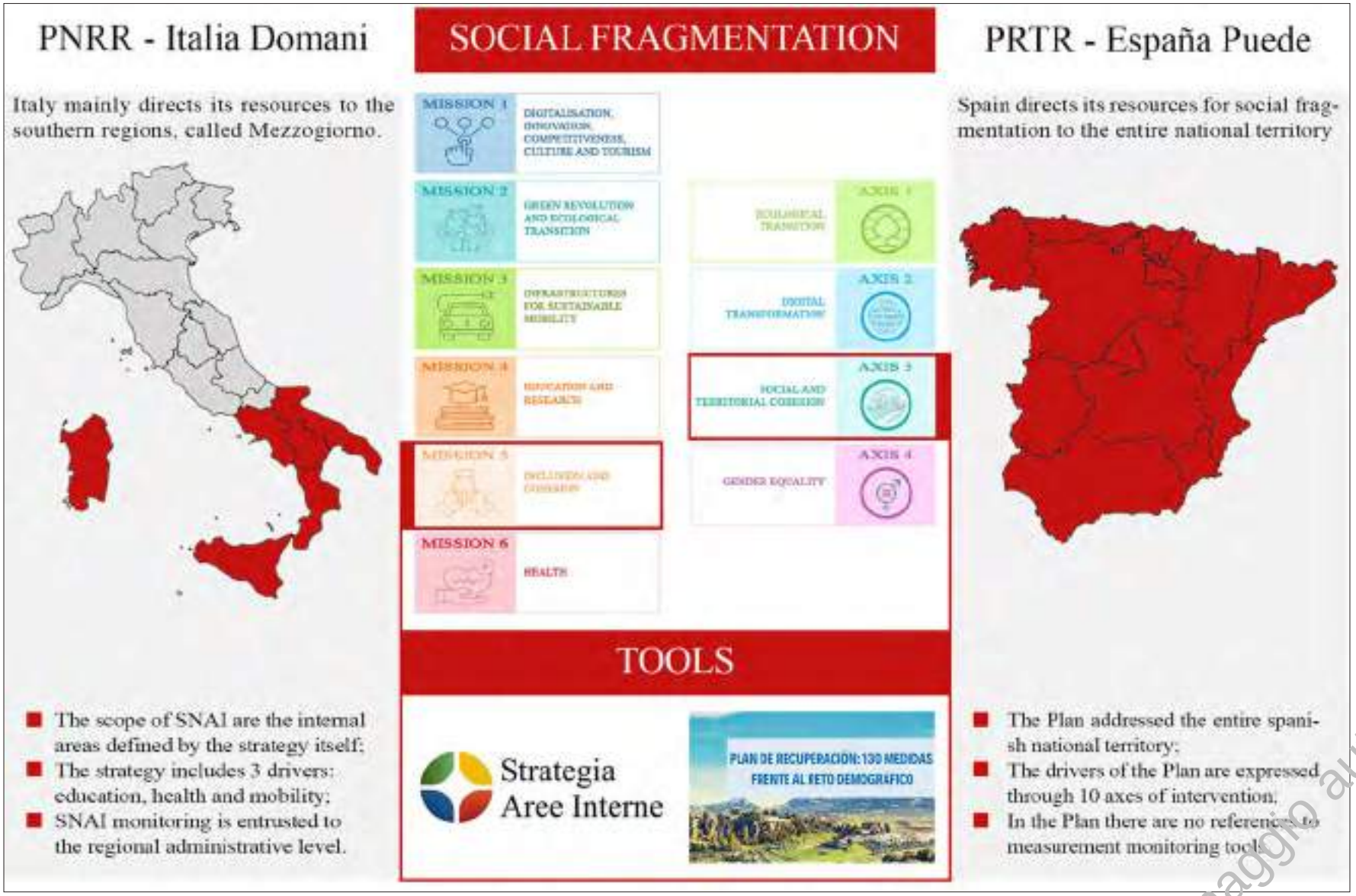

Fig. 1.
Summary scheme of comparison between "Italia domani" and "España puede".

Exploring innovative strategies and approaches arising from EU funds, mechanisms and tools to counter regional and local disparities

*Rodrigo Vielmo Moura**

The regional disparity also affects EU member state regions despite the countries' level of development and growth. In fact, the EU Regional Policy, also known as the Cohesion Policy, reflects the commitment over the years to address regional and local inequalities in an attempt to enhance job opportunities, socioeconomic growth, and territorial cohesion. Moreover, the policy also aims to overcome territorial imbalances, dealing with complex problems such as depopulation and other demographic trends, geomorphological conditions, hydrogeological instabilities, and inefficient essential services (healthcare, mobility, and education). These problems are usually encountered in fragile peripheral areas. In this context, the Italian Strategy for Inner Areas is a virtuous example of a laboratory testing new approaches interrelated to EU Cohesion Policy, multilevel governance, integrated territorial development, and the place-based approach. A key point of the strategy is the power given to the local level. Although the central and regional levels influence regulation, time frame set, and funding allocation, it is at the local level where territorial issues, challenges, barriers, and opportunities are identified. Following stakeholder processes, local development projects are later outlined, completing the local strategy report. This procedure is supposed to be in line with the municipal diagnosis but also follow the related Regional Operational Programme and, as a consequence, the EU's thematic objectives or priorities. Besides strongly supporting its occurrence, the link between the Italian policy and the European Union has brought concrete possibilities to correct existing imbalances around the country. Thus, the research objective is to analyse the innovative strategies and approaches employed and neglected through this agreement, having the Inner Area of Alto Lago di Como e Valli del Lario, Northern Italy, as the case study (local level). The research methodology explores the EU's structural and investment funds, mechanisms, tools, and official national and local strategy documents. The investigation of European and Italian frameworks has generated reflections, insights and findings regarding the benefits of constructing such a strategy, the added challenges and barriers, as well as the neglected mechanisms and disjointedness at different levels of government. The policy analysis indicates that the supranational level was vital for the feasibility of the national strategy – since the major funds have originated from the EU. Also, the European Union provided guidance throughout its conceptual frameworks, reports, objectives, and priorities axes. The thematic objectives have driven the decision of the inner area's goals and local development projects, demonstrating a degree of coherence and a common vision for all member states to follow. Moreover, it is worth pointing out the possibilities arising from the EU funds, integrated sustainable urban development practices, and mechanisms such as *Integrated Territorial Investment* and *Community-Led Local Development*. Regarding the central level, the policymakers created an interest arrangement that made it possible and facilitated all inner areas' requests for assorted funds. This relationship enabled the municipalities to claim up to four funds (ERDF, ESF, EAFRD, EMFF). Still, the national strategy has suggested combining the Italian tool Project Framework Agreement and EU mechanisms. The 'power' given to the municipalities as policy- and decision-makers demonstrated flexibility, confidence, and decentralisation of tasks and decisions to approach the local level. However, the projects do not communicate beyond the inner area's boundaries or reproduce a common vision with medium- and long-term interventions to positively impact and reinforce the municipalities as a new area. Another missed opportunity regarding the inner area was not employing any of the EU mechanisms – showing a lack of unity and alignment with upper levels of government. The Integrated Territorial Investment, for instance, could be a means to improve the infrastructure linking Lake Como to the mountains and public works, delivering better connections among the lake shores. This mechanism admits the combination of more than one fund and priority axe, increasing the chances of success. The Community Led Local Development could be applied to assist the territory recognition in a more structured and unitary way, creating a basis for a long-term cooperation between multiple actors. From a positive point of view, parallel strategies, programmes and actions are taking place due to the regional activity. The advent of the national strategy 'obliged' 34 municipalities and several local actors to work together for months to re-think Alto Lago di Como e Valli del Lario's territory and the near future. Finally, it can be argued that the agreement between Italian policy and the EU generated concrete conditions to tackle complex problems in inner areas. Nevertheless, the selected inner area should have made better use of EU mechanisms in an attempt to avoid mismatches about the local interventions, which most concentrate on specific municipal issues. Building a long-term vision and regular contact with upper levels and experts appears accurate in taking advantage of available opportunities and pursuing a more coherent, aligned and responsive framework to counter regional and local disparities.

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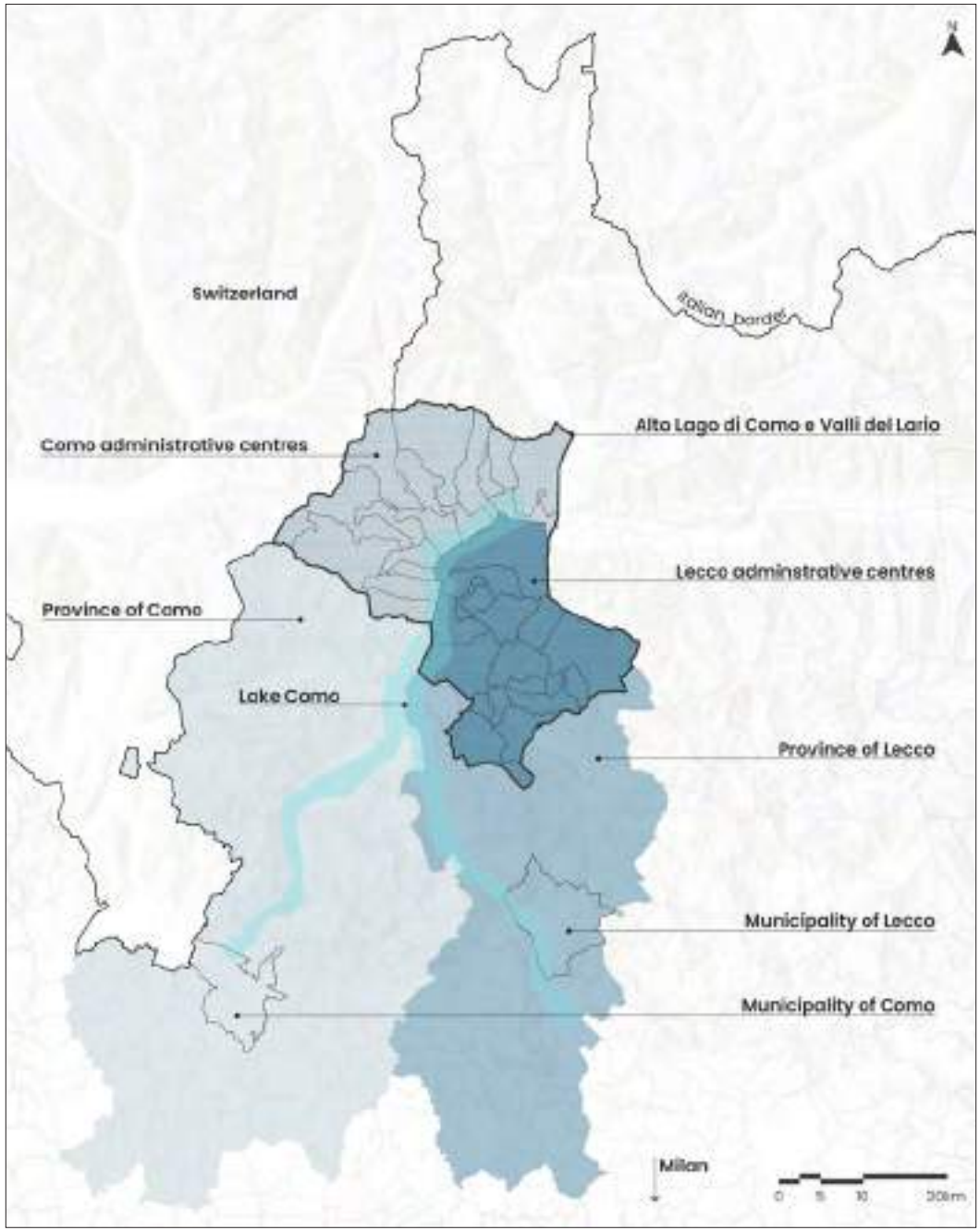

Fig. 1.
Understanding the boundaries and location of Alto Lago di Como e Valli del Lario.

Parallel Workshop

2. Metropolitan or city proposals

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Co-coordinators
Gianfranco Fiora
Carlo Gerundo

Discussant
Kent Håkull
Co-Discussant
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Planning an eco-neighbourhood in Attica

Despina Amolohiti, Dimelli Despina*

Urban planning is a great challenge that combines political, economic, social, and environmental needs of different stakeholders. The rapid urbanization, the climate crisis, the need for environmental protection and urban resilience makes the need to plan new urban zones a procedure that should cover the needs of modern societies. The aim of the project is to create a new eco-neighbourhood in an area in the borders of Attica, the most populated area of Greece that presents interesting characteristics. The project analyses the existing natural and anthropogenic characteristics of the area, and it proceeds to their evaluation. It recognizes the importance of the existing natural elements and the opportunities for the connection with the surrounding urban zones with means of mass transport. The area today has some structures that are developing without regulations and restrictions, while it is of great environmental importance. It is situated in the borders of the existing city in a small distance from metro station and other important facilities.an Ministries, malls, and the Olympic stadium. It presents interesting natural environment while it is in proximity with the Penteli mountain an area of important, historic, cultural, and natural value. The terrain is smooth, while the average slope of the ground is from 5% - 10% except the north area where the maximum slope reaches 40%. The area is "crossed by three streams. The surrounding area is mainly residence with some retail services allocated in the axial sides of main roads. The existing buildings are developed in a sprawled way, and it differentiated we observe low-cost structures and luxurious houses.

The aim of the project is to propose a new eco-neighbourhood that develops many different building types, for the inclusion of all income residents, while it combines green and open public spaces and infrastructures that are interconnected with sustainable urban mobility means. The basic idea is to develop a new urban centre which will gather retail and leisure uses, offices, cultural infrastructure combined with public open and green spaces. The neighbourhood is divided into sub-neighbourhoods equipped with their sub-centres which will have local services for the coverage of their residents' daily needs in a 500m radius. This structure makes walking and cycling attractive means of mobility. The aim of the proposal is to create supra local functions as a Center for start-up enterprises, a Center for research, development, and application of renewable energy sources. and a Botanical Museum-combined with botanical gardens. These uses will be connected with a network of means of mass transport with the wider area.

Along the route that will connect these centers innovation kiosks for citizens environmental education are proposed. The proposal is based on the creation of green corridors around the existing streams which are parts of a wider network of green spaces.

The project proposes building types that can be developed for different groups of residents based on environmentally friendly forms and materials. Three main typologies of houses are planned, houses for 2, 4-5 and 4-6 residents. These are developed in one, two or three storey buildings. The main aim is the spatial mixture of all kinds of residents social and economic backgrounds. The layout of buildings is based on the principles of New Urbanism. The densities are differentiated as higher structures are developed in the central zones while in distant from the centres zones the densities or gradually lower following the urban-peri-urban-rural transition. The organization of these building types is proposed in three kinds of buildings squares of different sizes. The denser public zones are organized with higher buildings, while the residential areas are organized with lower height structures and bigger open areas. The inner areas of the building squares can be used as urban gardens. The shapes of the building squares are defined according to the area's geomorphology, the proposed mobility networks, and bioclimatic principles. Every building square is planned based a combination of all housing typologies to achieve social mixture in the area.

The mobility networks are based on sustainable means, as the cyclists and pedestrians' networks are developed in all the area and are connecting public activities, public squares, and green zones. Based on the three streams-green corridors, the proposal proceeds to a network that interconnects the sub-neighbourhoods and connects the area with its wider region. The neighbourhood will be served with a electric buses that connect the neighbourhood with the metro stations close to the area promoting modal split. As for the local network it is based on the superblocks principles which limits the car speed to certain roads to 30km, creating a pedestrian and cycling friendly environment for the residence zones. Parking spaces are also limited as the residents are using the inner areas of their building blocks, while visitors can park in organized areas connected with the cyclists, pedestrians, and mass transport hubs.

Green surfaces are developed in different sizes and forms. The natural landscape is preserved in the north zone, and the streams networks and it is supplemented by organized green pocket parks, playgrounds, urban gardens, and the public botanical garden situated in the research and innovation area.

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Fig. 1.
Planning an eco-neighborhood in Attica.

Urban study of the Central Axis of Petržalka

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The urban study "Central development axis of Petržalka" comprehensively solves the issue of urban development of the focal area, in which more than 115,000 inhabitants currently live. Petržalka is a part of Bratislava located on the right bank of the Danube. A substantial part of Petržalka consists of a housing estate built in 1975-1989. It was originally designed for 100,000 inhabitants and is one of the largest panel housing estates in Europe. During the first stage of construction, mainly apartment buildings and basic civic amenities were built. The central axis of the estate was reserved for the metro with civic amenities and the main transport network. The water feature of the "Croatian Arm" in the central axis created the potential for sports and recreational facilities. After 1989, the concept of an underground metro in Bratislava was rejected. A construction closure has been announced in the territory of the central development axis. In 2013, the city announced an anonymous international urban planning competition, the aim of which was to find a new urban concept for the central space of the housing estate. The international jury headed by the chairman P. Ger clearly selected the proposal of the authors of the submitted study from 15 domestic and foreign proposals. The winning proposal mainly brought a new transport paradigm. He emphasized the preference for sustainable forms of transport, the tram as a supporting system of transport and an element of a new identity, the completion of missing amenities, the preference for functionally mixed buildings, the creation of attractive public spaces, sports and recreational use around the "Croatian shoulder". The winning team was given the task of developing the ideas of the competition proposal in the form of an urban study, which had three basic stages: the analytical part, the variant concept and the resulting proposal. The study responds to the challenges defined in the New European Bauhaus initiatives, the Amsterdam Pact as well as specific local aspects. The concept of transport in the territory is focused on the preference for sustainable transport (public, cycling, walking), the central element of which is the tram. Tram stops are designed as tram-bus-bicycle transfer points. They fulfill not only a transport function, but thanks to their original solution in connection with the amenities and the system of public spaces, they support the social character of the territory and its identity. Emphasis is placed on easy and quick access to the territory on foot and by bicycle. This is supported by the design of a system of transverse connections and footbridges across the "Croatian Arm" water area. The proposal brings new public spaces, including the main and local squares. Car traffic in the axis has only a service character. The four-lane road planned in the city's spatial plan is canceled in the study, and the capacities are remeasured to the perimeter of the housing estate. The proposal solves the deficit of static transport, but expects a prospective reduction in the rate of car ownership. The study places great emphasis on the environmental aspects of the solution: water retention in the territory, biodiversity protection zones, mitigation and adaptation to climate change. The proposal envisages green architecture, zero energy consumption of new buildings, and urban energy cooperation. A special aspect is the design of greenery. The space of the water arm is designed as a compact linear nature park. In addition, small local parks with water features within easy reach are designed. Pedestrian routes are in the shade of alleys. The goal is to significantly increase the value of the eco-index in the territory. The study proposes to supplement the territory with the missing functions of amenities as well as to expand the forms of housing with the aim of diversity of housing and social structure The whole process was accompanied by extensive participation of residents, which was coordinated by the Office of the Chief Architect of the city. The resulting proposal is the result of a broad discussion of the lay and professional public. The study was finally discussed by the city council. It is thus the official basis for changes to the city's spatial plan and for more detailed regulatory plans. The study is one of the largest urban tasks of Slovak urbanism of the 21st century (5 km long, 200-350 m wide territory with an area of over 170 ha). The territory was divided into 7 sectors, which enables more targeted participation as well as the processing of more detailed spatial plans.

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Territorial analysis tools for the construction of the Strategic Plan for Sustainable Development of Sappada

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Integrated sustainable development plans are important long-term planning tools for cities of all sizes. Balancing the losses and gains of natural and human resources has been a major challenge for the Municipality of Sappada – IT. With the main objective of satisfying local tourist demand and reducing the resident population rate, the University of Ferrara through the "Consorzio Futuro in Ricerca" in partnership with the Municipality of Sappada and the local community, has been working for the last 2 years on the Plan of Sappada Sustainable Development. 11 main themes were listed by Municipality for carrying out analyses and proposals for sustainable urban development for the next 20 years. The themes were the Natural Oasis of Val Sesis, Historical Villages, Piave Park, Sappada 2000, Residential Zone, Craft Zone, Hospitality, Timber Resources, Infrastructure and municipality assets, and Maintenance. Within each theme, specific analyses were identified that should be addressed in some way in the territorial recognition process. As a tool for analysis and territorial knowledge, a linear and scalar structure was used, starting from natural environmental aspects and moving on to the anthropogenic aspects of historical heritage and energy resources. To construct the cartographic documents, it was necessary to start the research using the City Hall's databases. To interweave the necessary data and absorb the maximum understanding of the territory based on the elements requested by the administration, several data sources were used. The first and main source was the CTC (Communal Technical Charter), from the territory's georeferenced database, it was possible to reconstruct and analyze the first themes of the Naturalist Site, being complemented by other data sources. The Risk Zones were reproduced from the charts of Piano Stralcio per l'Assetto Idrogeologico dei bacini idrografici dei fiumi Isonzo, Tagliamento, Piane e Brenta-Bacchiglione. The mountain ranges were collected from PDF maps with the help of orthophoto. For the other topics listed, the PRG (Piano Regolatore Generale), available in Dwg, was a fundamental basis for the reproduction of parking lots, plans and planned areas, the area available for artisanal and productive activities, and the plots of land. The cycle paths were represented based on collections of orthophoto interpretation and local plans. And for searching for data on installed activities, the greatest resource was open data. To make the data compatible, it was necessary to use the various GIS resources. It took several passes of Datum corrections, polygonization of static chart data in PDF, cataloging of data in tables, and conversion of Dwg files to Shp. In 2022, the orthophoto open source data was updated, and made available by Google through QGIS, this feature allowed for a more upto- date and accurate analysis of the infrastructure made available. In addition to the process of making the different data sources compatible with the GIS, difficulties were encountered throughout the research regarding the transition from the Municipality of "Regione del Veneto" to "Friuli Venezia Giulia". The Municipality was not included in the most current Plans of the "Regione del Veneto" nor in the Plans of the "Friuli Venezia Giulia" Region, therefore no specific guidelines for territorial planning were found nor updated data in shp. format. With the help of the urban morphology analysis methodology integrated with the Geographic Information System instruments, it was possible to identify integrated actions of important policies, projects, and research to control and mitigate the impacts of tourism and the loss of the local population.

Furthermore, at the end of this work, gaps were identified in data sources, an integrated political vision between municipalities, and the need for greater transversality between public authorities and the local community. Sustainable development plans for small communities become too challenging when working independently. The intervention carried out brought, in addition to urban planning strategies, architectural design elements that should guide the entire process of development and investment in new infrastructure for Sappada. From this final analysis, it was observed and demonstrated that the efforts, once concentrated on the themes of Parque Piave, Sappada 2000, and Oásis Val Sesis, and in the historic villages, are capable of resolving the main emergencies covered in the tables themes and the main problems diagnosed by the Municipality of Sappada. They address all other macro and micro themes listed at the beginning as priorities, building a line of development focused on environmental and tourist issues as a financial, cultural, and social resource for the sustainable growth of Sappada for the next 20 years.

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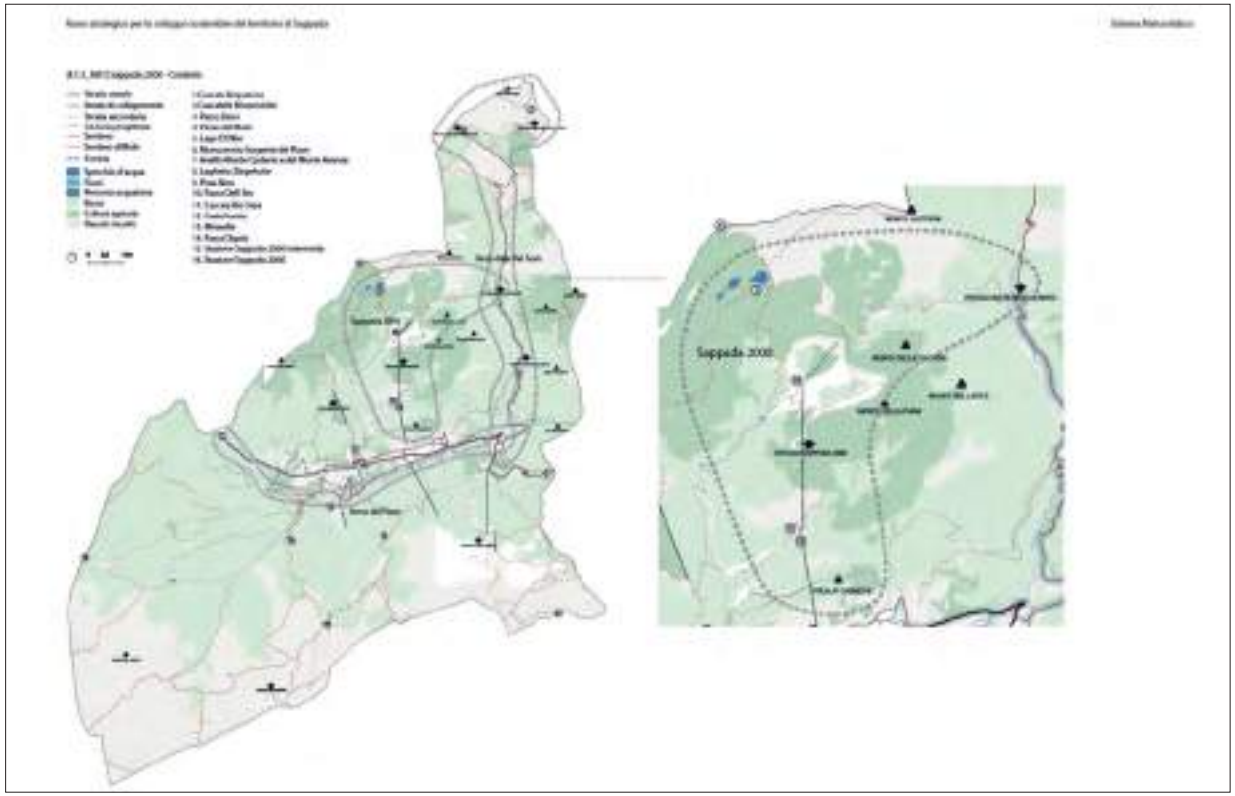

Fig. 1.
Mapping of Sappada's environmental system.

Fig. 2.
Historical mapping, flows and services in the historic center of Sappada.

Identifying and mapping proximity of services for students: a case study in the university city of Bologna

Silvia Bartolucci, Elisa Conticelli**, Angela Santangelo****

Cities have always been characterized by changing forms and services, based on the prevailing groups inhabiting them. Currently, in the Italian context, student population has been receiving wide attention being responsible for the urban phenomenon of *studentification*. This phenomenon represents a process by which specific neighbourhoods within urban areas become mostly inhabited by university students1. Like many other European and non-European cities, Bologna has witnessed this phenomenon, hosting a large number of students. In the academic year 2021/2022, the number of students enrolled in the Bologna campus only was approximately 70,000, of whom about 60% were non-residents. The presence of such a large number of students represents a significant opportunity for the city, capable of enriching its social and cultural capital in the present and, if well exploited, also in the future. However, it might also determine conflicts between student population and local residents that could lead to the disintegration of existing communities or ghettoization of students. In light of this situation, the research aims to investigate which services and facilities student population seeks the most near their homes to enhance their urban experience. To this end, we adopt the "proximity flower" method, a collaborative design tool applied by Gil Solá and Vilhelmson2 and Büttner et al.3 to engage the local population to design solutions and services that are better tailored to their needs. The exercise is structured in a rather simple manner, making it inclusive for the entire population or a specific target group. The basic tool adopted is a board with a stylized flower drawn on it. In the centre of the flower the resident's home is placed and circles with different radius and centres on the resident's home are drawn. Circles represent different walking distances to be covered by foot or bicycle. Each petal represents a different macro-category of urban services and facilities. Participants are asked to place specific types of urban facilities and services within the petals corresponding to their macro-category, and at a desired distance from home with the specific objective of understanding the various desired urban services and ranking them in terms of their proximity to residences.

In this research the proximity flower was applied to specifically investigate the needs of the student population living in Bologna and, consequently, to compare them with the current presence and location of the services within the city. To this aim, we engaged 92 students enrolled in the Engineering and Architecture courses at the University of Bologna by asking them to complete the student proximity flower (Figure 1) by placing the listed services within the corresponding petals at a desired distance from home. Four circles were drawn, ranging from less than five minutes to over 30 minutes distance covered on foot; six petals representing six macro-categories of services were then represented. They refer to entertainment, working, education, transport, commerce, and green infrastructures. We proposed a list of services and facilities for each category that may fit the expectations of students, but students interviewed were asked to add new services in the list, if needed. They were asked to place these activities and services in the related petal at the desired distance from home, to highlight the demand for services for a good living in Bologna. The results revealed that students desire public transport stops, bars, gyms, pharmacies, supermarkets, as well as trees and small green areas the most, since they were placed within a five-minute radius in most of the flowers. Within the 5-10 minutes range, the main services related to study and work were placed, along with pubs, pizzerias, train stations, tobacco shops, ATMs, and neighbourhood parks. Between 10 and 30 minutes, services such as cinemas, theatres, social and cultural centres, health centres, markets, community vegetable garden and public urban parks were identified. Finally, few services only were located at distances exceeding 30 minutes. Students were also invited to leave comments for better clarifying the activities they wish to do or the

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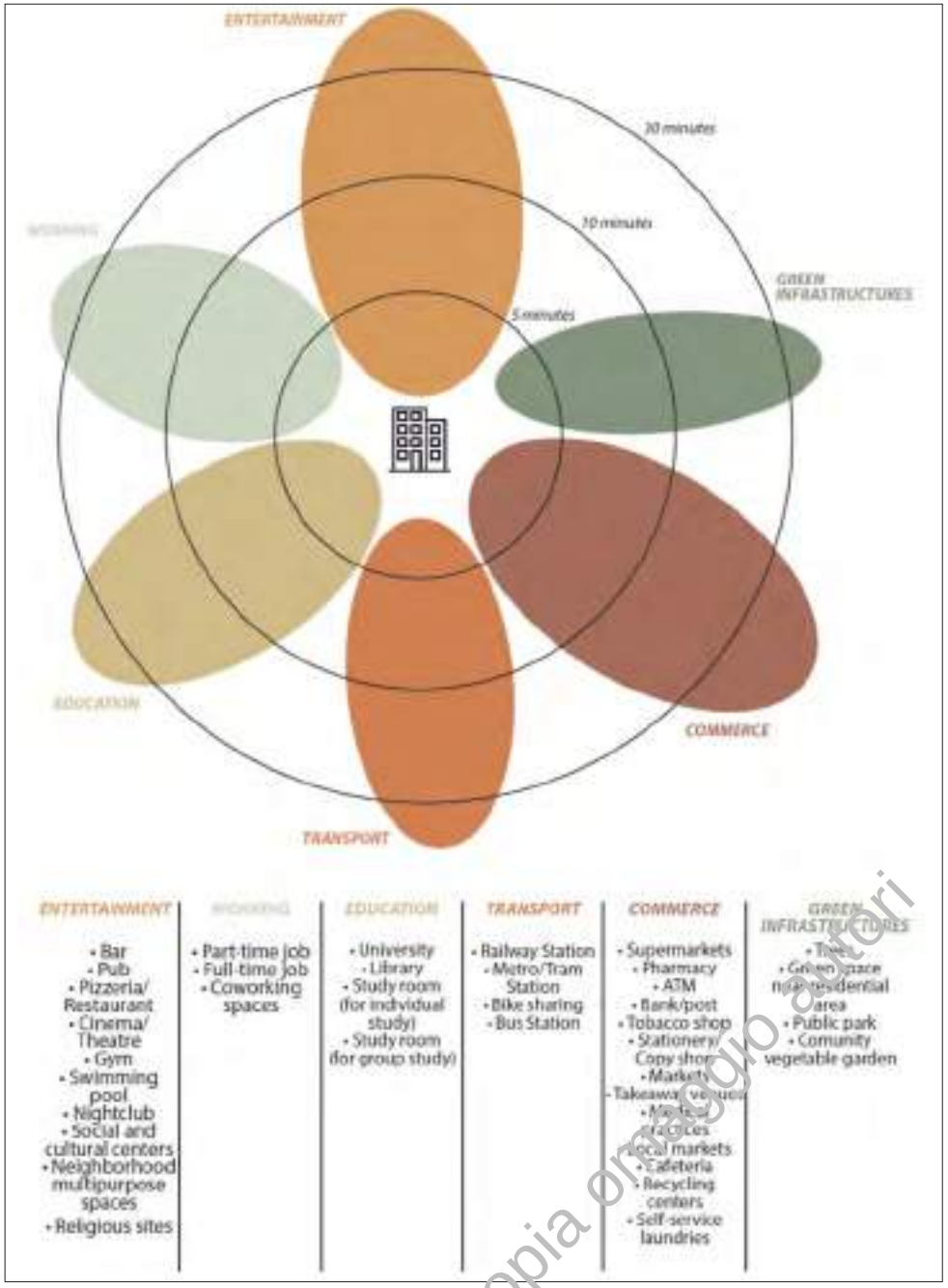
The student proximity flower adopted for the research.



quality of facilities they wish to find in the places they considered during the exercise. From the responses, it is evident that students express a clear need for socializing spaces and informal study places, which have so far been represented by bars, social centres, or public parks. However, they still fail to fully meet the expectations of the students who frequent them. After having analysed the demand of services that students would find in the city, we mapped what services the city offers and performed a network analysis on QGIS software. The final aim is to highlight possible spatial gaps in the provision of services for student population. It emerged that the accessibility of several basic services is already ensured in almost all the city areas. However, there is a concentration of student facilities, as university rooms, libraries and study rooms, in few and central areas of the city only, leaving other areas in the outer suburbs without access to such services. By crossing the demand for services from students with the proximity services offered by the city, it was possible to identify which areas of the city shared similar characteristics and where similar planning strategies could be applied. To conclude, although the research primarily focused on the city of Bologna, it is worth noting that the method used could be applied to any other city interested to further investigate the phenomenon of *studentification*.

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The Search for planning a Global South metropolis: The Case of the 2014 São Paulo Master Plan, Brazil

*Eduardo Alberto Cuscé Nobre**

The objective of this paper is to evaluate the implementation of the 2014 City of São Paulo Strategic Master Plan (PDEMSP), which has a metropolitan vision and aims to promote a more environmentally balanced and socially equitable urban development, providing new planning tools to achieve these objectives. The 20 million inhabitant metropolis has developed in the context of an extreme uneven society, typical from the Global South, resulting in a highly segregated space where the higher income strata live in the central areas, with jobs, services, public facilities and infrastructure, while the poorest ones live in the precarious outskirts with huge deficits of these items. The City of São Paulo represents roughly half of the metropolis population and concentrates the higher income population. The 2014 Master Plan was enacted by Law 13,650 after a participatory process, led by the Urban Development Department, following the requirements of the City Statute, the Federal Law 10,257/2001 that established general guidelines for urban policy nationwide. The plan adopted TOD (Transport Oriented Development) principles, concentrating new urban redevelopment along the so-called ZEU (Urban Transformation Structuring Axis Zone) earmarked along mass transportation axis (bus rapid transit, metro and railways). Along this zone, the FAR (Floor Area Ratio) can reach 4:1 after the payment of Additional Building Rights Levy, a local LVC (Land Value Capture) tool. These resources are deposited in the FUNDURB (Urban Development Fund) and 30% of them must be spent in public transport works and 30% in social housing. The plan also earmarked the ZEIS (Social Interest Special Zone) which comprises both favelas and irregular settlements to be upgraded, as well as, infrastructured vacant land dedicated to social housing production. Ten years after the enactment of the 2014 PDE, it is possible to make some conclusions about its implementation advances and setbacks. However, it is quite important to note that between the approval of the PDE and its implementation there was a political shift in the City Hall, from a left-wing to a neoliberal administration. This shift certainly impacted the completion of the plan many objectives. The research based on the Embraesp (an important real estate consulting company) database, mapped the high-rise development from 2005 to 2019 and demonstrated how their localization moved from a dispersed pattern during the previous master plan (2002-2014) to a concentrated one along the ZEU in the current one (2014-2020) as can be seen in the blue dots on the figure 1. According to some city hall official documents between 2014 and 2020 it is possible to assess the implementation of several PDE 2014 proposals, involving two offices, Fernando Haddad (2013-2016), who prepared the plan, and João Dória/Bruno Covas (2017-2020), opposition to the previous one. Analysing these data, it is possible to see that the effort was much greater and more effective in the first office, despite the fact that it has only two years to implement since the enactment of the plan. Considering the urban mobility policy, it is possible to notice that there was a greater effort by the Haddad´s office with the implementation of 95% of 447 km 0f priority bus lanes, and 76% of 586 km of bicycle lanes. However, BRT construction in both administrations was much lower than expected only 10% of 87 km, increasing the current network to 218 km. This goal was unfeasible, as the Municipal Account Court (TCM) suspended the process of expropriation of the properties necessary for these works due to an alleged problem of overpricing. Regarding the housing programs, 25,800 new HIS (social housing) units were built, 19,470 families benefited from the slum upgrading program and 324,000 were awarded at the land tenure regularization program. Once again it is possible to ascertain a greater achievement in the Haddad office with 58% of the new HIS units, 62% of land tenure regularization and 72% of favela upgrading. However, a survey carried out between 2014 and 2019 of the HIS approved projects by the city hall, identified 1,103 projects, 94% of which were carried out by the private sector and only 9% of the projects were approved as HIS 1, aimed at families with income up to 3 minimum wages, despite the fact that this social group represents 92% of the city's housing deficit. Despite redirecting the city growth along the transport axis, the strategies to promote social housing were appropriated by the market, redirecting it to the middle income classes in the East Zone, as figure 2, that historically has concentrated the working class. The research concluded that the implementation of the plan, without the respective public policies does not revert the existing social segregation. On the contrary, sometimes it can even reinforce it. This work was supported by the CNPq (National Council for Scientific and Technological Development), FAPESP (São Paulo Research Foundation) and CAPES (Coordination for the Improvement of Higher Education Personnel).

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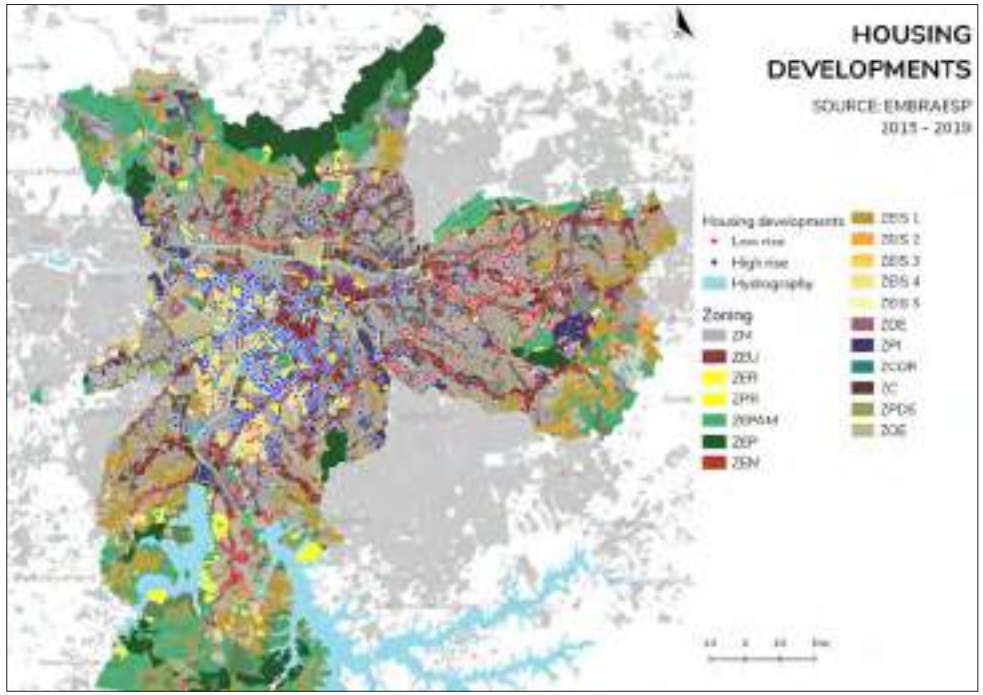

Fig. 1
Urban development in São Paulo from 2015 to 2019 in accordance to 2016 zoning. Source: Nobre & Seo, 2023.

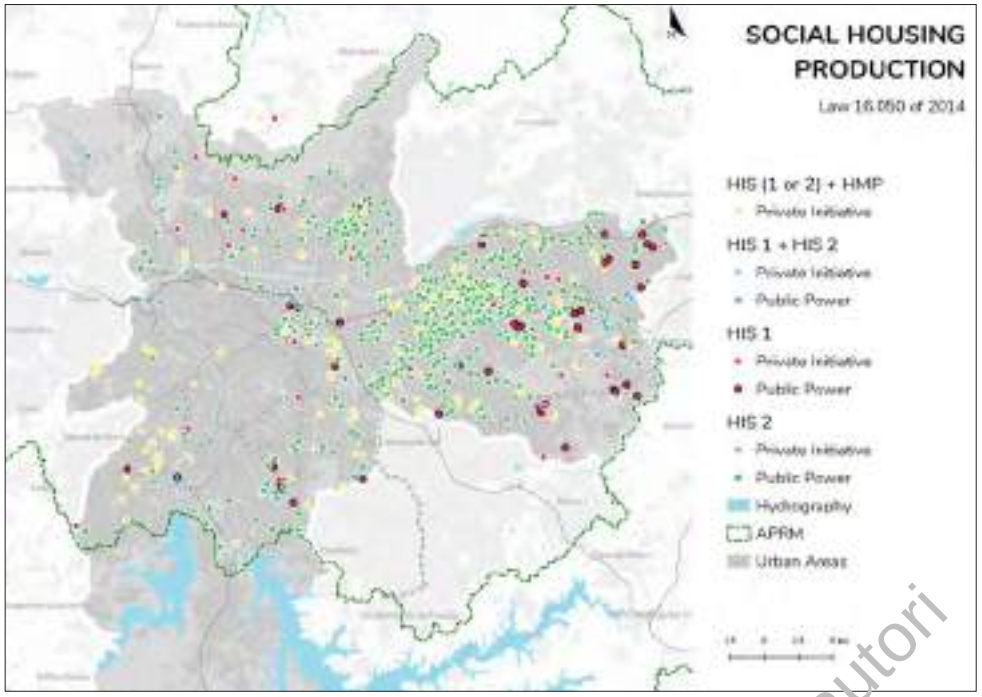

Fig. 2
HIS developments approved between 2014 and 2019. Source: Nobre & Seo, 2023.

Debt as Spatial Practice

*Antonio di Campli**

Many researches today address the issue of debt, particularly in the fields of economics and social and political studies. However, moving into the field of urban studies the questions that need to be asked are: how is space inhabited and produced, in, through, debt? What are its repercussions in the configuration of domestic space, in the processes of spatial production at the architectural scale and at the larger scale of proximity? The hypothesis argued here is that debt is not only an economic or temporal affair, but an actual spatial production practice that manifests itself according to precise forms of spatial production. Space that is produced within conditions of obligation, of intertwining forms of predation and extractivist production, of failure, of strategies of resistance. So how do we, as architects and urbanists, propose to think with these dynamics, with dealing with bodies and spaces produced within such conditions of obligation? How do we observe what Harney and Moten (2013) call 'lives in debt'?

Particularly in the contexts of the so-called Global South, the most interesting places to investigate in order to grasp the manifestations, dimensions and socio-spatial implications of the indebtedness of individuals and families, appear to be neighbourhoods and parts of cities usually considered as peripheral or marginal from a political, spatial and financial point of view. In such contexts, indebtedness, especially household indebtedness, manifests itself in particularly explicit ways, translating itself into urban spaces and arrangements. It is necessary, therefore, to stand on the threshold between economics, dwelling and processes of spatial production, observing some, specific, spaces, boundaries and 'interiors' of debt, observing spatial practices, processes of subjugation, cunning, through which indebted individual and collective subjects negotiate and resist debt. The situations and experiences of indebtedness, of course, are multiform, corresponding to processes of production of living spaces in which different forms and sources of indebtedness tend to intertwine. In these reflections, links are established between debt as an economic relationship and processes of spatial production. If we do not understand the different kinds of values, desires and conflicts embodied by objects, buildings and spaces of debt, we fail to grasp the reasons why vulnerable subjects accept debt in order to live in a marginal and precarious neighbourhood. Debt, it is argued, is both a form of predation and an extractive process (Graeber 2011; LeBaron 2014) that counteracts the dominant conception that thinks of debt according to the lens of financial inclusion and the promotion of individual enterprise. At the same time, through debt, forms of resistance to neocolonial and extractive processes are defined. Strategies of resistance and 'escape' from debt emerge from cunning strategies of producing living spaces redefined as devices for capturing resources, as infrastructures supporting a living that is both unstable and rooted. Those who inhabit debt know how to nestle within it, 'cannibalising' it and twisting its logic in their favour. They are the real experts on how to proceed, even if they often lack the resources to articulate their solutions in structured forms. Starting with a comparison with certain spaces and events located in the Ecuadorian city of Loja, it is possible to express some considerations on the spatial character of debt and the articulations between emancipation desires, forms of subjugation and processes of value extraction. Three possible project strategies are indicated, defined starting from the identification of certain spatial characteristics of debt that characterise the two case studies analysed. Through these forms of resistance, an attempt to operate 'inside' the debt appears possible, phagocytising it and twisting it in one's favour, challenging codes and intentions that see the home and urban space fundamentally as a resource at the service of capital valorisation.

The first design form of debt resistance may relate to the reconfiguration of housing into an infrastructure through which to capture more resources and, at the same time, offer adequate conditions of comfort to its inhabitants. The 'productive house' is an incremental device conformed according to logistical reasons, linked to the orbital movements of its inhabitants, and is a platform through which economies and incomes can be woven.

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The second form of resistance, readable at the neighbourhood scale, is linked to the activation of neighbourhood assemblies and collectives connected to the configuration of informal market spaces, comedores populares, merenderos, and collective canteens. These urban devices are places where a counter-power to the forces of extractive finance manifests itself, allowing residents not only to survive, but also to develop new forms of social relations and exchange.

The third design form of resistance can be defined by recalling the German term kunstwollen, a concept that describes a willingness to transform a social, economic and cultural fact into an image. The debtscapes are very visually recognisable. Their style is marked by the proliferation of mouldings, gables reminiscent of temples, arrangements of bay windows and stained glass windows. These are more or less codified and repetitive assemblages. The neighbourhoods of debt are, from a visual point of view, at once seemingly disordered but ultimately monotonous. Spaces of boredom, control and projection of the identity of a social group. Namely, domestic spaces. This is the production of a language deliberately distant from those resulting from pure technical and constructive rationalities. There is in this will something analogous to a political decision.

Through these forms of resistance, an attempt to operate 'inside' debt appears possible, phagocytising it and twisting it in one's favour, challenging codes and intentions that see the home and urban space fundamentally as a resource at the service of capital appreciation.

LABMET - Metropolitan Innovation Laboratory of the Metropolitan City of Cagliari

Nicolò Fenu, Isabella Ligia**, Paolo Mereu****

The LABMET - Metropolitan Laboratory of Innovation was established within the Strategic Metropolitan Plan of the City of Cagliari, gathering suggestions from citizens and local institutions. The Strategic Plan has played an essential role in the policies of the Metropolitan City, creating an awareness and reflection space on issues related to urban development and planning, including the need for systemic territorial management. This process led to the ideal conditions for promoting participatory territorial policies, which materialized in the Metropolitan City of Cagliari's project 45 - Urban Lab for citizens' participation and project proposal.
LABMET was established to assist authorities and entities in urban planning processes and territorial policies, providing training and sharing services on urban/territorial issues and developing operational and innovative projects and policies(Fenu 2023).

LABMET consists of three main pillars:

Observatory: Collects, selects, organizes, and disseminates information and data on the Metropolitan City's territory.

Research: Develops solid knowledge bases from good practices and the positive experiences of already operational urban labs and delves into themes related to urban planning, social, statistical, environmental, energy, and sustainability in general.

Participation: Promotes collaboration, consultation, and training pathways related to urban policies and metropolitan and territorial planning and programming. Activities are focused on designing participatory processes and using the ParteciPA platform for initiatives aimed at officials of the Metropolitan City and its 17 municipalities, local stakeholders, and citizens.

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The objectives of LABMET include fostering inclusive and sustainable development of the metropolitan territory, innovation in public administration, accessibility to the knowledge of the territory and environment, strengthening the economic and social development of communities, promoting technological and informatics innovation, enhancing participation and shared planning of the territory, improving the quality of the landscape and citizens' lives, and promoting the social cohesion of the communities living in the metropolitan territory. A series of activities related to the three pillars mentioned above were carried out in the first year of experimentation, which was useful for drafting the feasibility study.

The participation activities, horizontal participation processes, and the first cycle of introductory laboratory meetings were promoted to imagine and build together the new metropolitan agency. This involved the offices of the Metropolitan City and its 17 municipalities and stakeholders such as professional orders, trade associations, unions, and the university.

The research phase, strongly fueled by the indications and ideas in the three stakeholder engagement meetings, involved analysing and comparing good national and European practices. Urban agencies as a tool for urban transition were investigated through the study of documentary material and targeted interviews to identify possible activities, missions, governance systems, management models, economic models, and impacts.

The Observatory promoted and managed the collection, selection, organization, and dissemination of data and information, aiming to build and progressively enrich the shared knowledge base to support public interest choices. The pilot project focused on the systematization of data on green areas of the 17 municipalities.

Urban agencies play a crucial role between the technical and political spheres, acting as a hub between territorial planning and urban policies. As mediators among various

actors, they navigate between local and international contexts. With a forward-looking and territorial perspective capable of scaling from micro to macro, they build structured networks for collaborative, shared, and mutualized work based on exchanging practices and knowledge.

LABMET is a digital and physical space for sharing and disseminating urban issues, a tool for developing the metropolitan territory, and a community for open discussion. It is also a method of development and guidance for public spending, aiming to maximum inclusion, participation, transparency, and monitorability.

LABMET could be an operational entity and a strategic facilitator for public policy development and decision-making support on territorial strategies and major projects. With its comprehensive approach to urban challenges, LABMET is positioned to drive transformation in Cagliari's metropolitan area, ensuring that development is sustainable, inclusive, and future-oriented. The agency is evidence of the power of participatory planning and the collective shaping of a city's destiny, serving as a model for metropolitan innovation and civic engagement. It encourages exchanges and partnerships and multidisciplinary and coherent public policies aligned with local culture, economy, and environment, fostering the emergence of "smart planning," which is open and driven by elected authorities and all stakeholders from conception to project realization.

Fig. 1
What is for you LABMET? Answers shared during the first participation phase.

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Urban and peri-urban agriculture (UPA): from benefits to planning

Results from EFUA H2020 project

*Claudia Cassatella and Enrico Gottero**

Many cities have recently understood the great potential of urban and peri-urban agriculture (UPA). UPA provides several benefits that concern different dimensions of the urban environment and, if appropriately guided and supported, can contribute considerably to the achievement of the main targets of urban agendas. However, UPA is not yet totally and formally recognised and integrated into land use policies and planning tools. Understanding how to take advantage of benefits, encourage and support decision makers to promote and sustain UPA, in order to overcome some city-related issues, is still a crucial activity for urban planning.

In this paper the authors illustrate the main results of the European Forum on Urban Agriculture (EFUA), an ongoing H2020 research project (2020-2024) which aims to unlock UPA potential by improving knowledge, networking, deployment and policies. The integration of UPA into the EU, national, regional and local policies is another specific goal of this research project. This project includes 11 partners from all over Europe and involves not only academia but also practitioners, government, farmers, and civil society. The involvement of these stakeholders enabled the establishment of a European UPA forum.

Nowadays UPA can take various forms. It includes professional and non-professional agricultural practices, both in intra-urban areas and in peri-urban spaces. UPA ranges from professional farmers who cultivate in order to satisfy local demand and citizens that cultivate their own gardens with social or recreational purposes. Using proximity to the city, UPA can provide several goods and services for urban consumers and areas. EFUA has recently identified six types of UPA: Urban Farms, Community Parks, DIY Gardens/ Farms, Zero Acreage Farms, Social Farms and Community Gardens[1]. Considering these forms, EFUA has also classified five benefits categories: socio-cultural, environmental and climate, food, health and well-being and economic[2]. EFUA has also showed that these benefits are linked with urban policy targets including the main sustainable development goals and the themes of the European Urban Agenda. This means that UPA can contribute to overcome some urban issues, especially concerning social exclusion and disparities, food poverty and insecurity, as well as the quality of urban ecosystems. Furthermore, UPA may also play a crucial role in the debates on the new "Nature restoration law" and on possible "Common food policy" for the European Union.

Supporting urban policies and spatial planning to reach these targets by using the benefits of UPA is a crucial point of this research. For these reasons, EFUA has studied the main characteristics of UPA initiatives and the barriers that limit the development of UPA, and has collected a comprehensive set of urban planning approaches supporting UPA development[3]. EFUA analysed 44 case studies at city level, both within and outside Europe, as well as cities from LDCs, in order to transfer successful experiences and tools to the EU and local levels. EFUA highlighted that UPA has recently been addressed by many policies, at different levels and throughout the world. These policies are related to different thematic domains such as urban-rural partnerships, urban green development and management, climate adaptation and/or mitigation, local community development, urban renewal, and food strategies. These policies concerned various types of policy instruments (such as strategy, programme, project, land-use zoning, regulation, etc.) and can be grouped into two systems: the first focuses on UPA by a dedicated strategy

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1 Jansma, J.E., Veen, E.J., Vaandrager, L., Muller, D. & Berg, W. van den (2021). UA typology update, H2020 project n. 101000681,European Forum for a Comprehensive Vision on Urban Agriculture (EFUA), Deliverable 3.1, available from: https://cordis.europa.eu/project/id/101000681/results (last access: 2024/03/08).

2 Cassatella, C., Gottero, E. (2022). Type-benefit matrix, including set of indicators, and benefit leaflets, H2020 project n. 101000681, European Forum for a Comprehensive Vision on Urban Agriculture (EFUA), Deliverable D3.2., available from: https://cordis.europa.eu/project/id/101000681/results (last access: 2024/03/08).

3 Cassatella, C., Gottero, E., Cotella, G., Salizzoni, E., Pede, E., Quaglia, S. (2022). Report on in depth-analysis on UAs role in urban planning, H2020 Project n. 101000681 European Forum for a Comprehensive Vision on Urban Agriculture, Deliverable 4.2, forthcoming.

while in the second UPA is part of a more comprehensive policy which addresses many issues or concerns a specific theme. Based on the case study analysis, EFUA also classified a scheme of the main UPA-related planning and management tools that includes inventories, plans, regulations, incentives, and assessment instruments.

Based on the literature review, the stakeholders involvement, and the analysis of case studies at city level, the research also identified challenges and needs when planning for and with UPA. EFUA showed that the main obstacles to maintain and develop UPA concern land accessibility, availability and ownership, as well as the current limitations caused by local regulations and/or zoning codes. Providing land for UPA, integrating UPA into urban policies and creating specific strategies or plans for UPA are the main challenges that urban public polices should address in order to support UPA, according to the EFUA results.

To support city authorities in the development and integration of UPA into public policies, EFUA proposed 9 recommendations (see poster). Establishing a UPA committee and promoting a participatory approach can help to assist policy makers and to define tailored measures for differentiated UPA initiatives. The results of the EFUA project showed that keeping or making spaces for UPA, identifying existing and potential land, as well as improving its accessibility, are other crucial points for UPA. Developing tools such as site-specific strategies, land use and management regulations, financial, training and incentive instruments, evaluating and monitoring the development and impacts of UPA initiatives, are all measures that should be adopted at the city level. Finally, creating facilities and infrastructures, as well as promoting different forms and products of UPA initiatives are actions that can further maximise UPA benefits.

Urban and peri-urban agriculture (UPA): from benefits to planning. Results from EFUA H2020project

9 keys to successful UPA-related public policies and planning tools

DEVELOPING A PARTICIPATORY PROCESS AND ESTABLISHING A UPA COMMITTEE

ENSURING AVAILABILITY AND ACCESS TO PUBLIC LAND FOR UPA

IDENTIFYING EXISTING AND POTENTIAL LAND FOR UPA

CREATING A SPECIFIC PLAN FOR UPA

DEFINING REGULATIONS FOR UPA

DEVELOPING FINANCIAL OR INCENTIVE TOOLS

DEVELOPING FACILITIES AND INFRASTRUCTURES FOR UPA

SUPPORTING UPA INITIATIVES AND URBAN FARMERS

EVALUATING AND MONITORING PUBLIC POLICIES FOR UPA

EFUA

APRIPISTA: Sustainable Urban Mobility Plan of Gragnano

*Andrea Graziano**, Maria Somma*, Danny van Beusekom** and Luca Zampieron***

Urban mobility impacts the global population by facilitating travel and trade, bolstering city competitiveness, yet generates substantial external costs like congestion, pollution, and safety hazards, detracting from liveability and city appeal, despite the increasing use of alternative fuel vehicles. The excess number (number of vehicles for square kilometres) of automobiles can have adverse effects on all inhabitants by causing landscape degradation and reducing public space. Policy-makers are advocating for policies and solutions to achieve sustainable mobility goals in response to various challenges. In particular, the European Commission has recognised the Sustainable Urban Mobility Plan (SUMP) as a key tool for advancing economic, social, and environmental sustainability in urban areas and create an observatory on urban mobility[1] to allow the exchange of information, expertise, and experiences across European cities. The SUMP enhances quality of life by fostering a long-term vision through participatory, integrated, and multisectoral planning, integrating social accessibility, economic efficiency, and environmental factors. Starting from January 1st, 2023, in Italy, SUMP became mandatory for all Italian cities with a population exceeding 100,000 inhabitants. Below this threshold, implementing such plans is voluntary but highly recommended. The European Commission strongly advises European cities of all sizes to adopt the concept of SUMPs, based on established planning processes and incorporating ideas of integration, involvement, and evaluation[2] and can enhance inhabitants' quality of life by tackling significant concerns such as congestion, air/noise pollution, climate change, traffic safety, and parking. Furthermore, the SUMP enhances the attractiveness, safety, and protection of walking and cycling journeys, highly regarded as per Eltis guidelines advising administrators to dedicate a specific section to improving or constructing infrastructure and facilities for cyclists and pedestrians, ensuring their safety in the spaces they navigate and reminding people that walking or cycling, besides being enjoyable and environmentally friendly, is also healthy and entirely free"[3].

With this perspective, the city of Gragnano***, located in the Metropolitan City of Naples, adopted its SUMP at the end of 2023. The Plan is a strategic 10-year initiative designed to seamlessly integrate existing planning tools, promote sustainable mobility, and enhance urban environmental quality across all modes of transportation. Gragnano's SUMP, that called "APRI-PISTA: the plan with a new concept of sustainable mobility" seeks to transform urban living by focusing on vibrant, accessible spaces for community engagement, fostering a people-centric city. The plan includes enhancing both private and public transportation with safer traffic patterns. Moreover, promoting bicycles and electric micro-mobility as sustainable travel options is a key focus, supported by the integrated "Bicipolitana" cycling network lines. The Plan aims to enhance public transportation and shared micro-mobility by providing integrated, high-quality services and creating mobility hubs. Additionally, it contributes to the integration of a regional project converting the former railway line into a tram line. These initiatives center around optimizing urban spaces, with the goal of transforming Gragnano into a sustainable, model city that improves the quality of life, drawing inspiration from the Dutch approach to sustainable mobility. To this end, an integrated mobility approach has been developed, using the 'ABC method' for classifying areas into distinct mobility profiles. This classification comprises high density A-environments that prioritize pedestrians,

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*** The Municipality of Gragnano has entrusted the task of drafting the SUMP with Det.n.34 of 29/09/2022 General Register No. 922 of 29/09/2022, in accordance to art. 1 paragraph 2 letter A) of Law 11/09/2020, n. 120, to the Company "Citta Sotto Scacco Srl". Mayor of Gragnano Dr. Aniello D'Auria; Head of Private Construction and Urban Planning Sector of the Municipality of Gragnano Arch. Teresa Abagnale

[1] Maltese, I., Gatta, V., & Marcucci, E. (2021). Active Travel in Sustainable Urban Mobility Plans. An Italian overview. *Research in Transportation Business & Management, 40,* 2210–5395. https://doi.org/10.1016/j.rtbm.2021.100621

[2] Eltis. (2019). Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan

[3] European Commission. (2013). Together towards competitive and resource-efficient urban mobility.

B-environments, characterised by residential areas near A-environments where cycling and urban public transport play a significant role in accessibility, and C-environments where cars and regional public transportation connections are crucial for accessibility. This classification aids policymakers in directing efforts towards desired mobility behaviour. The method has been applied in numerous Dutch cities and international locations. This methodology helps create plans or projects incorporating the concepts of the 30-minute city and the 15-minute city. It facilitates the design of public spaces suited for pedestrians and cyclists in urban areas. Tailoring mobility policies to ABC-environments ensures appropriate solutions in the right locations. The 'smart mobility wheel', comprising five key principles, guides the formulation of comprehensive policies, fostering the development of future-proof, sustainable, and safe cities. The implementation of ABC areas in Gragnano includes transforming parking habits through the creation of multifunctional mobility hubs, aiming to convert on-street parking spaces into vibrant urban areas swiftly and cost-effectively. The hubs include parking facilities, logistical services, and last-mile delivery services. The reallocation of urban space is crucial for establishing new Children's Zones designated as Zone 30 areas by Gragnano's SUMP, involving tactical urbanism interventions to promote traffic calming, expand pedestrian and cyclist areas, and foster urban socialization. The results include improved urban life quality, reduced environmental impact, and increased efficiency and accessibility of various modes of transport. The plan includes regular monitoring and environmental assessments to achieve goals and adjust strategies to emerging needs.

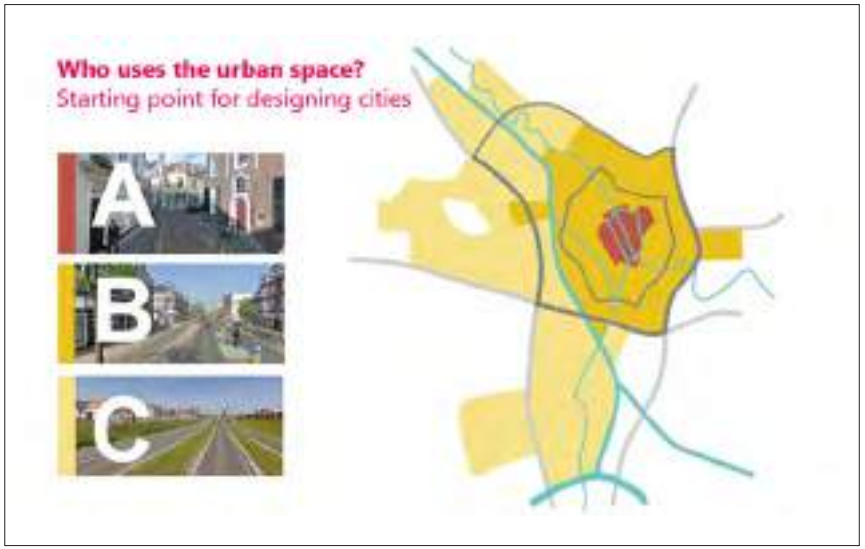

Fig. 1
Concept of the ABC Method for Urban Mobility Planning and Design. Source: Città Sotto Scacco Srl Goudappel BV

Fig. 2
Concept of urban cycling lines of the "Bicipolitana" and location of integrated mobility hubs as envisioned by the SUMP of Gragnano

Integrating Mobility Infrastructure, a European Topic

URBACT RiConnect network. Rethinking infrastructure for better metropolises

Joan Caba, Anna Majoral, Judith Recio and Mikel Berra, Noemí Martínez, Stela Salinas and Elena Argelich*, Roland Krebs and Rosa Rull (lead experts)*

The fundamental objective of mobility infrastructure has always been to connect people, link settlements and structure the territory. The history of mankind has advanced alongside the history of mobility, as humans have always aspired to be connected by roads, highways and bridges. As a society, we have perceived mobility infrastructures as 100% positive for centuries, a monument to something useful, necessary and collective.

But if we look at Europe now, where most of the population lives in urban areas, often fragmented and surrounded by congested, noisy and polluting mobility infrastructure, a question arises: Is this the most appropriate and efficient way to use this infrastructure? Is there another way? Can metropolitan areas and large cities develop more sustainable mobility, allowing citizens to move more efficiently and equitably while reducing the impacts and externalities they generate (social costs, urban segregation, stigmatisation, pollution-related diseases, congestion, etc.)?

URBACT RiConnect is a network of eight European metropolises led by the Barcelona Metropolitan Area (AMB). It has formulated a methodology on how to rethink, transform and integrate mobility infrastructures in order to reconnect people, neighbourhoods, cities and natural areas, all with a single vision: to achieve more dynamic, sustainable, equitable and attractive metropolises where everyone can interact and move freely, regardless of age, social status or where they live.

This methodology is in guide format and can be downloaded from the URBACT RiConnect website. Its plain and highly illustrative language makes it ideal for decision-makers, practitioners and even citizens. It is divided into five sections: The introduction defines the problem and how to choose the infrastructure to be rethought. The second one addresses the aspects to be considered (mobility, public space, urban planning, ecosystem functions and social impact). The third highlights the complexity of these operations which affect multiple stakeholders and defines a place-based integrated approach and a multiscale and iterate co-created process. The final chapter presents the action plans drawn up by the members of the network, followed by the final summary.

With the development of this guide, the AMB has laid the foundations – firstly with the Avinguda del Vallès project, but also with the other historic metropolitan roads – for implementing the future metropolitan avenues that should lend civic structure to the Barcelona metropolis of 3.3 million inhabitants, as defined in the new Metropolitan Urban Master Plan initially approved in March 2023.

Avinguda del Vallès, a metropolitan avenue

Avinguda del Vallès is a project that aims to transform a 6.5-kilometre stretch of the N-150 trunk road between Montcada i Reixac, Cerdanyola del Vallès, Ripollet and Barberà del Vallès into a new civic, green and commercial corridor, with strong public transport links. The friendly atmosphere, together with improved urban quality, a reduction in traffic and the activation of accompanying uses, will create an avenue on a human scale that will provide optimal conditions for habitability, sustainability, service provision, vitality, social inclusion, and economic competitiveness.

The urban strategy is synthesised in three approaches that cover the site with an inter-scale and multidisciplinary view. The territorial proposal develops a new structure where the avenue relates to its immediate surroundings. There are three longitudinal structural corridors: the avenue itself and two green corridors on either side of the road (the rivers Sec and Ripoll). The proposal also includes a series of transversal corridors that seek to

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*** Local institutions: Municipalities of Barberà del Vallès, Cerdanyola del Vallès, Montcada i Reixac and Ripollet. Government of Catalonia.

reconnect the territory and connect everything that infrastructures have historically separated. For the local scale, a new and detailed urban structure has been drawn up for each municipality, which enriches the avenue's environment. Specifically, the idea is to create new centralities (urban and neighbourhood) and configure structural corridors in the surrounding neighbourhoods. And finally, in terms of mobility, the proposal promotes active mobility modes, to discourage the use of private motorised vehicles and gain space for bicycles and pedestrians. Also included in the proposal are new road connections to divert some of the traffic to other nearby roads.

The Avinguda del Vallès project has been drawn up with the participation of the general public, institutions and stakeholders in the territory. During the process, eight co-creation sessions were held along with another three sessions with elected representatives from all the municipalities. Two festive public events also took place to make the proposed change visible and gather opinions.

Thus, the Action Plan aims to achieve a more connected avenue, maximising flows and intermodality in support of public transport, cycling and pedestrians; a friendly and attractive avenue that pacifies the road corridor and regenerates the surrounding fabric; an inclusive avenue that creates meeting spaces and coexistence between different urban uses; a healthy avenue that reduces externalities and re-naturalises and preserves biodiversity and natural connectors, and, last but not least, a metropolitan avenue, that is, one that is co-managed by all stakeholders.

Territorial approach to river restoration: an investigation into multi-governance

*Chiara Marasà**

Water is regarded as a valuable resource due to its essential role and inherent scarcity. The natural water cycle's delicate equilibrium is being threatened by pollution, climate change, and increased soil impermeability, which is exacerbating its absolute scarcity. The imperative for different river management arises from the inability to reproduce ecosystem services such as water quality or environmental protection. So, the convergence of different administrative entities under a unified and adaptable strategic framework is crucial to facilitate coordinated management efforts that involve multiple territorial dynamics [1].For example, in the city of Turin, the debate on riverbanks began in the 1970s with the idea of creating an orographic system connecting various parks, which would intimately link the ecological networks of rivers with green areas, thus structuring a metropolitan-scale green-blue system. Only in 2021 the city of Turin promulgated the Green Infrastructure Strategic Plan, developing the green infrastructure network in accordance with the Provincial Territorial Coordination Plan (- PTC2 - developed in coordination with the Regional Environmental Agency and the Turin Metropolitan Water Company). In the 1970s, the Barcelona Metropolitan General Plan of Rivers was approved, which relegated rivers to the sidelines and without an 'active' function. About twenty years later, Equip de Rius was formed, which elaborated a document (diagnosis, strategic principles, management objectives for the city's rivers) setting the basis for the coordination work that Barcelona Metropolitan Area is carrying out today.The metropolitan/regional scale is essential for optimizing the ecosystem services of river ecosystems, which perform functions such as: 1) ecological connectivity, helping the permeability between mountainous areas and the highly urbanised plain; 2) ecological permeability in plain areas adjacent to watercourses (could be a vulnerability if soils drain contamination of intensive agriculture); biodiversity conservation (river ecosystems host various habitats protected by the Habitat Directiv).The Water Framework Directive (2000/60/EC - WFD) represented a turning point in water governance: from a phase of social contestation to a new scenario of consensual governance [2].The implementation of the directive has triggered a significant transformation in the decision-making processes and governance of water resources in Europe, opening the door to the active participation of various associations and working groups involved in water management. This new approach differs from traditional forms of water governance in that it offers a chance to participate to collective stakeholders who had previously only protested as a means of dealing with institutions [3]. Consequently, a new protagonist emerges in participatory processes: environmental collectives.The protection of peri-fluvial agricultural areas is also becoming increasingly important in regional planning, as seen in the Llobregat Delta in Barcelona and in the lower part of the Lambro River in Milan. A response from the Piedmont Region has been the introduction of Ecological Agricultural Zones (ZAC), established with the aim of promoting sustainable agricultural practices, contributing to the conservation and restoration of biodiversity, and protecting water resources. In this regard, the European Commission has proposed the Nature Restoration Law that would integrate key aspects of the WFD, such as: 1) the promotion of biodiversity contiguity, especially in urban areas [4]; 2)the development of practices (agricultural, habitat preservation, recreational) that adapt the territory to the impacts of climate change through the restoration of river course functions [5].In conclusion, ecosystems and communities would respond to climate change and other environmental stresses by demonstrating their resilience and recovery capacity instead of solely focusing on long-term sustainability [1]. It is believed that the study can be deepened by investigating and comparing participatory processes aimed at achieving an effective consensus as well as a progressive widespread understanding of environmental dynamics.

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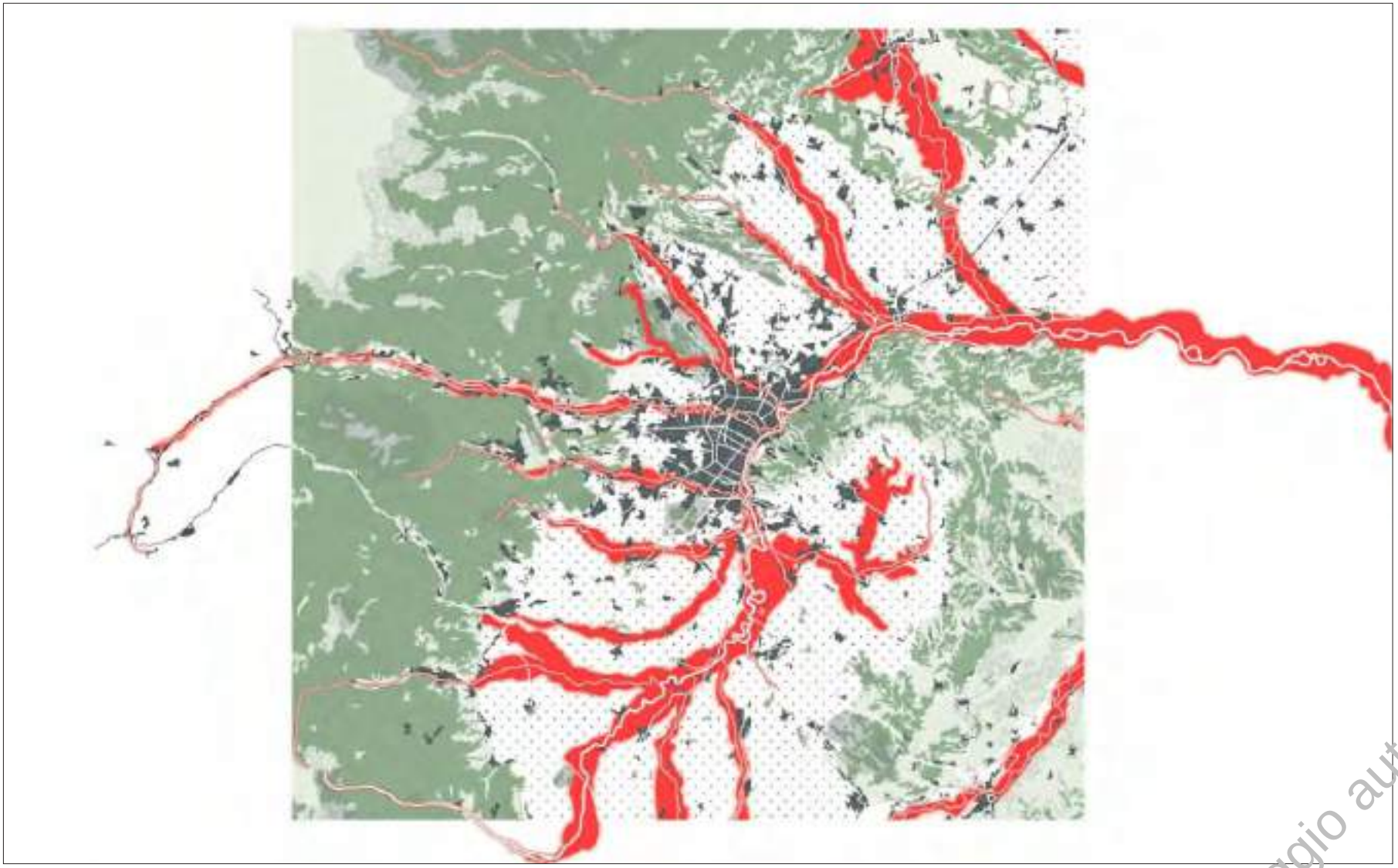

Fig. 1
Hydrological context surrounding the territory of the municipality of Turin: towards territorial strategy. Source: Green Infrastructure Plan 2021.

City and health through improved school routes

*Carmen Mota, Susana Aznar**

The European Healthy Cities Network – currently in Phase VII (2019-2024) - highlights the design of urban environments that improve health and well-being. From the point of view of Public Health, important dysfunctions are detected that make it necessary to correct some elements insufficiently considered in urban planning. Not in vain, urban planning emerged as a reaction to health inequalities that gave rise to unsustainable situations in terms of life expectancy. To correct this situation of the city that emerged from the Revolution Industrially, the first health laws were passed, the seeds of modern urban planning. The significance of prioritising health-related quality of life among population extends far beyond individual well-being, encompassing the broader dimensions of society's health, development, and the fundamental principles of human rights. Also, the child and youth population do not only represent today's society, but its very future. Being a multidimensional concept, specific questionnaires and instruments are used for assessment. For example, for HRQoL: PedsQL, KIDSCREEN-27; for the following social indicators: ChildWell-Being Index, KIDSCOUNT Project; and for the subjective well-being: Student Life Satisfaction Scale, Brief Multidimensional Students Life Satisfaction Scale, Personal Well-Being Index-School Children.

Fortunately, the deficient state of the issue has been recognized, and various works already approach problems and solutions. Especially two are related to the PAFS Research Group, from the University of Castilla-La Mancha:

- BEATS[1]. The study with the application of MAPS Global-SN tool and a condensed protocol presents a potentially feasible alternative to micro-scale assessment, simplifying data collection procedures, and reducing the time and resource required to audit the school neighbourhood. As attributes of the built environment, at the micro- and macro-scale level, influence ATS behaviours, it appears important that complementary micro-scale environmental audits and macro-scale GIS measures are both used in SN-BE assessment
- PASOS[2] The study aimed to assess associations between perceived quality of life and healthy lifestyle and related outcomes in Spanish children and adolescents.

AFTER THE PARTICIPATION OF THE MEMBERS in both studies, the Pafs group develops projects and strategies currently in evolution that we believe can be decisive in urban planning and health management at the regional level:

- The PACOyPACA Project (cross-sectional study). The sample consisted of 3rd year Compulsory Secondary Education (ESO) students from 4 Spanish cities (Toledo, Granada, Valencia, and Seville) and their parents. To guarantee the representativeness of the sample, schools were randomly selected based on the socioeconomic level (SES) and the "walkability" index of the neighbourhood where they are located. The PACOyPACA project will serve to raise awareness about the current state of active commuting to school (ACS) in adolescence and the possible factors that influence it. This knowledge will allow a better interpretation of the current situation and will be useful for the design and creation of strategies in order to promote ACS. These strategies will allow the creation of a National guide to promote initiatives using schools as a key point of action.
- Pilot study of the Physical Activity (PA) Prescription (PAP): Plan in the municipality of Camarena (Castilla-La Mancha - CLM, Spain) conducted to evaluate the incorporation of the exercise units which work together with General Practitioner (GP) to make "PA practice the easy option". The High Council for Sports of Spain launched a national

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[1] Mandic, S. et al. (2016). School Neighbourhood Built Environment Assessment for Adolescents' Active Transport to School: Modification of an Environmental Audit Tool and Protocol (MAPS Global-SN). International Journal of Environmental Research and Public Health

[2] Ródenas- Munar, M. et al. (2023). PerceivedQuality of Life Is Related to aHealthy Lifestyle and Related Outcomes in Spanish Children and Adolescents: The Physical Activity, Sedentarism, and Obesity in Spanish Study. Nutrients.

PAP plan developed by the creation of exercise units that will work together with PA referral (PAR) in all autonomic Communities in Spain. The plan is using digital tools to improve the accessibility and efficacy of the Community Sport and Health systems to provide PA for the inactive population with or without chronic disease. This investment is part of the Sports Sector Digitization Plan, one of the three axes of the Component 26, of the Recovery, Transformation and Resilience Plan, aimed at promoting the sports sector. A pilot study in PAP was implemented in Camarena designed by PAFS research group from the University of CLM. The pilot study started with a local meeting including all agents in the community: local nurses and general practitioners (GP), all staff involved in the community PA and Sports offer, and town hall members. The pilot study included: (i) developing a both-ways communication system between GP practice and the exercise unit, (ii) developing a Physical Fitness and Health assessment battery tool for all patients, (iii) developing individualised exercise programs using digital tools, (iv) analysing all opportunities to be physically active within the community, (v) quantitative and qualitative evaluation analyses of the implementation of the PAP in Camarena. This pilot study aimed to be the seed to scale-up PAP plan in CLM.

Fig. 1
PASOS STUDY.

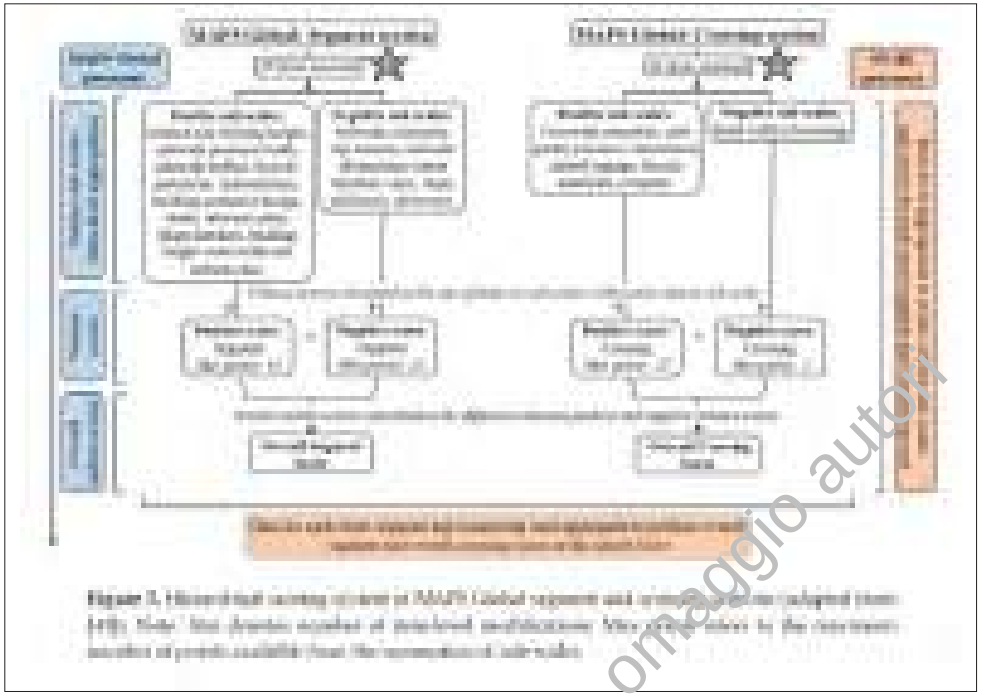

Fig. 2
BEATS STUDY.

ITI/SUD tools and inclusivity; Urban regeneration in the Municipality of Piraeus

*Emmanouela Tsagaki-Rekleitou**

The Integrated Territorial Investment (ITI) tool has been developed, in the context of European Cohesion, to simplify designing and implementing territorial strategies and to encourage greater involvement of local and regional governments, by combining different policy areas, funding sources, and stakeholders. These strategies focus on areas like urban regeneration, climate change adaptation, innovation and social inclusion, tailored to the unique needs and opportunities of specific areas. During the 2014-2020 programming period, Sustainable Urban Development (SUD) has been made compulsory, promoting integrated and place-based approaches to territorial development, meaning multi-sectoral policy, multi-level and multi-stakeholder governance, multi-territorial and community-led strategy. The aim of this paper is to critically examine the impact of diverse urban intervention processes promoted through the ITI tool as per the incorporation of social inclusion focusing on the Municipality of Piraeus, in the programming period 2014-2020, and specifically in the district of Agios Dionysios, as case study area. The methodology applied primarily involves a literature review complemented by interviews with stakeholders and review of public discussion in the press and in audio-visual media. Field research and synthetic mapping were also employed.

The Municipality of Piraeus, historically marked by its industrial character being the largest port in Greece with a leading role in the Mediterranean, has been significantly affected by the consequences of the previous decade's financial crisis. To recover, it has attracted significant projects and investments, mainly towards its tertiarization; meanwhile certain neighbourhoods continue to undergo degradation. The ITI/SUD tool, seeks to transform the city's profile and elevate it to an internationally recognized destination, maximizing resource impact, while integrated interventions aim for combined urban and social enhancement, along with the city's economic recovery. The district of Agios Dionysios, in close proximity to the port, has been experiencing degradation and underwent revitalization through both state and private funding. In 2016, the private company acquired three building blocks with industrial, commercial, professional and storage historic buildings of the largest manufacturer and distributor of cigarettes in Greece, which had not been used since 2009, in order to redevelop the area.

The ITI/SUD tool considers that interventions in the urban space of Agios Dionysios can address challenges related to the lack of quality tourist infrastructure in Piraeus, as well as regarding the utilization of the cultural element, by connecting the industrial character with other emblematic landmarks of the area's cultural reserve, such as archaeological sites and the Municipal Theatre. Additionally, it aims to integrate them into a broader framework for improving visitation and the tourism product of catering and entertainment businesses facing stagnation. Furthermore, it is stated that these interventions contribute to strategies for the Sustainable Economy of Needs, through the enhancement of the urban environment, energy conservation, and the concentration of green activities. At the same time, stakeholders from both the investment and governmental sides express their belief in the restoration of safety and the development of the triptych "Work - Live - Entertain in the area," as well as the intention to maintain the mix of land uses defined by the institutional framework, preserving its historical advantage, its traditional industrial character, the regulation of mobility, and the formation of pedestrian and bicycle-friendly movement, in combination with the tram and metro infrastructure. However, the other side of regeneration must also be recognised. Firstly, small manufacturers who have already been affected by the shrinking secondary sector, are not supported in any way to maintain their employment, and as a result they are driven into unemployment. In fact, the urban planning interventions implemented on the pavements leave no space for their supply vehicles, forcing businesses to relocate elsewhere. Uses seem ready to be replaced by those of recreation. However, the added value that the area is gaining from redevelopment – especially in contrast to the low values that previously existed due to the degradation condition – is driving rents to very high prices, displacing both

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residents and potential small business owners. At the same time, this displacement also transfers the problems to some new area forced to welcome those displaced by the redevelopment. Finally, public space and green space is at stake, as despite the fact that these are planned and implemented, they remain in the 'courtyards' of businesses, thus remaining private and not accessible to all.

To summarise, it can be said that, the integrated concept of the ITI planning tool is called into question, as it hasn't enhanced social inclusion and the local community appears to have been disregarded and not benefited. Integrated, timely and planned intervention is essential to be ensured in both institutional and decision-making processes to initiate economic and urban regeneration. Thus, the planning and implementation of the tool will not be limited to the results of "beautification" of the area, but to substantial interventions that will define developments and bring the best results for investors, users, residents and visitors, and ultimately for the Municipality of Piraeus as a whole.

Fig. 1
Poster "ITI/SUD tools and inclusivity; Urban regeneration in the Municipality of Piraeus"

Urban air mobility
From sectoral infrastructure to an integrated vision towards improved inclusion

Carlo Valorani, Maria Elisabetta Cattaruzza***

The aim of this contribution is to explore the margins of applicability of Advanced Air Mobility (AAM) systems in order to imagine alternative mobility policies enabling of capable effective integration of economic and social life of inland areas into larger urban regions. The apparently sectoral issue has recently been at the center of the "ACE/AAP" proposal by Olalekan Jeyifous, Silver Lion at the Venice Architecture Biennale 2023, curated by Lesley Lokko. The exhibition work is a multimedia installation that simulates a waiting room of an imaginary vertiport (Fig.01).
In 2022, the National Airport Plan (PNA) was published: a political guidance document developed a 2035 horizon, which hypothesizes the construction of a network of regional air mobility, useful for consolidating the catchment area of international airports. This could potentially "cover 100% of the national territory, regardless of the orography." The Plan identifies three scalar classes of suitable aircraft. Depending on the characteristics of the classes, the requirements of ground equipment change. Vertiports, useful for only smaller aircraft for 2/9 passengers on urban routes with a range of autonomy from 20 to 150 km, are currently classified according to three progressively high-performance infrastructures: vertipad, vertibase, vertihub. Vertipads represent the smallest structures and would function as terminals for the spokes of a hub-and-spoke network. Typically located in suburban or rural locations (up to 50 miles away from the network), they would have only one takeoff and landing area, plus two points for parking or vehicle maintenance. It is estimated that they could cost from $200,000 to $400,000. However, the Plan focuses on the second size class of aircraft, which, it should be noted, requires traditional airports. For these, we must imagine surfaces much larger than those, already significant, necessary to develop a vertihub. This condition will hardly be compatible with a capillary and widespread penetration into urban fabrics. Instead, one can expect the emergence of highly specialized metropolitan-level service nodes that could significantly alter land values and, in the case of larger structures, also cause accessibility problems.

Predictably, the advent of Urban Air Mobility (UAM) will have formidable consequences on territorial settlement patterns, making major airports rapidly accessible from catchment areas with a radius of about 250-300 km.

In any case, the documents reveal a vision that sees AAM as a resource for low-density settlement areas, leaving only a marginal commitment in dense urban areas. In this sense, it is interesting to explore the feasibility of a UAM further articulated on "last mile" connections, which is actually a distance that is around 15-20 km, capable of connecting nodes consisting of vertipads to individual users.

On a technical level, it should be noted that UAM mobility forms oriented towards less structured connection modes than those organized in the PNA are already mature in terms of technology, production, and commercialization. Single-seat eVTOL aircraft are already marketed today at a price of $98,000, with a range of 20 minutes and a maximum speed of 102 km/h for a maximum covered distance of 34 km. This technical-economic framework provides the background for an initial experimental application, carried out on the sidelines of the "Construction of the Salaria route's landscape-environmental reference" activity produced for the Commissioner's Office responsible for interventions on the State Road 4 "Salaria". In the study large-scale settlement rebalancing strategies were imagined, starting from the knowledge of the identity specificities of the places, aimed at constructing a progressive series of new connections (infrastructures) between inland areas and the broader complex of the urban region, towards an integrated landscape.

In order to increase the level of integration of settled communities into the social and economic life of the urban region, it was envisaged to implement a regional AAM mobility system, which is able to break down the 'access time' barrier, integrated with traditional mobility systems. For this purpose, the study identified an AAM network that, in the expanded surroundings of the Salaria axis, foresees the location of 10 vertipads placed in the main historical locations of Central Italy (Fig.02). The connection time between Rome-Urbe and Norcia can be estimated at about 40 minutes. It would be fully compatible with quality urban connections. Certainly, the cost of each trip will not allow for daily commuting, which, having also acquired the mode of smart working, will reasonably be replaced by high-value commuting oriented towards a sociality that requires physical presence: specialist performances; high-profile or representative meetings; shows.

An implementation of UAM oriented towards overcoming the mobility divide should push the public hand to encourage the production industry to design aircraft capable of reaching high altitudes, capable of traveling safely in adverse weather conditions within reasonable limits, and capable of flying with significantly low noise thresholds.

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Fig. 1
ACE/AAP by Olalekan Jeyifous, 2023, detail. Author: C. Valorani.

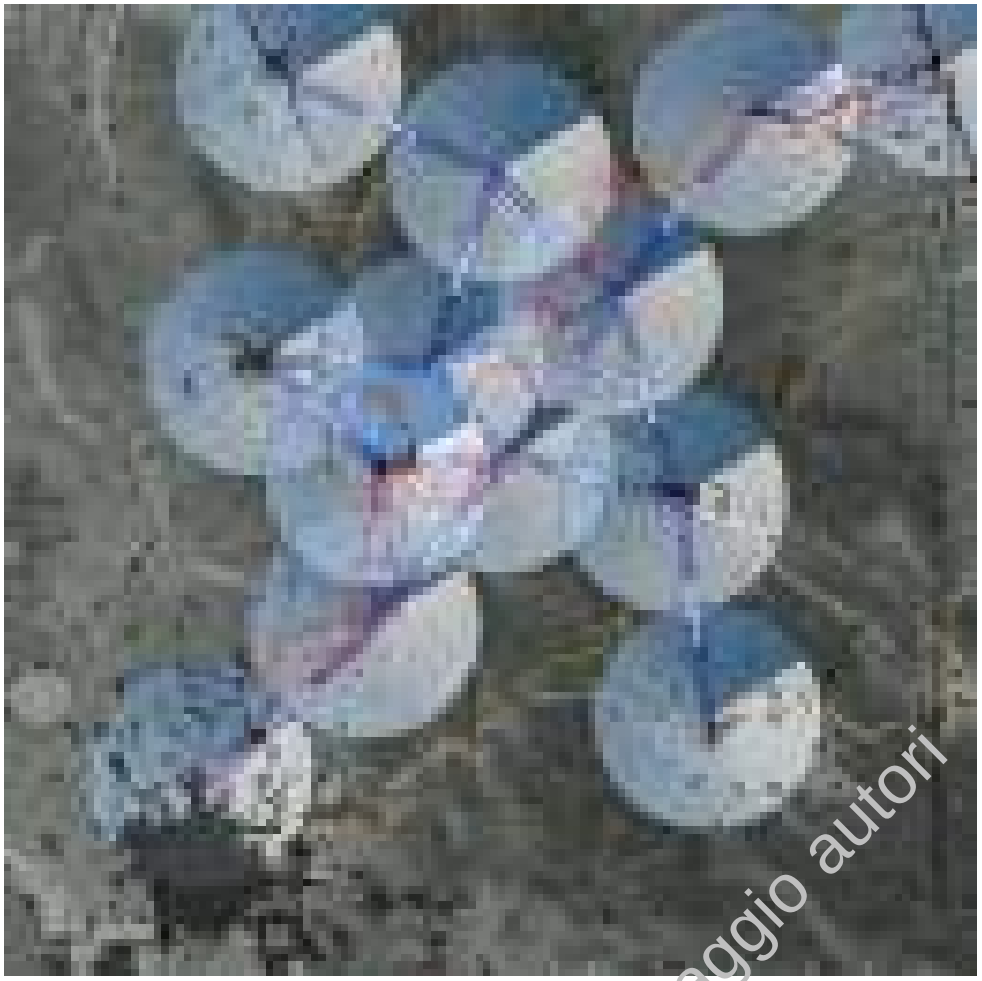

Fig. 2
Landscape district of the Salaria route. Infrastructures for the implementation of advanced air mobility. Author: M.E. Cattaruzza.

Right to the city through urban entropy and enthalpy
Life and death of the city

*Fernando Visedo Manzanares**

City is born as a system that acquires energy from the environment while increasing its complexity to gradually decay in a process of loss of energy and increase entropy until its disappearance, oscillating between growth potential related to life quality and reception capacity related to limited resources. Urban Dynamyc_Entropy_Enthalpy mathematical analysis applies the New European Bauhaus principles to TUS Territorial and Urban Dinamyc System, calculating the probability of its sustainability in addition to predicting the moment in which the city shows degradation signs, abandonment and death (Jacobs), filling a scientific gap in urban planning matter through integration of syntax and spatial semantics.

I Urban Dynamyc. Diagonal matrices α,β,γ,δ represent monopartite flows relationship of each economic, social, environmental, and spatial vectors. Rest of matrices represents bipartite flows between this 4 vectors. TUS core rests on β matrix that represents the vulnerability level and social self-demand regarding Right to the City (housing, health, education,..) introducing spatial semantics to spatial sintax.

1 Efficiency & environmental taxation. Local Leontiev α matrix reflects production values, adjusted for municipal employment. Inverse Leontief ε matrix represents the impact of rights correction on the economy. ζ matrix represents the environmental activity efficiency m_n over the lithosphere, hydrosphere and atmosphere. Poor environmental efficiency causes a decrease in environmental resources wich must be compensated by operating with the environmental rights ι matrix obtained from ι1 right to vegetation cover to compensate for inefficient land consumption ζm1, Water consumption ζm2 and GHG generation from economic activities ζm3, , ι2 right to water and ι3 right to sustainable and fossil energy. μ matrix is formed by the μji values that correspond to those ιij that must be compensated minus the values ιij› that by their nature do not require compensation, because they are renewable energies or have been compensated through natural resources (energy sinks carbon or vegetal covers).μ matrix is affected by the matrix monetization and the proportionality coefficient of weighted taxation of economic activity (which must include compensation for the economic carryover effect) to obtain λ matrix of compensation for the decrease in resources due to environmental inefficiency.

2 Social efficiency. The correction of rights vulnerability indicated in β matrix generates the need to evaluate the knock-on effect on local economy due the economic injection, which operates as an exogenous component, on the entire municipal economic activity. The exogenous component supposes an increase in income and an increase in economic activity, which effect on Gini Index.

3 Space tours. Population geolocated graphic representation allows the application of spatial patterns analysis tools (Moran's I), density, connectivity, accessibility, as well as different graph algorithms theory. The values of η,κ,ν matrices, represent TUS cartography. ξ,ο,π matrices reveal the vulnerability of economic, social and environmental vectors in each of census units.

II Life Quality and Reception capacity. This mathematical analysis of urban flows between vectors is completed with an identification of city's growth potential related to life quality, wich i depends on N Population, K Quality Life, V growth of Quality Life and ε productivity and ω1, ω2 calculation coefficients and the reception capacity related to the available resources.

$$\log N=\omega 1\varepsilon+\omega 2\log K \qquad \log K=\omega 1V+\omega 2\log N$$

III Urban Entropy and Enthalpy. Analysis of Social Sustainability (Cohesion) and Environmental Sustainability through Urban Entropy_Enthalpy of dinamic TUS (never streets, they are static elements). Urban Entropy > addresses the "death of the city" analysis as a phenomenon associated with the dependence of one population on

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another in the urban system. The isolated microcanonical system is characterized by its constant energy U, with εi being the productivity of each social group that has ni citizens, the Urban Entropy S N= n1+n2 U= n1 ε1+ n2 ε2

Occurrence probability of a phenomenon or population percentage in a state is calculated based β=1/γK, with γ being the homogenization coefficient of the census units and K Quality Life Index and εi the productivity of group i

$$\frac{ni}{N} = pi = \frac{e^{-\beta\varepsilon i}}{e^{-\beta\varepsilon i}+1}$$

Being n1+n0=1, n1 non-dependent population has ε1 productivity and n0 dependent population has ε0=0 productivity, different scenarios in which the death of the city occurs can be evaluated based on the probability of n1 no_dependence and n0 dependence related to total N

$$\frac{n0}{n1} = e^{-1}$$

Urban Enthalpy H allows calculating the energy exchange produced in TUS during equilibrium process before degradation and its impact on the soil and the environmental environment, therefore it informs about environmental sustainability, not only in sense of its relationship with the environment but rather its ability to maintain an integral balance that encompasses all vectors of urban system, on TUS isotropic surface γ=1 H=K (S–2d)

TUS enthalpy H has an energy exchange capacity with the environment directly proportional to quality of life K and population density but of a negative sign as well as TUS entropy. This conclusion has an impact related to city compactness. Density factor penalizes the enthalpy when the city swells and reduces it doubly when the city compacts. It´s quite intuitive to see that the soil consumption, the lithosphere factor, is greater in the sponge city.

Fig. 1
Dynamyc Urban Matrix.

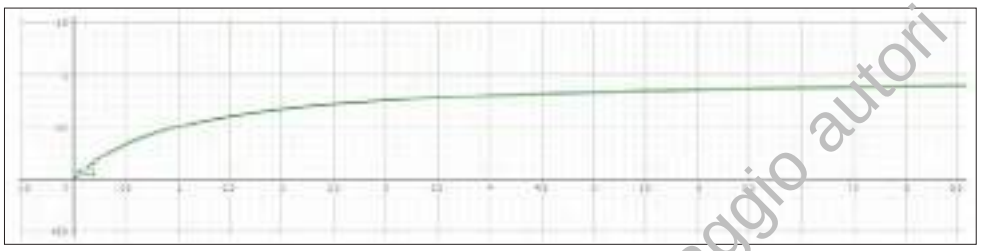

Fig. 2
Dependence_non-dependence probability funcion

$$\frac{ni}{N} = pi = \frac{e^{L\frac{n0}{n1}}}{e^{L\frac{n0}{n1}+1}} \qquad \frac{n0}{n1} = e^{-1}$$

The transformation of the coal and steel region

Ondrej Vyslouzil, Pavel Rihak and Vaclav Palicka**

Ostrava is located in the Moravian-Silesian region in northeastern Czech Republic. This region is nicknamed 'the region of coal and steel'. The Moravian-Silesian region is geographically and urbanistically diverse. It borders three countries - the Czech Republic, Poland, and Slovakia. The region is framed by two large mountain ranges, numerous natural sites, and a rich cultural heritage. Being part of the Upper Silesian Metropolitan Area, it stretches across southern Poland, north-eastern Czech Republic, and north-western Slovakia, with centres in Katowice, Ostrava, and Žilina, and is inhabited by over 5 million people. Ostrava and the surrounding region have a rich history of rapid development. A multicultural atmosphere prior to World War II drove industrialisation, although this changed during the second half of the last century. The region transformed and reoriented with the end of coal mining and the decline of heavy industry from the 1990s. The region boasts industrial tradition and technical prowess, with Vítkovice producing global steel components, and Tatra, who produced the first car in Central Europe in 1897.
In Ostrava, the region's "capital" city, the architecture studio MAPPA has been involved in urban planning for over 4 years. The studio bases its approach to urban development on 7 principles which play a key role in its activities.The MSID Regional Development Agency is actively involved in the urban development of the region and municipalities. It tries to implement the principles of MAPPA at the regional level and coordinates strategies for sustainable development.

In a region suffering economic decline, a proactive public sector is vital. MSID strives to include both public and private investments in the restoration of the area. The aim is to reduce disparity between locations and accelerate project preparation. The emphasis is on climate change and the related application of blue-green infrastructure. MSID actively promotes the development of locations and municipalities through strategic planning and citizen engagement. In Ostrava itself, MAPPA is involved in planning priority areas. Based on experience, 7 basic planning principles are defined. MAPPA uses dialogue with citizens, data, and prepares plans that reflect contemporary issues and the needs of the city. The concept of an ideal city is based on compact, well-used space that minimises impacts on the surrounding landscape. High quality public space should be safe, accessible, and easy to maintain. A diverse city offers employment opportunities, community development, and a wide range of activities that enhance social life. A sustainable city manages its resources efficiently and minimises negative environmental impacts.

7 principles for planning:

1. Continuity – A good plan respects historical development and correctly reflects and builds on what exists. It tracks the city's changes over time and constantly evolves. 2**. Stakeholder interests** – Considering the role and needs of all stakeholders - from investors to citizens to infrastructure managers. **3. Participation** – Involving residents in the planning and development process to achieve better results and their greater identification with projects. **4. Coordination** – Local government plays a key role in coordinating interests and guiding towards common goals. **5. Agreement** – The plan is the basis for agreement between actors, defining the responsibilities and rules for the area's development. **6. Adaptability** – The ability of the plan to respond to changes, with an emphasis on long-term sustainability. **7. Good Management** – A city with a clear vision can effectively manage its assets, influence the creation of neighbourhoods, and elevate property values.

MSID is also coordinating the transformation of a large area heavily affected by coal mining, similar to the Ruhr in Germany. The 2030 Transformation Programme was

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developed as an initiative of the Moravian-Silesian Region and other actors, based on the comprehensive Karviná Post-mining Landscape Development Concept.

MAPPA prepared the Concept for the main urban avenue 28.října-Opavská, which connects two residential centres of Ostrava. The concept promotes sustainable mobility, and emphasizes pedestrians, cyclists, and efficient public transport. High quality public spaces and greenery will provide a pleasant environment for residents and visitors. The Středoškolská locality project is a model example of a well-crafted development with cooperation between local authorities and investors. The aim is to use this as a standard for similar projects in Ostrava and the surrounding region. The creation of a quality-built environment was linked to the requirements of existing residents and the environment.

Both organisations are working together on an exciting project to connect the centre of Ostrava to the historic industrial area of Dolní oblast Vítkovice. The aim is to create a new district for over 12,000 inhabitants, combining modern infrastructure with respect for a national cultural monument. The new district, called "Pod Žofinkou" after the historic smelter, includes a park by the Ostravice River and a promenade. MSID acts as the coordinator, providing comprehensive project management and considering the diverse interests of stakeholders, both public and private.

The urban development of the Moravian-Silesian region presents challenges and opportunities for the future. The cooperation between MAPPA and MSID brings new perspectives and innovative approaches to the creation of sustainable towns and cities in a dynamic environment.

Fig. 1
Concept of the main urban avenue 28.října-Opavská, the main scheme.

Fig. 2
Urban design of the new district "Pod Zofinkou".

Wheelchair sharing system – a place for people with difficulties walking in Portugal's mobility public policies

Joana Coimbra, Paulo Silva***

According to the 2021 censuses, almost 19% of the Portuguese population deals with walking difficulties. This problem affects people of different genders and ages, especially elderly strata of the population. Due to population's ageing, there are greater chances of people having to deal with these difficulties for a longer time of their lives (Apolo,2010), losing quality of life, if adequate strategies are not found either at an individual or collective levels. Walking difficulties also have origin in different type of disease, such as rheumatoid arthritis, degenerative diseases, among others. Those people do not depend on a wheelchair, but they can benefit from using one to cross some part of their paths if they feel tired or in pain (Coimbra, J. 2019).

European Union defines strategies that bring guidelines and initiatives for member states to follow, looking to promote measures that regions and cities can implement to improve the quality of life of their citizens and make more pleasurable the experience of the visitors (EC, 2024). Some of those improvements occur by providing different mobility options to bring people closer to services and other localizations where they can find more opportunities. New EU Urban Mobility Framework (2021) tries to respond to problems principally the greenhouse gas emissions, noise and air pollution, congestion and road fatalities, an accessible urban space, however, in a fragmented way. Portugal defined in 2023 strategies to promote a more sustainable mobility, observing active cycling and pedestrian mobility. Other tools focus on people with disability by promoting inclusive mobility and accessibilities, looking forward to adapting infrastructure and services for a more inclusive design. All the implementation process takes time to be observed because a more sectorial and technical approach is still prevailing.

It's possible to find adapted public transportation, public space, parking spaces and the recent constructions tend to follow the law to keep the infrastructure accessible. In other hand, if we look at older infrastructure, we will see ramps that are dangerous, once they were not projected to be there and they were the easiest solution for the owners. If we look at sidewalks, maybe we will find that most of them don't have enough space for a wheelchair or a baby carriage. It's possible indeed that they have obstacles that make it impossible for the user to cross over there. Some sidewalk curbs are too high, providing terrible times to users with reduced mobility to cross a treadmill. Cities are far from being accessible bit it's important to start in some area, step by step. Short distances are not covered by any mobility service. People who have walking difficulties need to deal with them with no public solution available. It's proved that a wheelchair is the best support product in the sphere of rehabilitation and social integration (Alvarenga, 2002). People who do not depend on a wheelchair but have walking difficulties can use a wheelchair to make short distances as entering in different buildings, cross sidewalks, gardens, public space designed for walk. We can find some wheelchair sharing systems in private domain, such as in airports (Myway, Portugal), hospitals (Wheelshare, United Kingdom) or some museums (Palacio da Pena, Portugal). We don't find this type of sharing system in public domain as we can see nowadays bike sharing and scooter sharing. The propose it's to give some public services, around one zone of a city, some electric light weight wheelchairs that they can provide for those who needs them. In the end of the use, the user just needs to notify the service that left the wheelchair in a specific point and then the municipality service will bring it back to one of the pickup services. The beaty blenders for bikes and scooters, can do the same job for wheelchairs.

This research aims to contribute to more effective mobility policy by giving focus to an inclusive shared mobility solution for people with walking difficulties. Based on a previous research project in which a wheelchair sharing system was designed for a specific context (urban / smooth topography), current research aims to (1) expand / test the wheelchair sharing system in other spatial contexts (e. g. different urban densities, and centralities typologies), and (2) integrate inclusive mobility approaches into public mobility policies in Portugal. Two research questions were defined: 1. Do mobility plans respond to the needs of people who have walking difficulties? Initial hypothesis (H0): corresponds to the suspicion that they do not respond totally, regarding to displacements over short distances. ;2. Will a wheelchair sharing system respond to the mobility needs of people who have walking difficulties? Initial hypothesis (H0): is that it could be a facilitating solution for this segment of the population.

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Parallel Workshop

3. Urban regeneration and Public Spaces

Coordinators
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Inclusive governance for water areas and coastal landscapes

Participatory planning in the Phlegraean Fields

Antonio Acierno, Alessandra Pagliano** and Ivan Pistone****

Over the last century, coastal transformation interventions have mainly focused on urban waterfronts, improving logistical and economic demands, and restoring the aesthetic value of the coast. However, the current state of urban coastlines highlights the need to focus planning and management actions more on the theme of coastal socio-environmental issues: issues such as climate change, the demand for high quality public spaces and critical health issues requires a more comprehensive planning approach. These issues have been explored in the international research project 'WAVE: Water Areas Vision for Europe', whose main objective is to propose innovative design and analytical approaches to bridge the gap between local strategies and the socio-environmental demands of coastal communities. The WAVE project, which ended in 2023, examines the environmental and climate challenges common to the different coastal countries of the EU: it is well known that a large part of the existing socio-urban models are not in line with climate adaptation and mitigation strategies, especially in very competitive functional contexts such as the areas close to water basins, which are burdened by critical issues (e.g. land consumption, lack of sufficient green-blue areas, spatial fragmentation). Through multi-actor and multi-disciplinary cooperation, the research addressed the issue of functional and ecological fragmentation of water areas in order to contribute to a sustainable socio-ecological balance, working at local and micro-local scales, thanks to the support of national and international academic and professional figures.

In order to achieve this goal, 'Living Labs' have been set up: this methodology identifies a physical or virtual space where socio-environmental issues can be faced at the community level, involving the main actors of the reference context and combining proposals based on the direct experience and needs of users, supporting the governance processes underlying sustainable and inclusive urban transformation. In general terms, the main objective of this approach is to achieve tangible improvements in the quality of life of the users involved, with particular attention to social desires and needs. Living Labs are based on a number of fundamental principles, including a research context that can be scaled down, the presence of stakeholders involved in the process as effective co-creators, and a set of practical and evaluation activities. This paper examines the WAVE Living Lab experience developed in the Phlegraean Fields, specifically in the municipality of Bacoli, a town of about 25,000 inhabitants in the western part of the Neapolitan metropolitan area. The choice of this water landscape was based on the awareness of the specificity of the area, which integrates archaeology, crater morphology and volcanism, reflected in the widespread presence of thermal waters. The identification of a 'constellation of ancient and modern thermal waters', linking ancient cisterns, thermal halls, minor archaeological remains and modern active thermal centres, constitutes the framework of the Living Lab project, around which policies for the rehabilitation, conservation and valorisation of the landscape will be built. The main challenges of the area, which emerged from the citizens' participation, are the complex accessibility due to the rugged orography, the increasing degradation of the archaeological heritage due to maintenance difficulties, the need for urban regeneration of the high-density city fabric that has damaged environmental resources, and the demand for socio-economic growth.

The Living Lab of the Municipality of Bacoli, called 'BacoLIving L@b', was built on the basis of an existing network of local associations and thermal businesses, tourism operators, schools and ordinary citizens. The Living Lab started in the first months of 2021, during the pandemic period, using digital tools and then with the local participation of students and researchers who, together with some stakeholders, carried out targeted interviews and field studies in the area. In a first phase, they interacted with associations and some citizens through interviews and questionnaires. In a subsequent phase, they focused on co-mapping and quantitative survey activities using digital tools such as Google

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Fig. 1.
Scheme of the main digital outputs from the WAVE Living Lab in Bacoli

My Maps and Google Forms, and then reported all the evidence gathered in the workshop organised at Lake Fusaro, in the centre of Bacoli, in September 2022, as a basis for co-design activities. During the workshop, the community's expectations were collected, mainly regarding the provision of public facilities, squares, playgrounds, as well as mitigating the negative effects of mass tourism in the area. In addition, the project results of the workshop were presented to the local population and tourists through the permanent installation of a series of interactive panels that provide access to short videos presenting the local landscape resources and proposals for transformation. A permanent digital living lab was established through the workshop, allowing the academic and public institutions to gather social needs and opinions on the proposed regenerative design hypotheses, and to monitor their evolution over time.

The experience of the WAVE Living Lab in Bacoli allowed to test, on a small scale and in a geographically circumscribed context, the potential of community approaches applied to urban regeneration, pursuing the sustainable transformation of coastal public spaces from a socio-environmental perspective.

Protected Areas and urban regeneration An ÉcoQuartier in the Calanques National Park's Adhesion Area

Laura Ricci, Alessandra Addessi***

Within the international discourse on integrated and interscalar strategies for urban and territorial regeneration, the role of Protected Areas (PAs) is gaining prominence as a key element of urban planning. These areas are undergoing a paradigm and approach renewal, recognised not only for their role in nature conservation, but as strategic components for climate resilience, maintenance of ecosystem services, natural risks reduction, sustainable development and the well-being of settled communities and species (1). Moreover, growing trends in terms of area, driven by international policies and strategies, intensify the interaction between PAs and urban contexts, emphasising the need for a comprehensive territorial approach beyond protected boundaries to maximise benefits and substantiate new conservation paradigms. In this context, within the regeneration strategies implemented in Marseille and the *Parc National des Calanques* (PNCal), a positive inclination towards potential integration between the territorial context and the PA becomes evident. Innovations can be ascribed to four reference principles: co-planning, interscalarity, integration and project development, which will be highlighted in the specific case of the *ÉcoQuartier des Calanques*. The PNCal is the first metropolitan National Park in France, both terrestrial and marine, and among the Urban PAs recognised by the International Union for Conservation of Nature. It was established in 2012, after a long process to protect an area with exceptionally high environmental, landscape and cultural values, which marks the southern border of the third most populous metropolitan area in France, with 1.6 million inhabitants. The PNCal's territory is characterized by the overlap of terrestrial and maritime spaces, as well as urban and natural spaces, posing significant challenges and prompting innovative solutions. The governing instrument for PNCal is the *Charte du Parc*, reformed by Law 2006-436 in 2006, which, adopting a more integrated approach to the territory, introduces new components: *cœur*, *aire d'adhésion* and *solidarité écologique*. According to this legislative update, the territory of National Parks is composed of the *cœur*, in which superordinate regulatory prescriptions and the *Réglementation en Cœur* are in force, and the *aire d'adhésion*. This includes part or entire municipalities that, due to geographical continuity or ecological solidarity with the *cœur*, decide to join the *Charte* and its sustainable development project, actively contributing to territory protection. The *aire d'adhésion* on the Marseille side, identified by the "Carte des vocations" as "Espaces à vocation d'habitat ou d'activité économique", represents the focus of this contribution. These areas, already heavily urbanised, serve as interfaces between city and nature, transitional spaces between urbanity and naturalness, central to various planning documents: PNCal *Charte* and *Plan du Paysage*, as well as the *Schéma de Cohérence Territoriale* and the *Plan Local d'Urbanisme intercomunal*. The strategies implemented at various scales include restoring ecological continuity; defining access points to the Park's *cœur*; mitigating risks, particularly fire risk; regeneration of existing city fabric. Regarding the latter topic, the Charte (2) emphasises the importance of the establishment of PNCal as an opportunity for the regeneration of urban fabric, to be integrated into strategies for the co-valorisation of natural and peri-urban spaces. It also indicates, specifically, areas in which such experimentations can be undertaken, such as the *Hauts de Mazargues* district, which was targeted in 2011 by a *Projet de Rénovation Urbaine* (PRU), labelled *ÉcoQuartier* in 2015. The initiative expanded its scope to include *Zac de la Jarre* and *La Cayolle* district, ultimately being named *ÉcoQuartier des Calanques*. The ÉcoQuartier is in the broader, predominantly affluent, southern sector of the city, with which it contrasts as it is historically marked by situations of deprivation and marginalisation. In the post-World War II period, camps for refugees were built there, which were then completely raised to the ground in the 1980s, wiping out its identity elements to make way for a wider urbanisation of poor morphological quality. However, even in the 1990s and 2000s, the district was characterised by socio-economic distress and criminality (3). The

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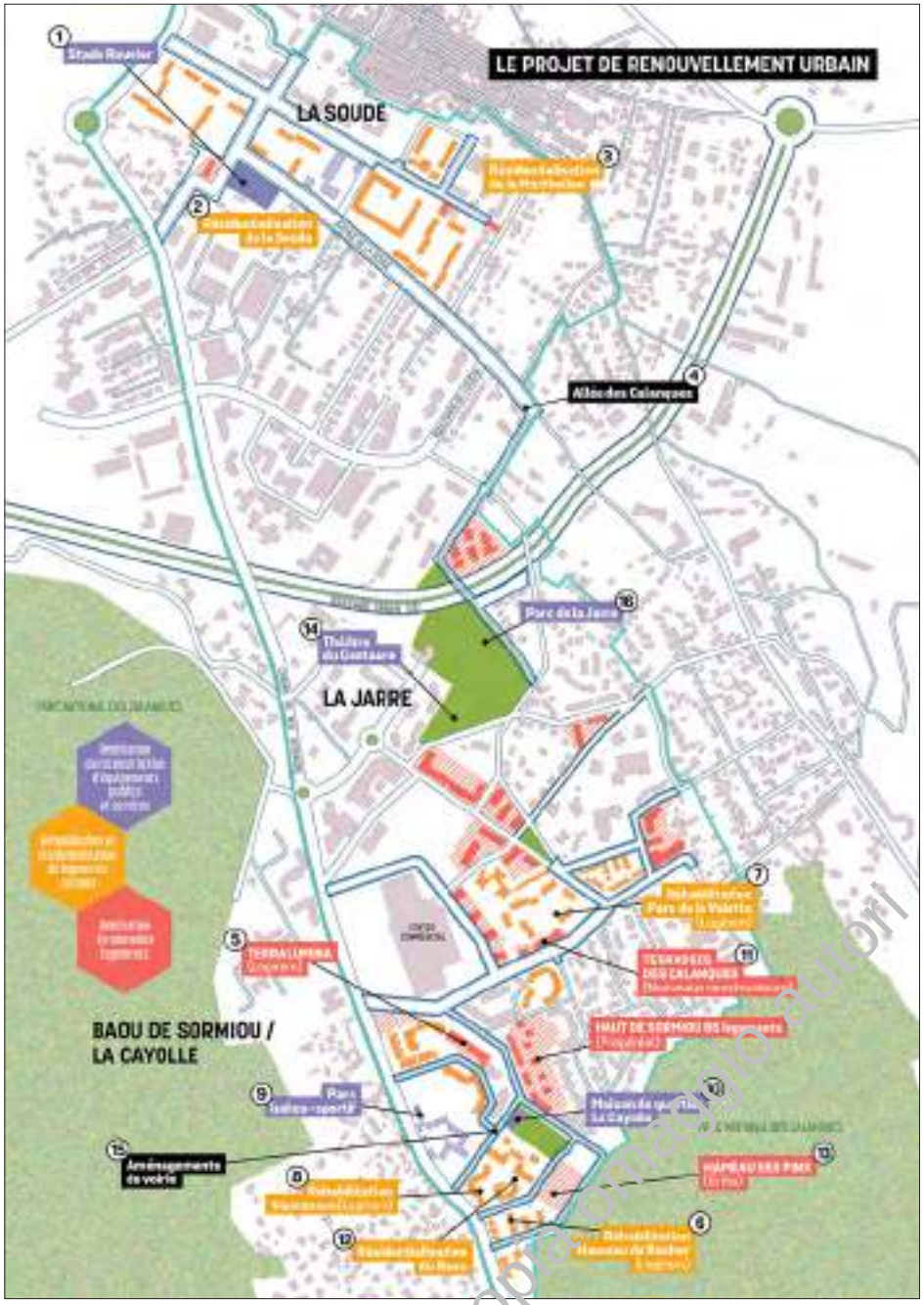

Fig. 1.
Projet de Renouvellement Urbain in Phase 3 of ÉcoQuartier label (4.).

urban regeneration strategy, led by PRU and the *ÉcoQuartier* label, aims not only to improve ecological and landscape aspects but also to integrate social, mobility, and welfare aspects (4). The program included new public facilities and modernisation of existing ones; building renovation and energy efficiency; public housing; soft mobility network; green and blue network and public spaces (*Parc de la Jarre*, water retention basin, *Allé des Calanques*); *Allée des Calanques* as the structuring axis of the district. The case of *ÉcoQuartier des Calanques* highlights the comprehensive and integrated approach of French National Park *aire d'adhésion*, conceived as project area aimed at disseminating the benefits of PAs in urban settings. Moreover, the integrated approach inherent in the *ÉcoQuartier* designation has stimulated solutions for regeneration not only in ecological aspects but also in socio-economic, mobility, morphological quality, and welfare dimensions. However, considering the complex history of the district and its proximity to wealthier zones, potential gentrification effects must be considered, potentially undermining the identity of the district.

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Territories of reconstruction
New paradigms for the regeneration in Central Italy 2016

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The experience that emerges from the research – concerning the post-earthquake reconstruction processes of the historic centers of the Marche 2016 municipalities – is characterized by significant specifities connected to the characteristics of the destructive event, the legislative interventions adopted, and the model chosen for the reconstruction.

As part of the work programme, the line of research developed starting from the best practies of the Aquila crater 2009 and the Emilia crater 2012, recognizes the validity of the approaches defined by the Minimum Urban Structure (SUM) and by the Emergency limit condition (CLE), but also notes some problematic situations for the purpose of their expeditious translation into strategies to be implemented at the municipal level.

The change in employment logic could have fundamental repercussions on the organization of cities and on their relationship with the rest of the territory: inland areas, villages, small urban centers which in Italy represent realities rich in history, identity, ties and roots (Ave 2020).

The methodological approach used considers that the municipalities major responsibility for choosing concerns the set of projects and interventions to be budgeted and implemented concretely, subject to the conditions of economic, social and administrative feasibility, and of course better effectiveness of the solutions to be adopted to better face the seismic risk. Following the 2016 earthquake, however, a season of fruitful active collaboration seems to have started, based on the capacity for dialogue and reflective learning of the different actors involved, and on the construction of concerted and shared paths with the aim of good governance of decision-making processes (Clementi, Di Venosa 2012).

The objective immediately stated was to ensure the socio-economic recovery of the Marche region, promoting the redevelopment of the town, also according to the density, quality and complementarity of proximity services and public services on an urban scale. The extraordinary reconstruction plans (PSR), have taken on a multilevel and multidisciplinary structure, an integrated territory project that has tried to overcome the drama of the disastrous event by seizing the opportunity for the socio-economic recovery and for the safety of the settlements affected by the earthquake (Alberti 2023).

It is appropriate to reflect on the possible repercussions that the work carried out in recent years and in these conditions in the crater of the Marche region could have on the ordinary practices of regional urban and territorial planning.

The strategy for drafting the extraordinary reconstruction plan was based on three main criteria: competence, coherence, cogency. The former limits itself to exclusively regulating the issues and objects that are attributed to it by commissioner orders, in accordance with current state and regional legislation, in strategic coherence with the other planning levels.

This means that the plan does not cascade the provisions of the superordinate plans but, on the contrary, the choices arise from an overall vision, or rather an integrated system of coherent and shared choices. The second, applies at all stages of the process of formation and implementation of the plan. Starting from the forms of co-planning, coherence is expressed at all levels of integrated planning, up to the implementation level of policies and actions for the definition of operational agreements. The third is expressed through the limitation of the possibility of unsustainable transformations for safety reasons, and with the indication of conditions that the plan places on the process of operational definition of the choices, both for the modalities and for the contents.

It is therefore necessary to act in a coherent and coordinated way in the different thematic areas, at the different scales of intervention, and at the different time phases. In this way, the plan can fulfill the role of structure capable of effectively governing both

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Fig. 1.
Petriolo (Mc): provisional works for the castle walls in the historical centre.

Fig. 2.
Visso (Mc): reconstructions in progress inside the "historic village" between the route n. 209 and C.Battisti street.

the process in the emergency phase and in the regeneration phase, including over time, the different policies and actions that will become appropriate and feasible, through the skills, roles and the public and private subjects from time to time interested and actually involved (Aven, Zio 2018).

The municipal administrations of Amandola, Petriolo, S.Ginesio, Tolentino, Ussita, Visso wanted to participate personally in the preliminary identification of the intervention strategies, placing themselves as protagonists and not as mere executors of the guidelines that arise at the headquarters and which sometimes tend to underestimate the complexity of preventive risk mitigation policies, in terms of their technical, economic and social feasibility, and above all the problematic nature of the processes of building local consensus.

At the same time, the decisive decision-making role of the municipal administrations emerged for the identification of buildings of strategic value, to be consolidated in advance in order to anchor the functioning of the urban structure put into crisis by the devastating extent of the seismic event.

The need for more resilient cities, less vulnerable in the face of crises, is evident, with the urgency of identifying priorities to address the major contradictions. The approach must be integrated and multilevel, looking not only at the physical aspects, but also at the spatial and functional ones and at the relationships between the various urban components, because to determine the development of the cities, and counteract their possible decline through an increase in resilience, multiple factors contribute.

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Campo Laudato si' Caserta
Masterplan for the restoration and urban regeneration of the former Macrico area

*Alvisi Kirimoto**

The urban regeneration, promoted by the Curia of Caserta, of the **former Macrico area** located 1.2 km from the Royal Palace of Caserta, now called **Campo Laudato si' Caserta**, is the result of the collaboration between public, economic, social, scientific and civic actors and the 'Casa Fratelli Tutti' Foundation. The proposal for the urban regeneration of the 324,533 sqm degraded area, which follows the principles of the papal encyclical Laudato si', is based on **a drastic reduction of the existing cubage** in favour of an **open urban park** that can be used by the community, connected to the area's sustainable mobility network and flanked by a parallel digital infrastructure available to all.
The project intervention of Camp Laudato si' Caserta is divided into the following programme points:

- **Reducing existing cubage** to limit land consumption and encourage the rehabilitation of existing buildings.
- **Creating a large green park**; an ecological infrastructure, a green corridor running through the entire area with character, functionality and quality.
- **Stimulating research and fostering a collaborative path of regeneration** through the involvement of citizens, institutions, businesses, organised civil society to grow together with the city.
- **Generating a network of connections and fostering new relationships** to reconnect the former Macrico area to the city by promoting the development of all services/functions within a pedestrian and cycling radius. This enhances the quality of life, reduces traffic congestion and helps reduce CO2 and particulate pollution.
- **Realising a park for integral ecology, a social and cultural hub**. Squares, visual axes, informal meeting places, trees, spaces for sports, parks and buildings for research make it possible to realise the idea of the contemporary city through an urban ecosystem.

The project also focuses on the division into **five main parks** connected by greenery and a network of paths.

The **Biodiversity Park**, located in the North-East, will host:

- An experiential nature park and a sensory museum open to the city and connected to the surrounding urban fabric.
- A Biodiversity Collaboratory realised through the regeneration of an existing building where co-design and incubation of nature-based solutions will take place.

The **Park of Arts**, located in the South-West, will host activities related to entertainment and cultural production such as:

- A Collaboratory for Culture and Creativity dedicated to the creation of enterprises in close connection with the area's cultural excellences such as the Reggia di Caserta, Caserta Vecchia, Reggia di Carditello, Complesso Monumentale Belvedere di San Leucio, the Museo Campano, etc.
- Spaces for musical events and exhibition spaces (permanent and temporary).
- Spaces for proximity activities and services attached to the above functions.

The South East area where the **Peace Park** will be located will consist of:

- Infrastructure "Casa Fratelli Tutti" which will consist of the Foundation's institutional spaces and spaces for the permanent and temporary hosting and accommodation of the Foundation's guests.
- Institutional spaces of the Foundation "Casa Fratelli Tutti" and a spirituality centre for peace.
- A Collaborative for Integral Human Development related to the theme of hospitality, integration, welcoming and social innovation.
- The recovery of the Laudato si' Chapel.

To the North-East will be the **Park of Care** consisting of paths and thematic areas related to "Nature and Territory" and "People and Spirituality" with:

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- An urban park open to the public with equipment and sensory paths immersed in nature, enabling spiritual and intellectual reflection and psychophysical well-being.
- Infrastructure for psychophysical and intellectual well-being (sports facilities, spaces for cultural events, etc.)
- Spaces for activities serving these functions that will promote the social inclusion of people with special needs.

The **Park of Economy of Francesco**, corresponds to the central area of the site, where there are masonry artefacts to be recovered, partially demolished artefacts and the so-called 'Hangar' will be characterised by the presence of the following activities:

- the Collaboratory for Sustainable Research and Innovation, i.e. an innovation infrastructure dedicated to technology transfer processes and the incubation of innovative entrepreneurial and social projects oriented towards integral ecology and sustainability.
- Research and training spaces open to universities and national and international research centres.
- The House of Trades and Crafts and places for public discussion and education based on the precepts of the Fraternal Economy.
- Places for the training and integration of businesses inspired by the principles of the Economy of Francesco in which fragile and vulnerable people are protagonists.
- The Hangar as a new event space.
- Spaces for the promotion and circulation of products related to the local economy and the park's own production, together with spaces and services, including those of a commercial nature, related to these functions.

By increasing the permeable surface area to **252,000 sqm of greenery, 786 m of water paths**, **511 trees**, **13,375 sqm of photovoltaics** and **10 squares**, the project outlines an interreligious, inclusive, intercultural and intergenerational place of technological innovation oriented towards sustainable development and social and climate justice.

Urban exploration as a co-narration practice: the case of "Per Luoghi Comuni: Ex-Qualcosa" in San Giovanni a Teduccio, East Naples

*Giorgia Arillotta, Sabrina Sacco and Piero Zizzania**

In the framework of the Festival "Campania Architettura CA23 - Territori Plurali," focused on the theme of "Inhabiting the city in transition" in collaboration with Sottospazio APS, the research group conducted an urban exploration titled "Per Luoghi Comuni: Ex-Qualcosa" in San Giovanni a Teduccio (SGAT), located in East Naples. This district has undergone significant transformation and today it still faces a continuing process of transition[1]. The urban exploration approach, recognized as a cognitive and transformative practice within a specific territory[2], has been instrumental in interpreting the abandoned heritage, referred to as "Ex-qualcosa"[3] and in uncovering its collective value. The aim is to establish a co-narrative practice[4], as a collaborative storytelling process useful to create a shared narrative focused on local heritage. To pursue this aim, the adopted action-research methodology consists of three phases: an analysis of the urban context and mapping of local actors; involving local actors in defining the itinerary and relevant themes for interpreting urban space; and implementing urban exploration and collaborative mapping to capture participant perceptual-emotional data related to the places visited. Each phase aims to bring forth a particular type of narration, progressively involving a variety of actors with different skills and perspectives in the narrative process. This occurs through the intersection of multiple tools, e.g. co-mapping, interviews, surveys. The investigation conducted is the outcome of a collaborative design process that engaged various institutions and entities to harness their potential narrative contributions, ensuring a comprehensive representation of the context, e.g. Officine San Carlo, ART33, UNINA, CNR, DiARC. Additionally, some of them acted as guides for the walk, offering insights into the SGAT context from their perspective, emphasising their missions and efforts in generating significant local economic and cultural impacts through initiatives in abandoned or disused buildings and spaces. During the exploration, participants were equipped with map kits to contribute to structured collaborative mapping, articulating their point of views of the visited places and narrating their perceptual-emotional connection, drawing on Plutchik's framework[5], with the SGAT's cultural heritage. By combining participatory walks, surveys, and collaborative mapping, reflections are stimulated, fostering an incremental community-driven process. Collecting geo-referenced qualitative data on-site enabled participants to acquire shared insights into the cultural heritage theme while fostering a collective exchange of reflections, anecdotes, and memories related to the visited site. The results of the process, documented through surveys, audio recordings, videos, and photographs, have allowed for the construction of a complex geography of emotions, highlighting landscape elements and locations with high emotional and perceptual impact[6]. During the walk, the most recurring elements of the urban landscape that elicited strong reactions were the fences, as physical barriers that portray a picture of a fragmented neighborhood, impeding the construction of a cohesive narrative. Notably, entities like Officine San Carlo and the UNINA Campus often seemed disconnected from the context, with their fences sometimes constraining their positive impact or intentionally creating distance from the degraded exterior. The prevalence of fences and barriers, especially near the railway, made it challenging to connect different parts of the neighborhood, exacerbating feelings of distance and separation. This low porosity extends beyond physical barriers, encompassing differences in vitality and safety perceptions of the neighborhood. The exploration revealed that a neighborhood dominated by fences corresponds to social fragmentation and isolation, amplified by the absence of public spaces and meeting opportunities. This underscores the importance of participative initiatives, such as those of ART33, fostering connections between people and innovation through art and culture. The emerging results highlighted the diverse emotional and perceptual reactions elicited by such an urban landscape. Participants frequently expressed surprise at the sudden shifts within the neighborhood, from wide streets to narrow ones, industrial to residential areas, unexpectedly encountering the sea (Beach of Industries). In conclusion, the urban exploration undertaken aims to overcome

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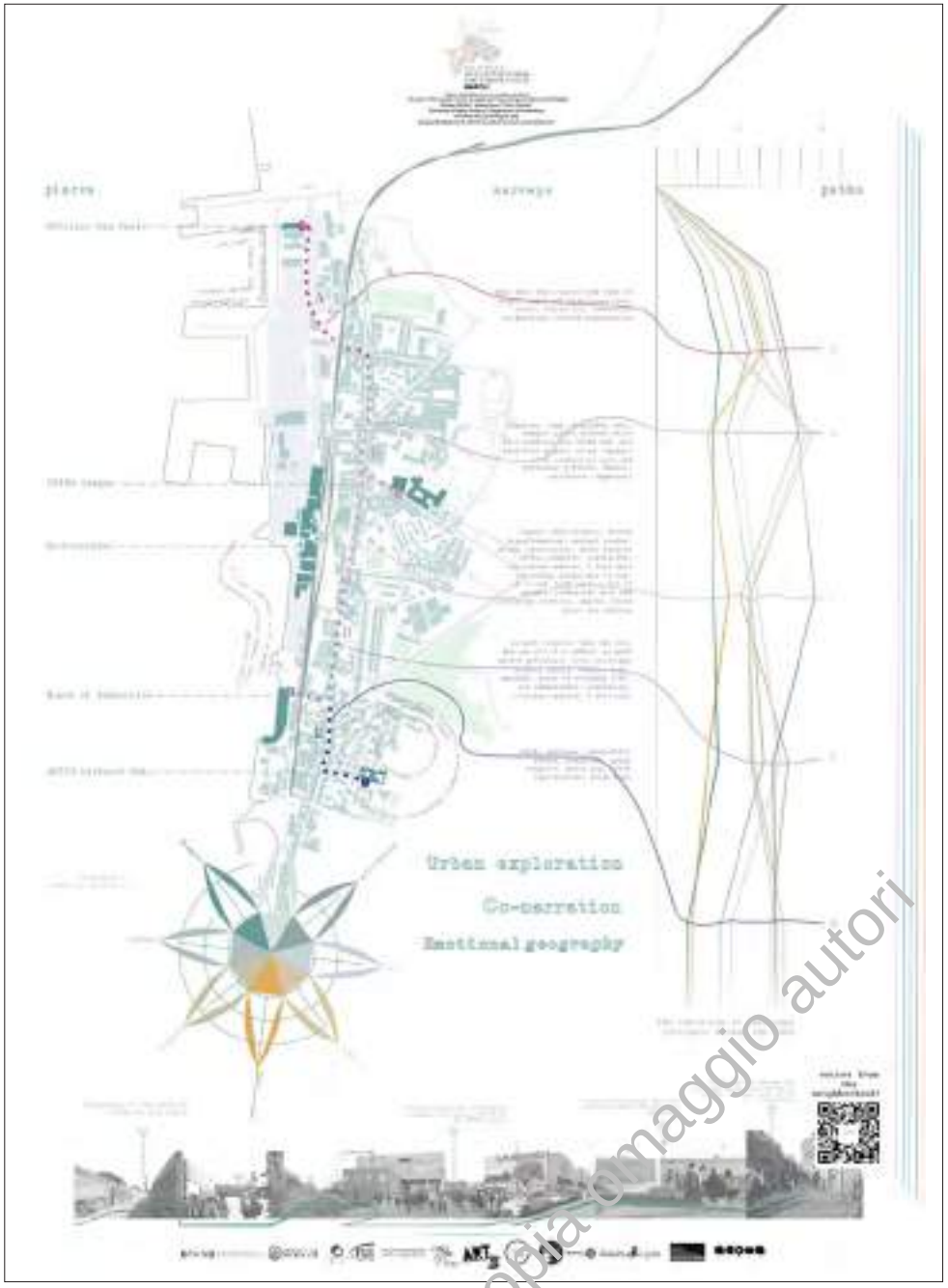
existing barriers and to build a collective narrative of the area, promoting opportunities for interaction and deepening community awareness. The emotional geography does not exclusively map a negative narrative, but rather reveals a vast reservoir of resources and a multiplicity of realities eager to share their stories and take centre stage. In city making[6], it's essential to consider the emotional lift that specific places have. These places are not merely physical spaces, but carry an emotional charge that affects people's experience of the city and perceptions of it. Through an in-depth understanding of this emotional dimension, we can amplify the value of places and encourage more active and conscious community participation. The process carried out not only highlights the value of these places, enhancing their heritage, but also underscores their crucial role in people's daily lives, thereby contributing to their well-being and local identity.



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Green and Blue Infrastructure and Urban Planning

*Alessandra Barresi**

The concept of green infrastructure originated in the United States in the mid 20th century and emphasises the importance of nature in spatial planning. It is widely practised in heavily man-made environments, and especially on an urban scale to mitigate extreme climatic events and to establish basic environmental qualities. The first definition of green infrastructure according to official EU documents is as follows: 'green infrastructure means the interconnected network of natural areas, such as some agricultural land such as greenways, wetlands, parks, forest reserves and indigenous plant communities, and marine areas that naturally regulate rainfall flows, temperature, flood risk and water, air and ecosystem quality' (COM 147, 2009): Subsequently, green infrastructure has been defined, again at the EU level, as networks of natural and semi-natural areas planned at a strategic level with other environmental elements, designed and managed in a way that provides a broad spectrum of ecosystem services (COM 249, 2013).

Many green infrastructure projects are in an advanced state of realisation around the world, such as the English Green Belts, which in UK urban planning are the policy tool to guarantee the ecosystem functions of territories, to control urban sprawl and to protect landscapes, or Barcelona's Anella verda, which comprises a network of 12 protected areas around the city connected by increasingly enhanced ecological corridors with the important role of controlling urban sprawl, regularising urbanisation and the increasing senseless consumption of land. In our country, unfortunately, green infrastructures are still few and far between, limited to individual local initiatives, and in any case they are not included in a system logic that is indispensable for achieving the objectives. From the point of view of the planning process, one of our country's strengths is the extensive and consistent work on ecological networks, which have contributed to an important work of mapping territorial potential, drawing on a very detailed scientific knowledge of the great wealth of habitats present throughout the entire peninsula. Almost all provinces, many regions and a fair number of municipalities are now equipped with the planning of an ecological network.

In cities, which are home to about 70% of Italy's population and 50% of the world's, in general the conflict between artificiality and naturalness is greatest and is the cause of loss of biodiversity, quality of ecosystem services and resilience. It is therefore necessary to integrate ecosystem services into urban planning and policy choices, making green infrastructures and eco-innovation the fulcrum of an intelligent and sustainable urban transformation, without concessions to the commercialisation of public green as an urban planning standard and affirming the role of the green plan as an element of a city's strategic and structural plan. The extensive use of green infrastructure, besides improving the ecological and social quality of urban areas, is also capable of generating net increases in built capital values and attracting investment (Foundation for Sustainable Development, 2014).

The aim of the paper is to disseminate knowledge of a path that aims at the design of infrastructures versi through a multi-scalar planning intervention on the urban system. This methodological path is applied to the city of Mangalia, a Romanian coastal settlement overlooking the Black Sea, in the Dobrogea region, which has a capital importance within the economic and organisational system of Romania, as, together with the neighbouring Constanta, it represents the only real gateway to the country's maritime connections. The proposed methodology is based on the assumption that the analysis and design of the urban system implies a necessary and constant ability to reshape the scale of intervention at an urban and territorial level, but also at a local and micro-urban level, allowing planners to focus on the city's nerve centres, intervening alternately from above and from below. The dimensional scale can therefore be considered a key to interpreting the different hierarchies of the elements of the urban fabric on which to intervene. Therefore, it is proposed to combine the inductive method with the deductive method, analysing both the urban-territorial reality and the space of proximity at the base of the city system: this indicates that the contemporary city is not a simple assemblage of objects and functions, but the multi-scalar product of physical, social and cultural processes (Russo, 2015).

In this perspective, the concept of the multiscalar approach as a progressive virtuous path for the design of the ecological city fits in. Therefore, it is proposed to combine the inductive method with the deductive method, analysing both the urban-territorial reality and the space of proximity underlying the city system.

One of the aims of multiscalarity is to preserve the possibility of designing at a localised scale with a bottom-up approach: this criterion focuses on the neighbourhood scale and

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on micro-units of the landscape, starting from the social base of the population through community listening techniques to facilitate the recognition of focal points towards which targeted and effective interventions can be directed. At the same time, the methodology aims to take advantage of the top-down approach that guarantees a broader vision, involving professionals from different fields for a strategic and coherent management of the urban project. Specifically, the proposed approach aims at the design of green infrastructures on a macroscopic scale tending towards a possible reconnection of fragmented urban open spaces with territorial ecological networks, integrating abandoned, disused or underused spaces within the city in the process. In this sense, the introduction of the practice of 'urban acupuncture' to intervene on dimensionally reduced parts of the city fabric is valuable. (Pistone, Scaffidi, 2022) This technique constitutes a recent approach that can be understood as complementary to the multi-scalar implementation of green infrastructure, as it aims to resolve critical issues on a micro-urban scale and then spread a benefit to wider areas of the city, in affinity. Complementing the described method is a third verification tool, namely the urban functional transect, which aims to verify the coherence between territorial green infrastructure and localised acupuncture interventions (Acierno,2019).

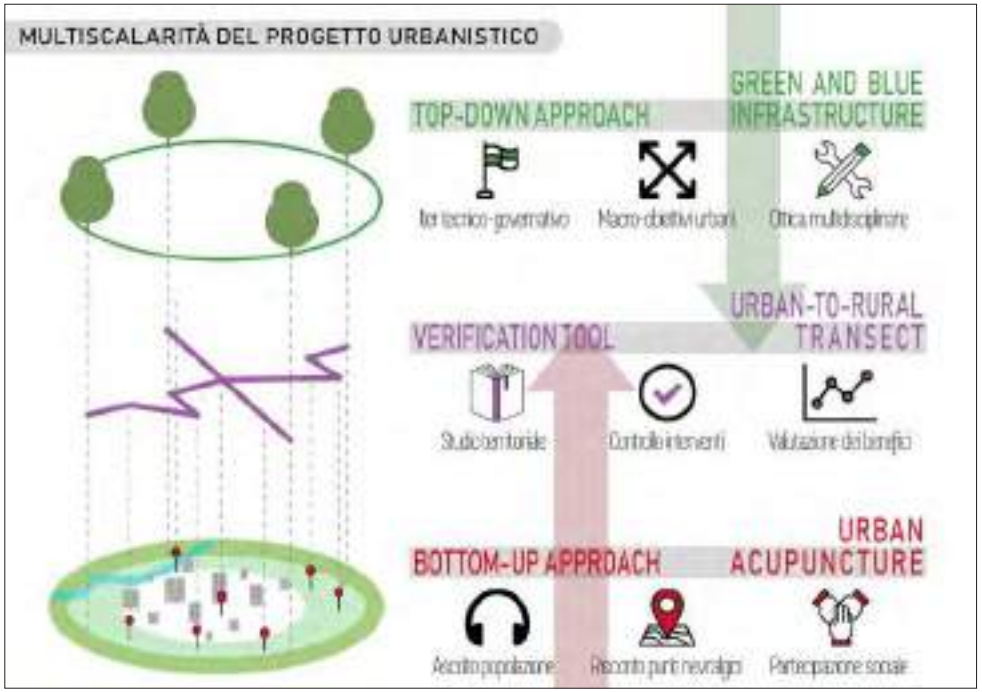

Fig. 1.
Descriptive concept of the multi-scalar approach to urban design (elaboration by I. Pistone and L. Scaffidi) Image Taken from: Pistone I. Scaffidi L. (2022) Multiscalrità e Pianificazione Ecologica della Città Contemporanea. Il progetto di infrstruttura verde e blu per la costa di Mangalia in Acierno A. Coppola E. (2022), Green Blue infrastructure Methodologies and design proposal, Napoli, FedOA Press

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Mobility for Urban Public Space
A study case between Naples and Barcelona

*Adriana Bernieri**

The research investigates how and to what extent mobility infrastructures can contribute to urban regeneration and the design of public space. This question is addressed by evaluating the transformative possibilities of the urban spaces affected by the current transport structure, intersecting it with other light flows, mostly pedestrian and cycle paths, but also with the possibility of connecting green areas, parks, and public structures, on a dual scale, neighborhood and metropolitan. The research focuses on the city of Naples starting from the station nodes. From a methodological point of view, the proposed investigation is structured through the analysis and study of some case studies from which joint reflections and thematizations arise. The comparison is here conducted between the cities of Naples and Barcelona, two realities that in different ways take mobility as a characterizing element within their urban structure and their recent urban history. Two cities, comparable with each other on multiple levels, dimensional, morphological, social, from which similarities and differences emerge in the design of public space linked to mobility, especially from the point of view of the premises, policies and management of the transformation, the latter very linked to its public narrative. In this context, Barcelona is assumed as a best practice for two reasons. The first reason deals with the events of urban transformation that occurred, especially starting from a rethinking of its mobility, in terms of both (infra-)structure and contents, that is the level of involvement of structures and served public spaces, connected, and rediscovered starting from the lines of mobility in a very broad sense. The second reason examines the exportability of the model (1), that is the possibility of tracing the entire operation back to a guiding principle which, from an urban point of view, address most of the choices: the contemporary reinterpretation of the nineteenth-century grid of Ildefons Cerdà, in the confirmation and in some way in the exaltation of a very precise morphological model, historicized and therefore a *de facto* heritage, on which to rework and through which to rediscover new logics of community. The "Barcelona project", already underway between the 1980s and 2000s thanks to the funding and urban transformations linked to the 1992 Olympic Games, continues in the following years with cutting-edge mobility plans from the point of view of the degree of transformability and impact at various levels over the city. In particular, the "Barcelona Urban Mobility Plan 2013-2018", just as many other that followed, has established mobility guidelines for the city with a clear focus on sustainability. The main objective of the plan is to create the so-called superbloks, starting from the Cerdà's *illa*, implementing alternative transport (new orthogonal networks of buses and bicycles, carpool and pedestrian lanes, etc.). Other objectives concern compliance with European environmental quality regulatory parameters, the reduction of noise and the number of accidents, and the increase in pedestrian road space. This last aspect has given rise to a very high number of interventions on public space, understood in a very broad sense and involving squares, gardens, parks, avenues, private and public roads, as well as the waterfront, in the construction of a very dense network of connections which has also ended up including the public transport lines themselves, especially those at street level such as trams and buses. A program of interventions which also actively involved the historical and built heritage of the city, in many places revalorized, readjusted, reused but above all recontextualized in order to root pre-existing structures in new inhabiting and collective logics of public life in the city. The study aims to identify some qualitative characteristics of certain interventions, in order to define further design configurations, innovative in terms of interaction between users and the city, through an updated interpretation of the morphological and functional peculiarities for the "urban breath". From this perspective, one of the pre-eminent and winning characteristics in projects in Barcelona concerns the level of urban capillarity. This is significant from two points of view. The first, in a progressive rapprochement of the citizen with the "culture" of public transport, understood as the possibility of a mobile collective life within urban spaces. In this sense, all the strategic plans supporting the municipal agenda of transformations are significant, such as the 2018 "Game Plan" (2), on the one hand governance and planning components, on the other tools between city and citizen, of all ages. The second, from an even more projective point of view, deals with the position of coincidence that mobility spaces and urban public spaces are gradually assuming. In the journey back to the project for Naples, but also in a further study on the city of Barcelona, capillarity becomes the real objective and at the same time the measure and criterion through which to set up (*ex ante*) or evaluate (*ex post*) an urban project.

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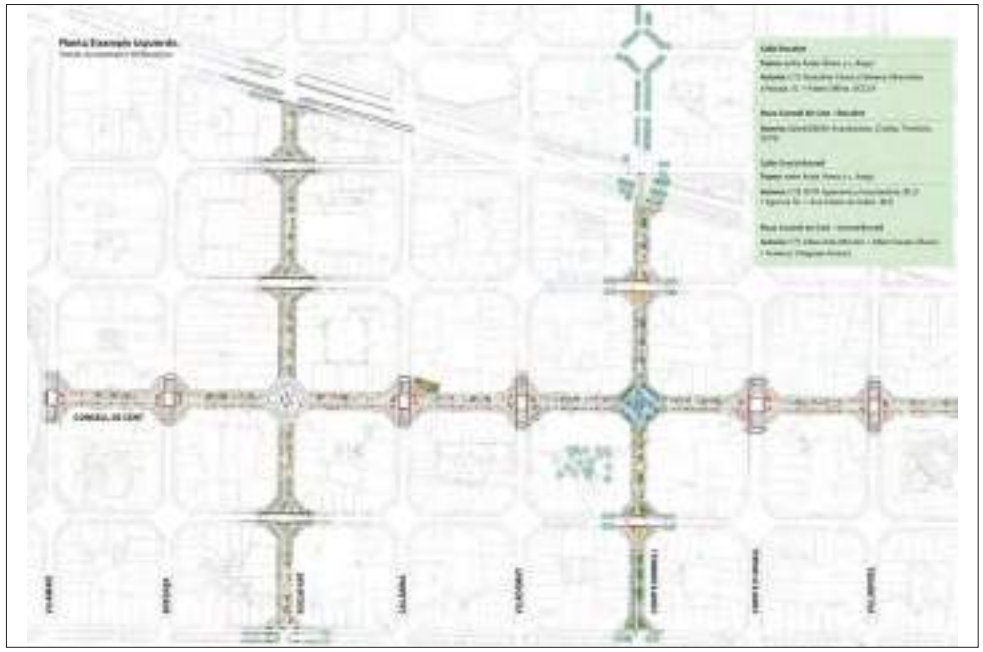

Fig. 1.
Mobility as Public Space (Plan of Eixample left. Source: Barcelona City Council, extracted from Regenerar Barcelona: Barcelona 2015-2023, http://hdl.handle.net/11703/129163).

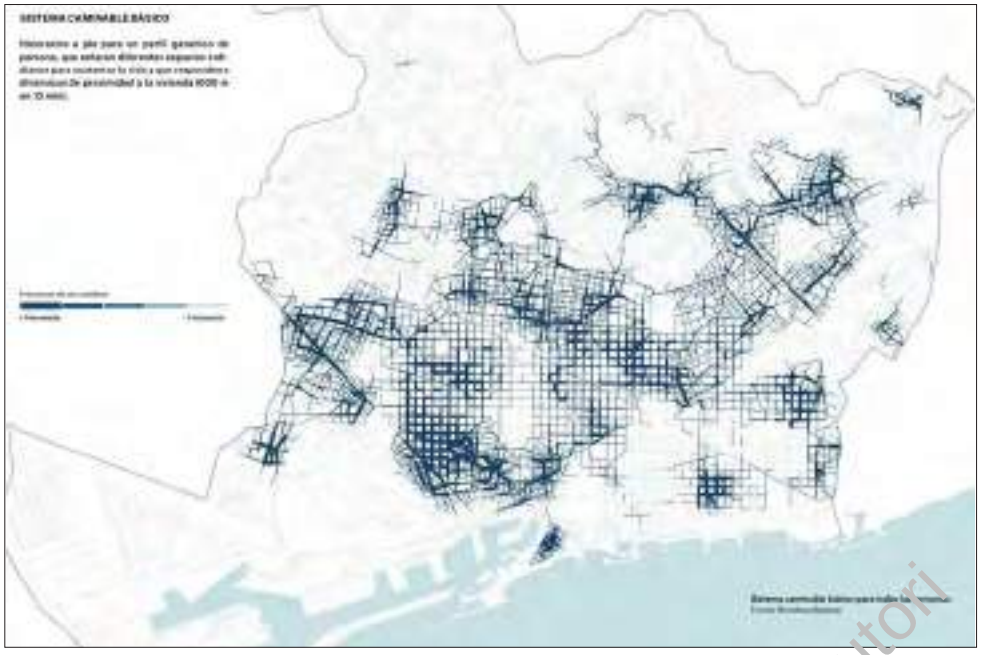

Fig. 2.
Urban capillarity in Barcelona (extracted from Regenerar Barcelona: Barcelona 2015-2023, http://hdl.handle.net/11703/129163)Mobility as Public Space (Plan of Eixample left. Source: Barcelona City Council, extracted from Regenerar Barcelona: Barcelona 2015-2023, http://hdl.handle.net/11703/129163).

Performing collective action for cultural urban regeneration projects

Early notes from a Barad and Schechner diffractive analysis

*Vittoria Biasiucci, Maria Patrizia Vittoria**

The article identifies an interdisciplinary posture as a useful key to reading the development of complex organizational systems in the context of cultural-based urban regeneration projects. In questioning the concept of performativity, the article recognizes two approaches: the first by quantum physicist and philosopher, Karen Barad's 'agential realism', pertinent to the New Materialism current, and the second approach, based on the work of anthropologist Richard Schechner, who introduced the intersectional field of analysis called Performance Studies.
The reflection matured following a study of practices of self-organization and activism in urban commons with evidence on organizational capacities examined in dynamic-evolutionary terms ((cfr. Teece, Pisano Schuen 1997; Metzger 2015). From this analysis, it was possible to state that an organizational model of complex systems can be composed of a range of actors participating in an urban regeneration process. The theoretical model for the analysis of these phenomena has action (i.e. intra-action and responsibility) at its center; understood here, as the development of a process. Hence the need to conduct a study of collective action from the concept of performativity. If for Barad (2017), performativity is diffractive processing, in which one does not observe facts, but phenomena in which one is enmeshed; Schechner (2017) using "as" performance as a tool, one can look into things otherwise closed off to inquiry. The two perspectives may lead to the adoption of a different idea of "outcome" and contribute differently to the starting organizational analysis. On the other hand, for Karen Barad, "a performative conception of discursive practices challenges the representationalist belief that words have the power to represent pre-existing things. Performativity, when properly interpreted, does not represent an invitation to turn everything into words (including material bodies); on the contrary, performativity challenges precisely the excessive power granted to language to determine what is real. Therefore, ironically, far from representing a form of linguistic monism that considers languages the constitutive stuff of reality, performativity challenges the unquestioned habits of mind that accord language and other forms of representation more power in determining our ontologies than they deserve. The shift from representationalism to performative alternatives shifts the focus away from the issue of correspondence between description and reality (do they reflect nature or culture?) to issues concerning practices/activities. I would also add that this approach brings back to the forefront important issues concerning ontology, materiality and agentivity, while socio-constructivist approaches remain entangled in the geometric optics of reflection where, as happens in the endless play of reflections between two opposing mirrors, epistemology bounces from one side to the other, and nothing" (Barad, 2017, p. 32). While, according to Schechner, "performativity is an even broader term, covering a whole panoply of possibilities opened up by a world in which differences are collapsing, separating media from live events, originals from digital or biological clones, and performing onstage from performing in ordinary life. Increasingly, social, political, economic, personal, and artistic realities take on the qualities of performance. In this sense, performativity is similar to what I called "as" performance" (Schechner, 2017, p. 123). On this point, it is good to define those performances, for the author, mark identities, bend time, reshape and adorn the body, and tell stories. Performances – of art, rituals, or ordinary life – are "restored behaviours," "twice-behaved behaviours," performed actions that people train for and rehearse. That making art involves training and rehearsing is clear. But everyday life also involves years of training and practice, of learning appropriate culturally specific bits of behaviour, of adjusting and performing one's life roles in relation to social and personal circumstances" (Schechner, 2017).

The contribution of two authors on the same concept was useful to discuss (or, better to put on a diffraction plane) the different conceptions. Where, in Barad's contribution, the emphasis is on matter and intra-action, while for Schechner it is on behaviour and

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action. At the organizational level of analysis, some lessons can be learned about the role of the interdisciplinary lens in enriching the analytical toolkit. In other words, in-depth "performance" conceptualizations allows organizational analysis of complex systems to be read through additional integrations useful in highlighting concepts and assumptions of responsibility by those who help generate enabling processes for the phenomenon of urban regeneration.

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Urban Regeneration and the Role of the Private Sector

*Sveva Bocchini**

Recent years have witnessed the growing and constant development in state, regional and municipal regulations of provisions on the 'regeneration', 'redevelopment' and 'reuse' of urban spaces and buildings. These regulations respond to the need to provide administrations with the tools to govern a phenomenon of significant importance that, although differentiated in terms of the purposes and tools provided, finds its common denominator in the need to recover, transform and in general innovate existing assets or spaces in an improving sense.

The aims of urban regeneration processes are many: to reduce (up to zero) land consumption with a view to environmental sustainability, to relaunch construction through building redevelopment (in this case, however, regeneration is more of a tool than an end), to regenerate the suburbs (or other degraded areas) through urban, social and cultural redevelopment, with the elimination of marginalisation and social exclusion factors and crime prevention, but also more generally to recover, transform and innovate urban spaces in order to improve the quality of life of citizens[1].

The complexity and costs of regeneration interventions, the long-term duration of the activities necessary for their implementation, the spatiality of projects often covering vast and uneven areas, expose these processes to economic and social risks. The economic risk concerns the finance ability and necessary profitability of the works and emphasises the involvement of strong economic actors, such as owners or economic operators in view of a 'financial' participation in the realisation of the projects. The 'social' risk, on the other hand, can be defined as the situation in which the community does not recognise the social use value of the operation and requires mechanisms aimed at enhancing the interlocution with private parties, capable of contributing to the realisation of the project and favouring the social acceptability of the operations[2]. In this latter perspective, the social participation (and not only the bargaining with private entrepreneurs) of all the subjects involved in the urban regeneration process (residents, inhabitants, entrepreneurs, associations) appears fundamental to ensure the recognition of the territory as a common good, that is, as the good of each and not generically of all and for which each inhabitant feels responsible[3].

The traditional mechanisms of citizen participation in urban planning through recourse to observations have proved insufficient since they intervene on a plan already prepared by the administration, reducing it to a mere criticism of what has been decided by the public administration and therefore susceptible to marginal modifications. It is therefore a mode of involvement that is not suitable for ensuring a real sharing of the choices made by the administration.

The aim of this intervention is to outline a model of 'aware' participation that involves citizens in all phases of the regeneration process, from planning to the design of interventions to their actual implementation.

To this end, some regional laws on regeneration are significant, such as Emilia Romagna Regional Law no. 24 of 2017 (art. 17) or Sicilian Regional Law no. 19 of 2020 (art. 13)[4]. These legislative interventions, however, do not identify the modalities of exercising this participation, nor do they place the exact moment in time from which and up to which it must take place, hence the need to outline a legal conformation that allows the "sharing" of regeneration processes with citizens.

The process of regeneration of urban spaces, whether publicly or privately led, cannot in the end be understood as a rigid and formal scheme within which to crystallise needs predetermined by the promoter, but it is the regeneration process itself that must become the interpreter of the needs of citizens, so as to act both as a tool for the recovery of land or buildings with a view

to environmental sustainability and economic revitalisation, but also as a means for the realisation of fundamental rights.

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Designing with time. Chrono-urbanism and some of its declinations

*Chiara Bocchino**

The metabolism of a city does not only consist of an incessant material flow and does not exclusively represent the tangible aspects of a conurbation. There exists an immaterial urban metabolism whose functioning is conditioned by all those intangible elements that constitute the existence of society such as time, information, participation, education, relationships, well-being, happiness. These components, although difficult to quantify, affect the life of individuals and society in general, in the same way as the material elements; moreover, they influence the material processes themselves. This contribution analyses one of these intangible components, time and its declinations in urban planning. It is necessary to integrate the temporal dimension into urban planning so that it can be used as an instrument for the transformation and adaptation of the city. Designing, building and managing cities requires the simultaneous consideration of the built environment, flows and time (1). If it is common to considerate space-time from a philosophical and physical point of view, it is less so in the urban and territorial sphere but is increasingly attracting the interest of scholars, planners and public actors; urban society, like any other, produces its own specific time system, which is the result of the social activities taking place in the city. The physical transformations of a city and those of society do not always coincide in a parallel evolution: this makes it necessary for the city to become malleable so that it can adapt to the rhythms of the city and the people who inhabit it. Time management in an urban system can, therefore, be declined in order to achieve different objectives (fig.1). Three examples of designing with time are deepened and listed below:

a) configuration of social policies that harmonise urban times to make individuals' movements and activities easier. The first effective time management measures were implemented in Italy in the 1980s, thanks to the political action of the women of the Communist Party: this movement later inspired other European countries. The 8th of March 2000 the italian law "Disposizioni per il sostegno della maternità e della paternità, per il diritto alla cura e alla formazione e per il coordinamento dei tempi delle città" was born. This law stipulates that every Italian municipality with more than 30,000 inhabitants must adopt a Territorial Timetable and Timetable Plan (*Piano Territoriale dei tempi e degli orari*), considered an "unitary instrument for purposes and directions, articulated in projects, also experimental, related to the functioning of the different timetable systems of urban services and to the gradual harmonisation and coordination". At present, the number of municipalities that have approved a Time and Timetable Plan seems negligible and is concentrated in northern Italy. Time policies could follow different orientations, ranging from the promotion of space-time planning to the promotion of equality and social cohesion. They could also represent a transversal approach that raises fundamental questions concerning the coherence and complementarity of public policies;

b) optimisation of the utilisation time of spaces, with a view to a sustainable reconfiguration of the city, in which existing spaces and buildings can be utilised as much as possible while avoiding the construction of new ones. The different building types have different modalities and times of usage that can be enhanced: most spaces remain empty for at least twelve hours and are, therefore, severely underused. In an urban context in which the population is bound to increase along with the demand for spaces to be used and in which densification and diversification is necessary, leaving functional spaces underused – or in some cases not used at all – is counterproductive. While respecting people's physical environments and architecture, there is a growing need, therefore, to manage the time of use of these spaces, alternating different activities that fill the time gaps and for which the need to create new spaces lapses;

c) utilisation of unused or underused spaces and buildings through temporary occupations of places, involving social capital. These operations, which we could enclose in the concept of *temporary urbanism*, are considered flexible tools for the revaluation, reconversion and improvement of cities. Temporary urbanism refers to a series of practices and practitioners who deal with the development and management of open spaces such as roads, building areas and vacant lots, and closed spaces such as empty buildings, offices, housing, or unused industrial warehouses. These activities are based either on the temporary occupation and use of empty areas pending complex building projects, or on the reuse of existing buildings to meet immediate or urgent needs. Temporary urban planning therefore proposes using empty buildings and spaces in different ways, taking advantage of the time before an urban project, sale or renovation. Temporary urbanism takes the form of several similar practices that are sometimes confused by the characteristics they have in common. This is the case with transitional, tactical, ephemeral, pop-up urbanism: all of these share the temporal nature of initiatives but differ in the way they are organised, executed and their objectives.

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These different actions challenge traditional urban planning instruments and long-term approaches and can represent new tools with different aims and forms to make urban systems more malleable and adaptable.

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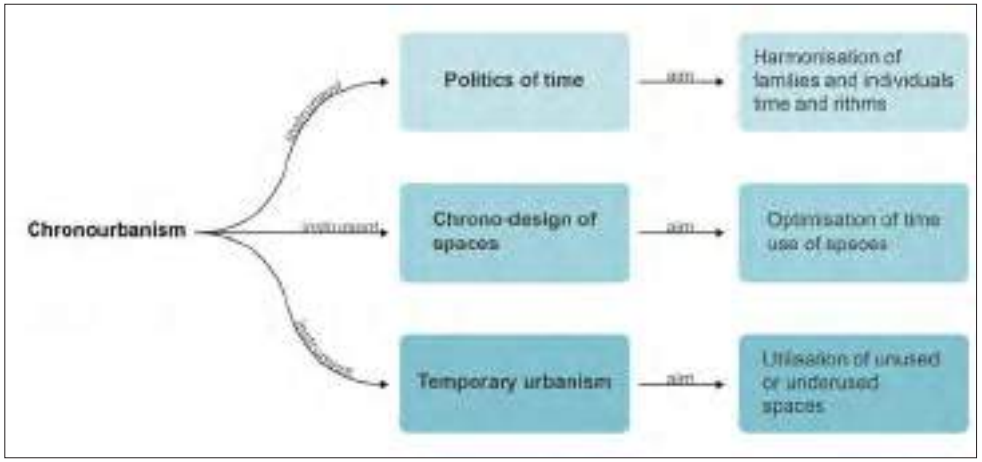

Fig. 1.
Instruments and applications of chronourbanism.

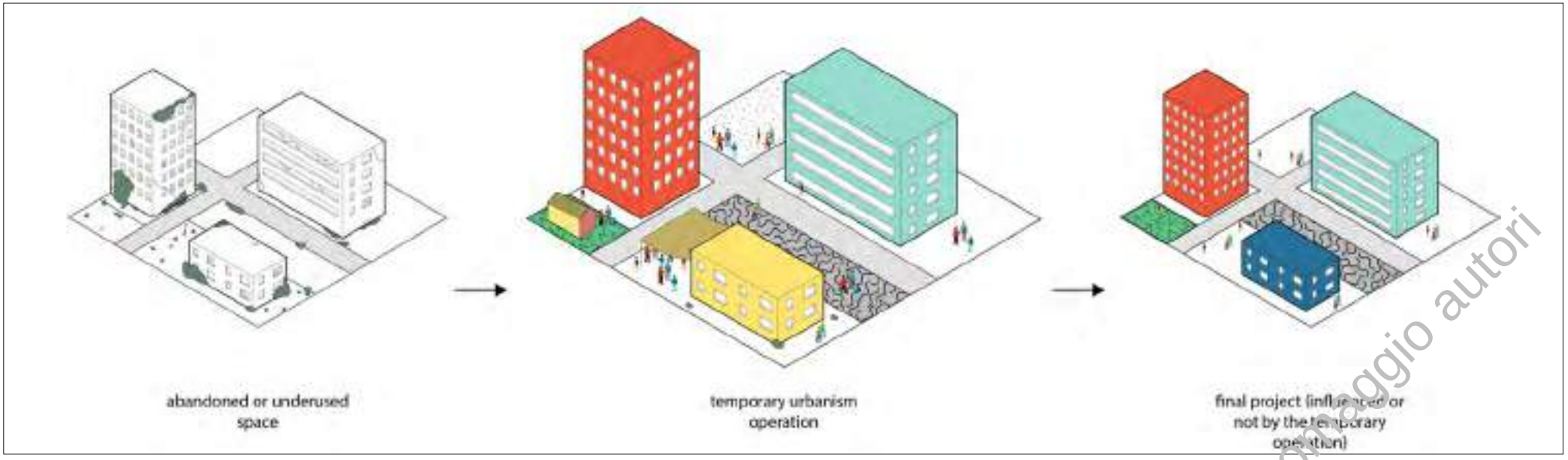

Fig. 2.
Temporary urbanism operation process.

ROME: Capital of the CIPS

*Francesco Bonanni**

In Italy, "smart city" is still an idea: it does not propose concrete initiatives to solve the causes of main urban problems, like marginalization of immigrants and traffic due to commuting. A true "smart city" must be equipped with "cips" which in Italian is the acronym of Inclusive and Proxemic Service Centres: intelligence engines like computers, in terms of "software", with the purpose of creating multiple and integrated services, not building new structures but reusing existing ones. The solution to improve inclusion and proximity is to create (CIPS) structures organized in an intelligent way, equipped with available technologies, distributed in the urban land in a rational and participatory way, to create new proxemic workplaces and social inclusion for the citizens of each neighbourhood. These centres should have a fundamental characteristic in common: they should be identified, designed, and built according to real demand, based on the actual needs expressed by citizens, entities, and companies, equipped with common and personalized services for each citizen. With the data already available and with other information found through the local administrative structures, by studying the citizen's vision about their working place, is possible to define the locations of the CIPS in a more "barycentric" position, respecting the needs of citizens and interested companies. To create a CIPS there is a need for systematic data collection and continuous dialogue between the actors involved; only in this way "totems" that represent the "intelligent poles" of a true "smart city" can be created: participatory, shared and inclusive, all interconnected with each other. Urban planning: Not static and pre-established planning for many years, but dynamic, continuous planning participated by citizens. The growth of CIPS can create a vital, organic urban system, rebalanced in terms of value and habitability, polycentric, inclusive, and easily reachable with fast public transport. The progressive reduction of commuting and chaotic traffic can be achieved with better use of public transport. Less traffic means healthier air, with a progressive reduction of smog warning limits. In an era of intense migratory flows and social marginalization which, especially in large cities, create problems of inclusion and integration, it is necessary to distribute reachable services and functions across the territory aimed at welcoming and recovering people in need of various assistance and essential supports. When citizens have more facilities and can participate more to public projects, they become active and capable of expressing their desires; each CIPS would become a place that can also be used by administrators not only to provide services to citizens, but also for continuou s interactions with them to increase awareness as "smart citizens". The dematerialization and delocalization of work allows free distribution of peripheral offices, and all the logistical, security and technological services available in the CIPS. The increase of precarious work among young people, radically changes the role of trade unions: they will have to intermediate in the intense phenomenon of worker mobility, creating very active reference nuclei in the CIPS with qualified staff, given that the "permanent job" is now in extinction. Living near CIPS offers families a series of advantages, for instance quiet and comfortable homes equipped with qualified services; care of shared places such as the workplace, schools, shops, gardens. Citizens will have more freedom to choose where to live, away from their jobs. The ease of reaching the workplace by foot, radically simplifies daily life and eliminates stress and anxiety due to commuting. The possibility of meeting other people that carry out completely different activities from one's own in the same workplace offers many opportunities to learn new habits and make new friends, so it promotes socialization instead of isolation. In CIPS there are spaces and functions for the exchange of experiences and knowledge between various generations, increasing transition between elderly experts and inexperienced young people. In CIPS it is also possible to recover the "digital divide" between current generations and the past ones who have never had the opportunity to learn how to use digital tools. Finally, a quick synthesis of my methodology in CIPS. Seven essential instances (in order of priority) Survival Security Health Science Sustainability Development Solidarity. Seven main themes (in the same order of priority) Person Society Work Technology Ecology Economy Politics. And the MATRIX along theme: There is no survival without a person and vice versa. There is no security without society and vice versa. There is no health without work and vice versa. There is no science without technology and vice versa. There is no sustainability without ecology and vice versa. There is no development without economy and vice versa. There is no solidarity without politics and vice versa. This is my vision. Thank you for your attention.

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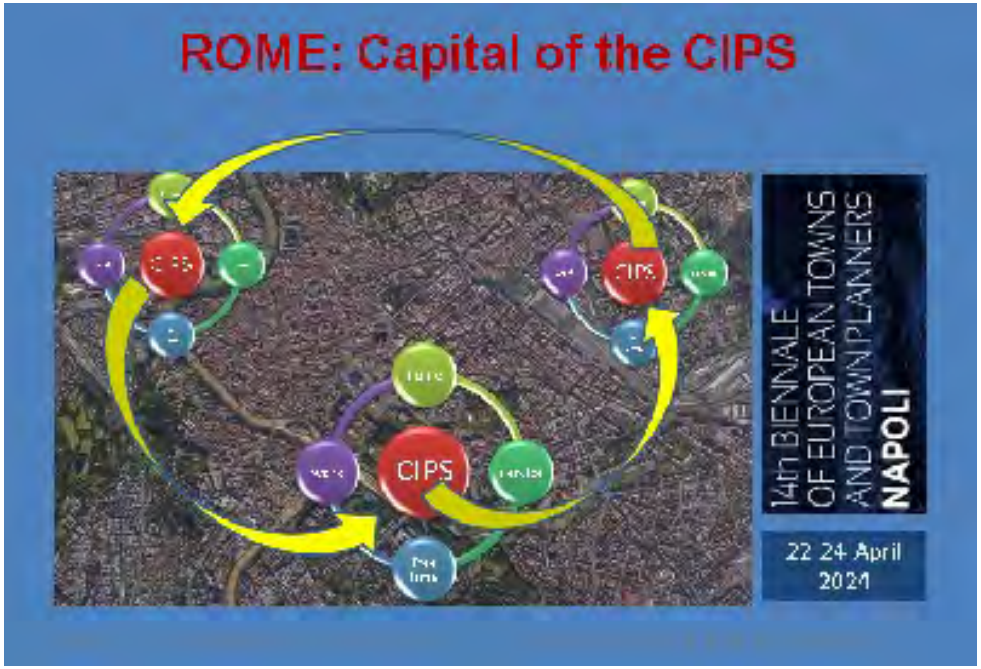

Development games in the neglected urban areas

Aleksandra Jadach-Sepiolo, Maciej Borsa***

Urban development is a critical aspect of shaping the living spaces of societies. Particularly, neglected downtown areas are where diverse urban, social, and economic challenges converge. Habermas's perspective on urban space as a cultural symbol sheds light on the interaction between government, community, and local economies, highlighting the importance of such spaces in social life. This paper proposes a policy aimed at building an effective framework for urban planners at various stages of the urban regeneration process. From the initial stage characterized by complete uncertainty in deeply crisis-stricken downtowns, to stages where cooperation among all participants yields synergy effects. The analysis, based on examples from European downtowns, aims to illustrate these processes. For instance, in the UK, a shift in urban policy towards regeneration, as noted by Imrie and Raco (2003), reflects the evolving approach to urban development. This shift from property-led initiatives to more inclusive, community-focused strategies illustrates the changing landscape of urban renewal. Anne Power (2007) further underscores the role of social capital in low-income neighbourhoods, highlighting the value of community bonds and networks in the regeneration process The development of games in neglected urban areas can thus be a significant tool in the process of renewing urban centres, enabling the effective integration of spatial planning with economic and legal instruments. This is particularly important in the context of growing challenges related to urbanization, demographic changes, and the need for creating sustainable urban spaces. The toolbox for neglected urban areas created in the game theory framework, thus, emerges as crucial for urban renewal, enabling the integration of spatial planning with economic and legal instruments. This approach is vital in addressing the challenges of urbanization, demographic shifts, and the creation of sustainable urban environments.

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To illustrate the different stages of urban revitalization we've chosen examples from four cities, each representing a distinct stage in the regeneration process:

1. Complete uncertainty in deep crisis downtowns: Lisbon, Portugal: Historically, parts of Lisbon faced severe neglect, particularly following the 1974 revolution and subsequent economic challenges.
2. Initial success and easier financing for renewal: Bilbao, Spain: After the industrial decline, Bilbao underwent a significant transformation, with the Guggenheim Museum being a pivotal project that signaled the city's revival. This stage represents the transition where initial successes, like the Guggenheim, made it easier for property owners to obtain financing for further renewal projects and the local authorities began to see tangible benefits of urban redevelopment.
3. Authorities seeking to maintain development momentum: Copenhagen, Denmark: As Copenhagen transitioned from an industrial port city to a hub for culture and sustainable urban living, the city's authorities focused on maintaining the momentum of development. The revitalization of the Meatpacking District and the development of sustainable urban areas like Ørestad are examples of the city's commitment to continuous improvement and development.
4. Synergic cooperation among all participants: Barcelona, Spain: The regeneration of the Poblenou district, particularly through the project, is a prime example of synergistic cooperation. This project transformed an industrial area into an innovative district, involving cooperation among city planners, businesses, educational institutions, and residents, showcasing effective multi-stakeholder collaboration.

Each stage of urban development reflects different dynamics and expectations among authorities, planners, and investors, tailored to the specific challenges and opportunities of the respective cities at that stage, what will be in details presented with reference to the most prevailing financial instruments supporting renewal at different stages.

(1) The urban renewal of the Chiado neighborhood in Lisbon, led by Álvaro Siza and Carlos Castanheira, demonstrates the evolving relationship between authorities, planners, and investors during a period of uncertainty. (2) The transformation of Bilbao, particularly marked by the construction of the Guggenheim Museum, showcases how initial successes can lead to cheaper state-aid financing for renewal. (3) Copenhagen's approach to urban renewal, with a focus on sustainable development and maintaining momentum, reflects the continuous efforts of authorities, planners, and investors. The city's initiatives in areas like cycling infrastructure and waterfront development are examples of ongoing development efforts. (4) In Barcelona City planners set the vision and framework for the project, facilitated regulatory support and provided public funds to kickstart the regeneration process. Businesses, both local and international, funded the construction of modern office spaces, research centres, and commercial facilities that now characterize the district. Residents played a role in the financing and development process through participatory planning initiatives. Educational institutions and research organizations have been key partners in this collaborative financing model. This synergy between public, academia, business and residents has been instrumental in creating an ecosystem that fosters innovation and entrepreneurship.

Lisbon (Complete Uncertainty in Deep Crisis Downtowns)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Innovative solutions to entice investment	Clear investment plans and commitment
Planners	Guidance and support in high-risk areas	-	Financial backing and patience for long-term development
Investors	Clear policies and incentives for risky investments	Feasible and sustainable urban plans	-

Bilbao (Initial Success and Easier Financing for Renewal)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Continuation of successful urban design	Sustained investment in urban projects
Planners	Consistent support and funding	-	Confidence in and commitment to urban projects
Investors	Stable and conducive investment climate	Long-term urban visions aligned with market opportunities	-

Copenhagen (Authorities Seeking to Maintain Development Momentum)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Sustainable and inclusive urban strategies	Continued investment and trust in city's vision
Planners	Support for innovative and sustainable projects	-	Alignment with sustainable development goals
Investors	Maintenance of a favorable business environment	Viable, future-focused urban projects	-

Barcelona (Synergistic Cooperation Among All Participants)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Cohesive urban designs that reflect city's cultural ethos	Investments that align with city's comprehensive vision
Planners	Policies supporting creative urban solutions	-	Engagement in sustainable and culturally integrated projects
Investors	Long-term vision and consistent policies	Plans that are innovative yet grounded in community needs	-

Fig. 1.
Unique dynamics and expectations of main stakeholders at each stage of urban revitalization.

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Urban regeneration and public space between the gaps of the dense city

*Francesca Calace, Stefania Assenti**

In the context of the several environmental, urban and social challenges that cross the existing city, due to both long-term changes and emergencies, particular attention should be reserved for those dense parts of the city, now historicised, that were never involved in modernization and renewal processes. They are often characterized by degradation, discomfort and marginality but, at the same time, they're bearers of cultural and social values useful to redesign the city's future. These are historic working-class neighbourhoods, often places of marginality and degradation that lurk in cities and metropolitan areas, even in the most central spaces; 'suburbs' as places of deprivation of the right to the city and the opportunities it offers.
The contribution is aimed at describing a *research by design* experience carried out in the framework of an agreement between the University and the Public Administration, which engaged teachers, PhD students and young researchers, undergraduates of the multidisciplinary laboratories "Urban regeneration in the historical suburbs", with the objective of elaborating knowledge scenarios and urban regeneration strategies for the districts and municipalities of Bari, with particular attention to the historical suburbs of the town, districts that have never become anything else even when they have been affected by the city development.

One of the most relevant case studies of the research was the Libertà district, the first working-class suburb of Bari's Murattiano area, which reproduces its layout by increasing its density: a specific investigation and a project with exploratory value were carried out for it.

The research delved into historical reconstruction, aimed at recognizing the city's permanent values, that is, the existing signs and artefacts that have survived the urban transformations which profoundly altered Bari's territory during the twentieth century, erasing the traces first of the rural heritage that surrounded the city, then those of the nineteenth-century, its architecture and urban proportions. It has also analyzed in particular the district's 'zero share' in detail, revealing how the narrowness of public space corresponds to a marked underuse of private space, due to the commercial desertification that has characterized the district.

The project explored operationally the idea that historic neighbourhoods are infrastructures of urbanity, for the contemporary city. The question was therefore how to apply urban regeneration in historic working-class neighbourhoods, potential models of resilience and inclusiveness and places of public proximity space.

A first strategy adopts public space as a resource to be enriched and integrated to improve neighbourhood and local living conditions, following the model of the exemplary interventions carried out in European cities aimed at revitalizing public space by targeting the now well-known city of proximity. A second, consequently, is intended to subtract space from a pervasive and indiscriminate mobility and to reuse it to integrate public areas, a scarce and precious resource in such dense contexts, on the European models of hierarchization and differentiation of roadways in favour of soft mobility and pedestrianism. Finally, a third decisive strategy is based on the exploration of the urban fabric's susceptibility to change, safeguarding the historical values present and adapting it to the needs of communities in transformation; avoiding simplified solutions that are often invoked, such as massive building replacement, which is also undesirable due to, as said, the presence of historical values, or limiting interventions to public space alone, without addressing the serious problems of inadequate housing conditions.

The urban regeneration project, consequently, shapes these strategies with a multi-scalar approach: from the neighbourhood,to the block, to the building.

The results outline solutions and, at the same time, pose questions for the different disciplines involved and their mutual relations, manifesting the importance of an integrated approach in urban policies. But most importantly they issue a challenge to practised town planning to overcome the alternating logics of conformity and derogation that pervasively connote it, as well as the narrowness of a reductive vision of urban regeneration, often reduced to single public works, in order to involve communities and private individuals, creatively orienting inventiveness and constraints in the city's transformative processes.

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Fig. 1.
'Libertà' District in the urban context.

Fig. 2.
The urban landscape of 'Libertà' District.

Reclaiming Public space
The role of Cultural Heritage sites in Urban transformation

*Greta Caliendo**

This contribution investigates the affordances of cultural heritage sites, conceived as public space, in guiding socio-spatial regeneration processes (Caruso et al, 2021)[1] and in redefining spatial and cultural inclusion in urban and peri-urban dynamics of societies and territories in transition.
This paper builds upon two extensive research involving respectively Naples National Archaeological Museum (MANN)[2] and Pompeii Archaeological Park[3], examining their interplay with public space and the city. It offers a critical analysis on the impact of cultural heritage sites, with a focus on museums and archaeological parks, on inhabiting Contemporary City, by turning towards the city as new public space and by generating processes of spatial and cultural inclusion.

This study aligns with ongoing discussions on the "museums of cities movement" (UNESCO, 2006)[4], which, in the early 21st century, has redefined the concept of cultural heritage, reflecting an increasing awareness of the role of cultural heritage sites in affecting the city. There are numerous instances globally of cultural heritage sites, including museums and archeological parks, that have guided urban redevelopment processes by assuming the role of materially producing public space. Conventionally, the task of cultural heritage site is associated to the preservation of artworks and their fruition within either "buildings-container" (such as museum) or "protection enclosure" (such as archaeological park). However, these sites can modify the ways of interaction with the city, by opening up to local inhabitants and providing spaces for socio-cultural activities, beyond mere preservation and visit.

After surveying and analyzing some of these best practices, it is possible to further stimulate a reflection through two case studies, field of production of empirical knowledge and experimentation on the theme of this contribution: (a) the action that MANN Management has activated to open a section of the ground floor towards the City, accommodating new uses and functions beyond those of a traditional museums[5]; (b) the expressed intent by Pompeii Archaeological Park to open up to local community the space "outside the walls," that is the space in-between the archeological city walls and the park enclosure, as a freely accessible meeting place[6]. Despite differences in type of cultural heritage site and specificity of the context, both cultural stakeholders express a commitment to pursue an idea of "widespread museum" (Drugman et al, 2016)[7], a place of permeation between cultural heritage and territory, as well as between cultural heritage and local communities.

Therefore, this reflection contributes to further substantiate the profound significance of cultural heritage, not limited to its capability to promote tourism but related to its affection on dwelling Contemporary City. Specifically, it aims to demonstrate how in a context where social disparities increase alongside spatial segregation and urban complexity, cultural heritage site plays a crucial role in affecting the way of inhabiting: on one side, indeed, as an instrumental "public space", it can define spatial inclusion by

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1 Caruso, N., et al. (a cura di) (2021). Rigenerazione dello spazio urbano e trasformazione sociale. Proceedings of the XXIII Conferenza Nazionale SIU: DOWNSCALING, RIGHTSIZING. Torino, 17-18 giugno 2021. Roma-Milano: Planum Publisher - SIU.

2 Applied research agreement "Implementazione e valorizzazione della connettività urbana del MANN" (2018-2020) between Naples National Archaeological Museum (MANN) and Architecture Department of University of Naples Federico II (DiARC). Scientific coordinator: prof. arch. Carlo Gasparrini.

3 Applied research agreement "POMPEI FUORI/TRA LE MURA. La cinta antica, le necropoli, gli ingressi moderni, la Buffer zone e il rapporto con i siti minori" (2022-in corso) between Pompeii Archaeological Park and DiARC UNINA. Scientific coordinator: prof. arch. Renata Picone.

4 UNESCO (2006). Urban Life and Museums. In Museum International, Vol. LVIII 3 (231)

5 https://mann-napoli.it/; Piano Strategico quadriennale del MANN 2016/19 e 2020/23 https://mann-napoli.it/piano-strategico/

6 http://pompeiisites.org/; https://cultura.gov.it/luogo/parco-archeologico-di-pompei-area-archeologica-di-pompei

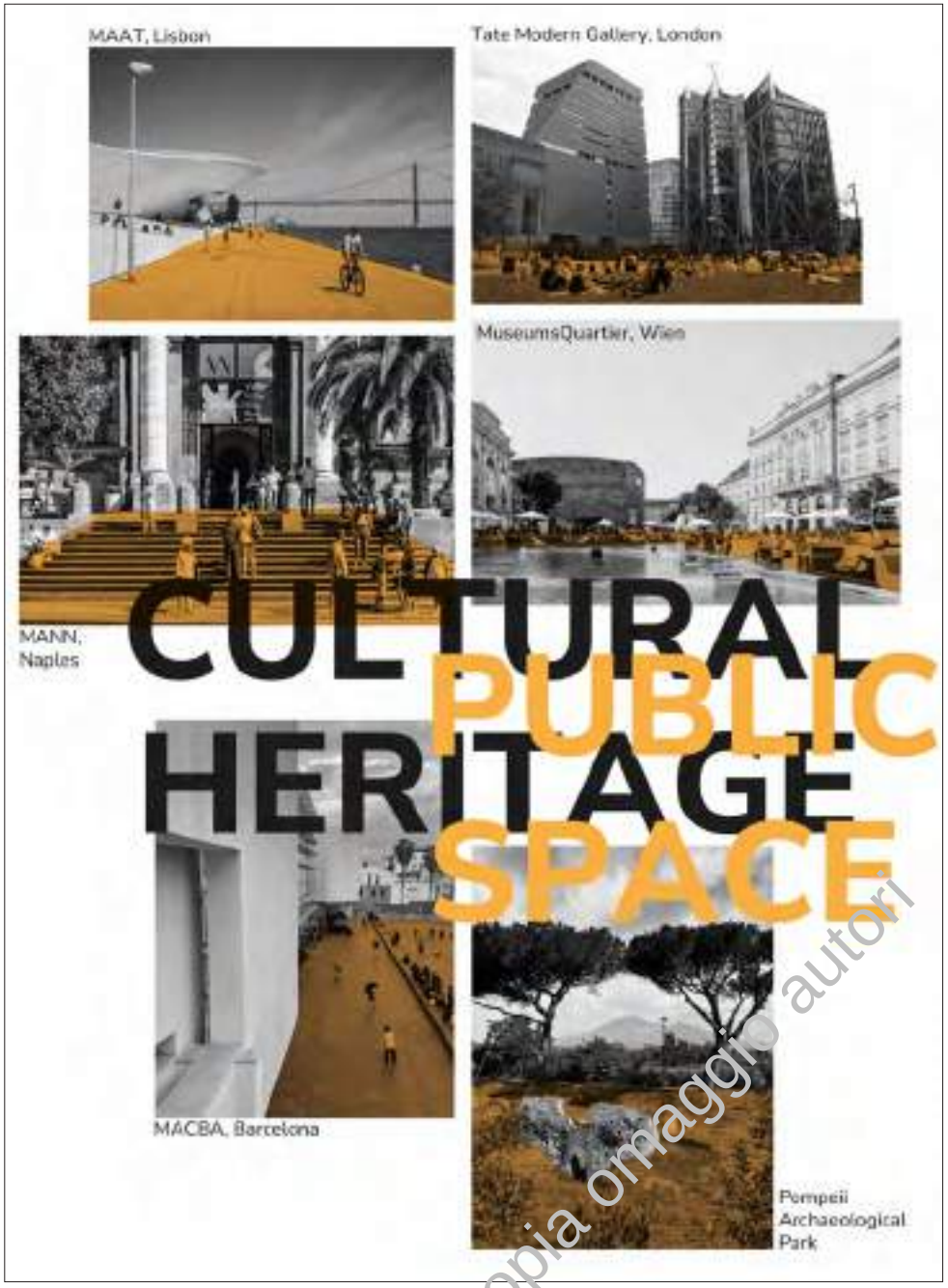
7 Drugman, F., et al. (a cura di) (2016). Idee per un progetto di museo lungo il Trebbia. Firenze: Edifir.

providing interpersonal personal spaces. Simultaneously, cultural heritage can promote cultural inclusion, because of its capacity to shape collective memories of residents and users, since it is a cultural resource that needs to be defended, meaning not just protected but exploited, to establish a common ground between different cultures (Jullien, 2018)[8]. Transforming into a new square, a hub for meeting and cultural exchange, cultural heritage site further expands the social implication of cultural heritage, emerging as active participant in society, providing cultural and social services, and making its spaces available for uses and functions other than the intrinsic ones of preservation and visiting.

In conclusion the contribution aims to capture the essence of cultural heritage as a central element of public space and, thus, of the city, highlighting how it is a place of encounter and interaction between different communities, and how it shapes the way people dwell and interact within their urban environment.

However, the results of this contribution inevitably intersect with the long-explored issue of preserving and enhancing cultural heritage. Consequently, it is evident the need, for this research future developments, to survey strategies aimed at protecting cultural heritage by acting on spatial modification and, thus, at integrating preservation with transformation.

Fig. 1.
Cultural Heritage and Public Space.



[8] Jullien, F. (2018) L'identità culturale non esiste. Einaudi.

(how to) Draw a process
An Architectural storytelling of a social innovation case

*Arianna Camellato**

The current context presents a high complexity, making it difficult to interpret. However, there is a shared agreement on the need to increase awareness of environmental safeguards. In response, the architectural field, where construction is a major global waste producer, is shifting its focus from new construction to regeneration, reuse, and recovery as the preferred methods for transforming physical spaces. However, a critical issue remains: the lack of attention to the contents and relationships that make these "re" strategies successful is linked to the risk of falling back into a cycle of abandonment. This is evident in funding programs like PINQuA and PNRR, where positive scores are granted for attention to social aspects, but no actual financial support is provided for the related practices and activities. This situation suggests a potential reinterpretation of the architect's role: from designer of spaces to interpreter of processes. This requires evolving architectural design tools to ensure projects are developed coherently with the hosting context, ultimately aiming to prevent their failure.

The research started as a master's thesis and has evolved into a doctoral project. It aims to develop visual tools that improve the effectiveness of participatory processes activated in urban space regeneration projects. These participatory processes are often treated as mere tokenism, a practice R. Hart would consider an oxymoron as it falls within the realm of non-participation. The analysis of recent processes reveals that both the tools used during and for presenting the outputs are primarily textual. This method of information transmission excludes various groups, including the most vulnerable (children, individuals with cognitive, cultural, or language differences) as well as experts, researchers, and particularly third sector entities, who, despite having reading abilities, often lack the necessary time. To quote the latter, I refer to social groups that act as catalysts for relationships in urban spaces, demonstrating a high potential for revitalizing abandoned areas. However, these groups often find themselves oppressed by the contingencies of an unsupportive bureaucratic framework, hindering their survival within the context. While recognizing the value of textual narratives, the research experiments with alternative narrative methods and tools that can make these processes more understandable, reproducible, and inclusive, addressing the ineffectiveness of existing tools in dynamic environments such as cities. The proposed approach involves generating hybrid-medium narratives -combining text, images, photos, and videos- allowing individuals to engage with the content in various ways, based on their abilities and available time. This approach is based on the hypothesis that the individual's design accessibility arises from genuine cognitive access to information. Furthermore, using these hybrid tools can support the reader's self-positioning within the narrated system. This is important because we are never truly external observers of a process; we always read and observe from a specific point of view. The development of a set of visual tools useful in the participatory process includes the possibility of linking storytelling and impact evaluation, actively involving participants not only in the learning phase but also in the design and evaluation phase. From a research perspective, this presents an opportunity to align the stories with the methodological rigor of data collection and analysis, seeking to establish a connection between the qualitative and quantitative value of the process.

The research was applied to the Lumen Firenze case study, a cultural-based regeneration project of an abandoned space owned by the municipality and given to the APS Icche Ci Vah Ci Vole free of charge in exchange for ordinary and extraordinary maintenance. The visual tools are presented in the second of the three research volumes, which utilizes an innovative system of textual narrative, images, and insights organized with notes and references. This allows readers to engage with the whole content according to their abilities, interests, and available time. The visual process narrative is created by translating the phases of the architectural project narrative into a process storytelling format, transforming for example the urban frame into the frame of interest, and the building prospect in the process prospect. This enables users to access complex information with the simplicity of a comic book and the dynamism of a game book. The most notable element is the process prospect, a 3-meter drawing that visualizes the interwoven relationships between intangible elements (temporal, social and political interlocutors) in the context and the tangible outcomes (physical and vegetal interlocutors) in the hosting space, contributing to a clear understanding of the project's current state. Direct experimentation with this tool reveals that people approach it and choose their own way to read the story, developing a quick grasp of the general context even without prior knowledge. Additionally, the tool facilitates the immediate comprehension of the interplay between material and immaterial aspects, which would otherwise be invisible. It also tests the tools' ability to stimulate reflection, encourage deeper exploration of specific aspects, and help users imagine connections between the presented experience and other known experiences, fostering the creation of new connections.

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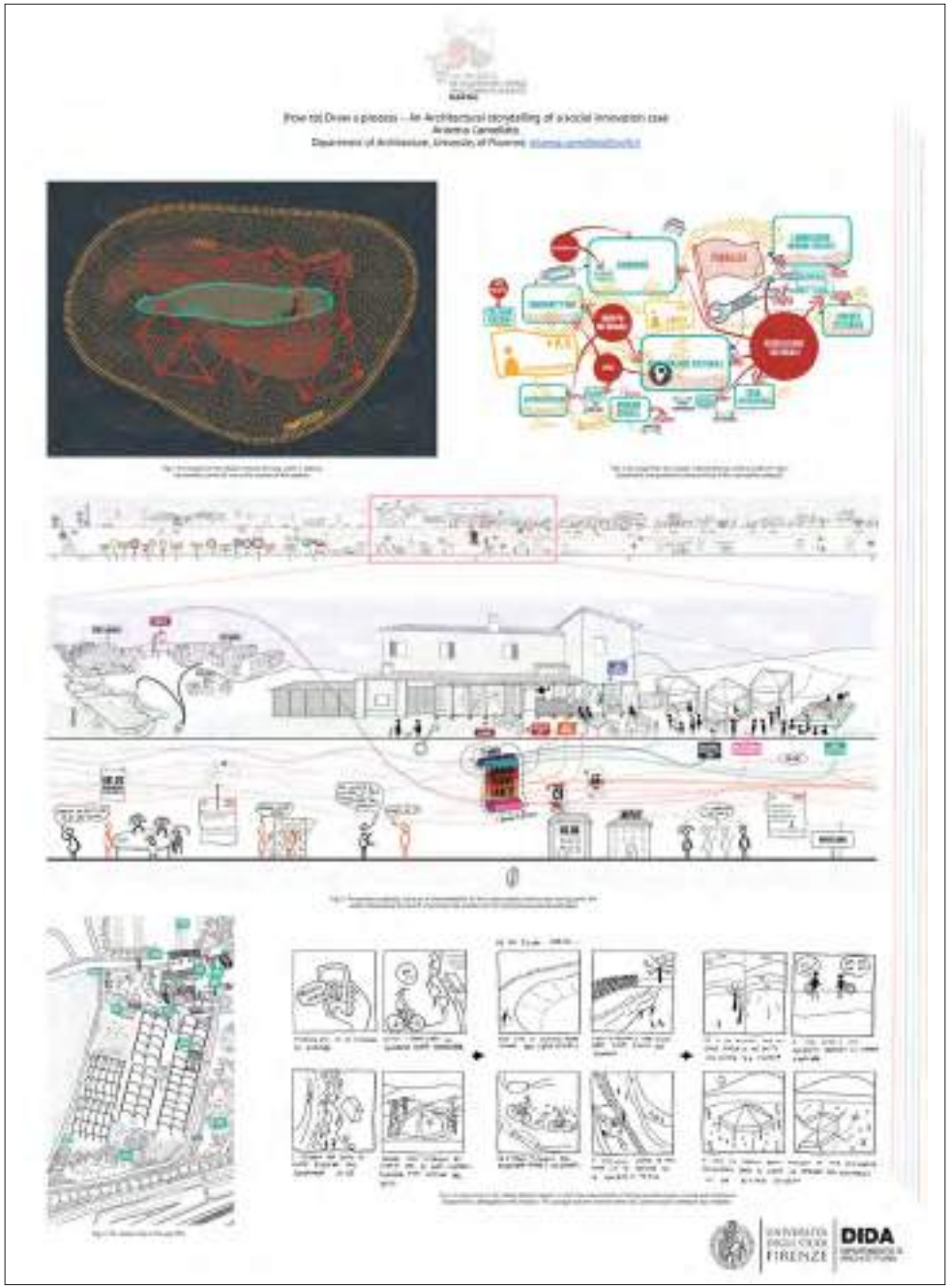

Fig. 1.
An image from the chapter Interest framing, useful in stating the narrator's point of view in the context of the research.

Fig. 2.
An image from the chapter Interest framing, which is useful to relate quantitative and qualitative characteristics of the case studies analyzed.

Fig. 3.
The process prospectus, acting as a visual storyteller for the Lumen project, unveils a key turning point: the section showcasing the launch of activities that breathe life into the previously abandoned space.

Fig. 4.
The Lumen map in the year 2021.

Fig. 5.
A comic strip in the Talking Details chapter in which the responsibility of telling a sensitive issues or those with emotional components is delegated to the medium. This passage tells the moment when the Lumen project's initiation was revealed.
Images created by the author.

"From the edge to the castle: sustainable mobility and connections of the third millennium" Municipality of Falconara Marittima - Ancona - Italy

The winning project of the two-stage design competition and drafting of the technical and economic feasibility study

*Massimo Canesin, Omero Bassotti**

The study in question deals with a sustainable mobility project and its connecting infrastructure with the subsequent urban planning that it generates in the city and the metropolitan area of Ancona-Falconara. The implementation of this medium-long-term vision is intended to promote a new sustainable development scheme for the urban environment in Falconara Marittima as part of a space-planning project based on an overall general vision.

The city is geographically located at the meeting point between the Esino river and the Adriatic Sea, at the 'natural' and unavoidable intersection between two main routes, the coastal road and the Vallesina valley, and is a meeting point for major transport infrastructure, first with the construction of the Ancona-Rimini railway line and in the second half of the 19th century with the construction of the Ancona-Foligno line. Today, major road networks converge in the Falconara area, both nationally, such as the A14 motorway, State Road 76 and State Road 16 Adriatica, and internationally, with Ancona airport, resulting in a substantial volume of traffic flowing through the municipality, in particular with large numbers of vehicles heading towards the nearby regional capital, which affects life quality in the area. Following a careful prior investigation, critical issues were identified throughout the area. The environment is characterised by high background pollution due to the presence of the refinery and major road and rail infrastructure. The urban fabric has a very high population density and inadequate road network, with the absence of parking services and connection alternatives for low-impact traffic. The network of connections is in practice inadequate between the most sought-after areas, such as the high part of the city with its unfavourable terrain, and with the most distant neighbourhoods from the central urban area, such as Villanova, Castelferretti and Fiumesino, which have been completely given over to road traffic.

The objective of the project consists in a top-down reorganisation of the city in which the links between the most populous urban locations are simplified. People-mover systems will be implemented for vertical links in line with the existing landscape-architectural backdrop, created in combination with new cycle-pedestrian infrastructure and light rail facilities throughout the area. These communication systems place mobility and parking facilities at the service of the urban centre thanks to a joined-up, integrated network, allowing for simple transport between the various areas. The plan for the redevelopment of large urban spaces such as the Villanova seafront and the proposed space for a Business Startup Centre aims to capitalise on this urban wealth by encouraging increased crossover between private transport and new public transport systems. In summary, a plan has been drawn up that aims to:

- Improve accessibility with flexible and collective transport schemes with a low impact on the environment aimed at resolving the difficulties of travel caused by the urban topography.
- Reconnect urban and regional centres (the airport and the Ancona-Falconara metropolitan area) with the creation of automated transport systems, such as the metro del mare and the fixed-route shuttle.
- Replace current transport based on the use of private cars and buses, encouraging sustainable and environmentally friendly transport by simplifying vehicle park-and-ride schemes with the creation of mobility hubs.
- Redevelop deprived neighbourhoods by regenerating abandoned or heavily built-up areas with sustainable and innovative development programmes that outline a new urban townscape vision.

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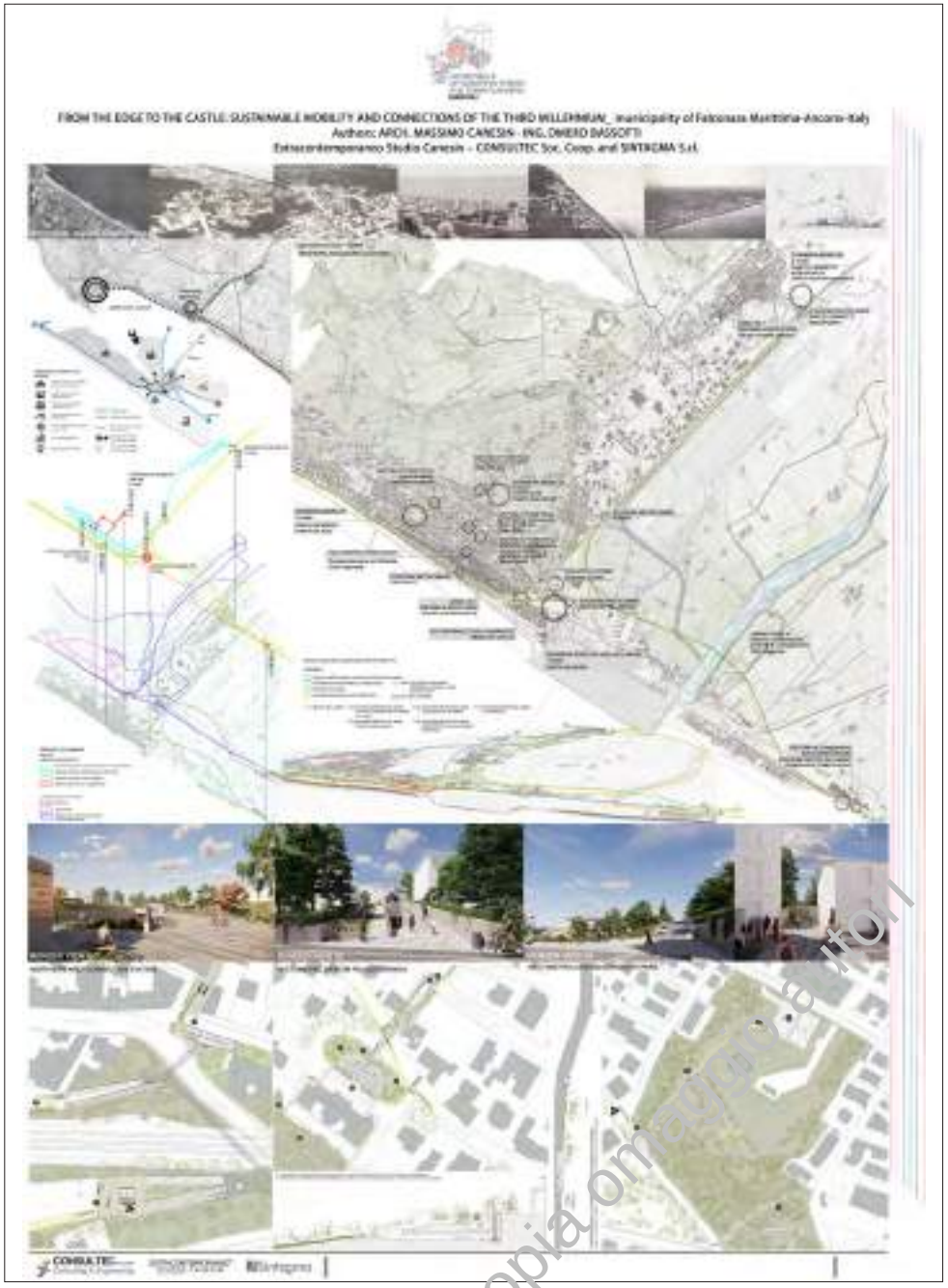
The creation of new sustainable transport in Falconara and the greater Ancona area is a challenge that it is time to face head on, and can only be achieved by working on various fronts, with differing initiatives and courses of action. An area with such unique characteristics from an urban, social and economic perspective that have to date not been adequately explored and understood needs a solution based on actions/measures that have already been tried and tested in other settings, but which must then be specifically applied to the overall and complex context of this city.

Thanks to these measures, an alternative transport system to the car and other private motorised transportation will be established, focusing instead on public transport and sustainable travel in order to improve the quality of life for our citizens. To achieve this, the objective requires the involvement of the people themselves in this process of change and development: everyone is independent and also individually brings about partial solutions to the highlighted issues. Changing the behaviour, and habits, of adults is, however, often difficult. There is a need to focus on a new network of cycle paths and protected pedestrian pathways, (including through the creation of cycle-pedestrian projects and a Zone 30 project for the city), and on efficient, punctual and economical public transport systems capable of increasing the proportion of low-impact travel. At the same time, it will be necessary to work on encouraging this change by targeting the young generations in particular and in schools, which are the main gathering place for a markedly multi-ethnic population; it is often young people and children who challenge the highly unsustainable behaviour of parents and adults.



EMPaThY Space
Creative ecosystem for a transfeminist city

Francesca Carion, Gaia Del Giudice**, Marta Moracci**, Federica Morra**, Maria Scalisi*, Livia Russo*, Stefania Oppido**, Stefania Ragozino** and Gabriella Esposito***

Background - Since the late 1980s, a new lens of intersectional feminism has provided an opportunity to enrich and capture specific nuances related to the mainstream debate on spatial justice (Israel and Frenkel, 2018; Marcuse, 2009; 2010; Pirie, 1983) and the right to the city (Lefebvre, 1968; Iveson, 2011). Which bodies move in the city and how many of them are excluded because of gender, race, class, sexuality and ableism? (Muxí Martínez, 2011; Federici, 2018; Kern, 2021). Starting from these questions is essential to read a double denial of urban spaces: on one hand, urban policies and decision-making processes often reflect dominant and privileged perspectives, which may ignore or minimize the needs and perspectives of marginalized communities (hooks, 1998; Criado-Perez & Palmieri, 2022); on the other hand, urban spaces are strongly affected by commodification dynamics (Harvey, 2012), which are destroying their collective and social values. In other words, urban spaces today are often neither inclusive nor collective.

Project proposal - EMPaThY SPACE is a project proposal designed for the city of Naples, placed at the intersection between urban and gender studies, and based on the integration of two approaches for developing/reshaping inclusive and collective urban spaces. On one hand, the transfeminist approach that could fill the lack of knowledge and awareness of marginalized communities needs; on the other hand, the research group, recognising the innovation that the network of emerging urban commons for civic and collective use in Naples is experiencing in terms of processes of selfdetermination, legal innovation, and democratization (Micciarelli, 2018; Capone, 2020), considers empty and/or underutilised urban space as a potential space for the production of commoning practices (Stavrides, 2016; 2022), and also for the development of new social economies, starting from the valorization of human and social capital. The aim of the proposal is to create an ecosystem of community-driven urban spaces where can be experimented: new methods of spatial design and production, the transformation of ideas into social enterprises in the direction of the selfdetermination, the potential impact in interconnecting existing practices.

Methodology - *Phase 1 - Data collection through collaborative mapping:* in order to identify the spaces that the community of mappers needs to reshape. *Phase 2 - Definition of criteria and spaces selection process:* selection criteria depend on the number of alerts on each space, alerts repetition of a specific need, dimension of the space and other several ones emerging from the previous phase. *Phase 3 - Engagement, empowerment and co-design*: mappers will be invited to participate in collective moments to share their experiences, needs, skills and networks. This will promote better profiling, alliance building and the expansion of the network. Then in-depth focuses on the two approaches (transfeminist and commoning) will provide the knowledge and tools for the co-design phase on the selected spaces. *Phase 4.a - Co-production processes:* to fortify the group cohesion and encourage a rooting process in the new urban scenario, communities, researchers and the other partners involved will work together to realize different objectives among which tactical urban furniture and art installations. *Phase 4.b - New local and social economies*: an open call will be launched to surface the existence of social entrepreneurship ideas among the community and beyond. Skill profiling will be used in this phase to stimulate alliances among the community, in order to connect and systemize the existing human and social capital. *Phase 5 - Learning from the process: data representation and spatialization*: data collected will be analyzed to build a spatial representation of them. Some of them will be useful to give representation of the actors involved and their skills, re-shaped spaces, and local networks, others will be used to define what indicators are needed to classify an urban space as transfeminist space and build a new map for Naples. Finally, still others will be used for cowriting a vademecum for other processes inspired by the integration of transfeminist and commoning approaches.

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Expected Results - The project's outcomes span multiple dimensions, strictly connected each other: on a *physicalspatial level*, the reshaping of the selected places, according to a transfeminist perspective and through a practices of commoning; on a *social level*, stimulate the creation and/or strengthening of social networks and the empowerment of the communities; on a *advancement of knowledge level*, the development of a new set of indicators, more up-to-date and effective than those currently used by Istat (Italian National Institute of Statistics), to capture and describe the social and urban complexity, and a new "Guidelines for Transfeminist Urban Design" —also useful for the other urban designers, planners and policy-makers; on a *digital-spatial level*, the creation of an interactive map, "EMPaThY SPACES map", to visualize and link co-produced spaces, and also to highlight existing transfeminist spaces or areas in the city.

IN.KIOSTRO
A Community Hub in the former St. Michael's Cloister in Anacapri

Maria Cerreta, Laura Di Tommaso**

The decisive role assumed by local communities is increasingly evident in the future of the Italian urban landscape, in relation to their ability to transform places of urban living, starting from the innovative interpretation of the existing heritage, in a collaborative and polycentric approach which expects the cooperation of different actor platforms for the formulation of new strategic directions of urban governance. In this perspective, the disused ecclesiastical heritage can be considered a privileged object to start regenerative co-design processes, primarily for the widespread diffusion throughout the national territory of this heritage, which allows for a far-reaching reflection on the transformation of the Italian urban landscape; and then for its ability to transmit the identity values of the community, in a logic of valorisation of these values as well as innovation of contemporary society towards circularity, resilience and integration.

The IN.KIOSTRO research, developed for an Architecture degree thesis, develops an interdisciplinary approach that includes evaluation, urban planning, restoration, interior architecture and technology. The project was developed by integrating theoretical research and experimentation, aiming to overturn the dichotomy between deductive and inductive approaches. On the one hand, the first goal is to develop an innovative hybrid methodology for the construction of urban policies, replicable in multiple socio-urban contexts, and – on the other – the second one is to start a process of urban regeneration in Anacapri, through the adaptive reuse of the former St. Michael's Cloister, an abandoned cultural asset of immense identity value for the local community, where triggers the aggregation of a Heritage Community, as defined by the Faro Convention.

The reference environment is interpreted as a *quintuple-helix co-governance model*, in line with a particular *Co-city model* introduced in 2016 by De Nictolis and Iaione, assigning a decisive role to *civil society* in the development of public policies, which is split into two distinct groups, referring to the characteristics of the urban context and the identified cultural asset. The methodology represents an interpretation of the Social Multi-Criteria Evaluation (SMCE) approach introduced by Giuseppe Munda and, generally, places integrated evaluation at the centre as fundamental to understanding the complexity of real cases. The integration of the quintuple helix co-governance model and the SMCE approach allows us to outline an iterative, dynamic, and continuously learning design process, in which each phase allows to insert into the previous one and produce new integrations. The methodological path is divided into five steps:

a. *Exploration*, necessary for the construction of the basic cognitive system, developed through an analysis of the urban context and a co-mapping process, whose project outcome consists of an alternative masterplan for Anacapri, which outlines strategies overall coherence to the needs of the community;
b. *Identification*, with which, considering the emerged data and other logistical-programmatic observations, the cultural asset for the co-design and co-evaluation process was co-identified. The former St. Michael's Cloister is an under-used cloister owned by the municipality, around which many public buildings gravitate for it could become a strategic node and appears to be historically and urbanistically central for Anacapri;
c. *Co-evaluation*, through which a group of stakeholders was involved in the design and evaluation of new possible scenarios for reactivating the identified cultural asset, triggering a collaborative decision-making process;
d. *Selection*, during which the SOCRATES decision support software was used to work out an integrated evaluation, carrying out two multi-criteria evaluations and two multi-actor evaluations;
e. *Project*, with which the functional direction that emerged was validated, and a wooden micro-architecture was designed, with which to experiment and test the uses cho-

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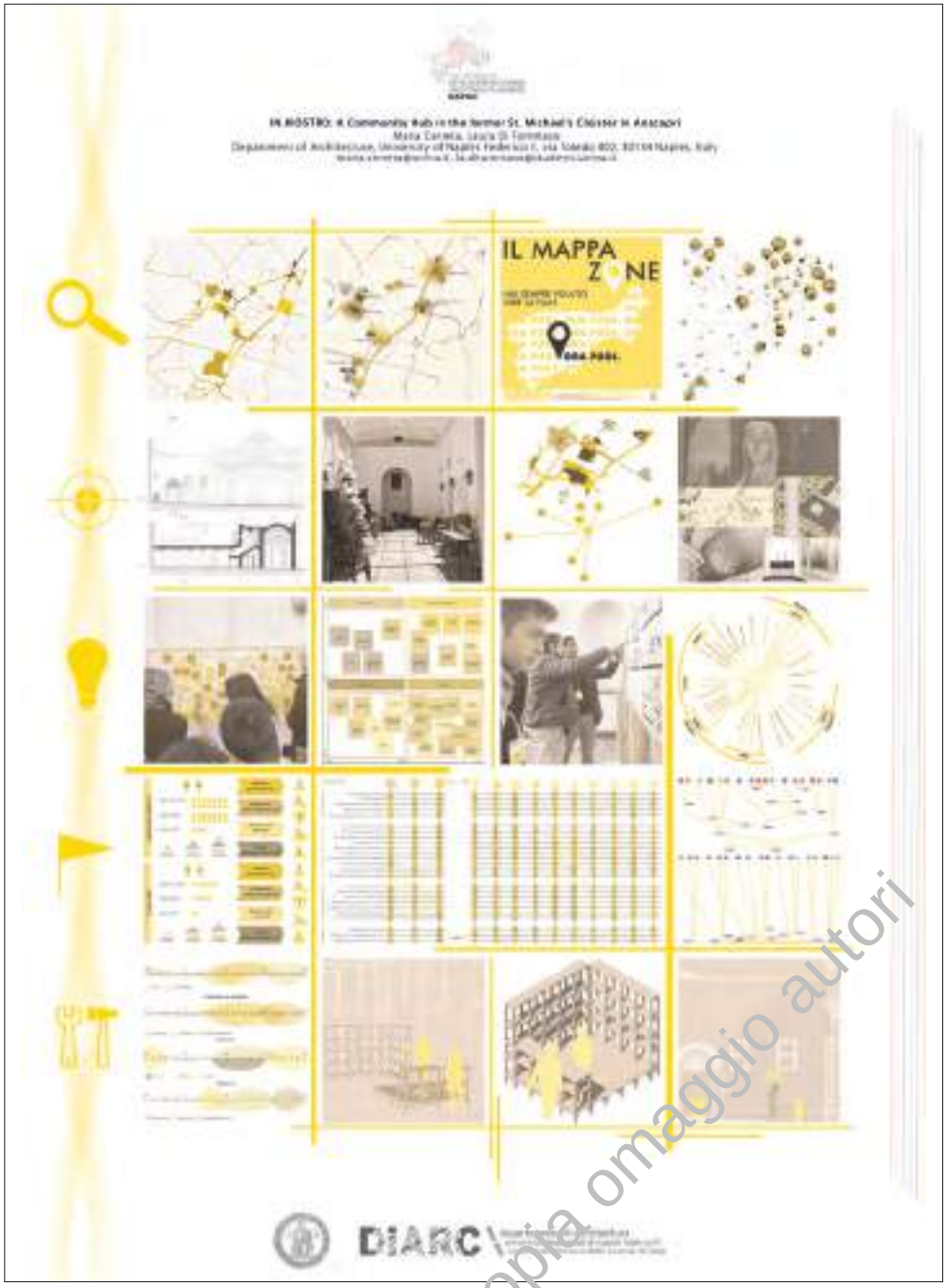

Fig. 1.
Poster: The methodological steps applied to St. Michael's Cloister in Anacapri.

sen with the community and start the reactivation of cultural heritage in a logic of urban acupuncture, supporting the aggregation of a new inclusive and innovative community.

By implementing the methodology, the research allows the understanding of the peculiarities of the context of Anacapri, whose community is seriously disaggregated and affected by a deep social wound caused by the intensive tourism, by the territorial discontinuity and by the application – in the last twenty years – of short-sighted socio-urban development policies. The experimentation allows the reading of this complexity and its re-elaboration in a project that responds to the relative needs, starting from the urban resources that are identified with the community and paying particular attention to the former St. Michael's Cloister, the possible protagonist of the first adaptive reuse. The project triggers a self-reflection on the part of the *inhabiting* community on the public space, in its meaning as a privileged *place* for the development of social well-being, as well as allowing the introduction of the participatory method into the reference territory as a new opportunity for the construction of urban shared scenarios. The research also allowed for the in-depth analysis and resolution of conflicts, paying attention to operational risks and the different methods of resolving them. Furthermore, it was possible to carry out a critical analysis of the path activated, highlighting a new declination of the figure of the designer, as well as analysing the potential that integrated evaluation allows to explore the creation of participatory processes, aimed at identifying and developing design choices attentive to the implementation of urban, social, and cultural innovation processes.

The "Villa del Sole" project. A green area without greenery anymore...

*Teresa Cilona**

The redevelopment of urban public spaces requires a holistic approach and the collaboration of different skills. The projects carried out in numerous Italian and foreign cities show that the best redevelopment projects have a positive impact on the quality of life, the aesthetic appearance of public spaces, the enhancement of the urban heritage, the environment and the local economy. This study examines the recent redevelopment project of the "Villa del Sole", a green area located in the centre of Agrigento, built after the Second World War, where in December 2023 numerous trees were uprooted to make way for new buildings to be used to a nursery and kindergarten. This has given rise to discontent and heavy criticism from citizens, cultural and environmentalist associations and sector experts towards the *governance* of the City, accused of serious inattention to the real needs of the community. While in other cities the tree heritage is increasing, in Agrigento it is being cemented, in contravention of National Law No. 10 of 2013 "Development of urban greenery", in clear contrast to the consolidated need to minimize land consumption, ignoring the landscape and geomorphological constraints that weigh on that portion of territory (PL28, protection level 1-28b). The project process of this intervention, which is opaque and lacks any hint of bottom-up planning, has the declared aim of obtaining a major European public funding (National Recovery and Resilience Plan resources). It all began when the city council, under the AGENDA URBANA programme – Action 9.3.1 PO FESR 2014-2020[1] – proposed a variant to the town planning instrument[2] for the approval of the final project (first excerpt). The area – indicated in the current PRG as sub-zone G3 (environmental protection and enhancement – equipped public green areas) and identified in the N.C.E.U. at Fg. 142 part. 3642 – is one of the two largest municipal villas in the city. For decades it was a very popular meeting point for the people of Agrigento, characterized by a large fountain – with an adjoining lake – structured on several levels, enriched in the 70s and 80s by wildlife (peacocks, ostriches, monkeys), games and sports equipment. Today, *that green area no longer has greenery* and very little remains of the lush vegetation, which constituted the arboreal heritage of the city... (fig.1). The urban landscape has been brutally disfigured to make room for new building of dubious utility (fig. 2). In fact, there are several concerns about the 'quality' of the redevelopment intervention. The survey carried out[3] did not reveal any ISTAT data – essential according to urban planning standards – that would justify the need, even potential need, to build new school facilities for children. Moreover, official demographic data show that between 2013 and 2023, the number of children between the ages of 0 and 6 years is in sharp decline. At this point, some questions arise spontaneously: on which forecasts is the project based? Why build new buildings? Could existing school structures no longer in use be recovered? Why cut trees? In planning, notoriously, every future action on the territory is closely linked to the needs of the community, to the number of people who will use the places and structures, paying maximum attention to the environment and the surrounding landscape. In this project, however, the priority would seem to be obtaining financing. The only data relating to sizing are the minimum number (No. 25 children) and the maximum number (No. 28 children) for the nursery; for the childhood centre the total number is 60 people. Data that give much food for thought on the planning methodology used And again, another very important aspect must be underlined. Among the project documents there is no agronomic study, necessary to identify, before cutting, the type of vegetation and the conditions of the individual trees and this in order to confirm their maintenance, or to plan their replacement with new planting. On November 29, 2023, the local administration celebrated the "laying of the first stone" without there being all the necessary authorizations for the start of the works, so much so that, on December 20, 2023, the Superintendence warned the Municipality, suspending the construction site just started[4]. As of March 1, 2024, work is still blocked. In view of Agrigento "Italian Capital of Culture 2025" we believe that, for the resumption of the "Villa del Sole" project, even before the construction of new volumes, it would be necessary to look to the city of the future by recovering and enhancing the properties no longer in use, together with the existing arboreal heritage. The use by citizens of public open spaces and abandoned buildings, adequately rethought and reasoned, would guarantee a higher quality of life. Only in this way will Agrigento be able to recover positions in the *quality of life* rankings, rather than being relegated to the last places.

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1 Initial amount of €2,100,000.00 subsequently increased to €3,000,000.00.

2 The P.R.G. of Agrigento is from 2009. The variant, pursuant to art. 19 clause 2 of DPR 327/2001, was voted favourably by the City Council with resolution n. 82 on 26 July 2022 and approved with DDG (Territory and Environment Department) n. 136 of 01.06.2023.

3 The project documentation was provided by "Codacons" of Agrigento.

4 Work suspended following reports from local associations / citizens' against the demolition of the trees.

Fig. 1.
Agrigento - Panoramic view of the "Villa del Sole". 1a) the area before the intervention; 1b) the area after the works carried out by the Municipality. Trees and vegetation were brutally removed (5).

Fig. 2.
a) Project plan, excerpt of project T. 03, in red the area identified for the construction of the buildings; b) detail of the building plans (3).

Tricase Porto | Hub of sea and land

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The coastal area of Tricase Porto (LE) is configured as a continuously inhabited coastal locality that, however, undergoes a strong seasonal imbalance in terms of density of presence and functions, and its enjoyment is also linked to the presence of the port. Nevertheless, the port is a communal element and not merely an infrastructure serving fishing and navigation; it is perfectly integrated into the coastal landscape. The inhabited settlement that develops along the main axes (coastal road and provincial road towards Tricase) also includes a small regular village called Borgo Pescatori. However, it is the disorderly evolution of this settlement that poses as an interruption of existing ecosystem networks, and the dense impermeabilization of the coastal strip acts as a micro-fracture in the ecological network parallel to the coast.The project addresses the process of naturalizing coastal contexts with particular attention to nature-based solutions in order to implement ecosystem connections and generate environmental, social, and economic value, thereby increasing resilience. It responds to two synergistic guiding ideas proposed within the feasibility study: Tricase Porto as a **hub of sea and land ecosystems**, reconstructing ecosystem and landscape connections parallel to the coast, and enhancing the ecosystemic node of the natural hinterland; Tricase Porto as a **hub of sea and land communities** to restore publicity to coastal natural spaces and create new living spaces for local communities and guests.Starting from the complexity and rich landscape and eco-systemic quality of the intervention area, the project addresses the critical issues related to the three relevant context components with corresponding improvement strategies in an integrated system of specific and linear actions:

Ecosystemic Component – In all project areas, the following interventions prevail:

- Deimpermeabilization of compromised soil in formal and informal parking lots, along the streets, by removing incongruous works and improper materials (asphalt, concrete, etc.) to increase soil drainage capacity with nature-based solutions, enhance the aesthetic quality of urban spaces, improve the microclimate by avoiding heat islands, improve rainwater drainage to prevent hydrogeological disasters, and recreate habitats for insects and small mammals.
- Re-population with vegetational plant species appropriately surveyed on-site, among those present within the context, at risk of extinction.
- Integration of trees in every intervention area, where possible, as a strategy to reduce summer temperatures and make public spaces more pleasant and usable. Trees not only contribute to shading people but also to improve the pavements of roads, squares, and paths for soft mobility.
- Conversion of compromised soils due to improper use or works, with the restoration of a natural ecosystem aiming to create a **public natural park on the sea**.
- Conversion of the current motorized mobility system to soft mobility by introducing spaces for a cycle-pedestrian network and encouraging cycling use within the areas of Marina between Tricase Porto, Tricase centro, and neighboring locations.

Settlement Component In various intervention areas predominantly connected with the settlement structure (parking area along the coastal road, Borgo Pescatori), all interventions aimed to restructure community life and the social function of these places:

- Parking lots are enhanced in their current function as mere car stops to become new public spaces, with a different cyclical function throughout the day and months of the year. These spaces are qualitatively harmonized with the context and contribute to rebuilding the ecological structure. The vision is to make these spaces pleasant even in those periods of the year when they lose their main function to be returned to the community: no longer depleted and empty of any significance but green areas to enjoy the surrounding landscape.
- The streets of Borgo Pescatori, currently simple roads for car connections and parking, are reinterpreted as linear squares, places for the cyclical summer and stable win-

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Fig. 1.
Actions in all areas.

ter community. They are enriched with green areas that improve the summer microclimate and consequently the thermo-hygrometric comfort. The functional and social mixitè of this historic village is enhanced, withdrawing it from the prevailing vehicular destination and proposing it as a slow, pedestrian place, except for the frontage owners, suitable for perceiving its panoramic values.

Historical-Cultural Component The project aims to enhance the historical-identity and perceptual reading of the place and the included assets, such as nineteenth-century villas that mark the landscape, high enclosing walls that mark the views, and from which a rich ecological heritage emerges through the elimination of linear landscape detractors such as electric poles and overhead cables. The removal of improper and deteriorated pavements near the assets, the possibility of perceptually enjoying them in a "soft" way, ensuring areas predominantly for pedestrians, the reconstruction of a public space, no longer predominantly drivable, in historically relevant axes of Tricase Porto. Through the access gates to historic villas, it is possible to glimpse a pavement structure with ancient cobblestones surrounded by vegetation: a characteristic element that the project reintroduces in new public spaces through the recovery of cobblestones mainly found on road edges and their repositioning according to new project configurations.

Sport as a tool for urban and social regeneration

The story of the project: CivitaSnova

Marta Cognigni, Davide Allegri***

Sport has always been one of the main indicators of social progress. Likewise, the infrastructural system, which innervates the spaces is, in contemporary times, a fundamental parameter to redefine ever higher levels of urban quality both from the "physical" and the "intangible" point of view of programs, actions, and strategies.

If the debate promoted by urban sociology in the seventies highlighted leisure as a right to aspire to, today the use of places and spaces for its exercise is an integral part of this right and a founding element of the «ethics of the open city»[1].

In this scenario, the recent evolution of sports infrastructure shows us how they can be as ideal places where interesting experimentation can be applied through socio-political environmental, and urban regeneration programs aimed at promoting new and high standards of welfare and sociality. In recent decades the attention to health issues, strongly related to the increase in the quantity and value of leisure, has affected the perception and configuration of the infrastructure system dedicated to recreational activities, placing it at the centre of a wider reflection on new roles and active actors of urban transformations on the meanings that public space (as a complex and integrated system in different functional layers) today expresses.

Recent strategies for the implementation of urban living, reported by the literature as a contribution to urban regeneration and territorial marketing actions, involve policies and actions on the theme of sports infrastructure highlighting their paradigmatic scope within the debate on the city and the quality of its spaces.

Equally significant is the overall picture that characterizes the relationship between sport/society in a current context in rapid and continuous evolution and characterized by a growth in the demand for space and services for sports at all levels.

The need to identify places for sport is linked with the need for spaces dedicated to free time for care, wellness, and health. The response to these needs has occurred, in recent years, thanks to the implementation of urban forms of sports, which have reconsidered parts of cities in an open and widespread exception: informal sports, which creep into often unresolved areas, rethinking them. Sport, today, identifies both the micro-event of everyday life able to create and activate spaces for leisure and well-being in capillary form, as well as: a factor that acts as a powerful instrument of cohesion and social inclusion, the use of which is free and permeable going beyond the physical limits between actor/spectator and the playing field/public space.

The boundary between content and container often becomes blurred, labile, often temporary, and temporary, no less effective for the dynamics of urban transformations[2]. Sport represents an ethical and educational system capable of profoundly influencing the behaviour of contemporary society.

Consistently with this cultural scenario and these evolutionary trends, the *CivitaSnova*[3] project was developed.

The concept of the project moves its reasons from some strategic objectives that the municipality of Civitanova Marche[4] and its administration have put into effect according to the general objectives of urban and environmental valorization, promotion of strategic action, planning and recovery of the territory, the protection of the historical artistic identity material and immaterial, the enhancement of open spaces and historical areas of the city centre.

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3 The research project described here stems from a collaboration agreement between the Politecnico di Milano, Dipartimento ABC (Architecture, Construction Engineering and Built Environment), and the Municipality of Civitanova Marche.

The partnership is based on the transfer of specific experiences gained by one and/or both parties to the other, even about project experience applied to the implementation of initiatives relating to building development and/or real estate management.

The Municipality has exposed the necessity to realize a "Program of environmental, architectural requalification and landscaping of Piazza XX Settembre and surrounding areas" including a regeneration and re-functionalization of the area "Ex Ente Fiera - Varco a Mare" and, in this regard, has developed an agreement with the Department in question for the development of the research project described here.

The research group of the Politecnico di Milano that has defined the phases of the project called "CivitaSnova" was constituted by:

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4 *Italian town of the Province of Macerata, Marche.*

The area of 15.000 square meters, called *Varco sul Mare*, about the remaining skeleton of the former exhibition halls, demolished in 2016, is a link between the city centre and the sea. Following the change of use of the area, the city has acquired a new public area to be allocated to new collective urban functions for rest and leisure.

The project concept aims to strengthen the role of existing spaces through their environmental, functional, and perceptive enhancement, qualifying the design, and the elements present and enhancing their attractiveness thanks to the inclusion of new surfaces, green elements, and equipment for sociality, culture, and sport.

The involvement of a wide range of users by age, needs, and lifestyles, is the primary objective of the project of re-functionalization, to promote the concepts of accessibility, fruition, environmental quality, sustainability, and social inclusion of contemporary public space. This is a useful testimony to identify urban sport as a design tool, capable of injecting into abandoned spaces positive effects, both from the socio-educational point of view and the quality of open spaces. The action of re-appropriating informal, abandoned, and degraded spaces gives rise to new modes of sports practice and physical activity with a direct interface between physical space and place of movement.

Fig. 1.
Pedestrian path and viewing of sports areas.

Fig. 2.
Free sports areas of the project.

Towards a city of good dwelling

Paolo Colarossi, Francesco Colarossi** and Sharon Anna Somma****

5 Keywords: public space, urban plan, Manifesto della città del buon abitare, urbanity, hospitality

There are seven design principles that should give substance to a correct urban regeneration; the aim is to improve living conditions in the contemporary cities, which are often lacking in quality. These seven principles are titled as follows: *qualities of good living; centrality; small cities within the city* (15-minute areas); *pedestrianism vs. automobility*; *memories for all*; *city-countryside pact*; *participatory process*.

These principles can be summarized as follows:

- Each urban area should have quality public spaces and public and private services; they should possess the characteristics of hospitality, urbanity, and beauty (qualities of good living).
- Public spaces are connected to each other; services are connected to public spaces; all together they should form a system that acts as an attractive center for each urban area (urban or neighborhood centrality).
- A centrality, to be considered as such, should be easily accessible from the surrounding urban area via pedestrian and cycling paths, with a maximum distance of approximately one kilometer (walking time: about fifteen minutes). An urban area can be defined as a small city within the fifteen-minute radius (or 15-minute area).
- Hospitality, urbanity, and beauty characterize a system of public spaces which forming centralities, especially streets and squares, prioritize pedestrian and cycling traffic, or at least have a mix of cars and pedestrians, and that centralities are connected to each other by roads accommodating both pedestrian and cycling traffic (pedestrianism vs. automobility).
- Hospitality, urbanity, and beauty are qualities concentrated mainly in the historic centers of cities. But even traces of history, even those small and dispersed in both 20th-century urban expansions and rural areas, are important for collective memories. Recent memories, even those with greater social value than traditions and memories of ways of life and living, are equally important. And all together, they contribute to the qualities of good living (memories for all).
- The quality of living in urban areas are located on the suburban areas of the cities, peri-urban agricultural areas could contribute, which could play a role not only in production but also, with suitable arrangements of paths and services, in attractiveness for citizen due to their environmental and aesthetic qualities (city-countryside pact).
- All the previous principles should be integrated with the principle of participation, a necessary and useful process to understand the needs and places of citizen and to discuss the content and effects of proposed interventions. But also to promote maintenance and care activities for public spaces or common goods in general (active participation).

For the quality of living, a crucial role is played by public space; Adequate attention must be given to small-scale urban planning through appropriate innovative tools.

Tools should be compatible and complementary with the usual tools of urban planning techniques (zoning, land use planning) and current legislation (Integrated Programme, City Strategic Plan, Public Works Master Plan, etc.), but should be designed, starting from small-scale content as a guiding principle, to improve process and actual realization of good levels of formal, functional, and social quality.

An adequate tool in general for urban regeneration of existing cities should have content to propose an overall vision of the future layout, to be realized through a system of projects; it should also introduce a necessary degree of flexibility, meaning a balance between prescription and guidelines, ease and speed of integration and modifications, but

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also requires formalization as a document of a municipal administration; finally, the right attention to the scale of intervention projects, which means urban design (or better: urban landscape): which is the adequate and necessary scale for designing the qualities of hospitality, urbanity, and beauty.

A tool that should be inserted within the process of drafting the General Urban Plan as a "Programme Plan for the Layout of Pedestrian Priority Public Space and Public and Private Services (PASSi)".

To propose an overall vision: for the intervention area, an "Schema Urbanistico di Assetto" (or Master Plan) should be developed, articulated by projects (system of projects) that outline an overall design, based on a system of public spaces. Projects, treated as a system, are coordinated and cooperative with each other to obtain the overall vision outlined by the Schema.

To propose and control the quality of the projects comprising the system at an adequate scale, Guidelines should be developed (for each of the projects comprising S.U.A) in the form of text and graphic tables that have prescriptive value for some aspects (those indispensable for urban quality) and directional value for other aspects.

To have the right degree of administrative formalization, the Layout Scheme and the PASSi Guidelines should be approved by a Municipal Council Resolution, as a program of urban policies of the Administration to be attached to the documents of the General Urban Plan.

The PASSi, with the further characteristic of flexibility, should be implemented over time and in stages and levels.

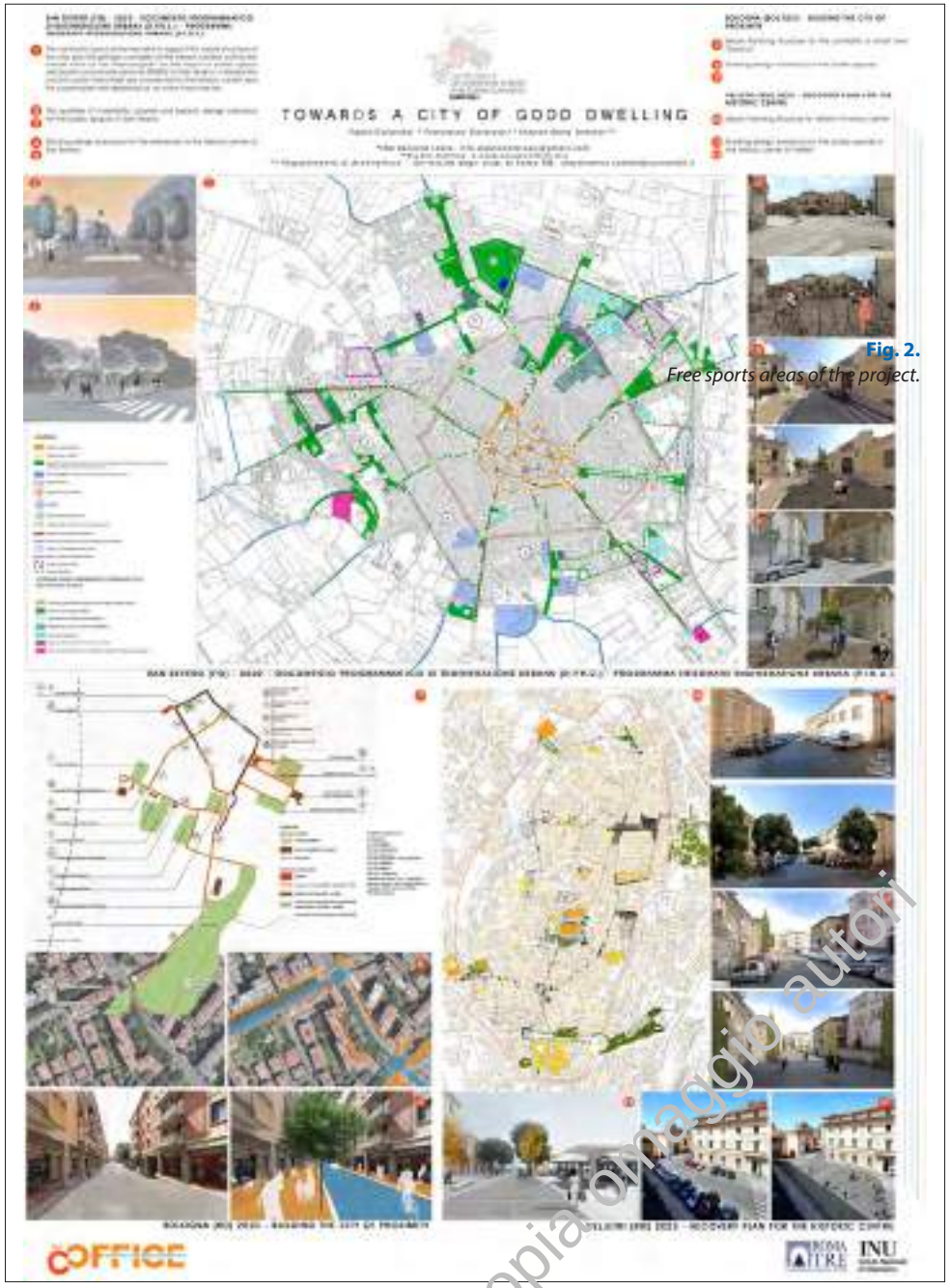

Fig. 2.
Free sports areas of the project.

Inclusive Public City pilot project. Co-generative experimentations for design innovation

Angela Colucci, Anna Schellino** and Antonella Cuppari****

1The paper presents experimental coproduction research-in-action activities developed under the framework of the Lecco VIVInclusi path[1], which intends to foster inclusivity as a crosscutting principle in the Lecco policies, considering creative diversity as urban resilience essential resource to face current and future challenges. The Inclusive Public City Pilot (IPCP) project activated processes to make urban spaces, services, and functions inclusive and welcoming and promote cultural advancement. IPCP activated experimental and innovative coproduction and codesign labs in a selected strategic area intercepting several strategic urban public nodes, several different schools, public urban services, facilities, and local nodes of social activation. All the activities engaged these institutional/private actors and the communities gravitating around them. **2**The research path recognizes the multidimensional complexity of the public city in which the physical/morphological, functional, relational, and cultural dimensions are inextricably linked in constructing landscapes and identities (UCLG, 2022). Creative diversity (Colucci, 2022) applied to the social dimension implies recognizing the value of social diversity as an essential resource for adaptation and evolution. Everyone, including the so-labelled fragile and vulnerable sectors, must be considered aware agents providing knowledge and design intentional abilities. Innovating approaches, methods, and toolboxes of urban design is necessary and urgent to achieve tangible advancement towards more inclusive (and resilient) public cities. **3**The IPCP activated several collaborative activities requiring multidisciplinary methods activating a constant dialogue between the toolboxes of urban design, social and cognitive disciplines, and a mutual hybridization exploiting different epistemologies to embrace everyone into the collective construction of the IPCP activities. Since June 2023, several coproduction and codesign paths were activated in the area of the pilot city that required different methods: sensobiographic walks involving users of the Artimedia/LVQ services and Polimi students (2); collective walks engaging more than 50 people light lab activities with schools placed in the pilot area; codesign path involving children and educators of Corti kindergarten, holder people of Giglio municipal center, Polimi students; codesign path involving users and educators of the services of the Artimedia/LVQ and Polimi students. All the codesign paths are structured in exploration, codesign of strategies, ideas, and projects for the public city, actively engaging all the participants through creative laboratories and using the metaphor of "inventions" or "devices" to make the Lecco public city better and more inclusive. **4**The outcomes of the codesign activities are currently being processed. It is undoubtedly possible to anticipate some considerations: the richness, complexity, and quality of the proposed "inventions" and "ideas" support the development of innovative projects and intersectional strategic guidelines for public space inclusiveness thanks to the integrated methods that allowed making explicit unexpressed needs and demands to the urban context. Promoting events/walks in the public city, the IPCP stimulated cultural advancement. The PICP experimented with successful innovative active learning formulas and educational and social planning practices for Third Sector professionals towards the empowerment of the people supported (generative welfare). The IPCP already modified the Lecco public city through the explorative walks: people walking and colonizing the public space demonstrated the generative potential of the research-in-action conducted, activating transformative practices, complex and layered narratives/identities, and imaginations for an inclusive public city.

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[1] Agreement between Municipality of Lecco and the Lecco Campus of the Politecnico di Milano. (2) Polimi students: Fifth-year students of the five-year Building and Architecture course at the Lecco Campus of Politecnico of Milan, Progettazione Urbanistica Course/ course elected Ambassador program on Inclusive Design (Prof. Angela Colucci) or their internship (involving 76 students).

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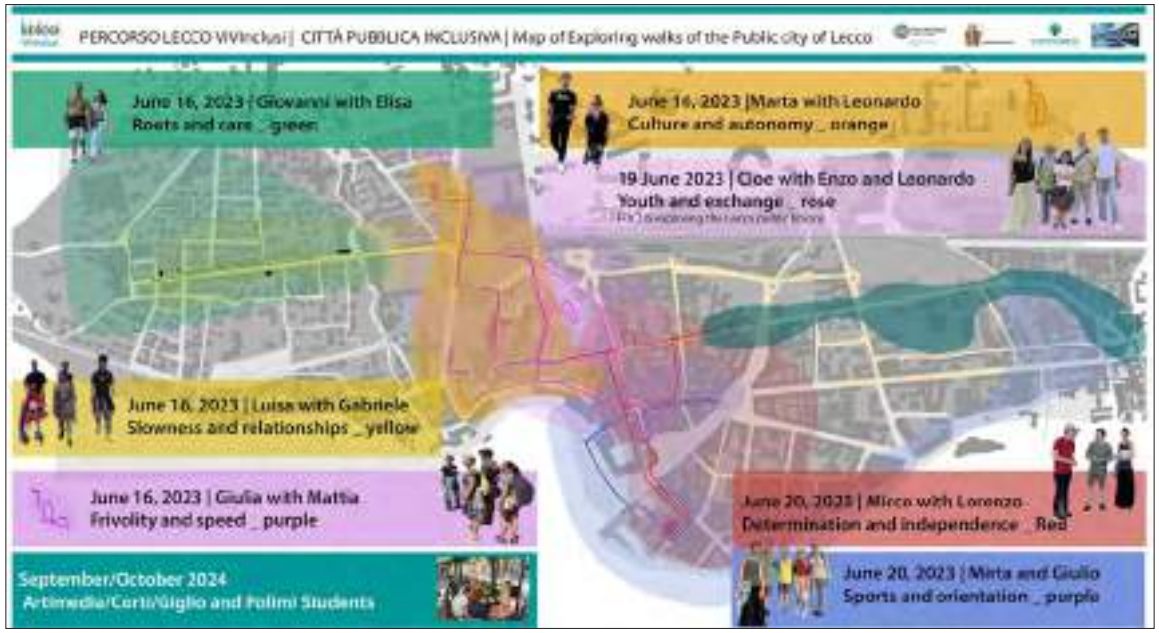

Fig. 1.
Explored public city areas in Lecco during the eight sensobiographic walks and the collective walks.

Fig. 2.
Framework of the Inclusive Public City Projects activities.

Integrated design for urban and public space regeneration in the territories of Southern Italy

Chiara Corazziere, Vincenzo Gioffrè***

This contribution was developed in the context of the Italian National Research Project - PRIN 2017 'Regional Policies, Institutions and Cohesion in the South of Italy' (Project code 2017-4BE543; website www.prin2017-mezzogiorno.unirc.it), financed by the Italian Ministry of Education, University and Scientific Research from 2020 to 2023. The focus of the project is on regional development policy, at the EU, national and regional levels. The study context is the Southern Italy, in a comparative perspective.
In particular, the period to which the proposed study refers is the one following the advent of the European Cohesion Policy and the Regional Operational Programs, from 2000, when regional administrations are called upon to prepare their own programming framework that uses a systemic and integrated approach – and no longer sectoral – combining actors, resources and interventions also from different instruments. The new orientation, in fact, assumes that the regions can design strategies that are more adherent to the potential and needs of local development and that the communities of inhabitants are also protagonists in the programming process as well as recipients of resources.

Specifically, this brief contribution reports some reflections on integrated territorial planning as an effective operational mode to intervene in the processes of urban and public space regeneration in the Mezzogiorno and as a tool that could, also in the future, foster convergence between the different entities acting on a territory, between different sources of funding, and between public and private actors, as has already occurred in several experiments investigated in some research products edited by the authors[1].

Against the backdrop of a critical debate on previous policies for the Mezzogiorno defined almost exclusively by the central government, the Community Support Framework (CSF) 2000-2006 for the programming of EU funds for the Mezzogiorno, introduced the concept of Integrated Territorial Project (ITP) as a «complex of intersectoral actions, closely coherent and interconnected, which converge toward a common territorial development objective and justify a unified implementation approach».

After a strong adherence of southern regions and local authorities in the 2000-2006 cycle to the ITPs, in the two subsequent cycles, the implementation mode of integrated planning is not adopted, by the regions of the Mezzogiorno, with equal uniformity. However, the reading of the Integrated Projects implemented in the 20-year period 2000-2020 highlights a constant learning process in the actors involved, which translates into the ability to aggregate, a proactive attitude, recognition of the endogenous potential of the territories, and familiarization with the vocabulary and themes of community programming.

Despite the initial enthusiasm lavished by communities for the opportunities offered by the bottom-up approach and the Cohesion Policy's integrated design tools, however, while in some contexts – in Calabria for example – there is a gradual move away from this implementation modality, on the contrary, in other territories, integrated design is being embraced and innovated in approach, as in the case of the Integrated Sustainable City Programs implemented in Campania with the 2014-2020 Operational Program, of which 'Casoria in transition to a sustainable, inclusive and regenerated city' is an example of an urban regeneration process that includes, among others, interventions to reactivate 'waste spaces' and integrates the intentions of local, metropolitan, regional, ministerial and EU actors, projects, and funding[2].

Precisely because they have often been the subject, from the mid-twentieth century to the present, of the implementation of projects that have remained isolated, poorly inte-

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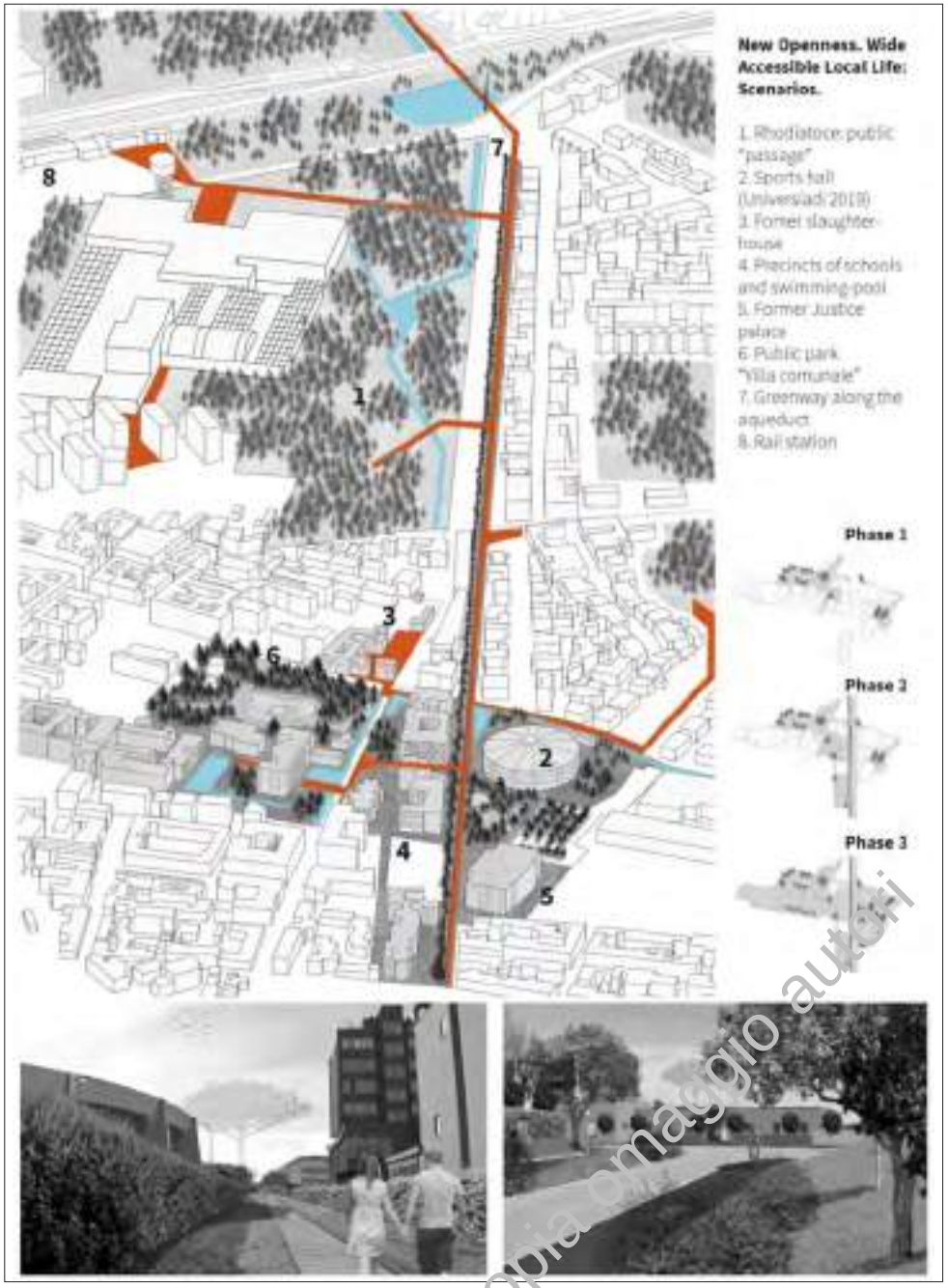
Fig. 1.
Casoria in transizione. Verso una città sostenibile, inclusiva e rigenerata. Image from https://www.territorio.regione.campania.it/pics-blog/casoria.



grated with the cultural and social context of reference, the territories of southern Italy, more than others, need actions for the regeneration of the territory and urban public spaces, connected to the needs of the neighboring context, but also to the issues of sustainable development and economic and social growth. From this perspective, integrated planning is the most effective operational mode for considering territorial resources, as a whole as an 'ecosystem'. An approach that allows the integration of public and private actors, different forms of financing and collective actions; an effective intervention strategy to enhance the existing and develop innovation and new values, to ensure a significant economic and social impact through a collective and democratic construction shared with local communities.

In fact, thanks to its characteristics of inclusiveness, flexibility and adaptability, integrated design can, more than other modes of operation, foster convergence among different entities acting on the same territory and among different sources of funding, but above all it can ensure processual and strategic paths aimed at promoting tangible and intangible cultural heritage and improving the quality of the landscape that accommodate the multiple interests and multiple aspirations of local communities.

Urban public space at multiple risk. The Neapolitan case study of Via Caracciolo

Candida Cuturi, Marichela Sepe***

Urban areas are increasingly vulnerable to risks, since they are affected by weaknesses of anthropic origin reducing their resilience. Public spaces are particularly concerned by multiple (natural and anthropic) risks, which overlap and interact with one another. An experimentation of the *Multirisk Method* (Sepe, 2022) has been carried out in the southern Italian city of Naples by CNR research fellow Cuturi C. (PRIN 2020 #20209F3A37 "SUMMA", Sepe M. as scientific supervisor). The early case studies have concerned the historic centre of Naples, with particular reference to Spaccanapoli-San Gregorio Armeno, Villa Comunale, Via Caracciolo, Piazza Municipio, exemplifying various types of public space subject to multiple risks. On this occasion, Via Caracciolo case study would be presented, related to Chiaia waterfront, from Santa Lucia quay, passing by Rotonda Diaz, to Sannazzaro Mergellina dock, with the hydrofoil Terminal and the tourist pier, until Largo Sermoneta (from the East to the West), for about 2,5 kilometres (Fig. 1). Along the internal side, via Caracciolo develops from Piazza Vittoria and Villa Comunale, with Anton Dohrn Zoologic Station, towards the United States Consulate, seafront building curtains, and the chalet area in front of Mergellina funicular until the beginning of via Posillipo. The Multirisk Method consists of seven phases[1]: analysis of the place with identification of single (effective and potential) urban risks; analysis of factors contributing to the risks; analysis of the effects related to the coexistence of risks; risk perception through questionnaires; analysis of projects, plans and policies for adaptation; analysis of potential and qualities of the place; MultiRisk map, representing all the risks and concurring factors, user perceptions and urban quality factors. Actual and potential risks, in relation to possible damages caused to people, buildings, infrastructures, anthropic activities, including cultural heritage, have been analysed (Cuturi, February 2023). Safety/wellbeing risk has been identified as a considerable risk (Fig. 2); deterioration of landscape/environmental heritage and loss of aesthetic-perceptive values have turned out as moderate risks. Besides the area is concerned by potential weather-hydrogeological risk. The factors concurring to the above risks – car-oriented mobility, traffic jams and gatherings in the chalet area, sea storms, damaged pavement, cumbersome objects, lack of maintenance – determine comfort decrease in Via Caracciolo, unsafety perception, particularly for pedestrian and bicycle mobility, under-valorised environmental heritage and sense of neglect/dereliction, with consequent decrease in the quality of place experience for citizens, visitors and tourists, and decrease in place attractiveness, with scarce attendance by local residents. A specific questionnaire about public space at risk was elaborated (Cuturi, 2022) and administered by the research fellow to analyse the risk perception by citizens, visitors and tourists. Starting from the attendance, during the last year, and the comprehensive consideration of the public space at stake, the questionnaire focused on the level of risk perception within the space, related problems/vulnerabilities and their importance: underused/abandoned space, poor maintenance of street furniture, building degradation, poor maintenance/valorisation of cultural heritage, poor greenery provision, waste and pollution, soil sealing, poor accessibility, low safety perception. Then the respondents were asked about regeneration interventions eventually contributing to the decrease of risk perception, characteristics of public spaces, and citizen participation in decision-making[2]. Most respondents have a light perception of risk in Via Caracciolo, generally related to cars. Poor accessibility is regarded as the most considerable problem in via Caracciolo (with particular reference to car traffic, but also to lacking parking space); also waste and pollution (particularly waste) are considered to be a very problematic aspect in the area. Low safety perception has turned out as another significant aspect. Though less relevant than the above problems, poor greenery provision and poor maintenance of street furniture have been stressed by some respondents. The area is characterized by a unique and extraordinary panorama on the Gulf of Naples, until Vesuvio, Sorrentine Peninsula and Capri Isle, also towards Vomero hill on one side and Posillipo hill on the other; via Caracciolo is adjacent to Villa Comunale (historic garden) and near historic-cultural assets of considerable value (such as Castel dell'Ovo). Via Caracciolo has got a great potential in terms of implementation of an extended and integrated cycle-pedestrian network among waterfront, Villa Comunale, squares and surrounding streets, with spaces for open-air activities. Urban interventions in the area should be focused on sustainable water management and cultural valorisation related to the sea, landscape and music. On the background of peculiarities and potential of places, opportune regeneration strategies would be developed, and mitigation/adaptation actions defined.

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Fig. 1.
A view of Caracciolo waterfront from Mergellina (Cuturi C., February 2023).

Fig. 2.
Via Caracciolo, Villa Comunale side: poor maintenance of street furniture and greenery (Cuturi C., February 2023).

Urban production processes and the role of public space as a connective tissue: the case of Brandoa and Alfornelos, Lisbon

Maria Manuela da Fonte, Filipa Serpa* and Ariana Marques*

In the second half of the 20th century, the northern boundary of the city of Lisbon underwent a transformation from rural to urban, as a result of migratory movements from the interior of the country to the coast in search of better living conditions, alongside emigration processes to France, Germany, Brazil, or even to the then Portuguese colonies. It is in this context that extensive areas of illegal construction emerged, both in the city of Lisbon and in the vast Lisbon Metropolitan Area (AML). In response to the housing shortage and the consequent growth of clandestine neighborhoods, responses were provided through the construction of public housing neighborhoods and the offering of private residential developments. This study aims to identify the processes of growth and development of the periphery of the city of Lisbon, between two privately promoted neighborhoods – one illegal (Brandoa) and one legal (Alfornelos) – and to understand how the process of urban development and positive contamination is observed from public space, evaluating its role in building a new sense of urbanity over the past decades. This work is an integral part of the research project 'MetroPublicNet - Building the foundations of a Metropolitan Public Space Network to support a robust, decarbonized and cohesive city: Projects, lessons and perspectives in Lisbon' (Funding FCT: PTDC/ART-DAQ/0919/2020). Quinta da Brandoa, located on an agricultural slope (fig.1.) at the northern limit of Lisbon, was divided into small "lots" and sold to a migrant population at a time of widespread housing shortage. As a consequence, a illegal neighborhood was built, within 54 hectares of land, similar to others constructed in the Lisbon region during the 1950s and 1960s. It had the particularity of being composed of buildings up to 9 floors high, without basic infrastructure or amenities, organized around a structuring street along the slope and housing thousands of people with no capacity to opt for better conditions. However, it was an alternative, especially for a poor population that found relative proximity to the capital's center in the neighborhood, despite the absence of public transportation. Almost simultaneously, during the 1960s, southeast of Brandoa, the process of urbanization of agricultural lands was initiated, also on the border with Lisbon, in Casal de Alfornelos and Quinta da Correia, in a joint operation between owners. In 1969, the construction of the future Alfornelos neighborhood began, under the responsibility of the Urban Planner Architect Mário B.A.S. de Menezes and Engineer M. Ramos da Cruz, resulting from private investment in promotion, urbanization, and construction of 31 hectares. Urbanization works began in 1972 but were suspended, resuming after the 1974 revolution, and inhabited during the 1980s. Private initiative took on the growing need for housing, with 4,000 housing units built throughout the process. In its consolidation process, it housed a middle-class community, but also upper-middle class. It is a neighborhood organized by cells, separated by hierarchical roads – the structuring and secondary roads providing access to the interior of the cells – with residential buildings ranging from 4 to 12 floors, and amenities organized within them. The proposed urban model integrates some modern principles in the organizational and hierarchical structure of roads and cells, served by various educational, sports, and religious facilities. The two neighborhoods – Brandoa and Alfornelos – have always been connected, by proximity and by the population of Brandoa that served as labor for the construction of Alfornelos. They both experienced simultaneous growth, each fulfilling the goals of its origin: illegal private promotion and legal private promotion. They represent two forms of city production of which the Lisbon region is an example. In 2001, the Integrated Program for the Qualification of Suburban Areas of the Lisbon Metropolitan Area (PROQUAL) was initiated, which included the Requalification of the Urban Nucleus of Brandoa, defining the intervention objectives in this Urban Area of Illegal Genesis (AUGI), with 80% of clandestine constructions. The requalification or creation of public spaces and green spaces, as well as the creation of new facilities, along with the legalization, licensing, and qualification of buildings, were the main objectives for the urban transformation of Brandoa during the 20 years following the creation of

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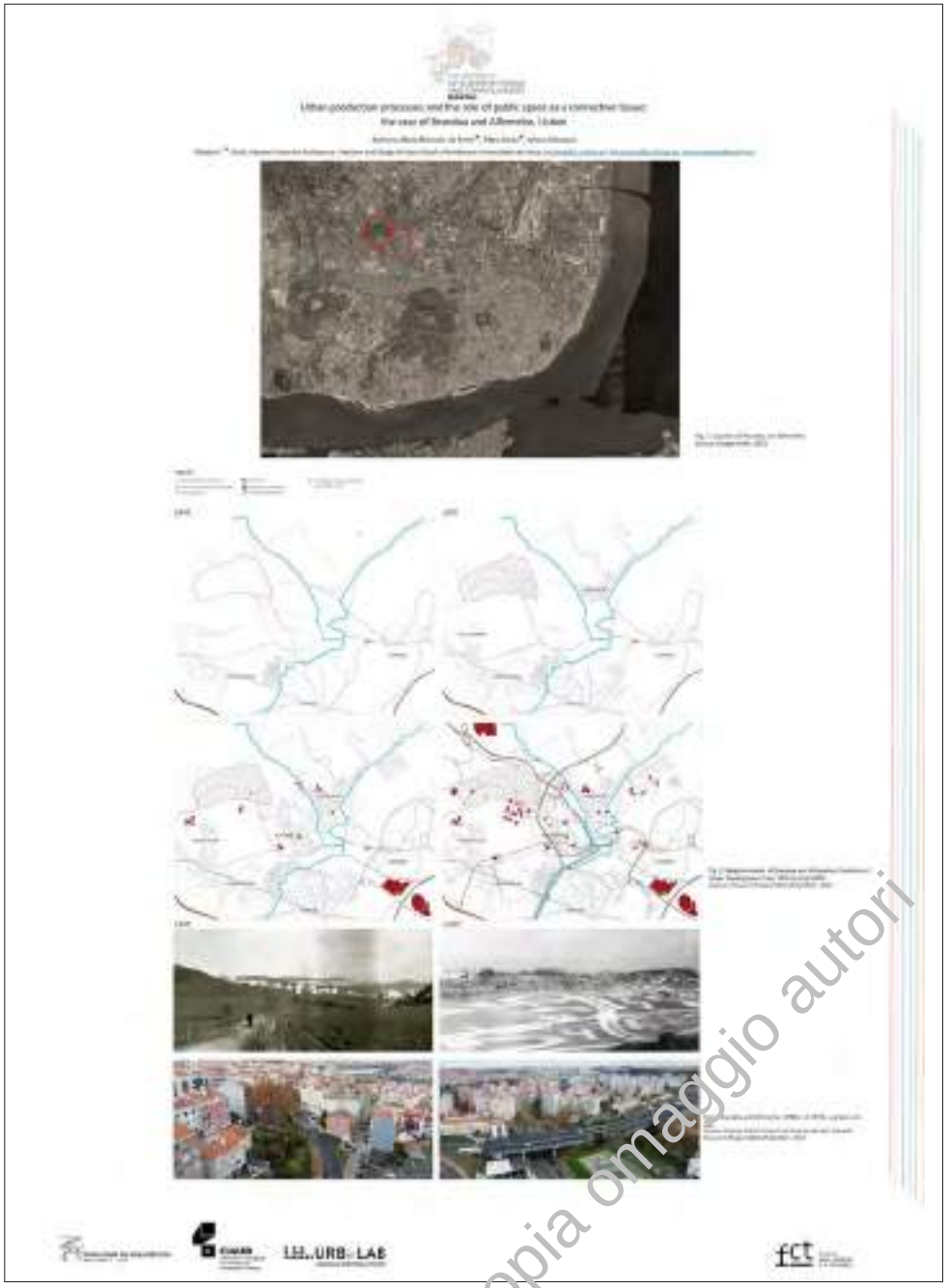
the Office. The created public spaces have been transformed and humanized, allowing neighborhood experiences and increasing the quality of life of its inhabitants, gaining a perspective beyond the neighborhood boundaries. The intervention system for the structuring and requalification of public spaces in Brandoa, in coordination with those in Alfornelos, was decisive and a turning point for the paradigm shift in their relationship with the surroundings and, above all, for their constitution as a place. After the requalification process of Brandoa, an urban and human continuum was generated in conjunction with facilities – cultural, community sports, leisure, educational, and administrative -, contributing to the transformation of a segregated neighborhood of the past and on the outskirts of the city, into a city itself. It is important to assess its role in building a new sense of urbanity in the Lisbon Metropolitan Area over the past decades, where the processes of urban growth and development are identified, in terms of road systems, expansion and consolidation of residential fabrics and public space. This analysis results in the identification of an evolution in the design and rehabilitation of public spaces as a central factor in the transformation/integration of these territories into a regular urban dynamic. This process of urban transformation lies between the absence of public space infrastructure, road infrastructure as public space, and public space characterized by pedestrianization, in the promotion of green spaces and soft connectivity networks, resulting in a greater sense of proximity, integration, and territorial and social cohesion.



Exploring the role of inclusion in railway hubs: a literature review over the last decade

*Ludovica Dangelo, Marika Fior**

Introduction

Railway stations are landmarks in the urban fabric but also vibrant places for the city. Railway stations contribute to the creation of significant public spaces, places for social interaction, economic interest, and embody both historical and modern architectural identities[1]. From a mobility perspective, these nodes are important transportation hubs, especially through integration with other networks and the development of the surrounding territory. This interconnection proves to be an effective strategy for generating different forms of mobility, such as multi-modality cycling and pedestrian networks. In literature, various methods of analysing railway stations are found to highlight and understand the dynamics of integration of these infrastructures with the surrounding environment. Two common approaches are Transit Oriented Development (TOD) and the Node-Place Model (NPM). TOD is an approach linked to transport integration with high density and diversity of functions in the surrounding fabric, while the NPM is based on a balance between the functions of transport node and place, considering the impacts on spaces and surrounding uses[2]. The dual function of railway stations and their potential to reorganize the city have led to growing interest in the transformation processes and renewal of the building and the stations' areas, to enhance them as new urban centralities capable of offering multiple services to a wide and heterogeneous audience[3].,

Objectives, research methodology, and results

The research aims to achieve a comprehensive understanding of node-station analysis and the degree of accessibility to the context, not just considered in terms of multi-mobility but also in terms of spatial inclusion, with particular attention to people with reduced mobility, limited mobility, or simply heavy luggage. The working method used is based on the review of the scientific literature over the last ten years (2013-2023). The search for relevant academic articles was guided by keywords such as "railway station", "node", "inclusivity", "accessibility" and "public space". A total of 50 relevant articles were found from which 34 articles specifically focused on railway stations were selected. The most important outcome of the research is the categorisation of the up-to-date scientific literature into three main directions: articles focus on network accessibility (41%), articles focus on spatial inclusion (23.5%), and finally, articles deal with other topics that do not fall into the first two categories (35.5%).

The 41% of the papers mainly analysed the railway station-node by focusing on the accessibility of the network, intermobility, walkability, and the density of the surrounding urban fabric, examining the related impacts on them. Authors examined railway station-nodes through TOD methodology, e.g. Jeffrey et. al. (2019) highlighted the potential of TOD strategies to create more walkable neighbourhoods around 230 railway stations in Melbourne. The railway stations accessibility was analysed in different ways, e.g. Adolphson et. al.'s research (2019) provided an overview of accessibility in an urban and semi-urban environment through the consequences of station relocation in Sweden.

In 23.5% of the examined articles, the node-station was linked to the accessibility concept as spatial inclusivity, analysing the relationship between the station and vulnerable people, the elderly, or simply people with heavy luggage. Swift et. al. (2021) have emphasized how rail transport can act as a barrier for people with reduced mobility, making

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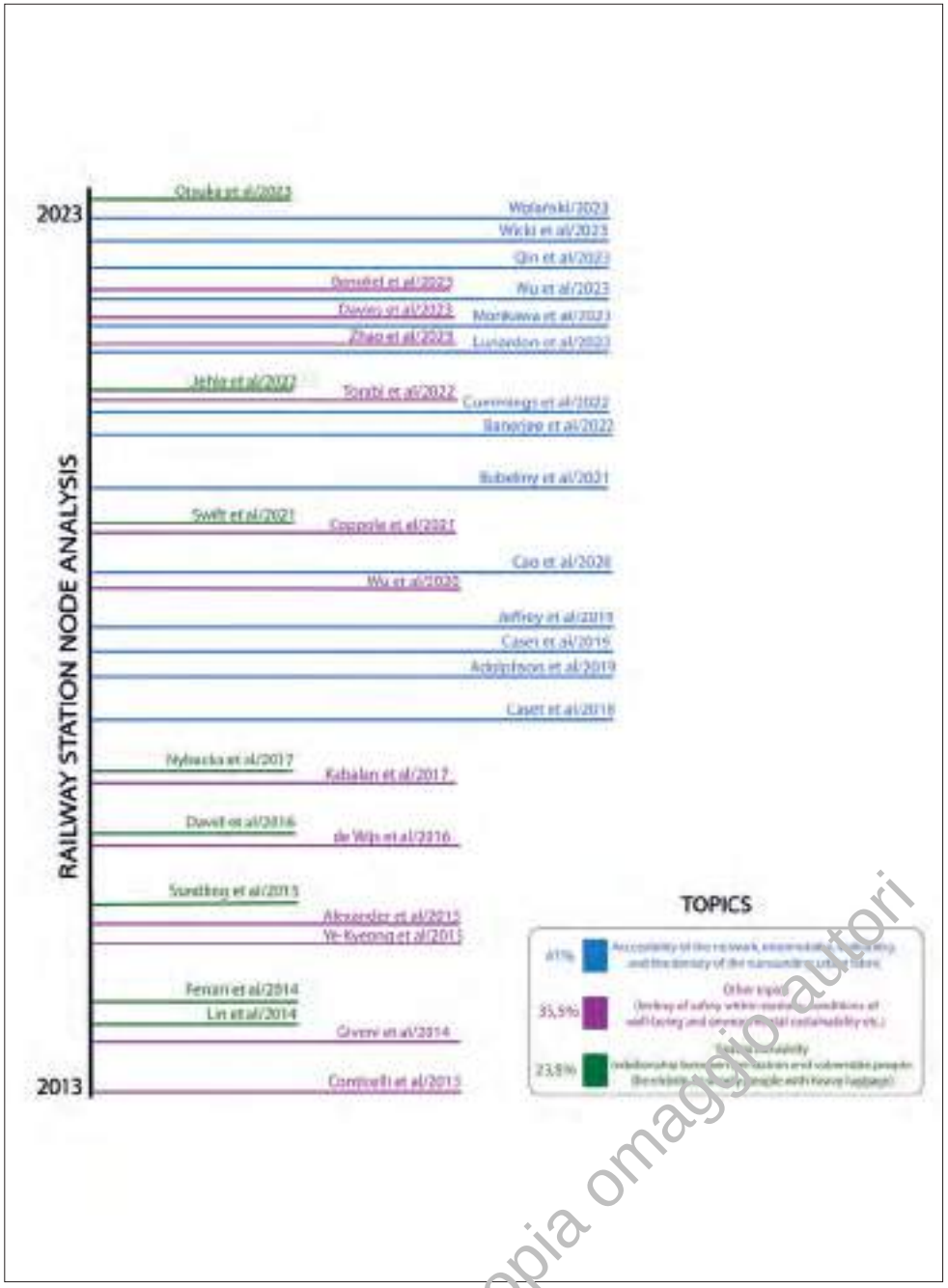
1 Banerjee, I., Saha, A. (2022). "Mobility centre-oriented urban regeneration: examining place value of railway stations". *GeoJournal* 87 (Suppl 4), p. 567-581, https://doi.org/10.1007/s10708-022-10582-y.

2 Bertolini, L., Spit, T. (1998). *Cities on rails. The Redevelopment of Railway Stations and their Surroundings*. Routledge, London.

3 Mussinelli, E. (2020). "Hub intermodali e infrastrutture urbane per la qualità ambientale e fruitiva delle città", E. Mussinelli, A Tartaglia (eds.), Nodi infrastrutturali e rigenerazione urbana: Stazioni, spazio pubblico, qualità ambientale, Maggioli Editore, p. 13-22.

Fig. 1.
Analysis of scientific literature.



it difficult for them to engage in social interaction and access available opportunities. A few articles propose customised methods to improve accessibility for all. Sundling et. al. (2015) modelled accessibility as a three-way relationship among travellers' abilities, the barriers they meet, and the resulting travel behaviour.

The remaining 35.5% of articles approached the issue by exploring other parameters, including the feeling of safety within stations, conditions of well-being and environmental sustainability, and the role of local communities concerning railway infrastructure.

Conclusions

It is clear from the results that a significant part of the recent scientific literature investigates the railway station in terms of transport network accessibility and the development of different types of mobility. However, there is a lack of in-depth studies concerning station and spatial inclusion for vulnerable people. In line with scientific debates and political agendas, in particular, Goal 11 of the UN's 2030 Agenda for Sustainable Development -which emphasizes the need to make cities and human settlements inclusive, safe, resilient, and sustainable- railway stations must be able to accommodate everyone, regardless of their capabilities or limitations. This objective goes beyond simply removing architectural, sensory, and cognitive barriers. It requires the adoption of multi-scalar strategies to create accessible and connected railway station areas that foster social interaction, promoting the creation of inclusive urban environments. This is especially important considering the function and role as drivers of meaningful public spaces and landmarks for all. Although further research is needed to explore innovative approaches that improve accessibility and foster inclusion. This study provides a basis for future interventions and investigations to promote inclusive and accessible urban design, thus contributing to an overall improvement of urban life quality.

The Playgrounds and the City
Towards the Reconstruction of Urban Life

Felice De Silva, Manuela Antoniciello***

The paper aims to investigate the concept of "in-betweening" in its architectural, urban planning, political, and social dimensions, viewing it as a strategy for designing public open spaces that contribute to the revitalization of abandoned and underutilized urban areas. The notion of "in-betweening" is understood as a space of mediation between people, serving as a meeting point where social interactions among individuals are manifested, embodying an architecture of community.

A type of in-between space is that of playgrounds, which are small, open public spaces located in interstitial areas of the city, primarily between adjacent buildings or between buildings and streets. They are organized in a basic manner for children's play. These public spaces prioritize the needs of children and neighborhood democracy in urban planning. Their main objective is to ensure support for public life practices and, simultaneously, they can serve as an opportunity to initiate processes of regeneration within urban fabric spaces.

The topic of the paper will also be discussed in reference to a recent design research experience conducted by the authors, which resulted in the construction of a new playground in a residential area of Mariglianella, a small town in the province of Naples. The project, part of a broader urban regeneration initiative that affected 7 areas of the municipal territory, was financed with funds from the Strategic Plan of the Metropolitan City. Its objective was to create a meeting place with a strong and clear identity to encourage social interaction among children, adolescents, and adults. The new playground, now completed, is an attractive public space that promotes play, physical activity, sport, health, and social encounters. It serves as a barrier to the progressive intensification of virtual relationships between people, reclaiming the value of community perspective that the city embodies. The playground is situated within a residential urban context along a road that connects two schools and is designed to address needs of accessibility, appropriation, sociality, and movement, while encouraging diversity and new, plural ways of using public space. The site has a rectangular shape and it is divided into four surfaces, each containing a variety of elements for different activities, staggered from each other and connected by paved paths. The project precisely delineates areas for playing, staying, and walking, providing distinct spaces for children, parents, teenagers, and adults to enjoy their leisure time. In the most protected and internal area of the plot, there is a lawn area containing equipment for babies, alongside a multi-sports field for ball games. More challenging games for teenagers and children are located in the northern part of the plot. Adjacent to the play and sports areas, a fourth paved area, shaded by maple trees and equipped with benches, bicycle racks, and an outdoor ping-pong table, offers adults the opportunity to enjoy themselves in good weather while overseeing other areas. The four areas are seamlessly integrated with long linear monolithic benches made of reconstructed stone placed on the edges of the space. These benches allow parents to supervise younger children without interfering with their play. Scattered trees, hedges, and borders of flowering shrubs form a green border towards the adjacent residential buildings, creating a natural backdrop that encloses the area. Benches and plant essences play essential roles in the project, serving both a protective function—the playground has no fences but is instead an open, free, and accessible space—and ensuring environmental comfort in all seasons. The project has led to a significant increase in social activities in the area and a reduction in acts of vandalism and neglect, which have radically transformed the area's image.

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Fig. 1.
Madre Teresa di Calcutta Playground, Mariglianella (NA), Italy. Architectural project and site supervision: Felice De Silva, Manuela Antoniciello. Client: City of Mariglianella (Na). Funding: Piano Strategico della Città Metropolitana di Napoli – Missione 08 - Programma 0. Contractors: Gemis s.r.l., Adriatica Verde s.r.l. Areas: 945 m2. Design and construction phase: 2018-2020; 2021-2022.

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Environmental Recovery and Urban Regeneration of the areas of significant national interest at the time of the PNRR. The commissioning of the Bagnoli-Coroglio area

*Viviana Di Capua**

It has long been fully recognized that environmental remediation operations cannot be separated from an overall regeneration of the affected areas[1]. Increasingly, reclamation and redevelopment must go through environmental remediation not only in brownfields but also in many urban areas. In fact, the failure to provide for a general redevelopment of the area in which the site to be reclaimed is located results, on the one hand, in a loss of opportunities in investment and, on the other hand, in the difficulty of achieving ambitious sustainable development goals.

In recent years, the national Legislator has brought its attention to the intertwining of environmental and urban regeneration strategy with two different approaches[2].

First, a simplified procedure for reclamation operations was introduced in the Environment Code, replacing the *ex ante* authorization regime with an *ex post* control and providing reduced project approval times for reclamation facilities (art. 242-*bis* d.lgs. no. 152 of 2006, inserted by art. 13 d.l. no. 16 of 2014, converted by l. no. 116 of 2014, and subsequently amended by art. 34, par. 10-bis, d.l. no. 133 of 2014, converted by l. no. 164 of 2014). The purpose of this privileged scheme is to reduce the administrative and economic costs of urban operations to be carried out on contaminated sites. It can be availed of by the economic operator interested in assuming the remediation work at its own expense.

Second, there is a special and contingent discipline, generated by and for the Bagnoli-Coroglio area, intended, at least in part, for a broader scope of application (art. 33 d.l. no. 133 of 2014, converted by l. no. 164 of 2014).

It is provided, first, that the rules on environmental reclamation and urban regeneration of areas of significant national interest pertain to environmental protection and the essential levels of services referred to in art. 117, par. 2, lett. s) and m), of the Constitution. The exercise of administrative functions related to reclamation operations is attributed to the state, which ensures the participation of the territorial authorities concerned in the formation of decisions. The status of a site of national strategic interest is attributed, by resolution of the Council of Ministers, to areas where pollution and contamination have assumed such a level as to require more incisive remediation measures than those originally envisaged for sites of national interest.

For each area of significant national interest, a specific program of environmental remediation and strategic guidance for urban regeneration (PERUR) is prepared, representing an attempt to merge environmental remediation projects with territorial regeneration. An Extraordinary Government Commissioner and an Implementing Party oversee the reclamation operations, for the completion of which they may proceed by way of derogation from articles 252 and 252-*bis* of the Environmental Code, for procedural profiles only.

Special provisions are provided for the Bagnoli-Coroglio area. An Extraordinary Commissioner and an Implementing Party oversee environmental remediation and territorial regeneration operations. The Implementing Party is identified as Invitalia s.p.a., an in-house company of the state. It is appointed by way of derogation from the provisions for SINs in article 33, par.6, which entrusts its identification to a decree of the President of the Council of Ministers. The formation, approval, and implementation of the PERUR of the Bagnoli-Coroglio area has been entrusted to a Government Extraordinary Commissioner and Invitalia s.p.a. as the Implementing Party. Art. 33, par. 12, stipulates that the ownership of the areas and buildings subject to redevelopment and redevelopment, originally belonging to Bagnoli Futura s.p.a., is transferred by d.p.c.m. to the Implementing Party, subject to payment of compensation.

Compared to the ordinary process of cleaning up an area, the provision of a PERUR is a discriminating and additional factor, as it expresses the need to proceed in parallel with the environmental remediation and territorial redevelopment of the polluted area. It is clear, however, that the implementation of these objectives passes through derogatory provisions and extraordinary bodies, which, perhaps, imply the need to rethink the general regulations.

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[1] On urban regeneration, see at least Giusti A. (2018) *La rigenerazione urbana. Temi, questioni e approcci nell'urbanistica di nuova generazione*, Napoli; Primerano G.A. (2022), *Il consumo di suolo e la rigenerazione urbana. La salvaguardia di una matrice ambientale mediante uno strumento di sviluppo sostenibile*, Editoriale Scientifica, Napoli; Spasiano M.R. (2022), *Riflessioni in tema di rigenerazione urbana*, in *Rivista giuridica urbanistica*, 2, p. 407; Di Lascio, F., Giglioni, F. (a cura di) (2017), *La rigenerazione di beni e spazi urbani. Contributo al diritto delle città*, Il Mulino, Bologna; Fontanari E., Piperata G. (a cura di) (2017), *Agenda RE-CYCLE. Proposte per reinventare la città*, Il Mulino, Bologna; Immordino, M., De Giorgi Cezzi, G., Gullo, N., Brocca, M. (a cura di) (2020), *Periferie e diritti fondamentali*, Editoriale Scientifica, Napoli.

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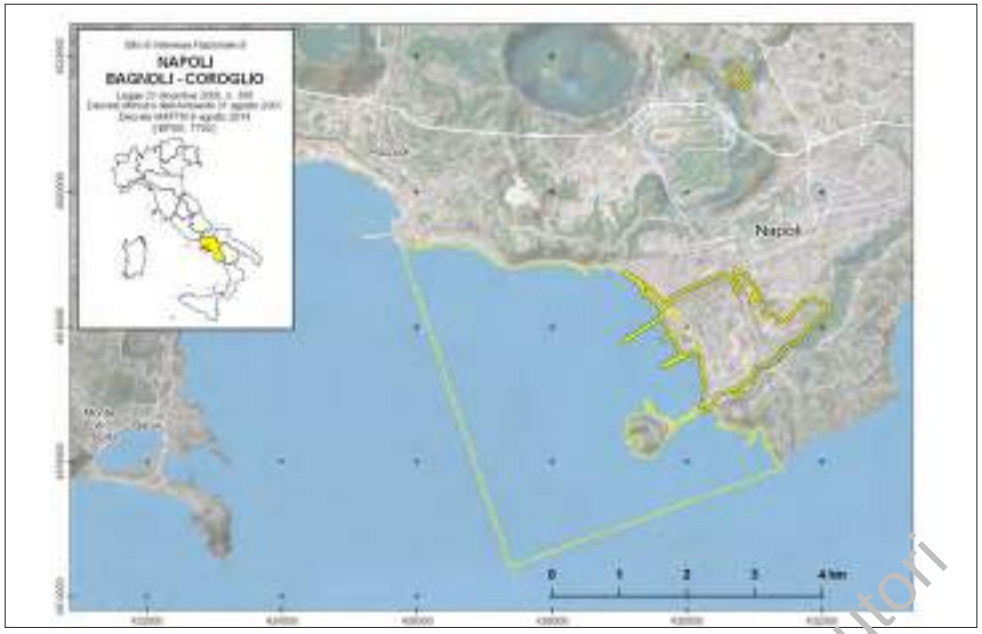

Designing cities for seniors: a vision of inclusivity

A Case Study in Vizille, France

*Cecilia Di Marco**

Planning inclusive cities for elderly has become imperative, considering the current demographic trends in aging populations[1]. Our study aims to contribute to the ongoing discourse on urban inclusivity by exploring the challenges faced by seniors in urban spaces and proposing solutions to enhance their quality of life through the transformation of public space. Our research question is how create a good place for ageing to allow people to ageing in place[2]. Cities provide better accessibility to essential services and healthcare, and foster social interactions, making them increasingly preferred by older individuals over rural settings[3]. Recognizing the significance of these factors, our research aims to provide actionable insights for urban planners and policymakers, designing environments that meet the needs of active aging and capitalize on urban living benefits. In the course of our research, we have conducted a comprehensive analysis of the elderly population's utilization of public spaces in Vizille, France. Situated at the southern periphery of the Grenoble Alpes Metropole, Vizille, once a significant industrial hub due to its hydrographic network, is now in the process of redefining its identity as the southern centrality of the metropolis. Vizille has been selected as a case study due to its unique demographic composition. With a total population of 7,303, including 2,051 individuals aged 60 and above, the town boasts a considerably higher proportion of elderly residents than the regional average. Specifically, 28% of Vizille's population comprises seniors, compared to the 14% average for the Grenoble Alpes Metropole as reported by INSEE in 2020.

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1 WHO (2007) Global age-friendly cities: a guide

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The city is human-sized, but the road layout, without sidewalk, and the low-quality public spaces are not encouraging to pedestrian movement, especially for the elderly. Many of the city's amenities are not easily accessible to older persons, which can lead to their isolation. Following our initial observations, we carried out semi-directive interviews and micro-trotters with elderly residents. Subsequently, we developed mental maps to pinpoint the focal points of their daily lives and to identify the difficulties they encountered along the way and the obstacles that deterred them from visiting certain social venues. Two primary challenges have been identified:

- Housing: Many elderly reside in older buildings that lack elevators. The physical effort required to walk up stairs and leave the home can discourage them from engaging in public life.
- Distance: The distance between residential areas and essential services or places of interest is often considered excessive. For example, the 500-meter distance between a retirement home and the public market can feel daunting, especially when carrying little groceries. The lack of benches or shaded areas along the way exacerbates this issue, as there are few opportunities to rest and catch one's breath.

Using qualitative and quantitative methods, we assess seniors' needs, identify opportunities for age-friendly urban spaces, and explore the perceptions of impacted elderly residents. Our research aims to propose innovative and feasible urban solution enhancing the city's adaptability to growing older, ensuring accessibility to services, and promoting an active lifestyle.

Our findings will significantly contribute to the development of projects aimed at prioritizing the creation of age-friendly urban environments, thereby enhancing the everyday experience of city life. We propose modifications to the existing infrastructure of the city, such as the implementation of pedestrian pathways, the installation of seating areas, and the incorporation of elements that improve the overall safety and comfort of elderly pedestrians in order to make public space easier to walk troth and enjoyable to stay. These public space projects will enable the elderly to walk and circulate more freely in public spaces, which can have significant benefits for their mobility and physical activity. This increased movement can contribute to maintaining good physical health among the elderly. Moreover, the opportunity to interact with others, gather, and access the services provided by the city will allow them to stay connected with their community, foster relationships, and thereby contribute to the preservation of their intellectual capacities. The active engagement of people growing older in public spaces can significantly contribute to their overall physical and mental well-being. It is essential for designers to prioritize these objectives when developing their projects of public space.

Fig. 1.
Elderly people in the public space of Vizille, during micro-trotters interviews.

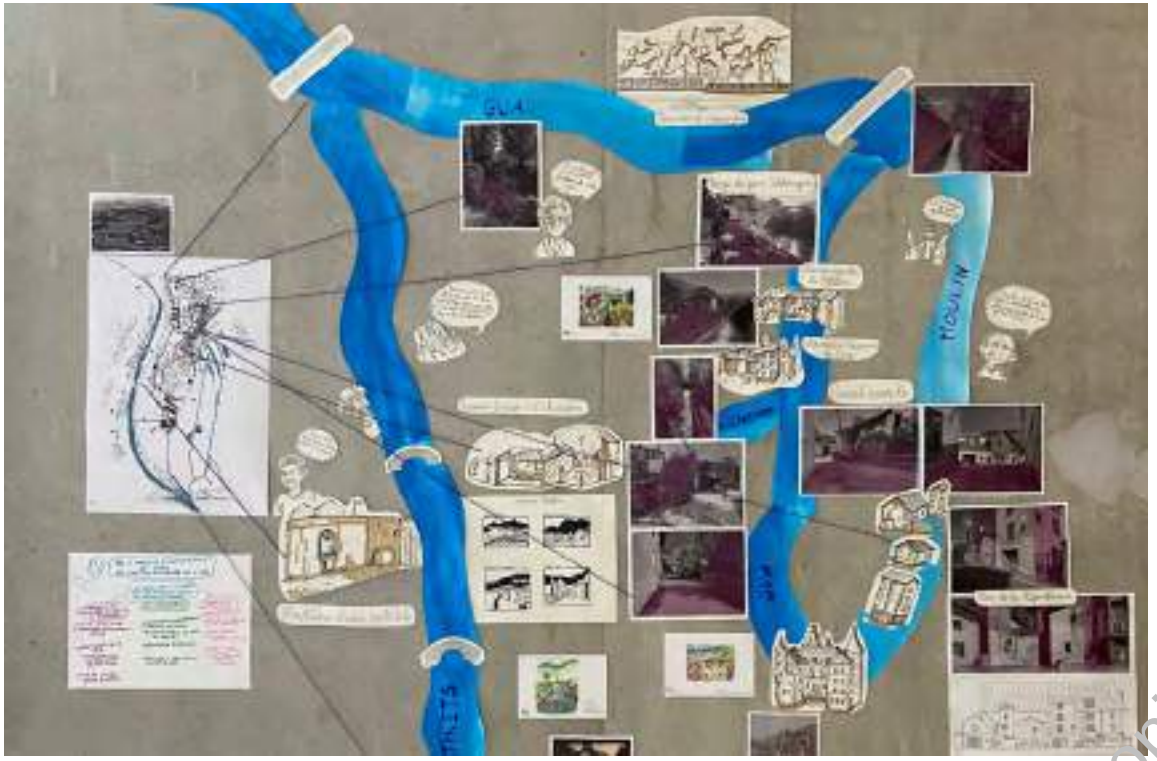

Fig. 2.
One of the mental maps produced: relationship between elderly, historical heritage and landscape.

Mouro's Fountain square renewal
A nature-based solution public space

*María Fandiño Iglesias**

Redondela is a little village located at the bottom of Vigo's estuary. It is also known by the nickname "Village of the Viaducts" due to the most famous icons of the village: two major railway viaducts built in the nineteenth. These infrastructures are the reflection of its complex topography. The town lies on the Portuguese Way, one of the Camino de Santiago pilgrimage routes. In this context, "A Picota" is an outskirt neighbourhood of Redondela with two main landmarks: Santa Mariña Chapel and the Mouro`s fountain, which are connected by the Portuguese Way.
In the 70's, the fast urbanism occupied a big part of the estuary, the city grew up with asphalt and unhealthy blocks, unrespecting the original topography. The link between the chapel and the fountain (locals claimed that it had healing properties) was blocked by cars. This uncontrolled urban expansion removed any remains of this "waterscape", the estuary, the fountain, topography… losing their identity and, at the same time, impermeable surfaces became unable to deal with the Climate Change framework: torrential rains and the sea level rise.

Currently the asphalt covers 84% of the surface, vehicles demand more and more space and, as a result, Mouro's fountain, origin of the square and historically recognized by the quality of its waters, became invisible.

In this framework, the project has two main goals:

- To improve the neighbours' public space: recovering the memory, providing meeting points, and upgrading the street universal accessibility. Re-linking inhabitants to their territory.
- To manage the water: increasing permeable areas, incorporating Sustainable Drainage Systems (SuDS) to minimize the water sheet, and shaping a garden made up of autochthonous and endemic plants, reducing the island heat effect.

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The lowest point is located at the roundabout, a key point of the project. When the tide rises during the rainy season, the sewage and storm water pipes overflow, causing unhealthy scenarios. The saturation of the treatment plant, forces the sluice gates to open, releasing untreated water into the estuary, polluting the environment.

To mitigate those collapses, we installed a central drain, and several drains every 10 meters along Picota Street. At the same time, we tried to reduce the runoff that reaches the roundabout through green SUDs (Sustainable Urban Drainage Systems). These green bands facilitate the natural infiltration, stores it and promotes the own watering of the vegetation. It has been designed with and for water, to improve the inhabitants' lives.

The new square's geometry is defined by the microtopography: the runoff, the garages and the doorways shape the square in little spaces. The result is a public garden designed as a space of spaces, a sequence of different atmospheres with autonctonous plants. The vegetation is a project by itself. Different trees' typologies were planted following their shape structure and their hydro requirement to reach an urban forest. This "public garden" reduces the temperature, improves the evapotranspiration and generate high quality shade places for people.

Furthermore, semipermeable pavement, as earth stabilized, reduces CO2 emissions and allows oxygen exchange between the substrate and the atmosphere. Benches and lamps are light elements that let shine the vegetation.

The landscape, before covered with asphalt, is now a water-structured place. However, as part of the square's renovation, the Mouro fountain has been extended onto the pavement's surface, contributing to the overall design of the square. Additionally, a small pond has been added to provide drinking water for birds, a play area for children, and to regulate the climate. As a result, inhabitants now have a public garden, a green space in the heart of their neighborhood.

The water, although invisible, now manages the green veil, sound, and ambient temperature. Perhaps the hypnotic aspect of the new space is due to the capillarity of an element that weaves the result of its architecture: **the water.**

‘FUTURA’. A Strategic Masterplan for Salsomaggiore Terme

*Emilio Faroldi, Maria Pilar Vettori**

The Strategic Masterplan aligns seamlessly with the development of the new General Urban Plan (‘PUG’), providing key strategic and meta-planning insights to enhance and delve into specific issues and pivotal areas of the city. The work reflects the commitment to enact a tangible urban regeneration, in its material and social meaning, with the aim of mitigating marginalisation, social degradation and abandonment of spaces.
The objective of the Masterplan is to establish adaptable and flexible guidelines for the city of the future, particularly considering the evolving landscape in spa wellness and psycho-physical recovery through the introduction and actions envisaged by new private operators that will shape the market and, hopefully, inject fresh momentum into the city as it seeks to redefine its identity. Central to this vision is a commitment to promoting healthy lifestyles, sustainable transportation and urban renewal, all unified by the overarching theme of beauty.

The project delves into contemporary issues, focusing on the development of a more sustainable and modern approach to local and supra-local transportation with reference to models, tools, global objectives related to the overall improvement of the quality of life, well-being and fostering a shift towards valuing time as a cultural concept.

The study comprises two main phases: initially, a dialogue-based analytical phase to understand the city’s needs and organise existing structures; followed by a phase focused on defining strategic themes and a guiding Masterplan that aligns seamlessly with the instruments required for the implementation of future urban planning tools to manage the territory effectively.

In the final phase, the Masterplan identifies a number of priority locations that offer a strategic vision for the city of the future, emphasising the creation of new urban polarities, and it undertakes a meta-design prefiguration of these areas.

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The concepts of time and connectivity represent the two elements, alongside previously mentioned factors, that are formalised within a network of nodes and strategic frameworks, which are poised to evolve into new urban polarities within a city characterised by a multi-centred structure.

By nodes, we refer to strategic areas earmarked for initiating and nurturing physical and social regeneration within spaces; the frameworks denote connecting elements that support these nodes, forming the primary axes of the city.

These polarities represent areas of interest where action should be taken in order to revitalise parts of the city, synergies and functions that are currently lacking, linked to the culture of leisure, sport, public space, public city life and social interaction.

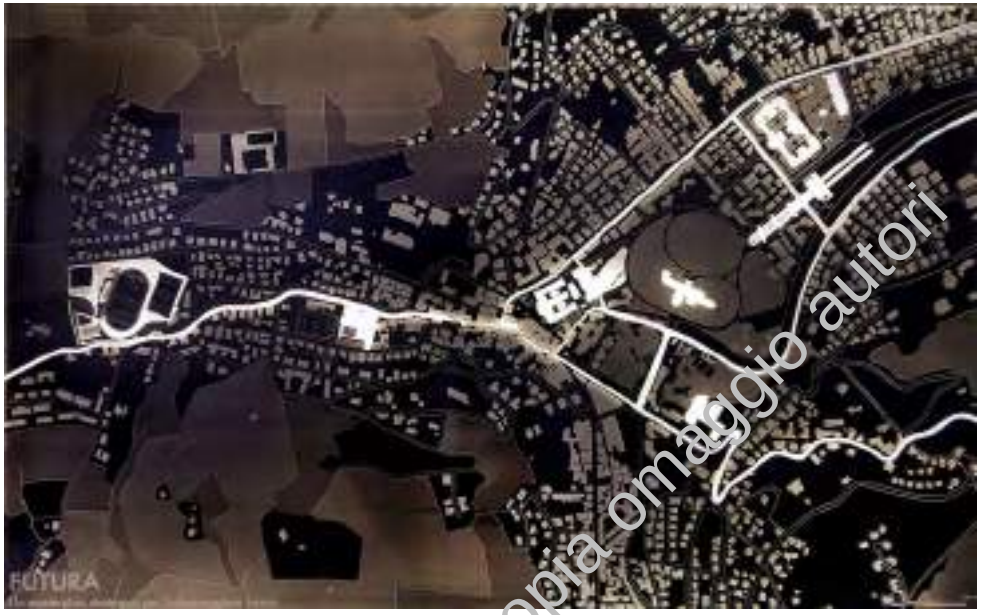
It is an in-depth study that offers a perspective of the city-system from a regenerated and contemporary point of view: the first act of a minute redevelopment of the fabric, as well as of the large historical site that are currently abandoned.

The main activities that the Masterplan proposes as crucial elements of regeneration are the repurposing and revitalisation of existing public areas and public buildings for public use; the improvement of the quality of urban aesthetics and of the social and environmental fabric, also through the renovation of public buildings, with particular reference to the development of social and cultural, educational and teaching services, or to the promotion of cultural and sporting activities; improvements for sustainable mobility, viewing it not as an isolated segment but as intricately linked to the overarching regenerative issues integral to the operational strategy.

The project has identified four distinct ‘ECOLOGIES’ or perspectives, encompassing current active functions, as well as assets either disused and/or undergoing transformation and/or planned for refunctionalization.

Fig. 1.
"FUTURA". Masterplan.

Fig. 2.
"FUTURA". Maquette.



These multi-scalar layers offer tangible solutions by virtue of their autonomy or overlapping, addressing synergies, complementary components and pilot actions across various domains: the health and spa system; the hospitality network, with the medium and large hotels that have long characterised the city's structure, and the currently lacking commerce sector; the natural and sports system covering both the city and public spaces in Salsomaggiore, as well as the system of the surrounding area, today particularly attractive; the system of entrepreneurship and cultural infrastructure network.

The four ecologies for a multi-layered understanding of Salsomaggiore Terme are: 'water is health', 'hospitality is continuity', 'nature is sport', 'culture is entrepreneurship'.

Reyner Banham's (1971) reinterpretation of the four ecologies serves as a tribute to Salsomaggiore Terme and its surrounding areas, including Tabiano Terme, which have experienced a gradual decline following the peak of success in the 1980s and 1990s.

The project identifies several themes that embody the future identity of Salsomaggiore: the themes of 'Connections', 'Culture of time and leisure', 'Culture as an engine of urban regeneration', 'Sport as a primary instrument of urban regeneration', 'Beauty as a design pivot', 'Multifunctional attractiveness', 'Training', 'Urban art'.

The Strategic Masterplan is part of a broader collaboration established through a Framework Collaboration Agreement between the Municipality of Salsomaggiore Terme and Politecnico di Milano, signed on 17 December 2021. This collaboration aims to analyse, study and meta-design the future urban development and development trends of the spa town, aiming to cultivate a new identity that accentuates its inherent qualities and focuses on health, sports, hospitality, gastronomic culture, art and culture.

Urban Regeneration in Italy: Unraveling the Legal Patchwork – Navigating Diverse Laws and Shaping a Unified Future

*Annamaria Felli, Francesco Zullo, Chiara Cattani, Cristina Montaldi, Emilio Marziali, Gianni Di Pietro**

Urban regeneration and sustainable development are two key and intertwined issues in planning practices and research. The Sustainable Development Goal of the United Nations' Agenda 2030 No. 11 focuses on the urban environment, and the New Urban Agenda supports this objective by promoting urban planning as an influential instrument for sustainable development (1). Urban regeneration may require the redevelopment of brownfields, adaptation of heritage buildings, reconstruction of underused sites, reuse, heritage preservation, and space reactivation. Best practices show that urban regeneration has the power to transform obsolete areas into liveable, vibrant, sustainable, comfortable, and thriving spaces. In this way, urban regeneration is used as an effective tool to prepare urban areas to face changes in urban population (2). Italy has no national law on urban regeneration. The lack of a unified approach has led to regional laws that vary considerably in content and focus. Urban regeneration is sometimes misunderstood as the only answer to limiting land consumption and associated only with the redevelopment of the built heritage. The aim of most current laws in Italy, which differ from region to region in terms of land management, does not place planning at the center and understands urban regeneration merely as the redevelopment of parts of urbanized land, through physical-spatial and urban-building planning redevelopment, sometimes promoted by volumetric or economic bonuses. Sustainable urban regeneration must prioritize existing structures to avoid new land consumption. Finite and non-renewable land resources must be valorized. Regional laws often overlook land consumption within urbanized areas, hindering the goal of reducing undeveloped land in line with European targets by 2050 (3). While many regional laws aim to limit land consumption, they have definitions that do not consider the use of land in urbanized areas or land designated for urbanization as such, even if it is still vacant. This approach, which differs from established definitions at the national and European levels, can encourage further urbanization disguised as the reuse of already occupied land, effectively contributing to land take and loss of ecosystem services. This undermines efforts to protect soil, especially in urban areas. Data from soil monitoring in Italy shows that urban soils, including those designated for regeneration, have experienced a significant increase in land use in recent years. This has led to the disappearance of permeable surfaces, increasing the frequency and intensity of phenomena such as flooding and heat waves and resulting in the loss of green spaces accessible to citizens, biodiversity, and ecosystem services. A SWOT analysis was carried out at the regional level to identify the strengths and weaknesses of the measures adopted and the opportunities and risks offered by the legal framework for urban regeneration in each region. Among the strengths of these laws is the regional regulation, which demonstrates a direct commitment of local authorities to managing issues related to urban regeneration. In addition, the focus on regenerating existing urban areas can lead to better use of the available resources, favoring urban densification rather than sprawl. However, these laws have some significant weaknesses. Ambiguity in definitions, especially concerning land use, can generate ambiguous interpretations and encourage manipulations that could lead to further unsustainable urban developments. In addition, there is a risk that encouraging the use of already urbanized areas will push local authorities towards redevelopment projects that involve additional land consumption, frustrating sustainability efforts. An important opportunity is represented by integrating these laws with national and European policies on urban sustainability. Changes or additions could ensure greater coherence and effectiveness in the approach to urban regeneration. Regional laws could encourage the adoption of innovative and sustainable practices, promoting the use of green technologies and low-carbon solutions. However, there are also significant threats that could jeopardize the success of these laws. Economic pressures and private interests could influence decisions regarding urban

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regeneration, leading to unsustainable developments. In conclusion, while regional laws on urban regeneration in Italy offer an important regulatory framework to address urban challenges, there is a need to address ambiguities, foster innovation, and manage external pressures to ensure that urban regeneration is indeed sustainable in the long term.

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An Ecosystem-Service based approach for Spatial Planning: Strategies for the city of Varese

Federico Ghirardelli, Silvia Ronchi*, Stefano Salata*, Beatrice Mosso*, Andrea Arcidiacono* and Laura Pogliani**

In recent years, Ecosystem Services (ES) mapping and assessment have become essential for supporting the design of multisystemic Green Infrastructures (GI) integrated into spatial planning tools and processes (Basnou et al., 2020).
The distinctive features and phenomena shaping the territory, environmental functions and processes, coupled with the ongoing urban dynamics, delineate a novel field of study for addressing urban regeneration processes built on a local GI project as a spatial planning strategy. Recently, there was a noticeable upward trend in the volume of research dedicated to investigating the incorporation of GI strategy derived from ES into the planning process (Gómez-Baggethun et al., 2013; Lennon and Scott, 2014).

In this framework, the research presents some relevant analysis and first results dedicated to recognising natural capital and ES provisions as a precondition to trigger urban regeneration processes for public space design. The aim is to assess the capacity of the territory of Varese to provide ES, identify the areas most vulnerable to climate change effects, and then propose adequate strategies for increasing ecosystem performance and territorial resilience. The analysis demonstrates how an adaptive urban planning strategy to climate change based on an 'ecologically oriented' approach can define a multicentric and multifunctional network of interventions characterised by high environmental and social performances.

The research is embedded within the framework of the scientific activities carried out by the Department of Architecture and Urban Studies (DAStU) to revise the Municipality of Varese's General Territorial Plan (*PGT*).

Based on Varese's environmental site-specific condition and open spaces features, ES analysis has been conducted to define and assess three specific thematic domains: hydraulic vulnerability, green areas quality, and composite ES capacity.

The ES assessment was developed using ancillary data combined with other spatial maps created by GIS geoprocessing sessions to estimate ecosystem performances across a territorial sample covering the municipality of Varese, considering both the built-up and open spaces.

Specifically, hydraulic vulnerability analysis aims to detect the potential urban flooding, namely the water run-off in the urban environment caused by the combination of geological components (hydraulic conductivity) and urban morphology (potential surface run-off accumulation due to landform). The analysis of Hydraulic vulnerability to yearly stormwater events is based on the combined interpretation of potential run-off, flow accumulation, soil erosion, and rainwater infiltration. Hydraulic vulnerability analysis estimates the generated run-off by urban settlements and the most vulnerable city areas where the flow accumulation and soil erosion can be drastically limited by adopting nature-based solutions (NBS) or sustainable urban drainage systems (SUDs) that can limit or mitigate the effects of climate change.

The assessment of the green areas' quality derives from the combination of Habitat quality, Cooling capacity, Public Green areas' accessibility and visual permeability, allowing environmental characteristics to be associated with recreational and fruition opportunities. Public green areas quality analysis enables the definition of the distribution and typology of urban and non-urban green spaces and it is a preliminary to establishing a comprehensive categorisation required due to the distinctive features of green areas.

The composite ES capacity has been developed considering multiple layers such as habitat quality, stormwater retention capacity, cooling capacity and avoided soil erosion. The final composite map considers urban ecosystems as complex and interlinked flows,

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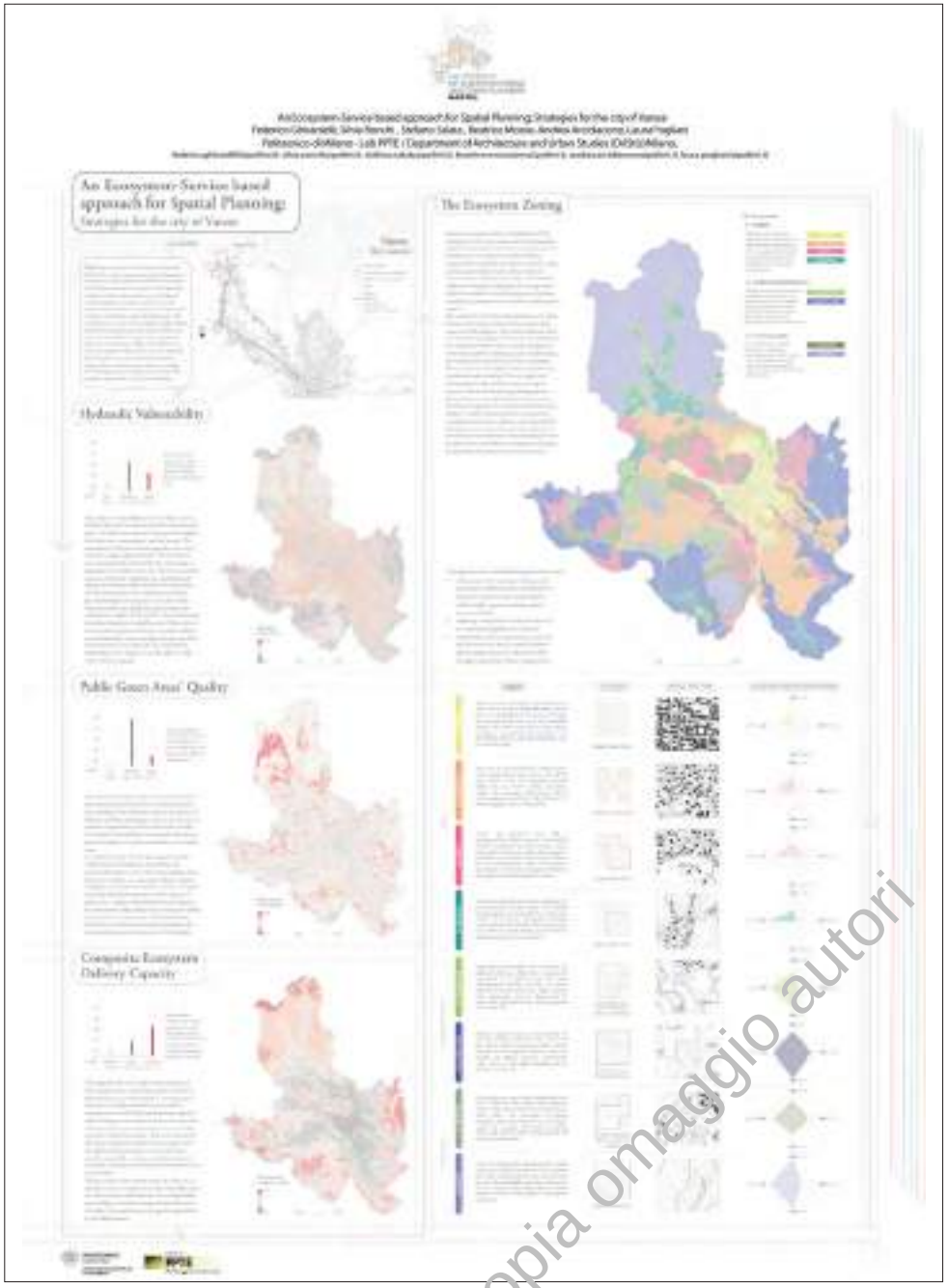

Fig. 1.
An Ecosystem-service based approach for Spatial Planning: Strategies for the city of Varese.

encompassing natural, social and infrastructural elements within the city. This approach aims to comprehend the interactions among biological, ecological, economic and social aspects of urban ecosystems to foster sustainable urban management.

The three selected thematic domains create the backbone for defining and developing the local GI design oriented not only towards strengthening and integrating green areas within the municipal territory but also characterising urban regeneration strategies of high environmental performances according to diverse urban and non-urban areas (mainly due to the Habitat Quality values which do not significantly differ between mountain's natural areas and the jeopardised green space massively present in the densely urbanised areas).

The results demonstrate how an ES-based approach allows the construction of a Taylor-made and site-specific knowledge framework useful to define a GI strategy and to activate a multicentric network of interventions for improving ES through a precise definition of the kind, typology and size of NBS and SUDs.

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Designing Inclusion. Redefining paradigms, categories, and methods

Santiago Gomes, Javier Fernández Castro***

After more than half a century, the concepts developed by H. Lefebvre (1968) in *Le Droit à la Ville* are still embarrassingly valid. The rapid, sudden, and overwhelming changes that have characterised our cities and societies continue to challenge the statutes of all disciplines that deal with the urban question, from philosophy to political science, from sociology to anthropology, from geography to ecology, and from architecture to urban planning.
Over the last thirty years, phenomena of social exclusion and spatial segregation (never entirely solved) have progressively worsened. These problems, investing the global world with similar characteristics, these problems have crystallised in the physical form of cities, becoming evident in the neighbourhoods and housing estates promoted by the welfare state, in "temporary" solutions for communities and ethnic groups, seasonal workers or migrants, and in the "informal" development of peri-urban fabrics.

The research and design experiences of urban regeneration, developed for more than two decades within the Laboratorio de Morfología and the Centro Hábitat Inclusivo within the Instituto de la Espacialidad Humana of the University of Buenos Aires, are framed in this context. Gathering the theoretical and methodological contributions of *Teoría del Habitar* (Doberti, 2008) and the notions of urban articulation developed by Jáuregui (2013), the operational research conducted by the Instituto has contributed to the redefinition of categories for the reading, design, and governance of the transformations of those parts of the city where the phenomena of exclusion and segregation (social, economic, spatial) are clearly and strongly manifested.

The intense project research activity applied to specific contexts, mainly conducted on slums and large social housing complexes built in the second half of the 20th century, has enabled the development of a model for the design and implementation of inclusive transformations, according to a transcale approach that simultaneously considers macro, micro and meso dimensions as spaces for action and as domains for urban design through the highlighting and updating of the conditions to which design and planning must respond. (Soja, 1996)

Rather than regeneration, the projects for barrio 31 (Fernández Castro, 2010; Gomes, 2017) and villa 21-24 (Fernández Castro, 2013) work around the concept of re-urbanisation, recognising on the urban condition (hybrid, dynamic, and contradictory) of the Latin American city a system of forms and meanings from which to build concrete operational hypotheses capable of integrating the relative homogeneity of the traditional city with the disintegration of the urban space of the popular self-produced habitat within a process focused on resolving the relationships between different parts of the city and the relationship between diverse urban fabrics and environmental systems.

In the project for Villa 31, a paradigmatic slum located close to the city centre, which grew up in the interstices of the consolidated urban fabric, between the infrastructures of metropolitan mobility and the port area of the city of Buenos Aires, as well as in the settlements that grew up along the banks of the Riachuelo River, in a semi-peripheral area, and even in the wide open spaces of the public housing complexes, the projects developed arise from the recognition of the morphological characteristics of "informal" fabrics, recognising their own rules of conformation, structuring and development that can be studied, described and systematised. This approach considers not only the form of the built and empty space but also the dynamics and mechanisms that influence the transition of city forms (Trisciuoglio et al., 2021).

In general, these are projects that, starting from the recognition of the structure of the urban space, are articulated on two levels, proposing specific paradigmatic actions and diffuse and typified interventions that act simultaneously on a metropolitan scale, integrating the settle-

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ments into the system of connections and accessibility, on the scale of the neighbourhood, through the reorganisation of the fabric and the redefinition of public space, and on the built environment, through the introduction of new housing units and the development of an abacus of operations to be performed on the housing stock to be preserved.

Beyond the strictly disciplinary spectrum, the working method adopted by the UBA researchers assigns a central role to the process of definition of re-urbanisation shared plans, favouring the organisation of the inhabitants and, at the same time, configuring itself as a vehicle for the empowerment of the community, within a process in which the project (as the prefiguration of a shared concrete scenario) acts as a tool for claiming the right to the space of the city.

In this sense, the project has the merit of having shifted the gaze from a dichotomous vision – which opposes the presence of slums and forms of spontaneous appropriation and self-construction of the habitat to sustainable urban, social, and environmental development – towards an integrating vision, in which these modes of self-production of the city space are configured as a concrete possibility of inclusive development and transformation.

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Fig. 1.
Buenos Aires, Villa 31. Contrast between the precarious buildings of the Barrio and the nearby high-end neighbourhoods (credit: Instituto de la Espacialidad Humana, Universidad de Buenos Aires).

Fig. 2.
Buenos Aires, Barrio 31. Re-urbanization project: Accessibility, referentiality, habitability, interchange, and demarcation (credit: Instituto de la Espacialidad Humana, Universidad de Buenos Aires).

How much public space has my city got to offer?

*Luciano G. Alfaya, Patricia Muniz-Nunez**

Truly understanding the places we live in, and especially those that continue to prioritise people, is one of the essential pieces of information for assessing their inclusiveness. Pontevedra, a province in north-western Spain on the border with Portugal, has almost one million inhabitants, with only two municipalities exceeding a population of more than 50,000 people: Vigo (293,652) and Pontevedra (83,893). The remaining 566,700 inhabitants are spread across 59 administrative units, with 40% residing in urban areas (as defined in the planning regulations). Depending on the individual district, this proportion varies. Residents living in boroughs with less than 10,000 inhabitants account for around 32% of the population, 56% living in districts with between 10,000 and 20,000 inhabitants, and almost 65% in municipalities with more than 20,000 inhabitants. It is crucial for this study to define what is considered 'urban area' and what 'public space'. For the former, apart from density and services, 'urban' is used as a planning category, in accordance with current regulations. For the latter, the characterisation of public space has been approached from a dimensional, perceptual, and morphological perspective. But essentially, it represents the inverse of private space as well as a field for experimentation, where complexity can facilitate inclusion. To understand this complexity, it is necessary to identify the city as a social entity that goes beyond its built form. Addressing this identity through successive layers and from different dimensions of reality (Morin, 2009) allows us to understand what is 'urban' differently depending on who is interacting (Sim, 2019). With the passage of time and the technological advances, these relationships and complexities no longer only apply to cities. As previously discussed, what used to be defined as 'urban' is increasingly expanding today, and particularly so in the north-west of the Iberian Peninsula. The city ceased to be "centripetal, and turned centrifugal" (Domingues, 2009). As for public space, its characteristics are an indicator for the quality of urban life. Allan Jacobs (1995) studied various cities by analysing the quality of their streets, based on the assumption that their physical characteristics condition the use and appropriation of space by their users, thereby promoting stronger social relationships. As a result, the analysis of public space, especially in small municipalities, involves a multitude of viewpoints as to the intervention's aims and intentions; however, foremost to this study is the space for walking. The practice of walking involves a hybridisation among all forms of life, such that landscapes coexist in a space in movement. Understanding the dimensions of public space is therefore crucial for comprehending cities. Pavements, as a place for negotiation (Loukaitou-Sideris, 2009), are spaces that facilitate encounters, segregate, ensure safety, accessibility, lighting, and even environmental quality. In contemporary cities, streets, and particularly pavements, when wide enough, promote social vitality (Rueda, 2012). The methodology of this research is based on creating its own cartography, using cadastral data, in order to take account of a unique, common and official source for the whole territory. It is therefore no longer necessary to map out the public space, as it is delimited as a void between the private plots of land. In other words, public space is the inverse of cadastral mapping, redrawn and verified through orthophotography and fieldwork. Consequently, considering urban floorspace as the sum of public surface and private surface, leads to the conclusion that the public surface by itself is the union of the room for vehicles and the one for people. To elaborate this further, the space for cars consists of both streets and parking areas, as well as pavements that are less than five metres wide (and which therefore do not allow for coexistent passing and staying). The main results of this study provide an insight into the relationship between public areas and urban areas. Overall, space available to residents in urban areas varies significantly across the province and in this case correlates directly with the size of the respective administrative divisions. Whilst people living in municipalities with less than 5,000 inhabitants average 132 m^2 of public space each, those living in cities with more than 20,000 inhabitants barely reach 31 m^2. In the districts with 5,000 to 20,000 people, public space available per person is around 70 m^2. It is worth noting that, in a territory where 3 m^2 out of every 4 m^2 of public surface are dedicated to private vehicles, it is possible to confirm a relationship between road surfaces and urban area, which should be considered for future research. There is a linear regression between the two surfaces. The value of r^2 is very close to 1, which demonstrates a direct relationship between them, hence, knowing one of them, it is possible to deduce the other. As a result, it is important to reflect on the need for a paradigm shift and the limited success of isolated actions.

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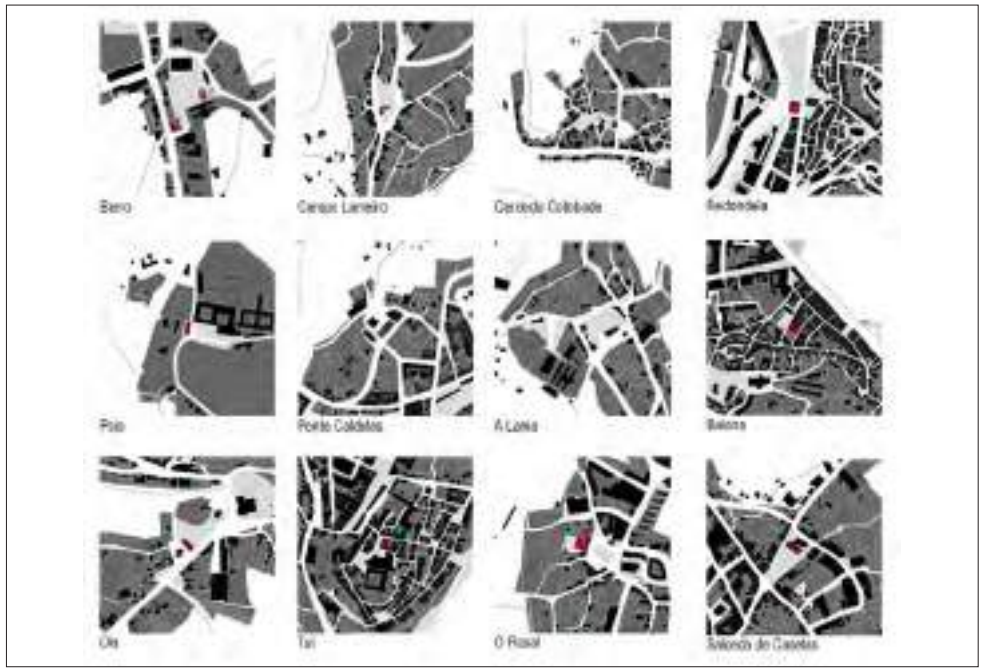

Fig. 1.
Urban voids in 12 different villages (city hall in red).

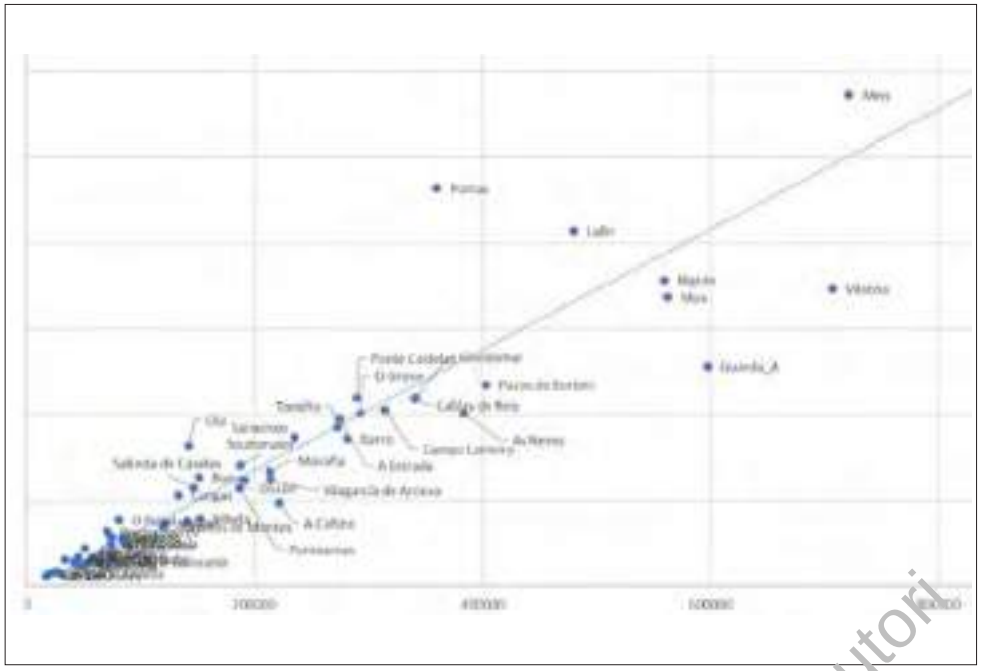

Fig. 2.
Linear regression between roads surfaces and urban areas.

Regenerate collective spaces in social housing

A research and a case study in Metropolitan Area of Naples

*Claudia De Biase, Giuseppe Guida, Chiara Bocchino, Antonetta Napolitano**

The long abstract will summarize the methodology and the first results of the research project entitled "A methodology for the regeneration of collective spaces in modern neighbourhoods", founded by Italian Ministry of University and Research. The proposal will contribute to the project of a "city of proximity", by creating the conditions to match the significant supply of collective spaces in modern neighbourhoods with the new demand for proximal spaces and services. Specifically, the research project is testing a multidisciplinary and participative intervention methodology, involving architectural and urban design researchers, city planners, historians. The research intends to test a research methodology for the regeneration of collective spaces in modern neighbourhoods as a crucial resource to face the challenges of living set by the pandemic outbreak. Therefore, the research aims to create the conditions to match the demand for proximal spaces and services. Fundamental, in this sense, are the case studies chosen among some specifically problematic neighbourhoods in Rome, Naples and Turin: cities where the three research groups of this research project are located. Within this geographical context a study of modern neighbourhoods divided by significant "seasons", 1930-45, 1945-65, 1965-85, will be developed. The proposed methodology articulates the technique of the so-called Living Labs in innovative terms, applying it to the transformation processes of urban contexts. The proposed experimentation, indeed, starts from the assumption that the reasons behind the malfunctioning of collective spaces in modern neighbourhoods should be deciphered together with those who live in the places, sharing with the subjects interested in their transformation the path that leads from the identification of issues and needs to the intervention hypotheses. The process of co-designing what the research has defined as "Urban Living Lab" takes on an innovative character not only in the dimension of analytical and design sharing, but also in ensuring a connection between the design phase and the implementation-management.

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In the first phase of the research, case studies were chosen: they represent a significant variety of underused or abandoned collective spaces. The second phase is dedicated to the historical reconstruction of the selected neighbourhoods by consulting public and private archives, family testimonies, interviews with inhabitants and cartographies. The third phase will include analysis of the context, urban instrumentation, road system and socio-economic data, as well as the morphology and character of these spaces. The data will be integrated into a GIS model that will not only articulate the data from the research into a single, georeferenced system, but will also allow users to access detailed information on the neighbourhoods. The last phase will understand problems of collective spaces by adopting an immersive approach, with the involvement of citizens, public authorities, associations and stakeholders, in order to outline guidelines and project strategies aimed at defining a 'methodological protocol' for the participatory regeneration of collective public spaces in modern neighbourhoods. The protocol will also follow an approach that reinterprets these neighbourhoods in a systemic way.

As regard the metropolitan area of Naples, the research team carried out a preliminary analysis of urban and metropolitan fabrics with the identification of the most important residential building districts, in particular public housing. The post-earthquake period (1980s-1990s) was explored in depth, both in the city of Naples and in the metropolitan context. Precisely at the metropolitan level, it has been identified as a case study neighbourhood called "Parco Verde" in Caivano, built with post-earthquake funds in 1981-82 and today particularly critical from a social point of view. It is a particularly problematic neighbourhood in terms of the endowment and usability of public spaces, particularly the 'open' ones, and the lack of equipment. Positive elements include the presence of numerous players in the so-called 'third sector' and the presence of several schools with all basic levels of education and which are a civic and legality supervisory body. From the first studies extended to the territorial context, several strengths emerged from which a process of re-functionalisation in a regenerative key can start. The first strong point is represented by the agricultural context in which the district is set. Agriculture is an identifying element of these places once called 'Campania Felix' and today it can be reimagined as a multifunctional part of the territory: urban gardens, cycle paths in the inter-farm roads, recovery of the old farms, etc. The second element is the presence, in Caivano and neighbouring areas, of several 'industrial districts' which can represent, beyond the economic and employment aspect, a further reserve of possible public space and equipment that can also be used by citizens. Whereas on the neighbourhood scale, it appears fundamental to map and measure disused and 'neglected' spaces, promoting participatory and shared projects (through the Living Lab model) that will allow their recovery, reconfiguration and new liveability.

Fig. 1.
A map of some of the public residential neighborhoods carried out by the Research Group of the University of Campania DADI. The Caivano neighborhood so called "Parco Verde" is the main case study (source: DADI Research Team).

Fig. 2.
Abandoned public spaces and equipment within Parco Verde (Green Park) in Caivano (Na) (photo: Giuseppe Guida).

Future-proof community centres and its transformative role in large housing estates

*Thomas Helfen**

On the one hand large housing estates built between the 1960s and 1980s in Germany are the last remaining resource of affordable housing for low-income households, on the other hand the building and ownership structure offers favourable conditions for investments in energy-efficiency and climate-adaption. This is why politicians, public administrations and the property industry are paying more attention to these housing stocks despite their negative image. In Berlin the Senate Department has started two new state programmes enhancing social cohesion, cleanliness and the sense of security in large housing estates on the urban periphery.
The community centres in the large housing estates on the urban periphery can play a key role both for the anchoring of neighbourhood management procedures and for the implementation of sustainable models for the multiple use of social infrastructures. Furthermore this social infrastructure facilities can offer valuable resources to tackle the simultaneous challenges of the digital, sociodemographic and climatic transformation within deprived neighbourhoods.

The research study starts with case studies about community centers in the large housing estates of Märkisches Viertel, Gropiusstadt (Berlin) and Am Schlaatz (Potsdam). In order to find innovative solutions for the refurbishment and management of this vital social infrastructures the study examines good practices in other German and European cities to find out, what is necessary to create and maintain a future-proof community center.

The preliminary results of the case studies and analysis of good practices indicate that the following aspects are relevant for a resilient community center, that can tackle the future challenges of the digital, sociodemographic and climatic transformation:

- **multiple purpose buildings**: bring together different groups of residents and create synergies between the different service providers
- **public space**: within and around the community centers offers unique possibilities for outreach services and low-threshold access for hard to reach groups
- **citizen participation**: plays a key role for the programming of the services and the strengthening of local democracy
- **financial resilience**: can be reached by a multi-channel funding structure in order to prevent structural breaks due to funding cuts
- **networking of social infrastructure facilities**: is necessary to provide high-quality services, because no institution can offer all services under one roof.

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Large Mine Sites Regeneration from the Perspective of Gender Health Perception

A case study of Xishan, Taiyuan, Shanxi Province, China

Zhizhong Hong, Ester Higueras García***

With the end of mineral resource extraction in some cities, how to effectively utilize the abandoned sites and facilities in the closed mining areas for green reclamation and project construction, as well as to promote the healthy and sustainable development of the area, has become a problem and opportunity for these cities. In the 21st century, with the promotion of the global Inclusive city movement, urban gender health issues have attracted more and more attention. Considering the public's health needs of different genders while regenerating mining areas is the realisation of public demand[1], including economy, environment, and facilities, for urban environmental enhancement (Figure 1)[2]. Based on the perspective of promoting gender equity in urban and rural areas, this paper takes the comprehensive remediation construction project of abandoned mine sites in Taiyuan Xishan Ecological and Cultural Tourism Demonstration Zone (Figure 2) as a case study, and conducts a systematic compilation and analysis of the regeneration and construction of mine sites, the implementation of regional policies and measures, and their health impacts on the urban and rural residents by means of on-site surveys and investigations, talks with relevant governmental departments, public interviews with urban and rural residents of Taiyuan, and an open-ended online questionnaire survey. 748 valid questionnaires were collected.Statistical analysis of valid questionnaire responses was carried out by using SPSS software. The study systematically compiled and analyzed the health demands of people of different genders groups citizens of Taiyuan city. The main objectives of the research is to analyze the gender equity needs of residents and stakeholders for the reuse of abandoned mine lands, and explore policy measures to address the gender equity needs of different residents and stakeholders. The study shows that different gender group citizens have different demand for the programs and services provided by the mine regeneration. In the process of ecological restoration of mining areas, construction of related projects, and setting up activities, the different perception characteristics of men and women should be taken into account in order to satisfy the public's satisfaction with regional restoration construction and achieve a more equitable construction. In order to promote the gender equity of mine reuse construction, it is necessary to promote the development and improvement of gender equity of mine regeneration construction from the aspects of improving the management measures, encouraging the public to participate in the planning and construction, promoting the integration of the regional health economy and industry, expanding the content of health services, and strengthening the creation of a healthy environment for both genders.

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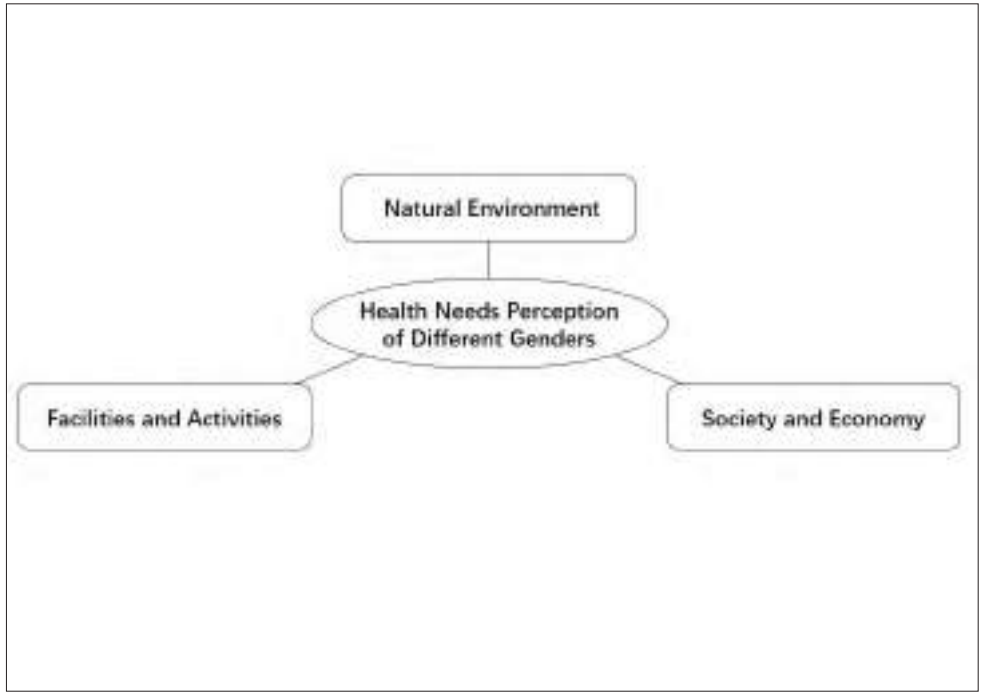

Fig. 1.
Diagram of the model for assessing the perceived health needs of different genders

Fig. 2.
Map of Xishan district in Taiyuan city

Improving the Livability of Contemporary Cities

The Role of Sports Infrastructure in Urban Regeneration

*Ilva Hoxhaj**

''In line with the global guidelines established by the United Nations with the identification of the 17 Sustainable Development Goals within the 2030 Agenda for Sustainable Development, adopted by member states in 2015, urban regeneration is configured not only as an urban planning strategy, which therefore mainly concerns the physical part of the city, but also as a project of social inclusion and local economic development, aimed at restoring prospects of equity, urban-ecological quality and efficiency to the government of the city and contemporary territories. '' (L. Ricci, 2020) The continuous phenomenon of urbanization of contemporary cities, the increasing lack of economic and environmental resources and the need to increasingly deal with the needs of society, raises the problem of preparing new methods and tools to improve life in consolidated urban fabrics.'' Strategies of reuse and refunctionalization, replacement and stratification, recovery, redevelopment and enhancement, densification and urban acupuncture are included within an integrated vision of regeneration contributing to the evolution of the city in a dynamic way and with the times that respond to the rapid evolution of the city. '' (Cangelli, 2015) Therefore, for the purpose of improving life within contemporary cities, sport represents an important element: in this perspective, numerous sociological studies (Tosi S. (2019), Russo, P. (2021), Di Paola L. (2021)), demonstrate the importance of sport in society, considering it a tool to better understand human activity. In fact, "if sport is more than just a recreational activity, it is because it works on the ways in which social facts are structured – in its micro, meso and macro level components – and is in turn conditioned by them" (Bifulco & Tirino, 2019, p. 10). It is therefore not 'just a game', but a product of society capable of influencing the identity, social, political, conflictual and commercial dynamics of human and city life. Not surprisingly, based on what emerged at the World Economic Forum in Davos in 2009, about 2% of the world's GDP is generated by the sports sector (Pioletti, 2017). As for the Italian context, the majority of sports facilities, and specifically football stadiums, present were designed and built in the first half of the twentieth century. Some important football stadiums, such as the "Meazza" in Milan and the "Franchi" in Florence date back to the 1920s, however, they are not the only ones, in fact, the average age of Italian Serie A stadiums is around 56 years, reaching 66 years in the case of Serie B facilities, the construction period of 42% of them is between 1911 and 1935, 30% between 1946 and 1970, 17% between 1970 and 1990 and only 11% between 1990 and today. (Battaglia S., Faroldi E) Furthermore, 63 out of 136 stadiums present in the territory are under protection, including Dall'Ara in Bologna, the Flaminio in Rome and the Franchi in Florence. Experimentation in foreign countries on the topic at hand is now consolidated. Case studies, of which the research, within the framework of the PhD thesis carried out within the PDTA Sapienza University of Rome, demonstrate how recovery and refunctionalization strategies of obsolete sports facilities can give positive results, in terms of social, economic and urban regeneration, in the urban context in which they are inserted. Among these, the experiences in Berlin with the Olympiastadion, in Turkey, Hatay, the Green Wings (1950 - renovation project 2019), in Barcelona with the renovation of both the stadium and the neighbourhood in which the Camp Nou is located, the same operation that is also taking place in Madrid with the Santiago Bernabeu. The cases of urban regeneration of Tirana and London are also emblematic. In Tirana, the Air National Stadium has been a generator of economic and social development for the neighbourhood in which it is located. On the site of the original stadium from the 1930s, the new stadium complies with UEFA regulations for sports facilities, at the same time "the search for elements of continuity between past and future, between tradition and innovation, becomes strategic, due to a way of thinking that does not preclude the recovery of traces of memory: symbols of the complex stratification of the city as an icon of a natural evolution and continuous development" (Battaglia S., Faroldi E., Arketipo).

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In London, Highbury Square, formerly Arsenal's Highbury Stadium, where the obsolete structure of the old sports infrastructure has been transformed into residences, with the football pitch becoming an urban park. In conclusion, the experiences, sometimes perhaps even too virtuous, of foreign countries could represent a starting point for the strategies of renovation of football stadiums in Italy, in the perspective of a city that renews and regenerates itself, respecting the territory and the soil it uses, paying particular attention to the stadium as a multifunctional system, usable 365 days a year, necessary in the urban context as a service, structure, aggregation center, and above all, a public space.

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Regeneration of disused areas: towards a new generation

*Rosaria Iodice**

In the contemporary city, phenomena such as climate change, loss of biodiversity, worsening inequality, and scarcity of natural resources suggest re-thinking disused areas as opportunities to experiment with transformations and modifications within the urban fabric. The question of decommissioning, that arose in the 1970s, marked an epochal transition for industrialised cities due to the relocation of the production process and the definitive abandonment of large industrial districts. Decommissioning, initially associated with a negative connotation of decline, was considered as a problem to be solved, as it was not yet clear how to manage this evolving phenomenon. The first public debates about decommissioning emerged in the 1980s. Different, often conflicting, perspectives emerged regarding the definition of the phenomenon and its impact on the city. The decline of the fordist model somehow triggered a crisis in the planning instruments created to control urban growth and not the reuse of abandoned areas as complex as industrial ones. As Bernardo Secchi pointed out in 1984, *"conditions have changed"* and the limits of urban planning in a context in which the city required the capacity for transformation rather than expansion became evident. In the eighties and nineties of the twentieth century, urban planning began to deal with the issue of industrial decommissioning in terms of recovery and reconversion. If disused industrial areas at the beginning of the phenomenon were seen as an obstacle, in the 1990s they represented *"a historic opportunity for concrete transformation"* as Gregotti suggested in 1990, new possibilities in parts of the city that were already strongly structured. The landscape of decommissioning in the contemporary city is still a relevant component in the urban system and requires new reflections. In the current debate, abandoned areas today are seen as an expression of the memory of the industrial past. Areas on the margins can become the engine of a *" different growth"* by focusing on new projects for the territory that are able to relaunch ideas, tools and practices capable of producing visions of the future. Studying disused industrial areas continues to be a stimulating challenge, capable of offering solutions to the great problems of contemporaneity. Decommissioning in the 21st century city has become an opportunity to discuss sustainability, ecological resilience, spatial justice, and technological innovation by broadening the theoretical and applicative frame. The methods of intervention in these areas is still an entirely open question and a fertile field for new research, although there is no single, universally applicable answer, as each situation presents different specificities. Over the last 30 years, industrial decommissioning has been the driving force and major field of implementation for urban regeneration interventions, particularly in Europe. Leaving aside a few virtuous examples, the regeneration of disused industrial areas is a complex process that encounters a number of problems that are not easy to overcome. Before questioning how to regenerate disused industrial areas, one should understand what makes these areas problematic. Pollution, obsolescence, lack of private investments, and urban planning tools dating back to the 1980s and 1990s, no longer suitable for governing urban transformation, slow down the process and increasingly distance the community from their use. An emblematic case is the regeneration of the former industrial area of Bagnoli-Coroglio in Naples, an intricate puzzle of complex issues and events. The failure that has been recorded up to now, however, provides the opportunity to reflect on the choices made so far, conducting an assessment of the mistakes made but also highlighting the positive aspects of this ongoing process. The failure has underscored the incompatibility between the original forecasts of the planning and the dynamics of the real estate market, the lack of interest in areas requiring additional investments for reclamation, and the low attractiveness of areas where transformation timelines were uncertain. Due to the lack of success achieved over the years, in 2014, the Extraordinary Commissioner for the Government, together with a new implementing institution, Invitalia s.p.a., was established. Together they have the task of implementing the Environmental Remediation and Urban Regeneration Programme (PRARU), which constitutes a single urban planning and implementation tool for the Bagnoli area. Based on the content of the urban planning outline approved in 2019, an international competition of ideas was launched for the design of Bagnoli's new landscape in 2021. In 2022, the planning entered an operational phase with the drafting of the Technical Economic Feasibility Project for the Urban Park. The PRARU continues to be subject to change, confirming itself as an instrument capable of incorporating changes during the course of the project. The case of Bagnoli-Coroglio highlights the complexity of the urban regeneration process in disused industrial areas, promoting a reflection on the capacity of town planning to prefigure new perspectives through the collaboration of knowledge. Past events indicate the need for flexible strategies and innovative solutions to address contemporary urban challenges.

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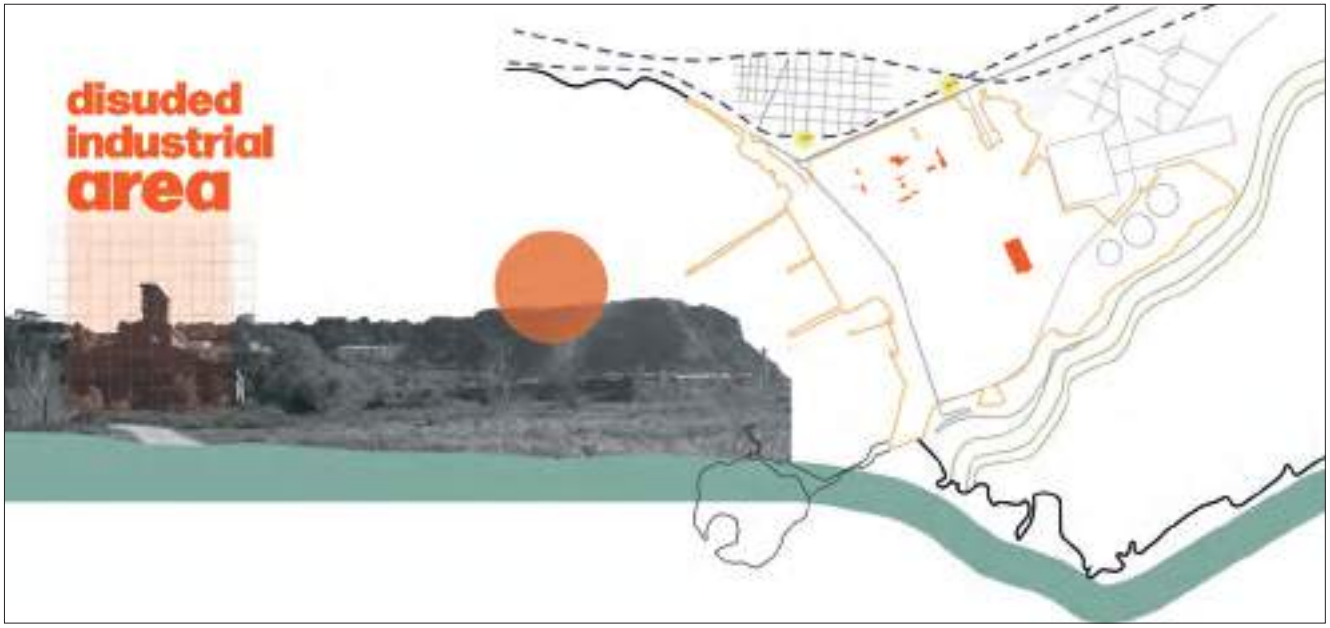

Fig. 1.
Interpretative scheme of the current condition of the former Ilva industrial area in Bagnoli-Coroglio.

Fig. 2.
The former Ilva industrial area seen from the Posillipo hill.

Development games in the neglected urban areas

Aleksandra Jadach-Sepiolo, Maciej Borsa***

Urban development is a critical aspect of shaping the living spaces of societies. Particularly, neglected downtown areas are where diverse urban, social, and economic challenges converge. Habermas's perspective on urban space as a cultural symbol sheds light on the interaction between government, community, and local economies, highlighting the importance of such spaces in social life. This paper proposes a policy aimed at building an effective framework for urban planners at various stages of the urban regeneration process. From the initial stage characterized by complete uncertainty in deeply crisis-stricken downtowns, to stages where cooperation among all participants yields synergy effects. The analysis, based on examples from European downtowns, aims to illustrate these processes. For instance, in the UK, a shift in urban policy towards regeneration, as noted by Imrie and Raco (2003), reflects the evolving approach to urban development. This shift from property-led initiatives to more inclusive, community-focused strategies illustrates the changing landscape of urban renewal. Anne Power (2007) further underscores the role of social capital in low-income neighbourhoods, highlighting the value of community bonds and networks in the regeneration process The development of games in neglected urban areas can thus be a significant tool in the process of renewing urban centres, enabling the effective integration of spatial planning with economic and legal instruments. This is particularly important in the context of growing challenges related to urbanization, demographic changes, and the need for creating sustainable urban spaces. The toolbox for neglected urban areas created in the game theory framework, thus, emerges as crucial for urban renewal, enabling the integration of spatial planning with economic and legal instruments. This approach is vital in addressing the challenges of urbanization, demographic shifts, and the creation of sustainable urban environments.

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To illustrate the different stages of urban revitalization we've chosen examples from four cities, each representing a distinct stage in the regeneration process:

1. Complete uncertainty in deep crisis downtowns: Lisbon, Portugal: Historically, parts of Lisbon faced severe neglect, particularly following the 1974 revolution and subsequent economic challenges.
2. Initial success and easier financing for renewal: Bilbao, Spain: After the industrial decline, Bilbao underwent a significant transformation, with the Guggenheim Museum being a pivotal project that signaled the city's revival. This stage represents the transition where initial successes, like the Guggenheim, made it easier for property owners to obtain financing for further renewal projects and the local authorities began to see tangible benefits of urban redevelopment.
3. Authorities seeking to maintain development momentum: Copenhagen, Denmark: As Copenhagen transitioned from an industrial port city to a hub for culture and sustainable urban living, the city's authorities focused on maintaining the momentum of development. The revitalization of the Meatpacking District and the development of sustainable urban areas like Ørestad are examples of the city's commitment to continuous improvement and development.
4. Synergic cooperation among all participants: Barcelona, Spain: The regeneration of the Poblenou district, particularly through the project, is a prime example of synergistic cooperation. This project transformed an industrial area into an innovative district, involving cooperation among city planners, businesses, educational institutions, and residents, showcasing effective multi-stakeholder collaboration.

Each stage of urban development reflects different dynamics and expectations among authorities, planners, and investors, tailored to the specific challenges and opportunities of the respective cities at that stage, what will be in details presented with reference to the most prevailing financial instruments supporting renewal at different stages. (1) The urban renewal of the Chiado neighborhood in Lisbon, led by Álvaro Siza and Carlos

Fig. 1.
Unique dynamics and expectations of main stakeholders at each stage of urban revitalization.

Lisbon (Complete Uncertainty in Deep Crisis Downtowns)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Innovative solutions to entice investment	Clear investment plans and commitment
Planners	Guidance and support in high-risk areas	-	Financial backing and patience for long-term development
Investors	Clear policies and incentives for risky investments	Feasible and sustainable urban plans	-

Bilbao (Initial Success and Easier Financing for Renewal)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Continuation of successful urban design	Sustained investment in urban projects
Planners	Consistent support and funding	-	Confidence in and commitment to urban projects
Investors	Stable and conducive investment climate	Long-term urban visions aligned with market opportunities	-

Copenhagen (Authorities Seeking to Maintain Development Momentum)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Sustainable and inclusive urban strategies	Continued investment and trust in city's vision
Planners	Support for innovative and sustainable projects	-	Alignment with sustainable development goals
Investors	Maintenance of a favorable business environment	Viable, future-focused urban projects	-

Barcelona (Synergistic Cooperation Among All Participants)

	Authorities Expect from	Planners Expect from	Investors Expect from
Authorities	-	Cohesive urban designs that reflect city's cultural ethos	Investments that align with city's comprehensive vision
Planners	Policies supporting creative urban solutions	-	Engagement in sustainable and culturally integrated projects
Investors	Long-term vision and consistent policies	Plans that are innovative yet grounded in community needs	-

Castanheira, demonstrates the evolving relationship between authorities, planners, and investors during a period of uncertainty. (2) The transformation of Bilbao, particularly marked by the construction of the Guggenheim Museum, showcases how initial successes can lead to cheaper state-aid financing for renewal. (3) Copenhagen's approach to urban renewal, with a focus on sustainable development and maintaining momentum, reflects the continuous efforts of authorities, planners, and investors. The city's initiatives in areas like cycling infrastructure and waterfront development are examples of ongoing development efforts. (4) In Barcelona City planners set the vision and framework for the project, facilitated regulatory support and provided public funds to kickstart the regeneration process. Businesses, both local and international, funded the construction of modern office spaces, research centres, and commercial facilities that now characterize the district. Residents played a role in the financing and development process through participatory planning initiatives. Educational institutions and research organizations have been key partners in this collaborative financing model. This synergy between public, academia, business and residents has been instrumental in creating an ecosystem that fosters innovation and entrepreneurship.

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Regeneration of Abandoned Transportation Landscapes within GI Framework for Sustainable, Inclusive and Resilient European Cities

*Bilge Kobak**

Amidst rapid urbanization and cultural shifts, cities struggle to strike a balance between human activity and environmental influences. The urban metamorphosis demands multifunctional public spaces, particularly those reconnecting citizens with nature. Inclusivity in spatial planning becomes pivotal, ensuring equitable development and addressing diverse societal needs. Brownfields hold immense potential to address the challenges, especially Transportation Landscapes (TL). Transportation infrastructures offer ways for strategic regeneration due to their significant size, including community involvement, natural process, story-telling of the history and heritage, as well as ensuring equitable access to nature-based recreation for society. This paper aims to explore the transformation of abandoned TL in Europe, such as airports, ports, and railways, as components of Green Infrastructure (GI), addressing social, and economic facets, advocating for holistic spatial planning. It seeks to assess the scale and scope of TL suitable for repurposing to highlight their capacity to supply ecosystem services, enhance quality of life, and promote sustainable urban development. An essential advantage of GI lies in its ability to mitigate the environmental impacts of industrial activities through fostering connectivity between natural areas. Abandoned TL can be reimagined through GI, transforming forgotten urban sites into integral components of the city. Once considered barriers in natural settings, the TL can now serve as crucial links within the ecological framework through strategic regeneration and transformation. This reshaped role emphasizes the importance of their inclusion in urban planning approaches.

Because of its scale, scope, and linear qualities, regenerating railways connects diverse districts, encourages sustainable mobility, increases security in vulnerable areas, contributes to development of multiple neighbourhoods, increases health and well-being while supporting the needs of the community as seen in pioneering railway regeneration projects such as Promenade Plantée in Paris. Airports, larger in size in most cases, present enormous opportunities for environmental restoration. Despite the inherent threats posed by airports during their operational stages, converting these extensive areas, some spanning up to 1000 hectares, into green spaces offers profound ecological compensatory advantages. Moreover, given their typical distance from city centers, redeveloped airport sites can function as pivotal nodes fostering urban-rural connectivity. Finally, the third typology, abandoned port areas or disused harbours, being located in urban waterfronts, add the element of water to the equation. Besides, related spatial components such as piers, docks, warehouses, equipment such as cranes, storage areas or production facilities, can be reutilized to host new functions for a thriving public space.

The transportation network datasets currently accessible do not provide a complete representation as they exclude numerous regions, nevertheless, even the partial data depicted in Fig. 1 calls for action. The abandoned TL offers a notable solution to the complex challenge of ensuring equitable access to green spaces for all citizens thanks to their quantity and distribution. One of the criticalities being the incomplete and not up-to-date information, shows the urgent need for inclusive and updated data, ensuring accuracy and relevance to address the pressing concerns. For railways, few numbers are available. Some countries have taken steps to repurpose unused rail routes through greenway initiatives, as seen in Fig. 2. They provide a glimpse of the progress made in reclaiming abandoned railway lines, indicating a broader territorial strategy across Europe. However there remains a significant amount of work to fully address and revitalize the extensive network of abandoned railway lines in Europe.

The GI design has not adequately taken into account the potential of these abandoned infrastructures however existing practices such as greenways, harbourscape projects and parks built on former airports show their eligibility to be included in related strategies. Given their varied dimensions, including their size, function, and geographical attributes, it becomes essential to include abandoned TL to GI frameworks for sustainable, inclusive, and resilient cities.

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Fig. 1.
Derelict Transportation Landscapes of Europe (author's own elaboration on data from Eurostat GISCO and Forgotten Railways, Roads & Places 2024).

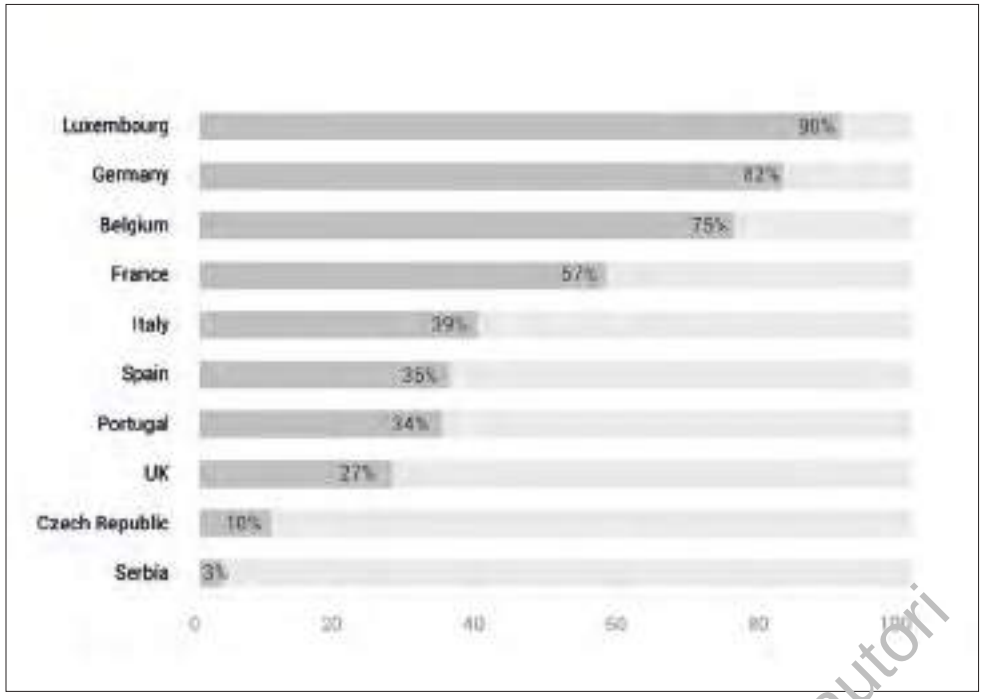

Fig. 2.
Europe's progress in Greenways (author's own elaboration on data from the Greenways initiatives of each country and Rete Ferroviaria Italiana).

Gewerbehofe, an enduring legacy in Berlin
Unveiling the GoWest project

Christoph Kohl, Marco Mondello***

Berlin's commercial courtyards (Gewerbehöfe) exemplify multi-storey industrial ensembles within the city, predominantly erected during the German imperial period. Unlike heavy factories built in peri-urban sites during the 1850s and 1860s due to space and emission concerns, Berlin's commercial courtyards strategically arose along the inner-city rail and waterways ways. They accommodated multiple companies on different floors, offering a flexible rental factory concept (Mietfabrik). Thus, the Gewerbehöfe formed urban blocks with sizable spaces for (small) mechanical and electrical engineering, textile, food, and chemical manufacturing. These structures, with a minimum of five storeys, expansive courtyards, brick facades, large windows, wide passageways and durable materials, synthesize Schinkel's Bauakademie principles with Germany's technological advancements. From the 1880s, hydraulic lifts revolutionized goods transport in multi-storey factories. Widespread adoption of reinforced concrete in the early 1890s created more spacious, column-free floor plans. Between 1888 and 1932, the construction of 49 out of the total of ca.60 Gewerbehöfe is documented in Berlin. Architects Kurt Berndt (1863-1925), Peter Behrens (1868-1940), Karl Janisch (1870-1946), and Hans Hertlein (1881-1963) were pivotal in shaping Berlin's commercial courtyards typology. The explosive city growth transformed both the Berlin apartment block (Mietkaserne) and commercial courtyards into prominent building types within a century. Their enduring quality and space adaptability have withstood Berlin's historical shifts, especially World War II and the modern urban planning of the post-war, inspiring production spaces and urban renewal. Commercial courtyards symbolise constancy in their urban integration. Spanning over 100 years, their interlocking neighbourhoods' small-scale nature offer an enduring legacy in both urban and spatial structures as much then as now.

In south-west Berlin, a vast commercial district, surpassing even the scale of Potsdamer Platz, is emerging on the former Reemtsma cigarette factory site, active from 1959 and dismissed in 2011. The GoWest project will deliver approx. 190,000m2 for offices, data centers, urban farming, retail, gastronomy, leisure, labs, and industry 4.0 on a 7.4ha site between the A100 motorway and allotment gardens. Cars are out of stage in this city of short distances: GoWest is easily accessible and 100% car-free. Integrated with Berlin's public transportation system and car-sharing offer, the district sits atop a multistorey underground garage infrastructure with separate driveways for cars, bikes, and deliveries. Central to the project are twelve newly designed Gewerbehöfe surrounding a neighbourhood market-square. All blocks pivot around a courtyard, defining the address for each eponymous location, whose entrances and passageways create a distinctive design sub-theme. Additionally, each block is divided into 4 houses to avoid repetition in ensemble composition. Externally and internally, visual relationships impact building positioning and design at macro and micro levels. Every design gesture, urban and architectural, undergoes scrutiny from the pedestrian's viewpoint. Red bricks define the district and create diverse architectural contexts with variations in tone, surface texture, dimensions, laying pattern, and joint design. Consequently, the facades express integrity, robustness, and confidence, marked by classical composition and individual designs. The GoWest project boasts Germany's largest Urban Farming rooftop with around 15,000 m^2, delivering fresh produce, including locally sourced honey, directly to the community. Most photovoltaics are elevated to allow room for commercial cultivation and offer sun protection for plants and people. The German Sustainable Building Council (DGNB) granted the DGNB pre-certificate for districts in 2019, with GoWest achieving the highest platinum award level (81.6% fulfilment). The ongoing elaboration of the DGNB full certificate, applicable upon district completion, runs parallel to the pursue of individual DGNB building certificates. Since 2016, Christoph Kohl Stadtplaner Architekten (CKSA) has led the urban masterplan, building application, design concept, and artistic direction of the

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project – which broke ground in 2022. As of now, the initial two courtyards on Forckenbeckstraße and the first part of the underground garage are under construction. The GoWest project's overall completion, spanning three construction stages from north to south, is projected in 2028.

This project signifies a crucial milestone for the Berlin-based CKSA office, marking three decades of engagement in urban and architectural design. Since 1993, starting with the Kirchsteigfeld district in Potsdam, the office has delivered around 30 projects across Germany and the Netherlands, together with intensive planning experiences in China, Georgia, and Russia. Beyond visual architecture, the firm develops urban districts for people, encompassing climate change response, the use of renewable energies, and future-proof mobility. Creativity and productivity need a dynamic and urban environment in which withdrawal and protection on the one hand, and exchange and communication on the other are offered in equal measure. The users take centre stage. The architecture is their scenery and, at best, their podium. The hustle and bustle of what moves people to do business in the GoWest commercial district is the barometer by which the success of the Gewerbehöfe concept will be measured.

Delivering inclusivity and climate justice in our cities

TEK-Technology Entertainment and Knowledge District in Bologna

*Stefania Anghinelli, Serena Girani, Chiara Introzzi, Sara Lodrini**

Tackling the issue of inclusivity in urban regeneration projects and in the design of public spaces has been a challenge Arup has taken up over the years. Contrary to traditional approaches that treat inclusivity as an additional consideration, we propose a paradigm shift. Our effort to masterplanning aims at maximising its "total-value" related to urban quality, social value, environmental quality, economic value. This approach puts inclusiveness at the heart of masterplanning activities. This means that we build a project that: is inclusive from its conception, because it is discussed and shared with the territory; responds to the needs and specificities of the context; identifies opportunities and seeks to resolve critical issues; combines aspects of climate, economic and social resilience. Climate resilience, low-carbon solutions, environmental and social equity, and long-term value supersede short-term gains in our regeneration approach. Arup has developed experiences implementing this approach in many projects in Italy (Milan, Bologna, Florence, Venice, Pavia), and worldwide, and proposing emerging themes, challenges for discussion.

The strategic planning project for TEK District in Bologna provides a significant example of this approach. BolognaFiere S.p.A. appointed us to work on the strategic development of an area where many opportunities for the future city are concentrated, from the attractive exhibition spaces of the trade fair itself, to the Tecnopolo Manifattura Data Valley Hub, from the Parco Nord and other green public areas to the areas and buildings to be regenerated.

The project has the following strategic objectives:

- optimise the use of space, creating a star system of connected and multifunctional green public areas for sports, water activities and leisure, and transforming the western boundary of the Trade Fair district into a porous border working both as an exhibition infrastructure, and as an entertainment district open to the city;
- generate a multifunctional, innovative, and attractive neighbourhood, the Digital and Innovation Village, a new mixed-use development, with a mix of offices for SMEs and start-ups, market and affordable housing, hotels and retail;
- integrate the sustainability strategy, circular economy principles and a decarbonization approach, into the project as a backbone of the masterplan, ensuring the economic sustainability of the interventions;
- design a resilient district from a climate point of view working on a nature-positive district project, where nature is embedded as a transformative driver from the initial strategic phases of design.

To translate this approach into a masterplanning strategy, we have focused on people and how they will interact with the space, functions and activities that will be established in the area, by operating on the following design levers:

- Quality of open and built-up spaces: evaluating whether quality remains consistent for both longstanding and new users. The strategy is designed with a focus on different users and on responding to different demands.
- Access and functions: recognizing diverse needs and providing equitable access and functions across ages, cultures, genders, and specific vulnerabilities. The mixed-use approach aims to increase flexibility and to maximise its ability to respond to user needs, whilst a dense network of soft mobility (pedestrian and cycle paths) and public transport connections (tram, metrobus), guarantees full accessibility to the district, especially working on the regeneration of via Stalingrado into a Green Boulevard.
- Climate Resilience and Low-Carbon Solutions: understanding and mitigating current and future climate risks on-site, envisioning new comfort thresholds, and regenerating accordingly; working on carbon reduction strategies and interventions on embodied and operational carbon components. All the foreseen functions and activities will be embedded in a green fabric consisting of areas such as parks and gardens, green and blue infrastructures, but also green roofs and walls that will play a key role

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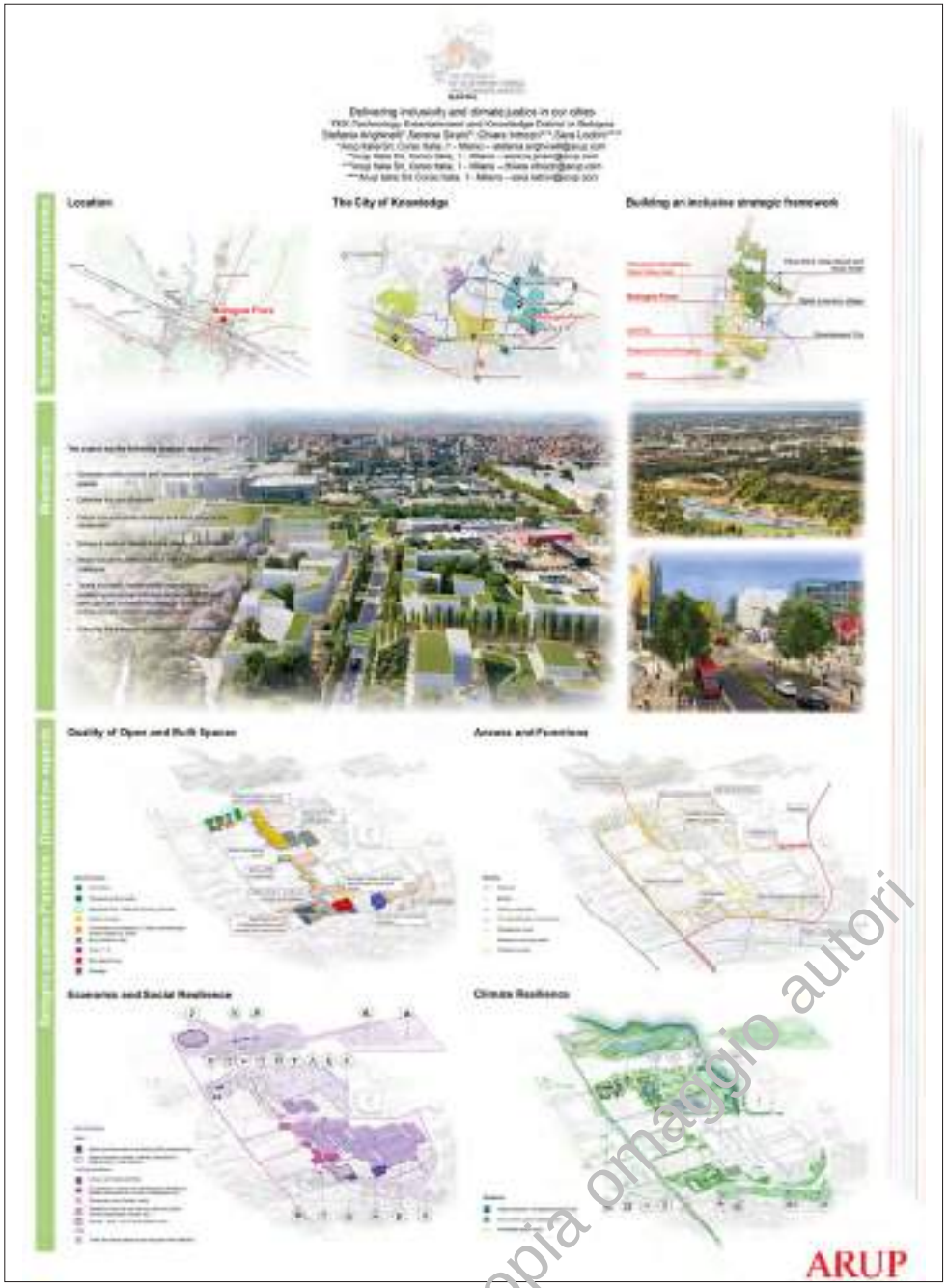
in climate resilience, along with other interventions such as photovoltaic systems and water drainage and recovery systems.

- Economic Resilience: considering the broader context of social and economic resilience, supporting entrepreneurship, local activities, and social economic initiatives. The TEK District tackles economic sustainability both directly by sustaining economic activities and indirectly focusing on challenging energy poverty, designing energy efficient buildings and providing new opportunities.
- Environmental quality and Nature and biodiversity: preserving, implementing, and valorising the environmental and natural components. The project creates a network of green spaces linking the different areas of the masterplan and enhancing the environmental and ecosystem quality of the two large parks that are planned in the north of the area itself.

The TEK District seizes the opportunities arising from the context and from the city visions and plans to design a new attractive and inclusive district in the north of Bologna.



Urban Regeneration in the Contemporary Compact City

Enrico Losardo, Irene Poli***

The paper aims to contribute to the debate on which theoretical-methodological and operational references could be useful for the regeneration of the consolidated city, through a reflection and illustration of an experimentation conducted in coherence with Goal 11 of the 2030 Agenda. If inclusivity indicates the practice or policy of not excluding any person on the grounds of race, gender, religion, age, disability" as for the Oxford English Dictionary, an inclusive city is therefore a city capable of offering the entirety of its citizenship a series of rights that today fall within the more generic definition of the "right to the city"[1]. A definition that often clashes with the condition of large parts of the contemporary city where high levels of physical, social, economic, and environmental marginalisation are the result of processes of metropolitanization of the territory[2], making it difficult not only to maintain an adequate level of welfare but also, in some cases, to satisfy the rights of the settled communities[3].

By consolidated city we mean that part of the existing city built since the second half of the twentieth century as the prevalent outcome of the implementation of urban planning provisions. A part of the city characterised by compact urban structure, a substantial physical continuity of the elements that compose it, not presenting particular individual or urban fabric values and now marked by obsolescence and technological inadequacy[4]. The relevance in the current disciplinary debate of this portion of urbanised territory is increased by its territorial extension, the amount of settled population and the 'geographical' position it occupies in the urban context, where it acts as a hinge between the city centre and peripheral fringes. However, high building and housing density, lack of public services and spaces, inadequacy of infrastructural facilities, and fragmentation in both physical-morphological and social terms are just a few of its numerous issues; these factors, combined with the lack of public resources and the inefficiency of traditional instruments, greatly compromise the possibilities to intervene, despite significant potentials, such as the presence of vast industrial sectors and nineteenth-century public facilities, incorporated during the urban expansion of the twentieth century and now decommissioned due to changed socio-economic conditions. In fact, although the contemporary compact city is widely recognized as a strategic intervention site, today its transformations mostly occur episodically and not structurally. However, in the most advanced fronts of the debate and experimentation, it is possible to identify three main lines of action, articulated at the urban and local scale: (I) *Accessibility* – at the urban scale, by reconnecting with public mobility infrastructures the "islands" of the settlement system; while at the local scale, ensuring proximity, in terms of public-private service offerings and revising the road hierarchies on the model of Barcelona's superblocks[5]; (II) *Social Cohesion* – at the urban scale, by strengthening polycentrism and offering high-ranking function for territorial and social rebalancing, while creating a widespread neighbourhood system of public or for-public-use spaces, also through morphological reconfiguration interventions following the model of the French open block[6]; (III) *Livability* – through the modernization and revitalization of the socio-economic and physical-morphological fabric, also thanks to building replacement interventions, building thinning, and housing densification, aimed at ensuring the completion of the urban structure with a functional and residential mix.

To identify new operational tools and strategies capable of envisioning and planning a more inclusive, liveable, and sustainable city, a design experimentation at the local scale

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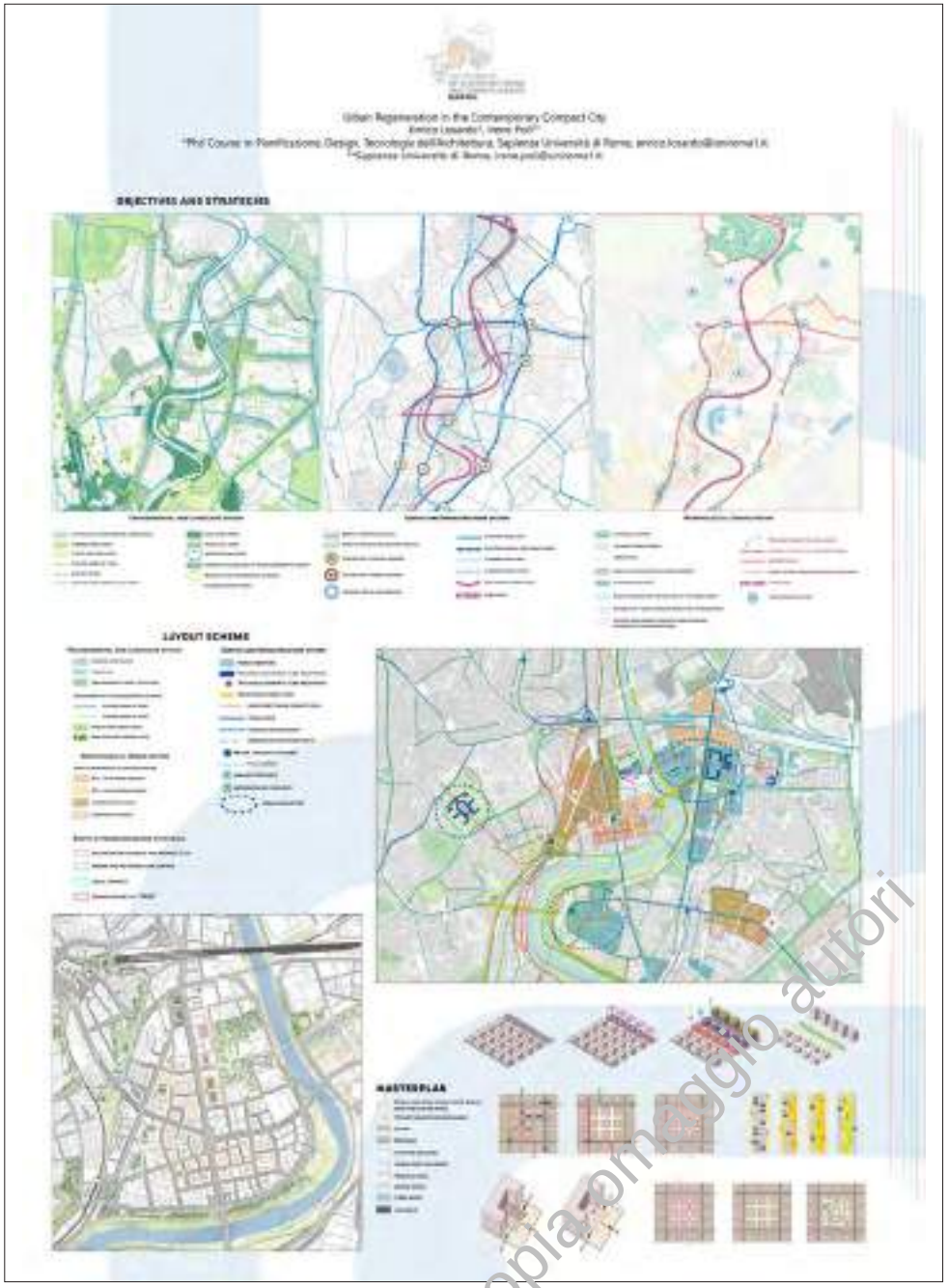
was conducted over a large portion of the "Città Consolidata" of Rome, in coherence and in implementation with what is provided by the 2008 General Master Plan. The experimentation focused on the Ostiense-Marconi district and was pursued using a systemic approach through a three-phase method (cognitive-interpretative, evaluation, proposal). It allowed the identification of exemplary characteristics and challenges of the contemporary European compact city and, consequently, the development of a framework of solutions that could be considered as best practices in terms of replicable and effective operational strategies, procedures, rules, and tools. For simulation purposes, specific, albeit transversal, solutions were identified for the three strategies previously described: (I) *Accessibility* is supported by the completion of the infrastructural framework and the branching of the public transport network on rail, while at the local scale, the reversal of road hierarchies allows for better and safer use of neighbourhood public spaces, also through targeted pedestrianization or woonerf. (II) *Cohesion* is pursued through the injection of strong functions and the strengthening and networking of existing public services, while at the local scale, interventions to open the internal courtyards of intensive typologies offer new spaces for socialization and meeting for the resident population. (III) *Livability* is instead pursued through the desaturation of some residential courtyards with localized demolitions and reconstruction in neighbouring areas; a rebalance not only in terms of buildings but also in terms of social and functional mix, guaranteed by housing densification, and the increase of public spaces.



From gray to green infrastructure
Rethinking the Lecco's waterfront

*Nerantzia Tzortzi, Maria Stella Lux, Aurora Bosia**

The impending urbanization of two-thirds of the global population poses a pressing challenge for cities. The long-term sustainability requirements and the necessity for urban adaptation are now imperative. This encompasses not only meeting climate targets but also addressing the burgeoning demand for green public spaces amidst limited urban land availability, exacerbated by ongoing urban densification. Consequently, streets are emerging as pivotal arenas for fostering sustainable urban living and mobility. One-third of urban land worldwide is currently occupied by streets and parking lots, offering a significant opportunity for repurposing them into vibrant public realms. Municipal administrations globally are recognizing the potential of transforming underutilized urban infrastructure into multifunctional public spaces.
In this context, the city of Lecco, nestled along Lake Como's eastern shore, serves as a case study. Historically disconnected from its lakefront, Lecco experienced significant urban planning changes with the construction of the Lungopiave street in 1928. This road, intended to connect Lecco to adjacent regions, created a stark divide between the urban center and the lakeshore. Despite subsequent traffic rerouting with the opening of tunnels beneath Mount San Martino, Lecco remained detached from its waterfront and its potential recreational offerings. In response, a design competition in 2019 sought to revitalize the city's relationship with its waterfront. This contribution presents a critical approach for the repurposing of disused urban infrastructure, integrating the novel principles of urban green infrastructure. The outcome is the development of a design proposal for the waterfront of Lecco, aiming to reestablish the connection between the city and nature.

The proposed approach takes advantage of an in-depth analysis of previous experiences, such as Barcelona's Superblocks and Cheonggyecheon's riverfront revitalization, and is grounded in the theoretical debate on people's right to public space, especially referring to Michael Sorkin's manifesto. Additionally, the scientific framework of urban adaptation and urban green infrastructures was taken into account. These theoretical references informed the project's scope and interventions. The proposed project responds to a paradigm shift in urban design, working on the transformation of former grey infrastructures into green infrastructures that serves as a nexus for community engagement, ecological preservation, and sustainable mobility. The adopted approach unfolds through four main themes: mobility, sports, leisure, and environmental considerations. Each theme was explored extensively to devise a comprehensive strategy integrating complementary and contrasting layers. Through this holistic approach, the aim is to redefine urban spaces, addressing the evolving needs of contemporary cities while fostering sustainability and enhancing quality of life.

The application of this principles to the case of Lecco led to the rethinking of Lungopiave Road as a dynamic linear urban park. By repurposing the road underutilized infrastructure and integrating nature-based solutions, the project fosters a multifunctional public space that meets the diverse needs of Lecco's residents and visitors. The proposed green transformation offers multiple benefits for the city of Lecco. Firstly, it addresses the pressing need for green public spaces, providing residents with accessible areas for recreation, relaxation, and social interaction. The park's lush greenery and natural elements create a tranquil oasis amidst the urban landscape, promoting mental well-being and fostering a sense of connection to nature. Moreover, the linear park serves as a catalyst for sustainable mobility, encouraging walking, cycling, and other forms of active transportation. By prioritizing pedestrian and cyclist safety and accessibility, the project promotes healthier and more environmentally friendly modes of travel, reducing reliance on cars and mitigating traffic congestion. The integration of nature-based solutions further enhances the park's ecological value, providing habitat for local wildlife, improving air quality, and mitigating the urban heat island effect. Rain gardens, bioswales, and permeable pavement help manage stormwater runoff, reducing the risk of flooding and enhancing the park's resilience to climate

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Fig. 1.
Strategic Masterplan of the Lecco's waterfront.

change. The park's design incorporates elements of cultural and historical significance, celebrating Lecco's heritage and identity. Interpretive signage, public art installations, and interactive exhibits provide opportunities for education and reflection, enriching the visitor experience and fostering a sense of pride in the local community.

In conclusion, the contribution provides a basis for reflection on the urgency of aligning the needs for adaptation and resilience with the aspirations of a more inclusive city, where urban space is returned to both people and nature. The experimentation on the Lecco case serves as a practical example of translating theoretical concepts into a thoughtful and conscious design practice, by embracing sustainability, innovation, and community engagement.

Urban walks as a cognitive tool at the service of urban plans and for the promotion of sustainability in Catania

*Gaetano Giovanni Daniele Manuele**

The Jane's Walk movement was born in Toronto in 2006 and involves the creation of free walks all over the world in which the main objectives are: rediscovering the places of the city; spread the ideas and spirit of Jane Jacobs; create dialogue and sociality among those present. There are currently over 500 cities that walk in Jacobs' name every year. The movement is also present in Catania where it has been active since 2017 and has seen – in the six editions – 33 walks in person and one virtual. In the 2024 edition the walks will become moments of reflection with the local community on climate change and the consequences for individuals of rising global temperatures. Furthermore, the individual walks will highlight the importance of ecosystem services and the need to create new ones in urban areas to improve the quality of life of individuals in the city. The individual associations, bodies or committees organizing the various walks will also be asked to:

- produce concrete gestures to improve the city's ecosystem services;
- investigate the local community by stimulating 'from below' the creation of concrete actions for the different neighborhoods to be submitted to the local administration to reduce the effects of extreme climatic phenomena in the city;
- encourage those present to form neighborhood committees that carry forward environmental issues or support the projects of local associations that deal with this aspect;
- disseminate what will be defined as 'sustainability pills' among those present at the walks, i.e. cards that will report the benefits of sustainable action and the related scientific source that talks about it – so that anyone who wants can delve deeper into the topic independently – .

This approach, which could be defined as almost 'catechetical', is fundamental in a city where environmental issues struggle to become the heritage of the local community. The walks will also become a tool through which to draw up a multimedia map on the critical issues and 'visions' linked to ecosystem services – and not only –. This map can be used in the drafting of both the upcoming PUG, General Urban Plan, and the PUMS, Sustainable Urban Mobility Plan. In fact, each walk leader will distribute to each participant of the walk a paper map in which the route of the walk will be marked but also some points of interest – marked with alphabetical letters –. Participants will be invited to join a Facebook group in which they will be able to post reflections, photos and videos during the walk, indicating the area to which they refer. This will allow anyone to possibly replicate what someone else has written or to reinforce some concepts expressed. In the group the walk leader – who will animate the discussion at different points of the route – will report what emerged through video messages. For those who do not have Facebook, paper cards will be distributed in which, for the different points, they will be able to provide written considerations, problems or wishes. Once the walk is concluded and ten days have been waited for any 'cool-headed' considerations, all the reports and considerations – from the Facebook group and expressed in paper form – will be loaded into a multimedia map of the Google Map service. This operation will be carried out for all the walks of the Jane's Walk 2024 edition. You will therefore have a multimedia map that will touch on the main neighborhoods and places of the city, in which by clicking on a point, you will be able to listen to or read the proposals or critical issues related to ecosystem services and more. Naturally, preparatory meetings for the initiative will be held with all the associations that wish to participate, asking them to avoid overlapping routes and that – overall – the routes cover most of the significant places in the city. Participants in the Facebook group will be asked not to abandon it so that, if they wish, they can become collaborators of 'bottom-up' initiatives aimed at improving the quality of local greenery. The Jane's Walk Catania 2024 edition will end with a scientific conference that will be organized with the political science department of Catania in which we will reflect on climate change, on the possible strategies to be adopted in Catania for the mitigation

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of heat islands but also on the effects of water bombs, and the walk leaders will have the opportunity to talk about their walks and what emerged from the participants regarding the improvement of ecosystem services in front of the representatives of the local administration. The walks will become a tool for social investigation aimed at improving the city's urban projects. The topic is highly topical and the discussion cannot be postponed any longer in the city of Catania given that on 24 July 2023 the record temperature of 47.6 degrees was recorded, and given that between 2010 and 2022 in the Catania area twelve extreme events occurred – five rain floods; three heavy rain events that caused damage to infrastructure; three whirlwinds; a river flood –. If the birth of a new awareness of the advantages of environmentalist policies aimed at protecting ecosystem services by the local community and the birth of microprojects based on sustainable choices appear to be virtuous and indispensable actions, they cannot be considered a goal. The walks of Jane's Walk Catania 2024 and the subsequent scientific conference are hoped to become the seed to start a debate – through the involvement of local authorities, citizens, stakeholders and the academic scientific community – which will germinate the idea that an absolute priority must be to create a city that is truly sustainable.

Fig. 1.
"Archi della Marina" walk organized by Legambiente Catania, in collaboration with Famiglie SMA as part of the Jane's Walk Catania 2023 (Source: Gaetano Giovanni Daniele Manuele).

Fig. 2.
Water bomb in the municipality of Scordia (CT) on 19 October 2018. (Source: Gaetano Giovanni Daniele Manuele).

Religious Archaeology
New opportunities for urban attractiveness

Andrea Marcuccetti

Socio-cultural and economic changes that inevitably occur in contemporary cities contribute to the phenomenon of abandonment in specific urban areas, both residential and industrial, with a consequent prospect of decay. Consider, for example, former factory zones with their neglected spaces and buildings, which no longer surprise us but are instead categorized within the realm of industrial archaeology. It has been recognized that these repelling places can, in fact, become attractive and represent an opportunity for urban development through their regeneration, involving communities in becoming participants in the change project.
This situation is quite different when it comes to places of worship, the so-called "sacred places," where a sense of belonging, more cultural than religious, can generate social conflicts, especially in the era of free digital communication. A cry of protest arises if they are abandoned or repurposed, but it is important to emphasize that there persists a propensity to build new ones—mostly empty boxes inducing static rituals, examples of pure formalism, relegated to the margins of urban development plans and scarcely used.

We are facing a new phenomenon: Religious Archaeology. Disused churches, convents, and chapels that no longer arouse interest, especially among the youth, are managed by a clergy less inclined toward contemporaneity. Today, sacred places take on diverse forms, creating confusion in socio-cultural language. Consider, for example, a stadium perceived as the "temple of football," with the consequent Maradonian "hand of God" or the "faith" in a sports team or a pop star like Madonna. It is therefore imperative to rethink sacred space in new dimensions and urban contexts suitable for interaction with communities, in new aggregative settings such as shopping centers, sports facilities, transportation infrastructure, and urban parks. The question arises: What to do with religious archaeology? Demolish it or adapt it? And what about the underutilized and poor-quality "new" parish centers? Our cities are no longer uniform seats of Catholic communities; they no longer require oversized religious structures. A more realistic approach involves sustainable projects distributed in the most attractive positions of the metropolis, offering spaces suitable for diverse beliefs, fueling the hope for peaceful coexistence and socio-cultural enrichment.

For too long, religious architecture has been exclusively oriented towards construction; a pause for reflection is advisable, a kind of "biological stop" would undoubtedly contribute to regenerating both the clientele and the designers. A secondary reflection will focus on the analysis of religious architectures and the quality of cities. These contribute not only to a sense of identity but also provide guidelines with local cultural languages for urban planners and architects, aiming to move away from current economic logics and uniform languages that poorly correspond to the places of implementation.

One of the most critical aspects, both for the birth and regeneration of more or less extensive residential centers, involves a requalification process emphasizing the qualities that the city of the future should possess: an innovative and eco-sustainable city, simultaneously conscious of identity and resilience. Decision-makers increasingly resort to knowledge-based projects to improve the economic competitiveness and urban attractiveness of the territories they administer (Asheim, Coenen, and Vang, 2007).

An identity vocation is inherent in every place, whether large or small, and it would be appropriate to consider it in projects: Jerusalem (religion), Montreal (language), Singapore (nation-building), Hong Kong (materialism), Beijing (political power), Oxford (learning), Berlin (tolerance and intolerance), Paris (romanticism), Florence (renaissance), New York (ambition) and Casablanca (cosmopolite) (Fig.1). Smaller centers identify themselves, for example, through the toponyms that generated them.

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Fig. 1.
Former cathedral of Sacré Cœur now Cultural Center of Casablanca. Morocco.

New forms of planning are anticipated, based on the concept of Knowledge-Based Urban Development (KBUD) (Yigitcanlar et al., 2012). KBUD is a new development paradigm in the knowledge era, aiming to create a city that encourages and allows for the production and circulation of "abstract labor," a knowledge city. KBUD aims at economic prosperity and environmental sustainability through a "fair" socio-spatial organization of cities, seeking to establish a secure economy in a sustainable human environment (Yigitcanlar 2009). Considering the identity areas of the place, often of a religious nature and no longer used due to constant social change, these spaces, rightly protected, become the seed of a socio-cultural and urban rebirth.

Managing cultural heritage in contemporary cities is a complex issue that requires careful consideration of various factors. One of the key questions in this context is whether to accelerate the design process, where the cultural variable plays a crucial role in the design approach to sustainability. Cultural heritage, traditions, and values must be taken into account in the design process to create appropriate and acceptable solutions for local communities.

Embracing diverse cultural approaches and perspectives is fundamental to creating resilient and sustainable societies and communities. Bringing together people from different backgrounds and fields allows tapping into a broader range of knowledge to address complex challenges. This can lead to more innovative and effective solutions that better fit the contexts and specific needs of diverse communities. Furthermore, embracing diversity can help build stronger social bonds and promote more inclusive and equitable societies.

The railway line as territorial activation tool

Immacolata Paciolla, Amelia Laura Maris Ile*, Ivan Negri*, Danila Della Monica* and Gianfranca Mastroianni**

In the Places of Being, new regions emerge where people can coexist, innovate, co-design, and reactivate. People's activities can trigger processes of sharing, envisioning new functional spaces, inclusive and open to the human dimension while respecting pre-existing conditions, correlating them with the social, cultural, and economic innovation of the territories; benefiting the entire community. This is the objective of our actions for and with citizens. The "Alto Casertano" region is a very vast urban area, whose strongly landscape-oriented identity opens up to endless reflections aimed at encouraging an innovative dialogue connection among various stakeholders. The goal of the FORUM LAB STATION project by Pontinpietra is to create undefined alliances for the urban regeneration of places through a new language that lays the groundwork to respond to ecological, digital, economic, and equitable transitions. An existing route, the "Ex Alifana" connecting the city of Naples to the province of Caserta, is our course of action, where through targeted actions, we activate the dispersed communities of the territories. The Alifana originates from the need to connect the various municipalities of Upper Caserta to the metropolitan city of Naples. The "Forum Labstation" project aims to shed light on the "High Alifana" railway line "S.M. Capua Vetere – Piedimonte Matese", consisting of 10 stops. The ongoing process aims to activate a dialogue between municipal administrations, cultural organizations operating in the area, educational institutions, and citizens. The railway becomes a vector of connection and territorial development for a renewed flourishing of the territories of the Alifana plain. The "Forum Labstation" project, born in 2020 with physical revitalization interventions on the stations, and in 2023 implemented with activities related to the "Quality of Architecture 2022" tender promoted by the Campania region, is part of the station revitalization program carried out by the Pontinpietra association with the aim of reactivating the railway stations/stops through participatory actions with citizens and practical training workshops. The relationship that the existing architectures of the railway line create with the territories of the Alifana plain has been addressed during conferences and laboratory activities that have triggered considerations on the development of the smaller areas of Campania; furthermore, through practical work in the training workshops, themes such as the choice of traditional building materials in architectural and engineering design have been addressed. The direct beneficiaries of the ongoing process have been and are the citizens who live in the places and territories crossed by the railway and indirectly those who temporarily inhabit those places with agricultural, landscape, and low-built vocations. Thanks to this process, local administrations, educational institutions, universities, operational associations, and the entire citizenry have had the opportunity to interact and create alliances. The railway network becomes a vector and instrument for social improvement, and stations become places of being, co-designing, and innovating; in a dual action of connecting local territories with the bond between the metropolitan city and the cultural landscape area of the villages of the Alifana territory and surroundings. Activities will continue with "Quality of Architecture 2023" additional Regional tenders, having received excellent feedback from the actors who participated in this process, opening up further reflections on territorial planning open to innovation and contemporaneity. The need to respond to the community's demands is evident, going beyond the "tracks" of the railway line, opening up to infinite possibilities of renewal, well-being, and sustainability. Pontinpientra's goal is to branch out this process, taking into account pre-existing conditions and adopting cross-sectoral intentions. Reactivating the places of being and going, of staying and traveling, from the stationary to the variable, through the creation of new proximity spaces, common life actions, urban areas open to socialization and interaction among people. Triggering connections not only spatial but also projectual, going beyond municipal boundaries, beyond physical distances for the creation of a renewed urban region, seeking to reconcile the different aspects of life in a more inclusive urban environment with cultural and digital equity. Indeed, during the

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activities of the Pontinpietrai project "ForumLab station", co-working stations have been activated, rethinking the stations not only as a transient place but as a public space open to all. With the reflections brought forth by our process, we hope for the creation of an informal urban morphology that responds to the development of city centers and social dynamics, moving from the specific to the indeterminate.

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"Il Borgo di Francesco", a biophilic design case study

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Biourbanism has been promoting autonomous and resilient communities by means of biophilic and peer-to-peer design tools for more than a decade. Biophilia stems from the respectful observation of nature, its forces, patterns and constraints both inside and outside human beings, while peer-to-peer urbanism and architecture are about free, grassroots, and shareable design rules, following in the footsteps of the open source software movement. This project paper aims to illustrate an enforcement of such a biourban strategy in the municipality of Paola (Cosenza, Italy).
The € 1.479.728 EU-funded integrated project "Il Borgo di Francesco" is based on a biourban vision. This paradigm requires that any design interventions harmonize with each other to reverberate throughout the urban ecosystem.

The 9 interventions of the project aim at systematically nourish the community of Paola by means of a sustainable social and economic development. The thematic vision of an experiential, "slow" tourism acts as their common thread.

Religion attractions produce relevant figures wherever a plan succeed in placing them at the centre of the urban socio-economic system. Accordingly, the project leverages on the historic figure of St. Francis of Paola (1416-1507) with the following actions.

1. Tourist route "Il Borgo di Francesco". This first intervention mends all the others. A tourist route guides the visitors from their arrival until their departure, crossing all the historical, artistic, cultural and natural values that Paola can offer. The route is configured as the urban continuation of the "Path of St. Francis," an hiking route recognized by the Italian of Culture, which ends at the Sanctuary of the Saint in Paola.
2. Museum of St. Francis of Paola. The museum, set up in a former Capuchin convent, offers a multimedia experience of the life and spirituality of Francis. It will activate synergies between private companies and the public administration.
3. "The ancient wash house". The Pilosella torrent banks, which borders the ancient Jewish quarter, has been reclaimed to public use by restoring the old wash house and the bridge that connects the left bank to the town. The pleasant environment has become an attraction for both locals and visitors.
4. Tourist's house. The project renovates and repurposes two unused real estate units connected to the museum. These host information services, meeting spaces, a room for exhibiting local and artisanal products, toilets, and a luggage storage service.
5. Restoration of Palazzo Scorza. This 18th century building is located in the heart of the historical centre of Paola, near the birthplace of St. Francis. The intervention adds a breakfast and a laundry room to the current hostel (approximately 70 sq. m).
6. Artistic map of the historical centre. The map of the town is made into an enjoyable piece of art created by local artists. Five glazed terracotta tiles copies are displayed inside the historical centre, along the tourist route, as large permanent installations. The map will also be printed on paper for helping navigating the city.
7. Tourist menu of San Francesco
   Creation and promotion of a tourist menu based on local products and linked to the figure of the Saint and the territory, through which the Mediterranean diet and zero-mile production are promoted.
8. Branding of the village, project storytelling, and technologies for virtual and interactive tourist services. This intervention enriches the project with a digital, marketing and promotional contribution. It builds a positive and captivating image of the historical village with a 360° virtual tour of the route and monuments; a tourist website; technological information totems; a promotional video about Paola; and design and production of merchandising for the museum.
9. "The complex beauty of hospitality". An continuous education course on tourism business aimed at building a local culture of professional hospitality and strengthening the touristic offer of Paola.

Even if the project is currently in its implementation phase, the authors have been able to analyse the first economic, social and built-environment impacts on the urban system. Design strengths and weaknesses are assessed, displaying a case study of urban regeneration linked to public funding.

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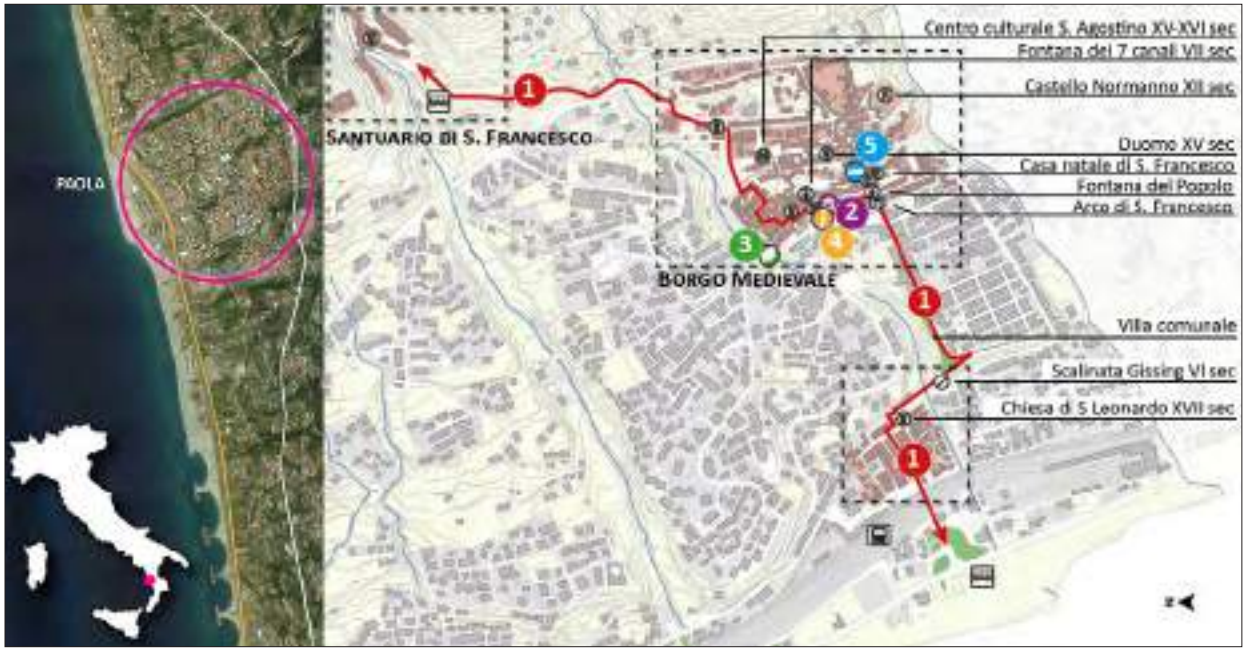

Fig. 1.
Masterplan. A renovated public place on the Tourist route, 1st intervention.

Fig. 2.
Intervention n°1 (Tourist route "Il Borgo di Francesco"): a view of the completed public square in the Marina neighbourhood.

"Enhancement of urban green, the establishment of urban gardens and the recovery of abandoned land"

Giovanni Misasi, Teresa Pandolfi* and Domenico Passarelli***

The project Borghi del Benessere of the Associazione Scientifica Biologi Senza Frontiere ((ASBSF) was born with the aim of improving the quality of life in the villages by improving the environmental and urban context which is inevitably linked to the state of health of the population. The ASBSF intends to promote a development model capable of increasing and qualifying the landscape and biodiversity of places that deserve to be valorised. Urban greenery represents one of the main elements to contribute to improving the quality of life of citizens and to creating sustainable cities from an environmental and social point of view. It is essential to adopt solutions that allow us to improve urban living conditions and, in this perspective, urban greenery which represents one of the main elements to contribute to improving the quality of life of citizens and to create sustainable cities, both from an environmental and social point of view. The World Health Organization has reported that for correct residentiality and, therefore, for urban healthiness, people should live no more than 300 meters away from a green space.

The presence of parks and gardens offers not only opportunities for socializing, for practicing outdoor sports, for playing for the little ones, but also guarantees an important ecological service, as it lowers the presence of fine dust in the air, reduces the noise, counteracts the rise in temperatures, increases the permeability of the soil and guarantees the city's connection with natural rhythms and the presence of various animal and plant species.

ASBSF therefore promotes the development, increase and qualification as a tool for enhancing the landscape and biodiversity with the following objectives:

- **Improve the quality of citizens' life**: promote health in urban planning for the common good with health approaches based on a correct eating style and constant physical activity.
- **Landscape enhancement and urban regeneration**: increasing green areas which represent a fundamental resource for sustainability and the quality of life in the city. In addition to the well-known aesthetic and recreational functions, they contribute to mitigating pollution of the various environmental matrices (air, water, soil), improve the microclimate of cities and maintain biodiversity. To make urban sustainability operational and integrate it into territorial policies, it is necessary to define a system of indicators that allows evaluating the level of sustainability of a city or metropolitan area, and what actions need to be implemented to improve this level. There are many indicators developed at various levels by national and international bodies to pursue the objectives of urban sustainability, such as urban green spaces – and the accessibility of public green areas and local services.
- **The reuse of the already existing building and urban heritage**: encouraging the creation of places and the development of widespread social activities, the inclusion of tourist and cultural routes and activities, vegetable gardens, parks and public green areas.
- **Creation of urban and socio-therapeutic gardens**: based on the availability of small plots of land in urban centres, it is intended to develop urban gardens in order to recreate the conditions for reliving the Mediterranean lifestyle, encouraging citizens and especially young people to cultivate according to ancient traditions, in order to have healthier food with high nutritional qualities, absolutely seasonal, with the privilege of spending time in the open air and in contact with nature, combining research studies to monitor the improvement of food quality and the health of citizens with our research and training study center in collaboration with local universities. The cultivation and maintenance of urban gardens by multiple people allows inte-

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gration, sociability and sharing of intentions for a common goal, which fall within the determinants of health promoted by the WHO.

- **Adopt eco-sustainable solutions for local agriculture**: encourage local agriculture to use bio-fertilizers to improve soil fertility, the quality of the environment, the quality of food and at the same time human health.

ASBSF aims to adopt the ecosystem services approach in the Borghi del Benessere as a conceptual framework and methodological tool through which to represent the multifunctionality of urban greenery as well as nature-based solutions – the Nature-based solutions (NBS) – which refer to the management and sustainable use of nature to address social-environmental challenges by bringing social, environmental and economic benefits, considering that urban areas offer many opportunities to contribute to the community well-being and the protection of species and habitats.

Post-socialist New Belgrade blocks as a potential for inclusive territory

*Nikola Mitrović**

The urban landscape of post-socialist countries in Europe has undergone profound transformations, particularly in the realm of spatial planning and public space utilization. This transformation is exemplified in New Belgrade, a city originally planned with a block structure that evolved into an automobile-dependent urban area. Following the collapse of the Communist political regime and the privatization of land, New Belgrade underwent significant changes, with public spaces and amenities transitioning into private ownership. This shift in ownership has led to the transformation of urban parcels, including areas previously designated for public use such as playgrounds, green spaces, and open areas within housing estates.

New Belgrade's urban development reflects broader trends in post-socialist urban planning, characterized by informal changes and sporadic interventions. These alterations are a response to the shift from a socialist to a capitalist economy, leading to changes in the physical and functional structure of public spaces. The city's transformation also reflects a broader societal shift in the post-World War II era, marked by rapid industrialization, urbanization, and the emergence of a welfare state. During this period, urban planning was used as a tool for social control and manipulation, shaping the physical and cultural landscape of cities in former Yugoslavia.

Today, public spaces are increasingly recognized as crucial components of sustaibable urban development. The New Urban Agenda emphasizes the importance of public spaces in fostering eco-social cohesion, civic identity, and the overall quality of urban life. However, many urban regeneration projects lack clear objectives and targets, leading to a focus on creating a 'product' without considering its long-term performance qualities and environmental impact.

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In the literature, there are different approaches in defining sustainable urbanism. *Sustainable built environment* is often defined by four main aspects (Jenks, 2010): land use, energy conservation, recycling and reuse, and communication and transport. Transport, in particular, is highlighted as a *core dimension of sustainability* (Jenks and Jones, 2010), with the dominance of private cars in cities contributing to environmental degradation and urban sprawl. To address these challenges, there is a growing call for sustainable transport policies that promote public transport, walking, and cycling. This approach faces a number of major hurdles. And as the last approach in defining sustainable urbanism, Ameen (2015) through the Environmental Impact Assessment Review introduces *Common indicators and sub-indicators for sustainable urban design dimensions*. There are emphasized some elements of cultural sustainability or outdoor comfort and safety which is interesting intersection between urban design and sustainable planning approaches.

In New Belgrade, urban regeneration efforts have led to the establishment of new park areas, pathways, and ramps, aimed at enhancing the inclusivity of public spaces. These interventions cater to diverse user groups, including children, the elderly, recreationists, and wheelchair users.

The objective of this study is to examine the formation of an inclusive territory within New Belgrade and how these changes contribute to shaping a new identity for this part of the city. The research employs a multidimensional approach to sustainability, considering already mentioned dimensions, aspects and indicators of sustainable built environment/urban design. By focusing on the perceptions and utilization patterns of community residents, the study aims to identify the inclusive potentials embedded in the urban structure of New Belgrade.

The study shows that small-scale urban design changes can greatly improve inclusivity and sustainability in post-socialist neighborhoods, fostering a sense of community and belonging. These interventions also contribute to the creation of pedestrian-friendly routes integrated into the urban block structure, promoting sustainable modes of transportation and reducing reliance on private cars. The proximity to amenities is crucial for sustainable elements, and in New Belgrade, the positive outcomes can be partially attributed to the legacy of the socialist city center planning system.

In conclusion, the transformation of public spaces in post-socialist cities like New Belgrade reflects broader societal shifts towards sustainability and inclusivity in urban planning. These elements serve as tangible evidence of a transition from socialist to inclusive planning, providing insights into principles that can guide the development of trajectories reshaping post-socialist neighborhoods towards more inclusive environments.

Fig. 1.
New Belgrade inclusive potentials through dimensions, aspects and indicators of sustainable built environment/urban design.

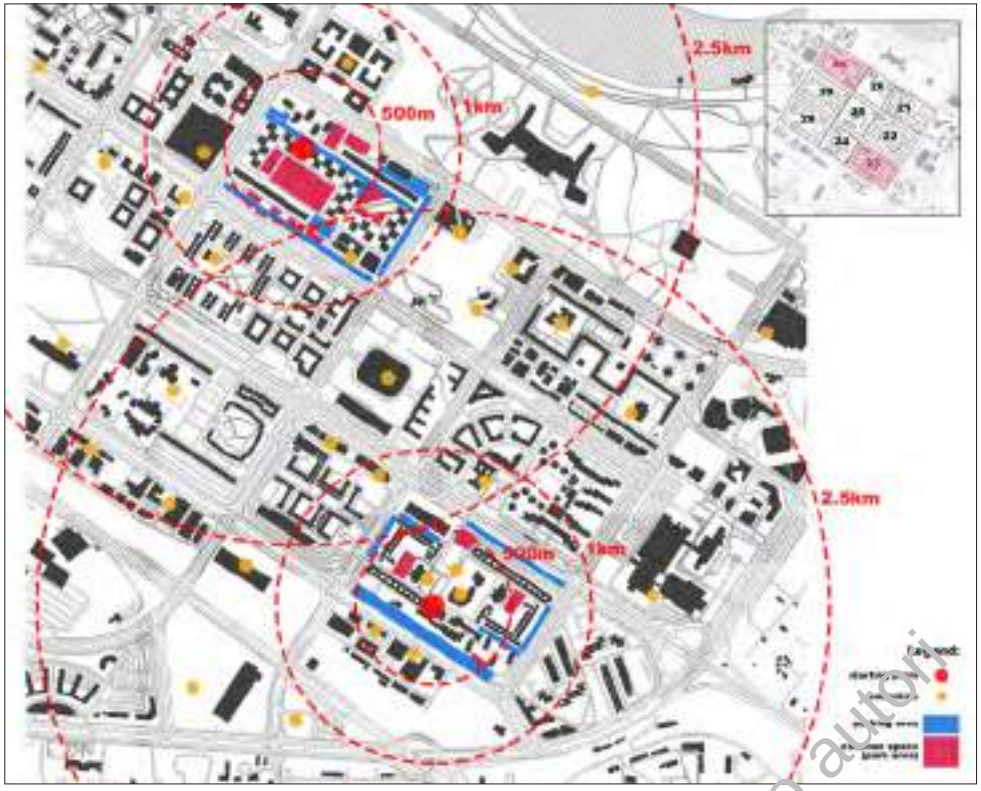

Fig. 2.
New Belgrade blocks 23 and 30 in Central zone - Mapped common and parking areas, amenities and walking distances.

Experimental governance and urban fragilities: Making cities through social-health therapies

*Walter Molinaro**

Over the past three decades, the traditional model of urban governance has been strongly challenged by the complex challenges and issues affecting cities and contemporary society. Globalization, economic-financial crisis, demographic decline, and rapid technological advancements have led to a redefinition of the role of the public sector and the introduction of a series of new actors and stakeholders within planning processes, fostering the development of governance approaches based on collaboration and interaction among multiple actors. The failure of the hierarchical model thus translates into the inability of the public sector to produce policies and practices capable of ensuring effective responses to the population's needs. The increasing complexity affecting cities and local administrations has, over the last decade, led to the development and proliferation of experimental governance approaches. The model of experimental governance, introduced by Sabel and Zeitlin (2011) as a top-down institutional response to perceived failures of the traditional governance model, is based on an innovative, flexible, and experimental approach to the definition and implementation of public policies. The model is based on a framework of pre-established rules and the recursive review of objectives and metrics and is made up of four interconnected elements (Figure 1). The Experimental Governance (EG) approach emerges as a form of governance that has "great potential to inform and redirect established approaches to urban planning" (Scholl and de Kraker 2021, p. 156) through the development and implementation of urban experiments aimed at testing innovative solutions.
The research specifically investigates the approach of experimental governance as an innovative tool to address the challenges faced by cities characterized by "urban fragility" (Muggah, 2014; de Boer et al., 2016; Selby & Desouza, 2017).

The research objectives are:
- Analyze the role of the public actor in interaction with other actors (both institutional and non-institutional) within predominantly bottom-up experimental processes.
- Understand how to develop and implement urban experiments in contexts where the public institution is fragile.
- Determine how urban experiments, if adopted and integrated by the public actor, can stabilize and modify the actions of local administrations.

The research aims to investigate both the role of experimental governance processes in both solid and fragile contexts, as well as that of the local administrative machinery. The analysis focuses on analyzing certain socio-health practices and policies activated in the Municipality of Naples, which show promising outcomes in terms of regeneration, care, and maintenance of public green spaces (Figure 2). These experiments, born from collaboration between third-sector cooperatives and the Local Health Authority Napoli 1, draw inspiration from the theories of active care for vulnerable patients introduced by psychiatrist F. Basaglia during the closure process of the former psychiatric hospital in Trieste initiated in the late 70s. The thesis aims to explore how these specific practices, aimed at the care and social reintegration of vulnerable subjects, can influence the modus operandi of a fragile local administration. The exploration of the case study is aimed at understanding what can be learned from these practices to initiate targeted experimental governance processes, broadening their scope to transform into public policies. Through the lens proposed by Altrock (2012), the role of experimental governance processes has been observed both in institutionally solid contexts, where urban experiments integrate consolidated planning practices (Enqvist, 2022), and in fragile contexts, where urban experiments act as a further element approach to address the shortcomings of local administration. Using the framework of strategic functions developed by Enqvist and Karvonen (2021), it was possible to compare the role played by local administration within experimental governance processes in relation to the institutional context. The research highlights that in contexts dominated by solid institutions, the local administrative machine performs vision, facilitation, support, amplification and monitoring functions, as theorized and operationalized by Enqvist and Karvonen (2021). Conversely, in institutionally fragile contexts, it mainly plays a supporting role to the development and implementation of urban experiments conducted by non-institutional actors. In conclusion, the analysis reveals both the accompanying role played by local administration in institutionally fragile contexts and the supplement role of experimental governance processes compared to the deficiencies of the local administrative machinery. Finally, the experimental governance model emerges as a promising approach, characterized by collaboration, flexibility and continuous learning, to address contemporary urban challenges and guide cities towards producing more efficient urban policies that respond to the needs of the population.

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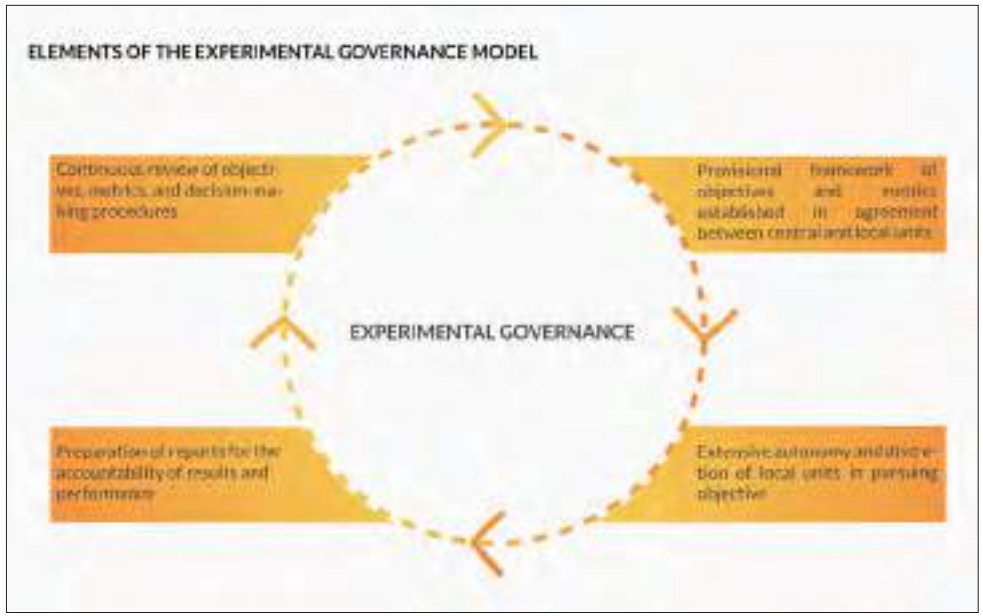

Fig. 1.
Elements of the experimental governance model.

Fig. 2.
Interventions of regeneration, care and maintenance on public green areas in Naples.

Does the design of public spaces foster spatial inclusion?
A survey on six roman squares

*Francesca Paola Mondelli**

Does improved urban quality foster better spatial and social inclusion? This research addresses this question by leveraging the case study of Rome's Centopiazze program – an urban development program launched in the 1990s to enhance social life through the redesign of public squares, parks, and open spaces more generally. Through a qualitative survey methodology based on more than 500 questionnaires fielded during 2021, this work investigates whether local projects aimed at public spaces' redesign and development have an impact on residents' perceived levels of social inclusiveness and life quality. Thus, the research aims to assess the relationship between urban spaces' morphology and the use of public space by residents, and between urban design and the development of local identities.
The questionnaire, fielded during July and October 2021, is articulated in five sections. This brief contribution presents only the results from the survey questions most relevant for the topic at stake. The selection of cases is representative of the different urban contexts which compose the city of Rome, ranging from Piazzas in the historic center (Piazza San Cosimato in Trastevere) to those in the variegated modern suburbs: Largo Agosta (Gordiani), Piazza degli Euganei (Tufello), Piazza Capelvenere (Acilia), Piazza Erasmo Piaggio (Villaggio Breda), Largo Niccolò Cannella (Spinaceto). Due to space constrains, this contribution focuses only on the two most representative cases: Piazza Capelverene and Largo Niccolò Cannella.

The survey questions analyzed in this work pertain to three main issues. The first question aims to assess the extent to which different urban morphologies affect residents' propensity to move by walking and, relatedly, to what extent the neighborhood's morphology translates into residents' perceived livability of the public spaces of proximity. Results indicate that, in neighbors with low population density – Acilia and Spinaceto – around ¾ of residents were most likely to use cars, despite the two areas' different morphology: Acilia features low and isolated buildings while Spinaceto is composed of tall and in-line buildings. In both cases, the open space is dominated by transport infrastructures. This, together with the scarcity of local services, discourages residents to walk.

The second question aims to assess, across the different neighbors, the degree of centrality represented by the square analyzed. All the squares analyzed are located within 15 minutes walking distance from the homes of most respondents. Still, not all the respondents perceived the respective Piazzas as central sites in their neighborhoods. For instance, in the cases of Piazza Capelvenere (Acilia) or Largo Niccolò Cannella (Spinaceto), a substantial (47% Acilia; 45% Spinaceto) share of respondents considered the Piazzas "not at all" or "not very" central.

The third question aspires to assess how residents make use of these public spaces, namely to gauge the intensity and diversity of activities carried out in the Piazza. This is particularly interesting, given that residents' perception of social inclusion is shaped crucially by how residents make use of public spaces. Respondents were asked to choose multiple options among a list of 8 main activities[1]. Based on respondents' selection, I have constructed a 'diversity of uses' index[2]. Results indicated that the Piazzas most frequently used, in the most diverse and inclusive way (different hours of the day, different types of activities) are those embedded within contexts whose urban morphology allows for greater walkability, and where neighborhood services are concentrated.

Overall, findings suggest that the design of public space has little influence on residents' perceptions of centrality. Rather, the neighborhood and the presence of local services

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[1] Individual rest; meeting; eating and drinking; commerce; outdoor sports; walking a pet; playing with children; participating in cultural activities and public events.
[2] This is a value that establishes how many different types of activities are carried out, on average, by the inhabitants in the analyzed square. Tre results are: Acilia 0.6; Spinaceto 0.9; Breda 2; Tufello 1; Gordiani 1.7; Trastevere 2.

appear to have a greater impact on citizens' perception and use of public space. This is most evident in the two cases – Largo Niccolò Cannella and Piazza Capelvenere – that epitomize the weaknesses of an approach centered only on urban design. In both cases, interventions aimed to create new uses and bring elements of architectural quality to the suburbs. In Largo Niccolò Cannella, the design aimed to define spaces configured to fulfill specific functions: an amphitheater area and a playground area, made of durable materials such as brick, travertine, and blackboard. Yet, the space remains unused, degraded, and was perceived by locals as both alien and a non-inclusive element. In Piazza Capelvenere, the square, which is closed on three sides by newly constructed buildings, houses the district's town hall and commercial activities. Peculiar elements were inserted to give an own identity to the square: the undulating blue painted metal canopy, the glass mosaic by artist Pietro Dorazio, and a central fountain. These features, however, far from improving open space quality generated respondents' feeling of abandonment and degradation. In all, therefore, morphology and lack of proximity services determined the interventions' failure, as perceived by the local population.

To conclude, survey results demonstrate that the idea of 'centrality' is not associated with distance or location within the neighbourhood. The design of public space is likely to improve residents' perceived quality of the urban space when interventions take place in contexts with an adequate morphology, and when interventions are supported by the creation of local services on which social life thrives. It is these types of interventions which foster social inclusion and generate proper local centralities.

Fig. 1.
From left to right: Piazza Capelvenere (Acilia); Largo Niccolò Cannella (Spinaceto).

Fig. 2.
The level of centrality of the analysed squares is determined by the four questions whose response rates for each neighborhood are shown in the pie charts.

Art and culture to rediscover the city's spaces, between identity and memory.

Outside the school, to re-appropriate the territory by exploring the city through its monuments and squares

Letizia Montalbano, Graziella Zizzo***

If the common good does not pre-exist but becomes so, there are projects that aim to transform and restore identity to a place and its community through a new awareness. In western Sicily, in a difficult and complex context, a 'treasure hunt' in search of historical and artistic traces becomes valuable and useful for developing emotional reactions through the spaces experienced. The goal is to activate interactions that transform the perception of the environment and the sense of place. Starting from the value of experiences that are placed in a perspective of shared common growth and from the vision of an educational ecosystem, the contribution describes an intergenerational project that promotes knowledge of one's own naturalistic and historical-artistic heritage. This helps fostering a sense of belonging to one's own territory and activates a process of community awakening in which young people become protagonists. It is fundamental, when dealing with common goods, and even more so when administering a territory, to know the problematic nodes of one's own community to intervene with concrete answers to critical issues. If the culture of our time is based on individualism and considers ties only as a limit to one's autonomy and personal fulfillment, the group becomes an appropriate intervention tool to re-establish a virtuous circuit between the individual and the community. This because it can strengthen human relations when the spaces of sharing and belonging are increasingly disappearing.One of the main aims of the 'Wellbeing Promotion' projects, carried out in schools, was to improve relations between classmates, between students and teachers, between parents and teachers. To restore deeply fractured ties that used to unite them for their common educational purpose The experience gained in those projects gave rise to the idea of the 'Castelvetrano da scoprire' (Castelvetrano to discover). This project promotes love for one's artistic heritage in order to foster a sense of belonging to the city. Besides activating a process of awakening in which young people become protagonists. The area interested by this intervention includes Selinunte's Archaeological Park, and the land and buildings of the Aragona-Pignatelli-Cortez' s Family, who governed the city in the XV century. This historical-artistic heritage is in fact unknown to many locals. The philosophy inspiring the Project stems from the belief that enhancing the many natural, artistic and human resources would allow for a cultural change. Changing our gaze, turning it towards beauty and not only to its many critical aspects, can help free us from negative attitudes. In the debate on the mafia phenomenon.On the one hand, the costs that it produces from an economic, political and social point of view have so far been highlighted On the other, it has been less investigated, so far, is how the mafia affects human relationships. They are deteriorated by a destructive streak that prevents the conception of the community dimension. As media crystallise Castelvetrano as the 'capital of the Mafia' , a stereotype that only partially represent it in its becoming and complexity, the function of culture is fundamental: to build a new imaginary by activating virtuous processes and contextually widespreading new skills. To do so, sensitizing the younger generations to learn about the history of the city and its roots and revitalising the historic centre along with its cultural life, through the valuable contribution of students, teachers, and schools, is fundamental. The objective of "Castelvetrano da scoprire' was to recover and enhance one of the city's ancient potentials: that of a City of Art. This is not just a change of image, but something much more radical: enhancing its resources. means revitalising its economy where the mafia is also combated through work and the sustainable recovery of the surrounding environment. Since adolescents are the weakest link in a society that is disintegrating (Morin, 2015), above all they are also the ones who pay the highest price. While searching for their own identity, they experience a fusional relationship with the social context from which they absorb models, myths, values... but it emerges how, also due to the effects of dependence on new technologies, relationships between peers have increasingly deteriorated. The objective of working on relationships becomes a priority in contexts impregnated by the disvalues of "mafiosity" and a weakening of bonds. The ethical and political task then becomes to be a protagonist, an agent of change for one's own community. What emerges from this research is that a starting point is to reactivate relational spaces by finding intervention strategies aimed at consolidating ties and promoting new forms of coexistence, that make people experience the pleasure of meeting and confrontation.

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Fig. 1.
The temple of Hera-Selinus-460-450 B.C. https://parchiarcheologici.regione.sicilia.it/selinunte

Fig. 2.
Guided student historical visit-Castelvetrano square system-XIII Century

Territorial Regeneration of Mondeggi country estate a project of inclusivity and regeneration

*Laura Nanni**

Inclusiveness policies could address, in addition to urban areas, where the greater concentration of population can more easily generate the social, cultural and spatial conflicts, suburban contexts but close to the city, where the problem is the abandonment of agricultural activities in favor of the trend toward suburbanization and the loss of historic landscape values. In the case of the regeneration of the Mondeggi estate, the Metropolitan City of Florence, which is its current owner, has requested and obtained substantial funding from the PNRR fund to implement a comprehensive urban and social regeneration policy: in addition to the establishment of new activities of public interest with a mainly social and cultural background, an illegal situation of squatting of buildings and land by groups of self-managed farmers will be transformed into an opportunity to safeguard the land and agricultural activities. The Mondeggi agricultural estate, founded by the Florentine Bardi family and then passed on to the Della Gherardesca counts and finally, after various changes of ownership, in 1964 to the Province of Florence, now the Metropolitan City, is a historic model of a farm in the Tuscan countryside, comprising the monumental 15th-century manor house, the marvellous Italian-style gardens and the six farms with farmhouses and land covering 170 hectares in the hills south of Florence. The particularity of the estate, which has also made it a symbolic place of the struggles for change towards a more equitable, solidarity-based and ecological society, is however its recent history linked to the 'Mondeggi bene comune' movement that arose around 2013. Initially, a group of farmers and ordinary citizens organised themselves into a committee to oppose the alienation that the province was carrying out on public property after years of neglect. This resulted in the squatting of farmhouses and land with the main intention of garrisoning and then re-inhabiting Mondeggi, settling families and individuals in rural dwellings, restoring crops, mainly olive-growing, practising self-sufficiency in food on the farms, through shared vegetable gardens and small farmyard herds, and finally promoting various initiatives held at the farms to encourage aggregation and participation from outside. The position of the landlord, who denounced the occupation and filed a lawsuit for theft of water and electricity with a claim for compensation, changed radically in 2021, thanks to the materialisation of the PNRR fund. A dialogue was established with the committee and the University of Florence was commissioned to draw up a master-plan to establish the general objectives of Territorial Regeneration[1]. The objectives of the Territorial Regeneration project were shared with the municipal administration through an agreement that coordinates five projects: the maintenance of the unity of the agricultural compendium and of the principality of agricultural activities with respect to those connected with agriculture, also opening spaces for social and social-health associations; the re-functioning of the villa as a multifunctional centre for training and educational activities, but also for guest quarters and a restaurant; finally, guaranteeing the energy and water needs necessary to run the various activities, both agricultural and non-agricultural, through the construction of four water reservoirs and the use of renewable sources. The project is currently in progress, so the results can only be discussed after the completion and installation of the planned functions. The management of the compendium will be the most difficult phase: agricultural activities will be carried out by the same people who currently practice them illegally, social and cultural activities will be carried out by third sector associations selected through public tenders. The occupiers will have to move on from their recently stated position: 'What is happening marks the end of one phase and the opening of another that is far from painless. Its completion will have the effect of reintroducing the institutions into the management of this part of the territory, effectively forcing the experience to come out of a phase of illegality and abandon a model of self-management totally unconstrained by institutional constraints of any kind. The path we have decided to take marks the end of this model to leave room for others to be created and experimented with'.

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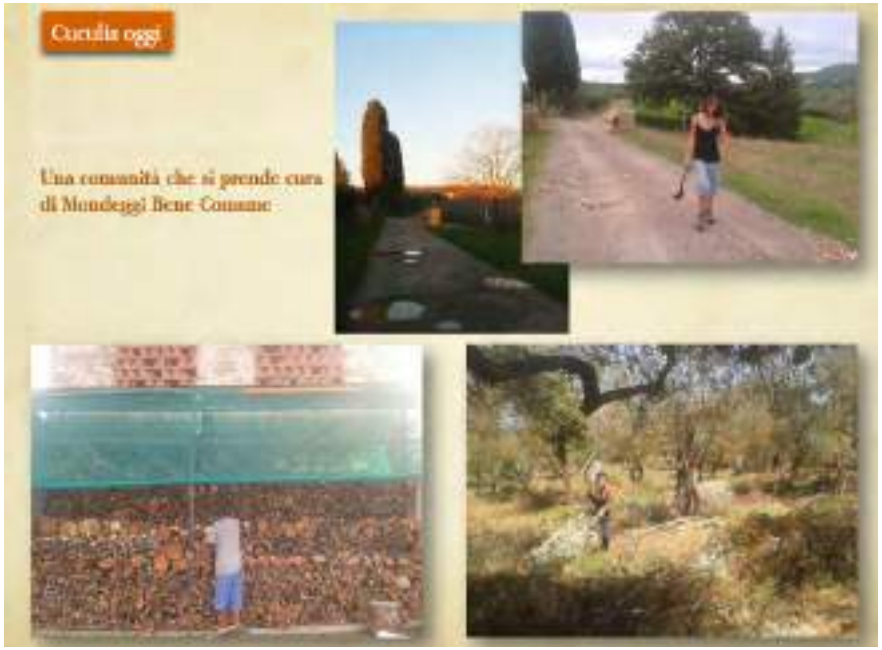
[1] The concept of Territorial Regeneration was introduced in the Tuscan Regional Law no. 65/2014 as a regulatory reference for projects that combine public and private resources and have broader objectives than mere building renovation. In the case of Mondeggi Regeneration, the project is based solely on public investment.



Territorial sustainable regeneration: a case study

Claudia De Biase, Giada Limongi* and Antonetta Napolitano**

The territory of Caserta between urban sprawl and environmental degradation

The so-called "Middle-Italy" represents a glue between Italian metropolitan cities and inner areas. According to Lanzani et al.[1], the "Middle-Italy" is made up of more than half of both the Italian municipalities and the national population. It includes the territories of the economic development of seventies and eighties, of extensive agricultural production and manufacturing industry. Nowadays it is crossed by strong environmental and social fragilities: urban sprawl, land consumption, car-dependent urban development, lack of public services, loss of ecosystem services and more. The plain of the Province of Caserta (Campania Region) has many of these characteristics[2]. The Provincial Territorial Plan (PTP) of Caserta, approved in 2012, recognizes the functional, physical, and environmental degradation of some areas by identifying the so-called "denied areas", i.e. those parts of the territory devoid of territorial functions and marked by evident functional, physical, or environmental degradation[3]. More than ten years after the approval of the Provincial Plan, some of these areas have been regenerated, many are still waiting for a transformation and new denied areas can be identified.

The current state of denied areas in nineteen municipalities in Caserta

This contribution proposes an analysis of the current state of the denied areas identified by the Provincial Plan and new ones of 19 municipalities in the Province of Caserta and a classification by type of transformation based on some specific characteristics of the area and the context. Figure 1 shows the still existing denied areas and the new functions assumed by the already transformed areas. The percentage of denied areas identified by the PTP which have not yet been recovered is less than 25% in Casapesenna, Parete, San Cipriano, and Trentola; between 25 and 50% in Lusciano, San Marcellino, Succivo, and Teverola; more than 50% in the remaining 11 municipalities. About 37% of recovered areas has a residential function, these are mostly small and peri-urban areas, while about 20% of recovered areas has a productive/commercial function and are mostly medium-large areas. Only about 14% of recovered areas has an agricultural function and only 10% have an environmental function. The remaining 19% have a function different from the previous categories or mixed. Over the years, other areas have been progressively abandoned and today present the same characteristics defined by the PTP for denied areas (figure 1). Most of them are small-medium areas located on the edges of compact urban centres, in predominantly residential or agricultural areas, and characterized by environmental and physical degradation.

Defining the vocation for transformation of denied areas: a proposal for a territorial sustainable regeneration

Both for the still denied areas identified by the PTP and the new ones, the main type of degradation (physical, environmental, urban-functional) have been defined together with their potential transformation based on some specific internal (type of denied area and degradation, existing buildings, imperviousness, natural hazards) and external (context functions, accessibility, urban zoning) criteria. For each area the transformability can be residential, environmental, industrial-commercial or for the settlement of territorial services. In the case of areas with vocation for environmental transformation, the predominant criteria are the absence of buildings and sealed soil, the poor accessibility,

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and the possibility of strengthening existing green connections while preserving their ecosystem function. From the synthesis map of the potential transformability assigned to the denied areas (figure 2), a strong environmental vocation emerges in peri-urban areas and along the main transport infrastructures. In the case of areas with a vocation for residential transformation, the predominant criteria are the existence of buildings and sealed soil, the good accessibility, and the proximity to dense urban fabric to ensure completion interventions and avoid urban sprawl. Also, areas closest to urban settlements are more suitable for a residential transformation and may include essential services for residents. In the case of areas with a vocation for industrial-commercial transformation, the predominant criteria are the existing of an industrial-commercial context, the presence of industrial buildings and sealed soil and a good intermodal accessibility. As in the case of residential vocation, the identified areas can be used to host public services serving existing industrial sites. Few areas have been identified as suitable for hosting territorial services. These are medium-large areas, close to urban settlements and with good accessibility.

The analysis of the current state of denied areas, their features, and their vocation for transformation resulted in a GIS database useful both for updating the knowledge framework of the Provincial and Urban Plans, and for supporting the definition of urban and territorial regeneration strategies, the choice of alternatives, and the prioritization of actions. Thanks to the definition of a GIS database, knowledge frameworks are enriched with a repository of spatial data on the current state of denied areas and a tool to enable the setting of strategies and interventions for unlocking the potential of a sustainable revitalization of marginalized and fragile ecosystems.

Fig. 1.
Map of the still existing denied areas and the new functions assumed by the already transformed areas.

Fig. 2.
Map of the potential transformability assigned to the still existing denied areas.

PINQuA|RInaTAPaoloVI-IntegratedProposalforthe regenerationandnaturalizationofthe PaoloVIsuburbof Taranto TherenovationandRe-naturalizationofPiazza dellaLiberazione

Simona Sasso[*]*,Francesca E. Nesca*[**]

Theproject is locatedwithinthearea called"Piazza della Liberazione", in the PaoloVIdistrict, onthenorthern edgeofTaranto.Thedistrict's construction began at the endofthe 60s with a first group ofhouses intendedfor the families ofthe employees oftheItalsidersteelmill(laterILVA).OvertimeitbecamethelargestdistrictofTarantoandcurrentlyhasabout18,000inhabitants.The district, although relatively recent, has its distinctive place in the collective memory of Taranto, precisely because of thecorrelationwiththesteelplant.Suchcorrelationis notonlyvisual,giventherelativephysicalproximityto theindustrialsite,butabove all of a social nature, as the neighbourhood was perceived as a housing settlement for the working class and the officeworkers of ILVA. By interpreting the urban signs and considering the chronology of the development of this part of the city, itappearsclearthatthegrowthofPaoloVItookplacealmostuncontrollably;inthemiddleofacountrysidewherenaturewasoncedeep and uncorrupted, only parts have managed to escaped full anthropization, surviving in a hybrid and ambiguous state.

It is a fragile and problematic neighbourhood, where the sparse urban structure has contributed to creating social distress, in acontextinhabitedmainlybyfamiliesinprecariouseconomicconditions.Thelackofservices,theabsenceofmeetingplaces, theoversized road network compared to the real needs, are just some of the critical issues that characterize the neighbourhood.However, the Paolo VI district presents a series of elements that can contribute to relaunch its development prospects: thehistoricrouteoftheAppianWay,thepropitiousandstrategicpositionwithrespecttotheMarPiccoloandthepresenceofpiecesof architectural heritage typical of Apulian rural construction, garrisons of the productive countryside that once stronglycharacterizedthe local economy andensuredsustenancetolocal families (*masserie,casini, jazzi, muretti a secco* and*tratturelli)*.Theprojectarea,*PiazzadellaLiberazione*,isaso-called*non-place*,consistingoftwolargeasphaltsquares,littlemorethanalargevoidwith no connection with the surroundings, fringed by public housing estates, separatedin themiddle by a roadtrunk, builtover the bed of a watercourse forming part of the local hydrogeological network, which is the cause of recurrent flooding whencopious meteoric events occur. The site is devoid of any element that could encourage meeting and social interaction; In fact,there are no areas equipped for physical or recreational activity, nor equipped green areas.

Oneofthemainobjectivesoftheprojectistopromotesocialinclusionbygivingidentitytothespace,encouragingnewfunctionsandsocialinteraction,promotingreconnectionwiththe neighbouring urbanfabrictoimprovethequalityoflifeofthe residentsand social cohesion, creating safe, accessible places of aggregation and meeting capable of rebuilding the unity of theneighbourhood.Theexpectedoutcomeoftheprojectisinlinewiththebroaderstrategyfortheregenerationandnaturalizationof Paolo VI: reconfiguring the neighbourhood's open public spaces to improve the environmental and landscape quality of thewhole territorial context. The new squares will be characterized by inclusiveness, devoted to aggregation, will accommodate amultipurposesports field,outdoortrainingequipment,pedestrianpathsand publicgardens.Theroadcirculationsystemwillberedesigned with roundabouts, driveways, and cycle paths and a "30 km/h Zone". The restoration of the natural flow of water,thanks to a hydraulic redevelopment intervention, will make the area, homes, and citizens safe from the risk of flooding. Theproject,startingfromacarefulobservationofthedynamicsofappropriationofthespacesandfromthedetectedneedforglobalregeneration, will assign new functions to the spaces: ECOLOGICAL-ENVIRONMENTAL FUNCTION, through the mitigation ofthe effects of degradation and pollution produced by human activities, regulating the microclimate and increasing biodiversity;SOCIALFUNCTION,through thecreationofnewplacesofstaythatwillencouragetheaggregationandsocialityofresidentsandnon-residents; AESTHETIC AND ARCHITECTURAL FUNCTION, through the regeneration of this piece of the city, which isessential to ensure the balance between man-made and natural environment, also from a visual point of view.

Inconclusion,theprojectintendstorestoreacharactertotheplaces,obliteratingthenegativeaspectsandenhancingthepresentandrecognizablelocalassets.Theaimistoimprovethebuiltenvironment,greenareas,publicfacilities,andthehydraulicsafetyof places, to encourage positive social dynamics, aimed at social inclusion, the defusing of harmful collective dynamics and theencouragement of participatory mechanisms of the local residents in public life.

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Fig. 1.
STATEOFTHEPLACES-
PiazzaledellaLiberazione

Fig. 2.
ARCHITECTURALPROJECT-
Generalplanoftheproject

My Neighbourhood, My Street
Promoting active participation of citizens in the management of public spaces in Vila Nova de Gaia

*Cristiana Nóbrega, Margarida Rocha, Catarina Pydzinska Azevedo**

The "My Neighbourhood, My Street" project (originally entitled "Meu Bairro, Minha Rua"), promoted by Vila Nova de Gaia City Council, was first piloted in 2019 and has been a continuous success ever since. The project promotes the involvement and active participation of citizens in the management of public spaces. It integrates two areas of intervention that, although distinct, are inevitably inseparable: the area of material nature, encompassing all physical works in public spaces and the relational nature, promoting social cohesion and creation of bonds of trust between citizens and between them and institutions.
The project aims, in the first phase, to address the lack of active participation of citizens and subsequently introduce a set of institutional dynamics that promote understanding, accepting, and valuing citizen engagement, both, at the level of social development, as well as in terms of support for decision-making and public investment. The project focuses on encouraging the residents and users of the space to value it, simultaneously reinforcing the social dynamics of community involvement. The project applies the "bottom-up" methodology at a territorial microscale (neighbourhood), defining an intervention zone of approx. 1000 households nearby a public school.

The very first neighbourhood that was targeted with this initiative in 2019, as a pilot phase, was 'Quarteirão da Biblioteca Municipal de Gaia'. Considering how positively it was received, further implementation followed in many more neighbourhoods of the municipality, for example, Quebrantões (civil parish of Oliveira do Douro), Cedro (civil parish of Mafamude), António Sérgio (civil parish of Mafamude), Senhora Graça (civil parish of Grijó), S. João (civil parish of Canelas), Espinheiro (civil parish of Canidelo). The City Council has expanded the project to new areas of intervention, based on positive results and growing interest from the leaders of further civil parishes. In 2022 the added value of this initiative by Vila Nova de Gaia City Council was also recognized at the national level, winning the National Sustainability Prize in the category of "Wellbeing and sustainable cities".

The resolution of micro-problems, with great impact on the lives of citizens who use spaces is sometimes more visible than more costly structural interventions and perhaps more generalists. It is from this perspective that numerous benefits of the initiative have been recognized, namely in promoting social development, placemaking and active participation of citizens.

The most consolidated example of the intervention, the library neighbourhood, with a primary school and one of the largest secondary schools in Gaia, is paradigmatic of the relevance of the "My Neighborhood, My Street" methodology and intervention. Despite apparently being a neighbourhood with quality urban development, consulting with residents and users of the public space allowed the identification of a set of high-impact interventions to improve the quality of life of the many thousands of people daily related to the space of the neighbourhood. Corrections were introduced in accessibility, with the creation of ramps on the uneven terrain, garden benches that created new relational and resting spaces, the placement of fitness equipment suitable for all ages, the requalification of the garden and the rehabilitation of an azulejo panel of great identity importance, the introduction of urban art elements as a factor of humanization of the space, the incentive to use the public library, through the creation of a space with garden benches, shade and free wifi at the library entrance.

The project acknowledges the crucial relevance of the involvement of different agents in the territory, be they citizens, institutions or political power. Hence the importance of close collaboration of all different actors linked to a certain territory in identifying problems and designing solutions. Familiarity with local challenges and knowledge of real-

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Fig. 1.
Quarteirão da Biblioteca Municipal de Gaia.

Fig. 2.
Quarteirão da Biblioteca Municipal de Gaia.

ities is greater the greater the proximity and interaction. The methodology applied by the project results in its significant social effect. The dynamics of citizen participation, on an intervention scale directly related to their daily life context, the involvement and adherence of various groups within each neighbourhood (school community, merchants, social and cultural institutions, etc.) as well as the commitment to strengthening relationships between all stakeholders in each micro-territory intervened, contributes to a rebirth of community bonds, of valuing each citizen in their living space, empowerment of people and entities in relation to public services, especially municipal ones, which has allowed remarkable social change. And each local action does not end with the physical intervention in the respective public space. There is clearly a desire to maintain the dynamics of participation, lasting and consistent, with the normalization of citizens' access to municipal services and a better understanding of the role of each person in building a better urban environment, contributing to making the city more liveable and more sustainable. With this project, our Municipality is developing a model of participation and local governance that promotes citizen engagement, enabling the creation of a joint vision of public management and redesign of public spaces.

The role of public space in the relationship between museum and contemporary city: the case of Barcelona

*Manuel Orabona**

Since the post-war period museums have played a crucial role in urban planning, evolving from mere exhibition spaces to key agents in constructing the post-revolutionary identity of the nation-state. The French Revolution marked a turning point, aligning public space, the public museum, and museum visitors in the same direction. The concept of public heritage that emerged during this period laid the foundation for the evolution of museums as custodians of culture accessible to all. Today, museums stand at the heart of global cities, shaping the landscape while simultaneously experiencing symbolic and physical integration with urban fabric. Regeneration processes, often driven by culture as a regenerative force, witness the transformation of heterogeneous urban areas into significant cultural spaces. These processes, sometimes supported by local actors, progressively merge into broader projects, influencing not only the quality of public space but also the economy, infrastructure, and social fabric of the involved areas. In this context, public space assumes a privileged role, becoming a symbol of a dynamic society that, through cultural initiatives, generates positive systemic effects. The museum now acts as a catalyst for urban regeneration. However, what are the necessary conditions to develop a quality public space? In the idea of a powerful cultural space, where the relationship between public space and cultural environment becomes a distinctive element of the entire involved area, a dynamic emerges, emphasizing cohesion between the museum and the city. This approach underlines, in the current context in which museums play an increasingly larger role in urban transformation, the importance of the concept of public space associated with the cultural environment in the definition of open, accessible, and multifunctional places. Iconic projects like Mies van der Rohe's Neue Nationalgalerie in Berlin and the Pompidou Center in Paris go beyond mere exhibition spaces, actively integrating into the surrounding public space, contributing significantly to redefining the museum concept. The museum plays a vital role in urban transformation, fostering unity and identity, reflecting architectural evolution, and embracing diverse perspectives. Barcelona serves as a crucial example in shaping the post-revolutionary modern nation-state. From the 18th-century War of Spanish Succession, the city endured over two centuries of suppression in urban, economic, and social development, initially under Bourbon rule and later during the Franco dictatorship. The turning point occurred in the 19th century with Pla Cerdà and, subsequently, with the transition from Franco's regime to democracy in the late 1970s, leading to unprecedented political, urban, and social growth, profoundly altering the physical landscape of Barcelona. The significance of these transformations is evident in both new constructions and, more prominently, in the establishment of an inventive public area – a tangible symbol of the city's progress. The urban issue in Barcelona has been central since the 1970s, with the Pla General Metropolità of 1976 outlining two crucial objectives: the decongestion of Ciutat Vella and the creation of public spaces and facilities for citizens. Interventions associated with the Olympic period, the gradual recovery of the waterfront, reclamation and revitalization of degraded fabrics, suburban development, new infrastructure provision, and the revitalization policy of public spaces are just some of the themes addressed in the transformation process promoted by public institutions in the last two decades of the 20th century. General improvement in the overall conditions of daily life and the creation of true urban polycentrism were achieved through a complex and articulated investment in urban social capital, ranging from public spaces to collective facilities, from services for citizens to mobility infrastructure. Starting from the Bohigas Plan to the present day, experiments regarding the rethinking and role of public space in urban regeneration have gained incredible centrality, both in theoretical and practical terms. In fact, from the period when Barcelona turned into a laboratory for architectural, urban, and urban planning experiments emerged the well-known 'Modelo Barcelona,' now an international reference model. In this context, the museum has played a crucial role as a device capable of creating synergies and relationships not only with local and national

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entities but with the various realities, large and small, present in Barcelona. The examined museums are in the neighbourhoods of Ciutat Vella and Poblenou, witnessing significant recent physical and social transformations. Each museum represents a unique approach in enhancing the characteristics of the urban context, promoting cultural dimensions, and serving social functions. For instance, the MACBA, with its recognisable architecture, aims to be a reference point for the creation of new economic and social circuits, while the CCM Born focuses on historical memory to preserve the identity of a neighbourhood threatened by micro-criminality. In Poblenou, regeneration efforts, including the project for Plaça de les Glòries Catalanes with Disseny HUB as the gateway to the innovative cultural district, capitalize on the rich industrial heritage of the 18th century. The latter is an integral part of the overall innovative project of @22 Poblenou, contributing to creating an environment that blends industrial history with innovative perspectives of the present.

Exploring the potential of the 15-minute city model in the eastern neighbourhoods of Naples

Maria Federica Palestino, Stefano Cuntò***

We emphasize differences in applying the '15-minute city' model (Moreno et al., 2021) to urban cores or peripheral neighborhoods, depending on socio-spatial features and cultural and heritage values. The feasibility of the 15-minute city, in fact, depends on three socio-spatial dimensions to be considered at the neighborhood level: morphology of urban spaces, residential social structure, and quality and accessibility of facilities.

In southern peripheral urban areas of Italy, especially where public housing prevails, uniformity of social structure, predominant urban poverty, fragility of public actors in managing facilities, and redundancy of large streets making social interaction difficult can dissuade urban livability. The thesis is that, especially under circumstances of extreme instability, the 15-minute city model can offer added value (Manzini 2021) in terms of inclusion. As planners, we must not disregard this opportunity.

Although the public city in Italy is the output of 20th-century European planning culture via the so-called "neighborhood units", which were designed as residential cells with autonomous services for primary education, health, leisure, daily needs, and food supplies, incompleteness or delays in realizing urban equipment make the need for contemporary investments particularly significant. These investments are aimed not only at physical regeneration and technological efficiency of the housing stock but also at updating and managing services through the care, defense, and control of functions and uses. The 15-minute city model, if applied to marginal districts, can therefore be a way to respond to a double challenge: 1. to collaborate in decreasing city traffic flows through mitigation, and 2. to regenerate and enhance urban equipment to turn public services into hubs for community inclusion. This means, depending on the daily, weekly, or seasonal cycles of use, seizing the opportunity to turn the 15-minute city model into a strategy to satisfy pending or emerging needs for improving contemporary living.

The Smart and Sustainable Mobility (SUM) Task Force by the University Federico II of Naples, together with the "I live in Naples" association, aims to test the applicability of the "15-minute neighborhood" to the residential settlements of San Giovanni, Barra, and Ponticelli, which are administered by the sixth Municipality of Naples. A collaborative arena is currently under implementation, in which the efficacy of the 15-minute city model is being measured through the interaction between expert and contextual knowledge by scholars and local politicians/officials. As a SUM partner, the Department of Architecture benefits from the outcomes of previous participatory surveys on the perception of territorial weaknesses and strengths by selected representatives of the local community, who were consulted through active listening and co-design (Palestino et al., 2023; Palestino et al., 2022; Palestino, 2022). As a starting point for the recovery of the eastern residential settlements, the status quo has been challenged by enhancing local mobility and accessibility among neighborhoods that are currently difficult to reach. The thesis is that local communities will benefit from upgraded services and equipment, being encouraged to engage more intensively with the neighborhood. In this framework, further qualitative surveys will be promoted on how to make the most of the 15-minute neighborhood by inquiring about local routines and everyday urban life. The ongoing action-research has identified at least fifteen closed or poorly maintained public services. Considering the size and spatial arrangement of local public services, a few regional or urban services, such as hospitals, parks, and sports complexes, or specialized high schools, are scattered among a large quantity of punctiform neighborhood services. A better territorial order could be achieved by adapting and updating the fifty-eight public schools located in San Giovanni, Barra, and Ponticelli. Connecting schools and public spaces through socio-technical and sustainable infrastructure offers an opportunity to enhance the importance of publicness, making it work as the engine of the 15-minute neighborhood.

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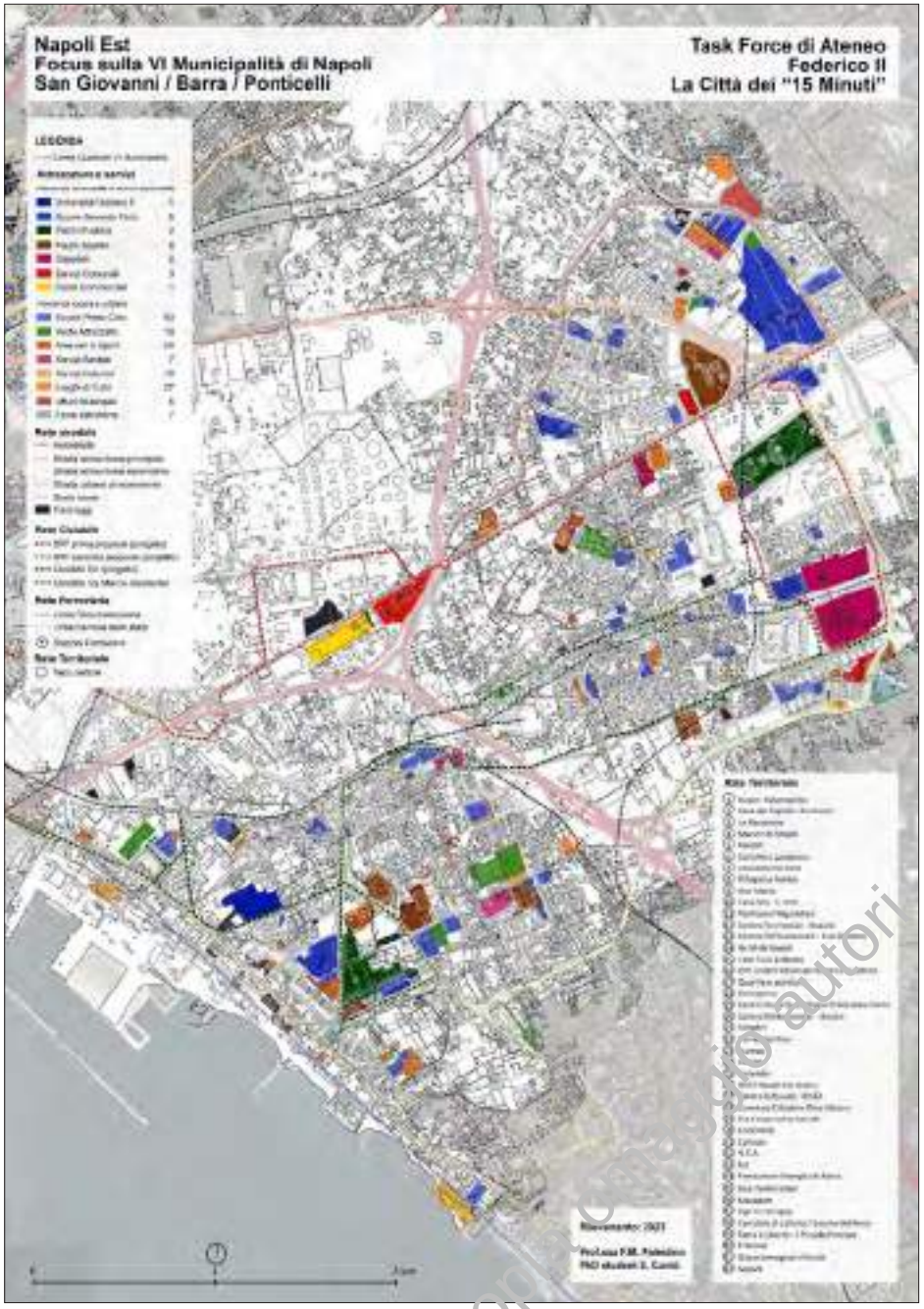

Fig. 1.
Public urban amenities, services and territorial networks in the sixth Municipality of Naples (edited by the authors).

In conclusion, lessons learned from peripheral neighborhoods emphasize how the amount and distribution of public facilities, despite the recurring decline of public services in southern modern settlements, can be turned into strengths on which regenerative urban policies must invest to meet the need for inclusion of marginal communities.

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Co-design public spaces of proximity
The case of Rome's former fair

*Livia Papagni, Leonardo Perna, Manuele Sun, Elena Tablò**

The project, implemented during the Urban Planning and Public Spaces and Proximity Courses of Professor Marichela Sepe at DICEA Sapienza University of Rome, Building Construction and Architectural Engineering Laurea Degree is focused on the renewal of Rome's Former Fair site of 7.8 ha along Via Cristoforo Colombo, established in 1959 and decommissioned in 2007, due to structural obsolescence and financial issues. In April 2006, the new Rome Fair in Ponte Galeria was inaugurated, replacing the old one in its functions, necessitating the old site to undergo urban redevelopment. Upon the disuse of the area, the built-up surface measured 46,500 sqm with 100% impermeable coverage. Therefore, the 2015 Amendment to the PRG envisages the construction of 44,360 sqm for residential purposes (20% of which are allocated for social housing), commercial use and the creation of public green spaces. The primary objective has been to create a new inclusive neighbourhood, achieved through implementing Co-design processes. Examining the issues related to the current state of the area, on October 3, 2022, we conducted an on-site survey to enhance our understanding of the overall situation. Subsequently a meeting was held at Parco della Garbatella with our colleagues, residents and Legambiente Organization, all actively involved in inclusive design and participatory process. Specifically, we utilised the World Café Technique as an effective method to foster informal and constructive conversations on topics concerning the life of an organised community. This approach enabled us to gain insights and engage in discussions regarding specific urban needs. By dividing into thematic groups, we successfully pinpointed the key issues of the area. In particular, it has come to light that:

- In relation to the settlement system, the state of degradation not only affects the site of the Ex-Fiera but more generally the entire neighbourhood. The buildings exhibit a lack of uniformity, characterised by opaque walls that inhibit visual transparency. Furthermore, facilities for essential services are notably sparse. The inadequate valorisation of the historical landmarks results in a lack of neighbourhood identity.
- Considering the environmental system, despite the presence of green spaces in the neighbourhood, they are inadequately equipped and underutilised. The noise pollution originating from C. Colombo is partially mitigated by the presence of trees acting as a buffer. Recreational spaces are in short supply, while the lighting and urban furnishings are deficient. Moreover, the area to the south of the Ex-Fiera is traversed by an underground ditch - the Marrana of Grotta Perfetta - originating from the nearby Tenuta di Tor Marancia and flowing into the Tiber River
- In the domain of infrastructure, the area is featured by significant road networks crucial for Rome's traffic flow. However, their convergence leads to traffic congestion, pollution and unsafe pedestrian crossings. The Municipality of Rome has previously attempted to mitigate these issues by constructing unfortunate underpasses. Both sidewalks and bike lanes are narrow and frequently interrupted. Considering the high population density of the area, the public transportation service falls short of meeting the demand.

Through analysis and debate, we have identified potential solutions for the Ex-Fiera, adhering to the principles of the Proximity Charter (Sepe, 2023). The Charter is an updatable guide consisting of 21 principles for those involved in assessing or implementing proximity, aimed at creating the Proximate City. Time is thus introduced as a factor in urban planning, with the objective of enhancing the daily lives of citizens: a life tailored to human scale that significantly reduces reliance on private vehicle usage, utilising zero-impact public transportation and facilitating access to essential services near residential areas. With the ultimate goal of creating a sustainable multipolar urban layout to bridge the existing service gap between central and peripheral neighbourhoods, the proposed solutions include:

- In response to the needs for social equality and multigenerational inclusivity, we have created Places of Identity Continuity, where services can be accessed within a short

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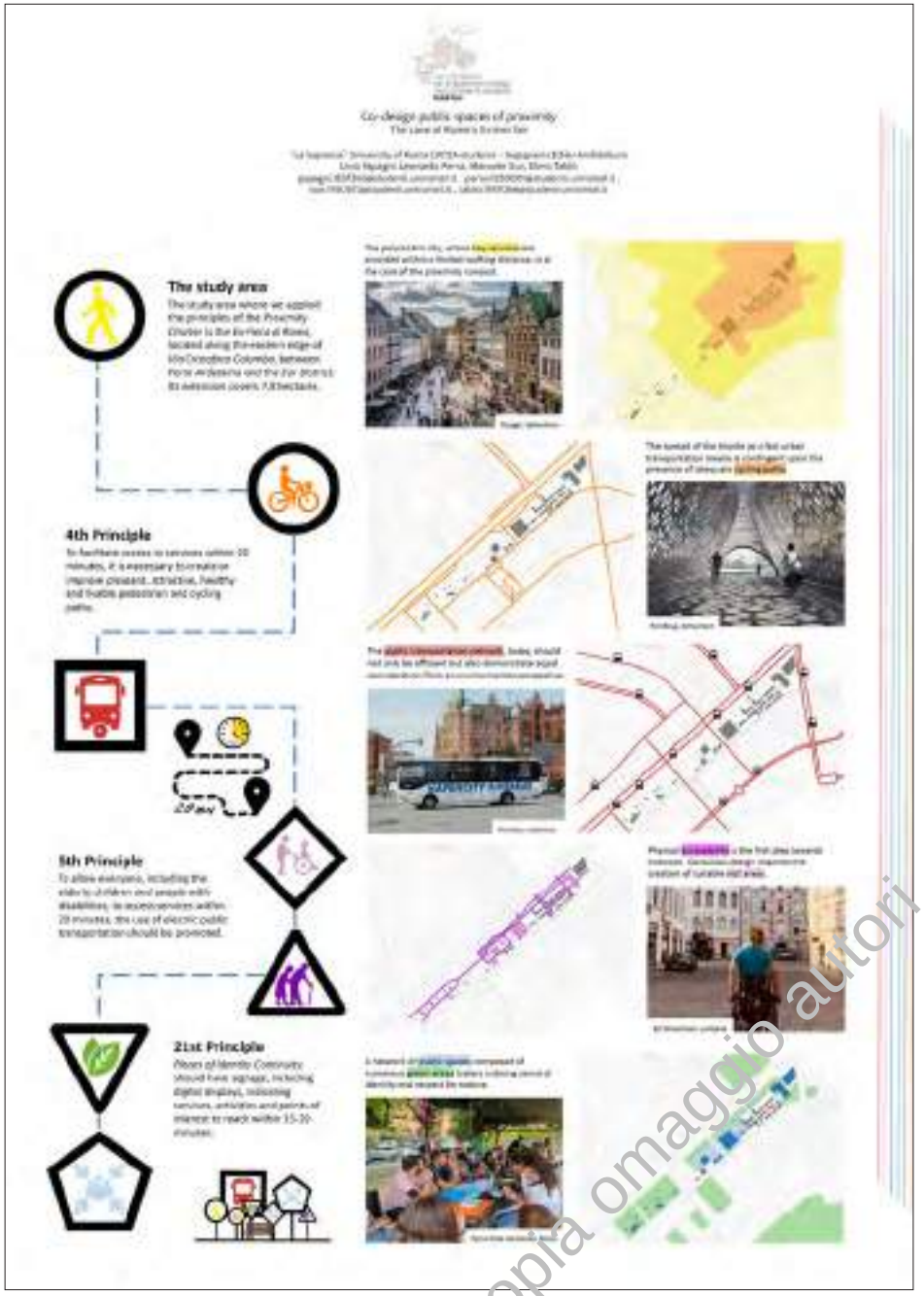
time frame, aligned with the concept of the 15-Minute City. The enhancement of historical landmarks coupled with the establishment of a new centrality has fostered a sense of community.

- The site has undergone refinement with a strategy centred on community gatherings in open spaces, enhancing interaction through the incorporation of flexible green areas across various scales. Access is facilitated by adequate lighting and widespread urban furnishings. Tangible proposals lean to improve the urban microclimate: a green filter along C. Colombo, the revival of the Marrana and a water square.
- The connection between various spaces has been achieved through an extensive network of footpaths and cyclist-friendly lanes. Crossings combined with tactical urban planning strategies and new signage - including digital displays - ensure citizens have complete accessibility to the neighbourhood.

This initiative led to the development of a Master Plan demonstrating both the physical and functional reorganisation showcasing the urban fabric and the connection with services of the area in 15 minutes. On May 26, 2023, the final version of the project was presented at the 2023 Biennial of Public Space, specifically in the Co-designing Proximity session.



Towards a child-friendly city barriers to urban independence for children aged 7-10

*Beata Patuszyńska**

In Poland, similarly to many other countries, the topic of children in urban space, is little present in a social discourse, which mirrors the situation of children in a society. That results in a vicious circle: unfriendly urban space discourages children from using it independently and adults, because they don't see children as users, don't see a need to adapt it to their needs.
Jan Gehl, a Dutch urban planner, once said, that cities were designed for elephants, not for people. While he talked about adults, in my work I decided to examine what impact the overscalling of urban space has on children, who due to the psycho-physical conditions perceive the urban surrounding differently to adults. Therefor I focus on children aged 7-10, which is the age they start urban independence and therefor their perception of the urban space, the pleasures and barriers it brings, is the most vivid.

My project, which I have developed for 6 years, aimed at empowering children in their first steps into urban independence and encourage them to (a) travel independently, (b) find their voice when expressing their needs in urban space and be active participants of society.

It consists of three main elements:

1. research with children, which I performed using the following methods: accompanied travels, conversations, interviews, photographs, observation, workshops. In that part I examined (1) perceptions of urban space by children age 7-10, on several levels: the role played by the city's street furniture and infrastructure (pavements, traffic signals, road junctions, cycle paths, public transport: stops, stations and vehicles); the sharing of the space with adult users; the experiencing of the city as a sensual and sentimental habitat; (2) the barriers to and pleasures derived from independent urban travel.
2. raising awareness of adults: writing articles, speaking during international conferences, writing a blog: cityfochildren.pl, workshops;
3. developing and implementing empowerment tools – scenarios of workshops for children and a book, which I co-wrote for and with children. The book's title is "Urban games" and its creation process assumed participation of children at every level of creation. Children were: (1) models: the narrator is an 7-year-old boy, who is getting ready for urban independence. He shares his experience as well as experience of his school friends and his 10-year-old sister, who already travels on her own; (2) teachers: the book is based on authentic children's stories and experience as well as findings of research I carried with children earlier. The material was extended by conclusions collected during the pandemic; (3) reviewers: I checked with children language and plot I reviewed prototype chapters during workshop. The book is aimed at reading alone or with a carers (ad an aid for adults, who want to support children at this level), still it is also a great complementation of my work, serving as an ice-breaker during the workshop I run with children – children who hear stories of other children can easily identify with them and open up, talking of their own experience. It validates their own experience and feelings.

I perform my work according to my 3L rule (namely: Listen, Learn, Love), which I developed while working with children, but is also a universal rule when it comes to participatory planning and understanding DEI.

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Fig. 1.
Illustration to a book "Urban games" by Marianna Dziemska.

Design for inclusivity
Guidelines for inclusive public space design

Luca Vandini, Annalaura Ciampi, Monica Malori, Enrica Perotti

Within the framework of the new 'PUG' (Piano Urbanistico Generale), the 'Urban general plan', for the Union of Municipalities 'Terre di Pianura' in the Metropolitan City of Bologna, that adopt a sensitive and peculiar approach to territorial and social fragilities, it has been developed a new operative tool for the design of public spaces that has inclusivity as its main goal. The '**Guidelines for inclusivity in public spaces'** is meant to contribute, integrated with other planning instruments, to the improvement the 'SQUEA' (Strategia per la Qualificazione Edilizia ed Ambientale) 'Strategy for Urban and Environmental Qualification' that will address the quality of urban public spaces in the next decades.

The 'Guidelines' is designed to be an operative instrument for the design phase, dedicated both to urban designers and public administration technicians to improve the usability of public spaces of people with different needs and ambitions.

To designer, the 'Guidelines' offers an applicative set of tools to improve the sensibility towards the different needs of people with different physical abilities, cultural backgrounds, gender identities, to the public administration technicians, instead, it offers a framework for the evaluation of the level of inclusiveness.

The 'Guidelines' is composed of 3 tools:

1. **A facsimile of a questionnaire** in 2 parts: one addressed to urban designers to better understand the physical context and the target of potential users; one addressed to potential new users to help to collect their needs and expectations;
2. **A summary of design prompts** to provide a higher level of inclusivity organized by type of sensibility (Physical, Social, Cultural, Inter-age) and type of design elements (Accesses, Paths, Communication, Service facilities, Lights, Surfaces, Green spaces, Activities, Co-design steps);
3. **A collection of intersectional design examples**;

1 - **The facsimile of a questionnaire** provides a framework of queries addressed both to the designer and to the potential user. The first part is dedicated to designer and it aims to help to build a survey on the potential target(s) of the new public space (age, fragility condition, religion, gender, frequency and terms of use) and on the physical actual condition of the place. The second half of the survey framework is dedicated to the potential users, and has to be dispensed to the target previously identified to help to collect its actual conditions and perception of the space to be transformed into public. By the confrontation of the two halves of the survey, designer can have a better and deeper understanding of potential user condition, needs and ambitions.

2- The second tool is a **collection of design prompts**, organized here through a synoptic table with a double order of reading. Horizontally the table shows the four main category of inclusivity (physical, social, cultural and intergenerational) and their subdimensions (mobility, cognitive, perceptive, community based, religious, linguistic, gender based, alders, adolescents, children). Vertically it shows firstly Italian main design mandatory regulation, where existing. Secondly it has been set up a 'level 0' condition, there no peculiar prompts are suggested, but is observed a general non conflictual or discriminatory spatial approach. Then design prompts are organized by 7 typologies of spaces (access, pathways, wayfinding, auxiliary facilities, lighting, surfaces, green areas) plus activities and co-design. For each vertical column and subcategory of inclusivity are so provided specific design prompts.

3 – The last tool of the guidelines is a series of **design examples** that show how to combine together the previously prompts into a coherent and efficient spatial layout able to improve the inclusivity of new public spaces. The design examples are three-dimensional fictional drawings that wants to help designers to prevent from possible conflicts between different inclusive prompts. Another aim of the collection of examples is to visualize to recipient, not a final concrete solution, that are due to designers according with other technical and aesthetical elements, but as sample of potential integration and coherence to develop an inclusivity-oriented approach.

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Reclaim and Exploring New Energy Scenarios for Eastern European Landscapes

*Nicola Petaccia**

The research is aimed to formulate directions and guidelines for regenerating the urban landscape with a smarter, more rational, and sensory urban planning that activates the landscape towards new forms of energy production within the residential neighbourhoods of Eastern Europe.
After the Second World War, two types of modern cities developed in the western and eastern parts of the European continent, generated in contexts profoundly different from social and political perspectives, although inspired by the same urban planning theories. The framework of this study started by analysing the transformations that have occurred rather rapidly in socialist cities during the transition from a centrally planned economy to a market economy[1]. In these cities, which were planned according to socialist logic, creating specific residential fabrics and social structures, we witness rapid changes imposed by ecopolitical modifications that critically influence the transformation of urban spaces.

The transformation of open spaces between the estate neighborhoods in post-socialist cities is particularly important for understanding state/society relations and their changes in post-socialist contexts. Currently, some of these spaces have been reduced, and replaced by many new residential buildings, shopping centres, and unconventional stores, shaping the new post-socialist landscape. Property owners aim to develop high-density projects on their lands. Consequently, public spaces have transformed into semi-public commercial areas located at the periphery. Socialist cities were designed and implemented around the need for cars and road-based public transportation in the last 50 years.

Nowadays neighbourhoods of Eastern Europe offer the opportunity to apply, in a currently neglected landscape, some solutions already tested and introduced in other countries or above all new innovative programs. Today, all communities face a great internal challenge by introducing renewable schemes. It is important to work on long-term programmes to increase energy efficiency and energy savings, but also sustainable production. Indeed, the objective is thus to test some models to promote a shift towards energy autonomy on an urban scale. Some are based on community initiatives, others on public services, and many others on long-term strategic plans to reduce emissions and promote low consumption.

The Kyoto Protocol envisions a near future in which the city transforms into a veritable Carbon Sink[2], with efficient architecture and, most importantly, the introduction of renewable energy source infrastructure where "new... territories of absorption production" also generate a new urban landscape based on sustainability principles. It is valuable to outline a set of recommendations for enhancing the effectiveness of energy policies in the Central and Eastern European countries under study.

The investigation aims to discover fresh paradigms for neighborhoods in contemporary Eastern Europe by implementing green strategies that propel the urban landscape towards innovative forms of energy production.

In the analyzed neighborhoods of Eastern European countries, the presence of infrastructure across the area is evident. Simultaneously, there are expansive natural systems, considered as legacies from past city development. In this urban setting, the objective is to transform ecologically compromised territories to meet renewable energy targets.

These neighborhoods have the potential to achieve full production of renewable energy sources without compromising natural landscapes. This can be realized by strategically

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[1] Andrusz G. D., Harloe M. and Szelenyi I., (1996) Cities After Socialism Urban and Regional Change and Conflict in Post-Socialist Societies, Blackwell in association with the International Journal of Urban and Regional Research, Wiley-Blackwell, New Jersey.

[2] Roger S., Sohngen B., Jagger P., (1998) Carbon Sinks in the Post-Kyoto World in RFF, Climate Issue Brief, Resources for the Future, Washington.

Fig. 1.
Petržalka Neighborhood, Bratislava, Slovakia 2015 (photo by Nicola Petaccia).

distributing the production infrastructure of renewable energy sources widely and integrating it throughout the urbanized territory.

The primary element driving the transformation of the post-socialist scenario is centerer around the concept of sustainable energy production. This transforms into a genuinely new energy territory that, beyond contributing to renewable energy production, introduces a novel paradigm, impacting not only the energy aspect but also the urban and architectural dimensions. It will bring about a transformation in the city's image through the alteration of the urban landscape.

The generation of energy from renewable sources should be strategically distributed across the territory, maximizing the diversity of energy sources. This intentional dispersion must consistently prioritize landscape preservation and harmonious integration into the existing contexts, particularly since the intention is to incorporate these installations into planned urban areas.

The extensive open spaces left by the socialist city provide an opportunity to distribute the infrastructure for renewable energy production throughout the territory. This approach is less damaging to the landscape, garners greater social acceptance, and, from a technical perspective, ensures a secure electrical system that is more stable over time.

Integrating expertise in the circular urban project

Marina Rigillo, Libera Amenta**, Anna Attademo***, Sara Piccirillo****, Rosaria Iodice***** and Federica Paragliola*******

In the current context of climate change and resource depletion, it is becoming increasingly important to provide more inclusive, circular, and sustainable models for the city. The adoption of circular operation strategies is pivotal for implementing an integrated planning approach with the aim of reducing emissions and optimizing the use of resources, influencing both processes and behaviors.

This contribution focuses on the development of short waste supply chains which implements different multidisciplinary perspectives of technical, environmental, social, cultural, and economic aspects in urban regeneration. The experimentation is part of a technical-scientific consultancy developed at the Department of Architecture of the University of Naples Federico II in the framework of the agreement between the Archaeological Park of Pompeii, the School of Specialization in Architectural and Landscape Heritage, and the Department of Architectural Sciences at the University outlines the " Pompei fuori le mura: la città antica, le necropoli, gli accessi moderni, la Buffer zone, i siti minori". [1]

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[1] Si ringrazia il gruppo di ricerca "Pompei fuori le mura: la città antica, le necropoli, gli accessi moderni, la Buffer zone, i siti minori" nell'ambito della Convenzione stipulata tra Parco archeologico di Pompei, diretto dal dott. G. Zuchtriegel, Scuola di Specializzazione in Beni architettonici e del Paesaggio e Dipartimento di Architettura dell'Università degli Studi di Napoli Federico II, resp. Scientifico per il Dipartimento prof. Arch. R. Picone, RUP e resp. Scientifico per il parco archeologico di Pompei ing. V. Calvanese.

Docenti e ricercatori: Libera Amenta, Raffaele Amore, Anna Attademo, Piergiulio Cappelletti, Gianluigi De Martino, Carlo Gasparrini, Gian Piero Lignola, Fabio Mangone, Bianca Gioia Marino, Pasquale Miano, Valeria Pagnini, Stefania Pollone, Andrea Prota, Concetta Rispoli, Michelangelo Russo, Valentina Russo, Anna Terracciano, Luigi Veronese, Mariarosaria Villani.

Collaboratori: Greta Caliendo, Luigi Cappelli, Filippantonio Castagna, Francesca Coppolino, Laura De Riso, Gennaro Di Criscio, Giovanna Ferramosca, Ersilia. Fiore, Davide Galleri, Stefano Guadagno, Sara Iaccarino, Rossella Marena, Iole Nocerino, Annamaria Pellino, Giulia Proto, Annamaria Ragosta, Lia Romano, Francesco Stefano Sammarco, Elena Vitagliano e le studentesse tirocinanti Fabiana Miglio, Federica Ferrandino e Anna Musella per l'acquisizione dei dati.

The study introduces innovative urban regeneration approaches, by addressing identified challenges through transformative modification. From a technical point of view, short waste supply chains provide for a territorial ubiquity that enables waste management at the local level, such as recycling and material reuse facilities, with a focus on flows from construction and demolition activities.

The design approach, based on the concept of closed loop, emphasizes reversibility, reuse, transformation and multifunctionality. The primary goal is to establish an innovative model of archaeological hub by which an alternative approach to use and mobility routes develops unprecedent connections (both physical and cultural) between the diverse and scattered archaeological sites in the wide territory of Naples. Within the research scenario, a number of "Wastecape" areas have been mapped and identified to be transformed in a kind of "opportunity set of places" designed to prevent spatial degradation and land consumption. The area of concern includes public housing complexes because of the higher waste streams they produce from their frequently unstable maintenance conditions and outdated materials. The efficient use of resources and the preservation of urban, architectural, and archaeological heritage are crucial for the regeneration of cities. Material recycling and the reuse of places play a key role in this context. They enable the valorization of existing resources, reduce environmental impacts, and promote cultural and social diversity. These approaches not only contribute to urban sustainability, but also serve as a catalyst for the economic and social revitalization of discarded urban areas.

The study produced a recovery project aims to initiate a new life cycle, fostering social and economic development. Exploring the hypothesis of demolishing small, abandoned buildings, the study also explores the potential of quantifying reusable materials to build alternative mobility routes connecting the different archaeological sites.

This research looks at urban regeneration as a key opportunity to lead toward the creation of more inclusive planning models for an equitable resource distribution, with a focus on the preservation and recycle of built heritage contemporarily to the recycle of neglected landscapes, reducing land consumption. The developed methodologies support current Italian and community policies, contributing to the EU's Second Framework for Action on Circular Economy and aligning with the objectives of goal 11 of the sustainable development agenda Make cities and human settlements inclusive, safe, resilient and sustainable.

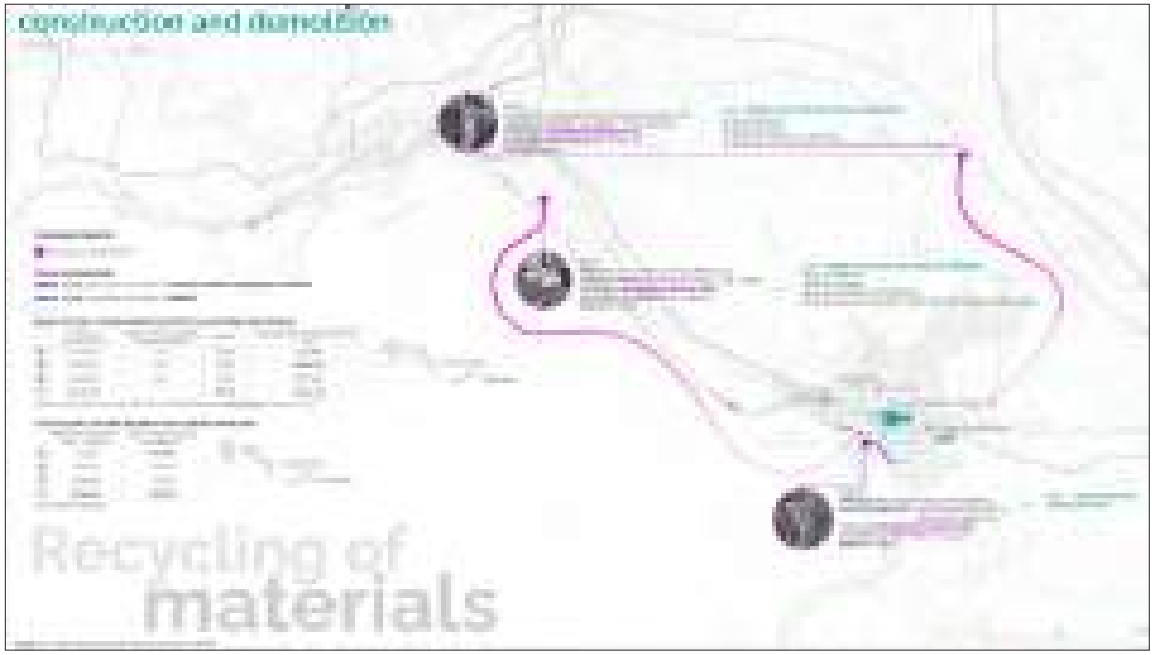

Fig. 1.
Study of operational waste infrastructures located in "Enhancing Pompei" F. Diglio, F. Ferrandino, A. Musella.

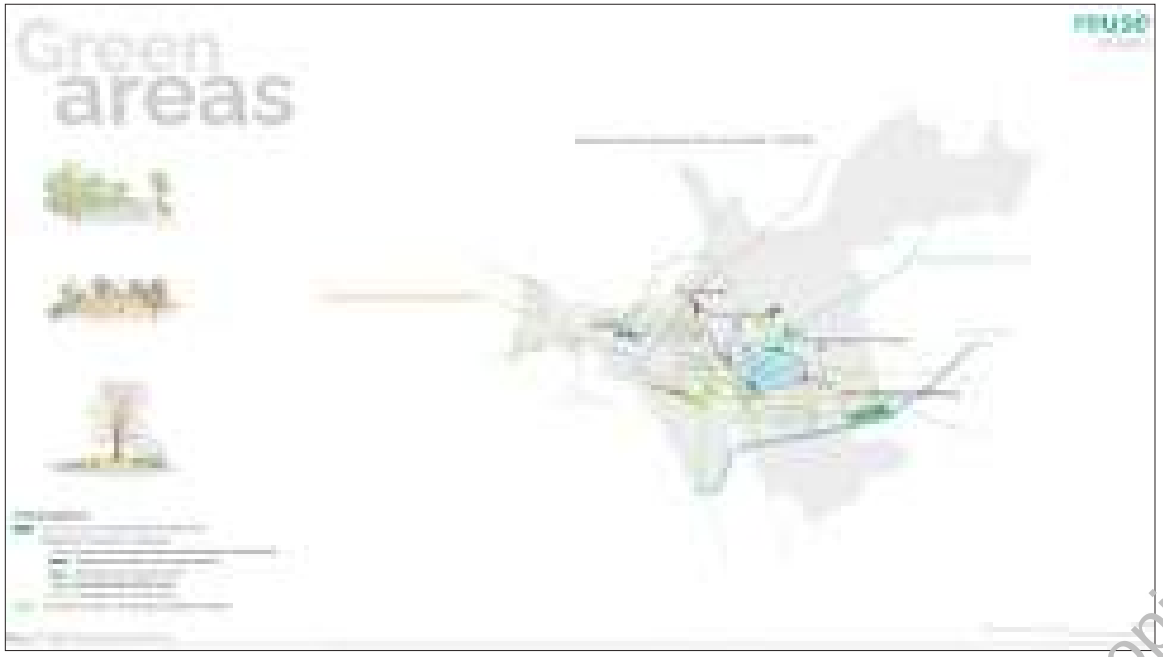

Fig. 2.
Actions and project strategies in "Enhancing Pompei" F. Diglio, F. Ferrandino, A. Musella.

Completion and upgrade of the market and office complex within the framework of the Coordinated Plan for the improvement of the Tamburi district in the city of Taranto

*Simona Sasso, Vincenzo Piccolo, Mariana Recchia**

The urban regeneration project consists in the completion of the existing market and office complex of the Tamburi district and contributes to an extensive effort to upgrade the quality of the public spaces and services in the district.
The Tamburi district, negatively marked by its reputation of urban and social marginality, needs to have decent public spaces and that can encourage meeting, aggregation and cultural dissemination. From this point of view, there is currently a big gap that needs to be filled: the areas in the neighbourhood where the inhabitants can meet and can enjoy comfortable and high-quality open spaces are at present almost non-existent. Rethinking the urban system to restore dignity to the inhabitants of this environmentally and socially fragile area is a priority.

The existing market is located in a fenced area of about 21,700 square meters, positioned at the southwestern end of the district; here a weekly local market takes place. The existing metal roof protecting the outdoor market is made of inclined pitches and staggered modules with a system of opaque and transparent panels supported by 50 concrete pillars.

The northern perimeter of the large square is marked by the presence a building block that houses offices, a cafe, shops and sale stalls. The internal road system runs along the perimeter of area.

The project objective is the creation of a multifunctional open area, partially covered, usable for different kinds of public events, also thanks to a new "stage" area, conceived as a high quality facility and as an urban attractor with social and commercial functions.

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Equally important is the objective of improving accessibility, safety and environmental comfort.

The multipurpose outdoor area will be partially covered with a mixed structure in laminated wood and steel, which, in addition to housing the stalls of the weekly market, will be used for different public events, thanks to the new stage. The new outdoor area will also feature a children playground and it will function as a hub for social aggregation, providing a fully accessible and safe environment. To support the prevailing function, a block of toilets will be built and pedestrian paths will be reorganized.

To complete the existing roof, the new wooden roof on pre-existing pillars is conceived as a sinuous alternation of curves that directly evoke the harmony of waves, in connection with the surrounding sea. The new roof will complement the existing roof, whose severe and cold aspect is reminiscent of the industrial monoculture, highlighting the contrast between the industrial heritage of the city and its aspiration to enhance the local naturalistic and environmental assets as a source for future cultural, tourist and social development.

The project marks a real turning point, a clear signal towards a new season of regeneration, in which the purpose is not only to complete a public infrastructure, but to create a real attractor, not only at the neighbourhood level, but also at the urban level. The idea of transforming a "simple" roof structure into a real metaphor that projects the design strategy beyond functionality.

Steel, which is no longer the only solution, coexists with the materials that nature makes available, leaving room for eco-sustainable wood beams with high durability and aesthetic appeal. The grey colour of the corrugated sheets gives way to the light colours of ecological and reflective sheaths. The industrial-like shed is transformed into the symbol of rebirth, from industrial monoculture to the rediscovered "culture of the sea".

The sun-drenched square and the dilapidated service roads are transformed into a comfortable shaded space in continuity with the green trees of what one day will be the urban forest. The local market will take place in a well-organized and functional space and, beyond the commercial activity, the square with the function of aggregation will be equipped with stalls for parking and playground for children, fenced and equipped with a video surveillance system.

Fig. 1.
Top view of the project.

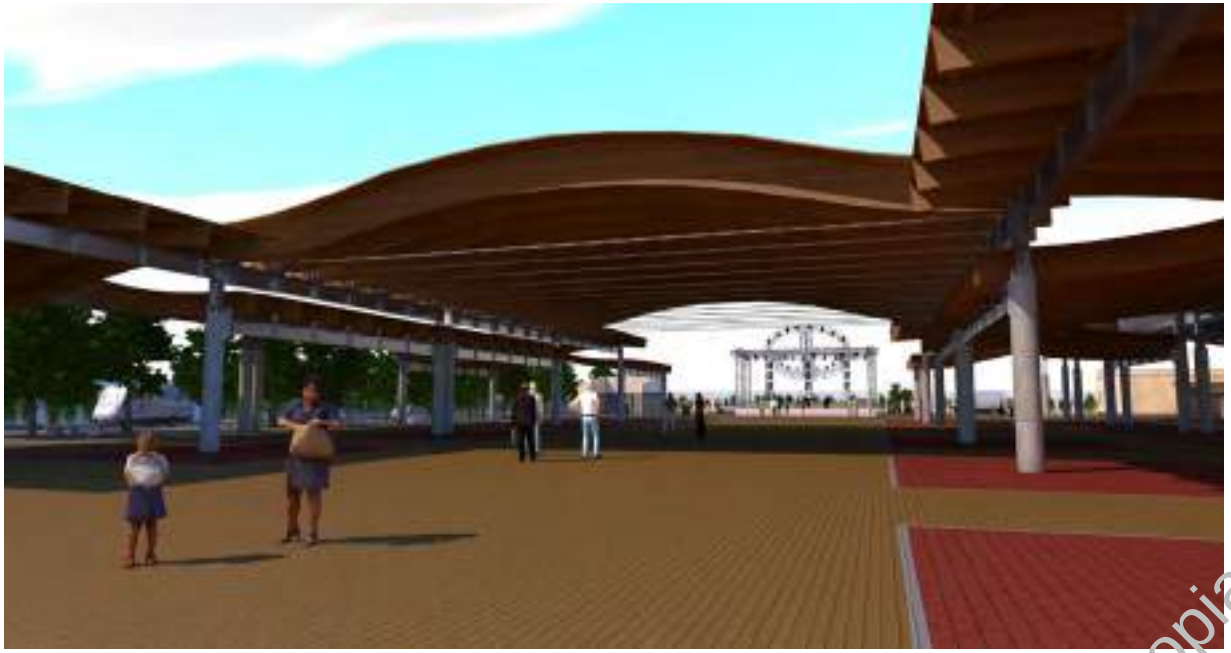

Fig. 2.
View of coverage and stage area
Designer: ing. Simone Mairo, TECHIN s.r.l., geol. Pietro PEPE.

Sustainable regeneration of public spaces for social inclusion in the western part of Santa Maria Capua Vetere

Antonio Acierno, Ivan Pistone***

The contemporary city is characterised by a high degree of complexity in its environmental and socio-economic processes. Its recent evolution has faced problems related to spatial fragmentation and functional transformations: disused industrial and military areas now form large dross landscapes, while urban degradation and illegal neighbourhoods are common in the outskirts. Urban planning should address these fragilities through the design of inclusive community spaces, taking into account environmental aspects and new social needs. The aim of this paper is to explore local regenerative approaches to create an efficient network of services and public spaces, aimed at restoring the peripheral margins of the urban core, implementing the overall ecological quality and community assets. Indeed, sustainable planning can reveal the latent potential of forgotten urban spaces, laying the foundations for the progressive development of new areas for social use to revitalise their spatial context. Multiscalarity thus becomes a possible approach in urban planning to control the structural, long-term and relevant use of territorial resources, also by means of local-scale planning to verify the coherence of choices at the municipal level.

In accordance with these theoretical premises, it is proposed the case of Santa Maria Capua Vetere, a medium-sized town with an ancient cultural heritage that suffers from several socio-environmental criticalities. In order to address these challenges, the planning structure of the city has been calibrated on the definition of multi-scalar actions that will be able to adapt flexibly to the new situations generated by the socio-economic dynamics, taking into account the need to protect the urban centre and the surrounding rural areas, and conceiving transformations based exclusively on urban regeneration. Recent trends in territorial management identify for Santa Maria Capua Vetere a development scenario in which the city becomes a tertiary metropolitan pole, pursuing a compact city model through the definition of a provincial ecological network that develops at the local scale into a capillary pattern of open spaces of various sizes. For this reason, local plans have been proposed for the western part of the municipality, which is currently characterised by brownfields and urban decay, defining a part of the urban green infrastructure and offering various services that are equally accessible to users.

The first regeneration plan concerns the dismissed area known as 'Ex-Italtel', located on the east-west axis of the ancient Appian Way and in direct continuity with outstanding elements of the local cultural heritage. Built in the early 1960s, the industrial estate covers an area of approximately 185,000 square metres, although productive activities ceased at least twenty years ago. The potential for re-use of the site and its buildings is extremely important. In order to pursue the objectives of environmental sustainability and the prevention of land consumption, and with the intention of stimulating socio-economic benefits, it is proposed to initiate a process of redevelopment through a complete spatial reorganisation, the provision of minimum services in accordance with legal requirements, the redesign of open spaces and internal routes, and the functional upgrading of the buildings, into a new productive, commercial and directional centre for the community. At the same time, it is proposed to optimise the viability of the adjacent residential areas, which are currently poorly connected to the main urban fabric.

To the north-west of the Ex-Italtel area, there is a small neighbourhood called 'Cappuccini', originally intended for industrial use: however, during the 1990s and early 2000s, the area developed only a modest presence of fully industrial activities, in favour of small manufacturing and commercial activities and housing. In addition, in the south-eastern part of the city, on the border with the municipality of San Tammaro, there is the area known as 'Campo Sorbo': this small district is made up of single and multi-family houses built over time according to a regular allotment plan; however, the lack of major urbanisation works and underground utility networks has led to a widespread state of decay. In the Cappuccini and Campo Sorbo areas, there are two other local urban regeneration

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projects that aim to improve living comfort, urban safety and the quality of the existing urban fabric, as well as enhancing accessibility for cars, cyclists and pedestrians, while promoting the general environmental and landscape quality, also through the tree system, which mitigates the impact of the built-up areas.

These projects at local level follow the indications of contemporary urban planning, which aims to read and design the urban territory on the basis of a synergic dialogue between green and grey infrastructure, aiming at urban redevelopment and green integration of public space within integrated governance processes, thus becoming a methodological testing ground for sustainable planning at the service of the community.

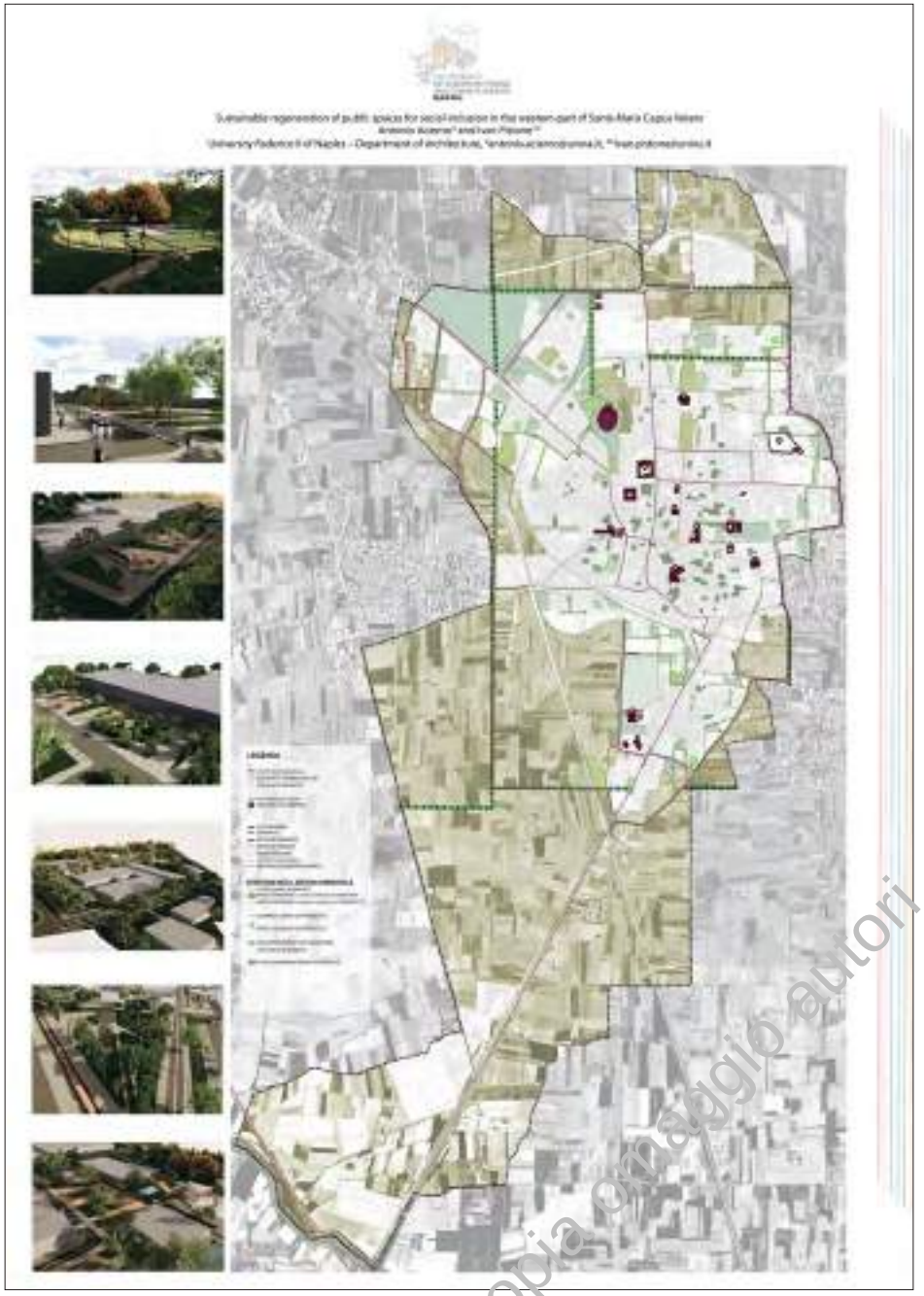

Fig. 1.
Scheme of the main digital outputs from the WAVE Living Lab in Bacoli.

Urban Planning and Design Journals in Europe
A new season?

*Marco Mareggi, Laura Pogliani**

The comparative and cross-cutting review of European urban planning and design journals stems from a growing interest in producing and exchanging knowledge internationally due to the globalisation of the labour market of planners and architects and university exchanges. Nowadays, the crucial point is to investigate the potential of journals to help position national culture internationally and support academic and professional training at higher levels. While respecting different opinions and tendencies and expressing a specific intention of cultural hegemony, journals can construct a common field of discussion in one discipline. This helps to measure the degree of cohesion, the divergencies, and the shared interest in trends, as well as contributes to the exchange, comparing, and learning from others' experiences and suggests future developments and changes. Despite journals being relevant to work in planning, research on their activities, dissemination, and quality is hardly available, except for valuation and ranking[1].
The article proposes a starting reflection on a mainly web-based survey that covers the last decade of a selection of Italian, English and French journals. The selection investigates the list of scientific journals classified A, the highest level for the Italian Agency of University and Research Assessment (Anvur, Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca), a public body supervised by the Ministry for University and Research. Sixty journals have been identified in this list because of their relevance and affinity to the town and country planning and design discipline. Within this group, fifteen are Italian Journals, one is French, and the rest are Anglo-Saxon-based editions.

Journal ranking is not the survey's main criterion since the research intends to highlight areas of interest and recurrent themes and research trends, how questions are dealt with, and the textual and iconographic languages to recognise and propose critical reflections on the prevailing typologies. Accordingly, the analysis pays attention to the presentation, discussion of planning practices and the dissemination forms in the academic and professional spheres. The themes intersect with considerations of the role of public and private stakeholders and the assessment of the quality of recent interventions. Moreover, the interpretations of urban contexts, their large or small-scale transformations, and emerging questions allow for a broader debate beyond European borders.

To test the program, an in-depth survey of three journals was carried out: *Urbanistica*, *Cahiers de la Recherche Architecturale, Urbaine and Paysagère,* and *Journal of Urban Design*. The last two journals publish online texts in French and English. At the same time, *Urbanistica* provides full Italian and English texts in a hard—copy edition with an online version of recent issues.

Urbanistica, founded in 1932, is edited and published twice yearly by the INU Italian National Institute of Urban Planning. It illustrates and discusses exemplary urban plans and projects at diverse territorial and administrative levels, including the emerging topics of environmental issues, climate change, landscape, strategic planning, regeneration, growing and shrinking cities and governance. The Journal composes single articles and thematic sessions, edited by scholars, professionals and civil servants and presents a critical view of planning practices in Italian, European and international cases[2]. It valorises the visual culture of planning tools (drawings, images, photographs) as an integral part of the urban planning and design field.

Cahiers de la Recherche Architecturale, Urbaine and Paysagère, initially developed in the 1970s in French research labs, is now an international open edition journal published twice yearly. Thematic issues characterise the Journal with a few recurrent sections. The

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[1] Goldstein H., Maier G. (2010) The use and valuation of journals in planning scholarship: peer assessment versus impact factors, *Journal of planning education and research* 30(1). p. 66-75.

[2] Astengo G. (1988) La rivista Urbanistica, in Fabbri M, Greco A, *La comunità concreta. Progetto e immagina*, Quaderni della Fondazione Olivetti, Rome, p. 183.

fields of interest include theories of design, planning, architecture and landscape, the project and its design, the materiality of the city and the technical know-how.

Taylor and Francis publish the *Journal of Urban Design* with six annual issues. It includes scholarly articles and special issues mainly focused on townscape identity and character, as well as atmospheres and a sense of place; urban structure and form; sustainable development; urban history, preservation and conservation; urban regeneration; local and regional identity; design control and guidance; property development; practice and implementation.

The first results of the research on the contemporary journals concern three points: *i*) the remarkable growth of references to environmental problems and their impact on planning practice; *ii*) the continuity of considerations about the history of space changes; *iii*) the recurrent structured scientific approaches to describe both practices and research issues. New and revisited subjects and different ways of dissemination (online editions) outline a new season for academic and critical publications.

Inclusivity and public lighting of public spaces at night

*Antonella Radicchi, Dietrich Henckel**

The research study presented in this contribution focuses on inclusivity in public lighting of public spaces at night by making the case for addressing "pedestrian visual diversity", defined as "the condition, capabilities and needs of visually impaired pedestrians" (1). In so doing, it contributes to novel knowledge about an issue overlooked in urban theory, policy and practice, yet affecting an increasing number of the world's population. In fact, visually impaired people have increased by 80% across Europe due to the aging of the population, which is itself projected to increase to 32.2% by 2050 (2).
Against this backdrop, the research identifies three main objectives: 1) highlight the need for a paradigm shift from considering vision as a fixed metric to a variable human characteristic by introducing the concept of "visual diversity" of visually impaired pedestrians; 2) provide guidelines for inclusive design and planning of public lighting through a systematization of data from the literature review and interviews conducted with international experts, 3) elaborate a methodological framework for the development of empirical studies on the perception of public lighting of urban space by visually impaired pedestrians.

Method-wise, the literature was reviewed and semi-structured interviews were conducted with international experts from different disciplines. Given the interdisciplinary nature of the topic, the literature review was extended to different fields such as urban and mobility planning, public lighting planning and design, sociology, health, disability studies and universal design with a focus on visually impaired pedestrians (e.g., see 1, 3-9). Regulations and case studies were mainly consulted in English, Italian and German – a methodological aspect that constitutes a limitation of the present study. Based on the results from the literature review, semi-structured open-ended questions were designed and used to conduct interviews with twenty-one international experts from disciplines related to urban accessibility, health studies, urban and mobility planning, lighting design and representatives of the German and the Italian associations for the blind and visually impaired. The interviewees' contacts were obtained through the literature review, the authors' networks and the application of the snowball method, using the recommendations provided by the interviewees. To analyze the interview data, an inductive approach was applied through qualitative content analysis and coding of the themes that emerged during the interviews (10).

The research produced three main results. Theory-wise, the concept of "visual diversity" was released to acknowledge vision as a variable human trait that should be considered in planning and designing public lighting of urban spaces. Secondly, the research produced guidelines about strategies, approaches and technologies that can be used to support an inclusive approach to public lighting of urban spaces. For example, it is recommended to avoid lack of contrast which would make difficult recognizing people and objects by visually impaired pedestrians (Fig. 1), and to limit glare effects caused by lighting devices located on the ground along pedestrian routes. Thirdly, it's recommended to run place-based experiments with visually impaired pedestrians to produce empirical evidence to inform the production of more inclusive public lighting standards, norms and good practices. To this end, the research proposes the conduction of participatory lightwalks (i.e., experiential walks (11, 12)) with visually impaired pedestrians to carry out perceptual analyses and collect mixed data about public lighting in urban spaces.

Future research developments include i) publication of the manifesto *An Agenda for Inclusive Public Lighting*; ii) participatory pilot studies in public spaces with visually impaired pedestrians to collect perceptual data about public lighting; iii) pilot public space regeneration plans where to test the guidelines for inclusive public lighting.

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Fig. 1.
The image highlights the poor visibility of the pedestrian walking along the pedestrian crossing due to low levels of contrast in public lighting (photograph © Siegrun Appelt).

Integrating Equitable Climate Adaptation into Green Urban Regeneration.

Infrastructural spaces as Inclusive and Nature-based Commons

Alessandro Raffa, Annalisa Percoco***

Climate change impacts are asymmetrical, thus affecting especially those that are already vulnerable and have less resources to adapt. These asymmetries are both internal to cities and urban settlements, where those neighbourhoods historically characterized by disinvestments and their communities are more vulnerable to present and future climate extremes and stressors. They are also geographical: medium and small cities and urban settlements, especially those in marginal contexts, has less capacities and resources to adapt compared, for example, to pioneering metropolis who are leading global efforts to equitably adapt urban environments, thus increasing existing divides. In an urban climate resilience perspective, for example, the inequal distribution and access to green space expose neighbourhoods and communities that are more underserved to stronger direct and indirect impacts compared to communities where there is greater vegetation cover and green spaces. But this inequality, together with other features, affects negatively the resilience of the whole urban system and, if we consider the system of urban settlements on a larger scale, the resilience of a territory. Communities and urban spaces will increasingly experience risks associated with climate extremes and stressor, like air pollutions, heat wave and flooding. But cities are also at the forefront of climate adaptation, showing how we can plan and design to be more prepared and proactively adjust to present or expected future climate impacts and simultaneously addressing equity in urban design and planning. Inside a theoretical framework that explore the connection between equity and adaptation, the green regeneration of infrastructural spaces could play a crucial role in shaping new greener, inclusive and by the end resilient commons. In the last two decades, pioneering cities are transforming infrastructural spaces through the implementation of Nature-based solutions, to equitably adapt to climate change entire part of cities and neighbourhoods and to cope with local asymmetries, i.e., ecological, social and economic, prioritizing those communities and their spaces that had been aside from previous green regenerative efforts and investments. Abandoned, underused or in use infrastructural spaces are transformed into new urban commons and experimental prototypes where pioneering cities are testing planning/design strategies and actions to be replicated and upscaled, enhancing spatial quality, liveability and well-being for all. From a design and planning perspective, the literature search brought out conceptual (principles) and methodological/operational (procedures) gaps concerning the integration of equitable climate adaptation into infrastructure spaces' regeneration via Nature-based solutions. The research[1] moves from the following questions: How to integrate equitable climate adaptation into current green regeneration practices of infrastructural spaces? Which design and planning principles and procedures can support a transformation on grey-infrastructure into blue-green infrastructure as new commons? How to mainstream Nature-based, equitable climate adaption into unequal neighbourhood and urban settlements in a transformative perspective? The research, in order to answer these questions, adopts a qualitative mixed-method strategy, made up of three phases[2] that works together in a circular way: (a) research for design, taking knowledge from other disciplinary fields; research of design (b) in which, through a deductive process, learn from a taxonomy of design and planning case studies which incorporate equitable adaptation into green regeneration of infrastructural spaces; (c) research driven design, apply principles and procedures to specific experimental contexts, characterized by different vulnerabilities, i.e., climate, ecological, social and economic, in order to test and refine them. Concerning phase (b), inside the hermeneutical circle between US and EU, a set of case studies of equitable climate-adaptive green regeneration of infrastructural spaces – diverse for context, also climatic, type, size, etc. – has been selected and compared in order to extract design and planning principles and procedures. Principles and procedures deducted from the case study analysis and comparison will be treated as hypothesis, tested and eventually refined through applicational experiments inside Basilicata region urban environments. The region's urban structure is characterized by a multiplicity of shrinking and vulnerable urban environments and is assumed as a test-bed in order to define a set of space-based guidelines that could operationalize equitable climate adaptation through the nature-based regeneration of infrastructural spaces inside vulnerable context.

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[1] The extended abstract is the result of a shared reflection of the authors. The contribution of Author 1 has been informed by the research Urban Green Shape, funded by PON R&I and FSE REACT EU, (sc.r. I. Macaione). Research Contract38-G-14879-1, CUP C49J21043340001. The investigation has been also nurtured by the research carried by Author 1 as Fulbright Visiting Scholar at University of Florida, DCP, FIBER-Florida Institute for Built Environment Resilience. The contribution of Author 2 has been informed by FEEM Local Projects research for urban and territorial regeneration inside the Basilicata region.

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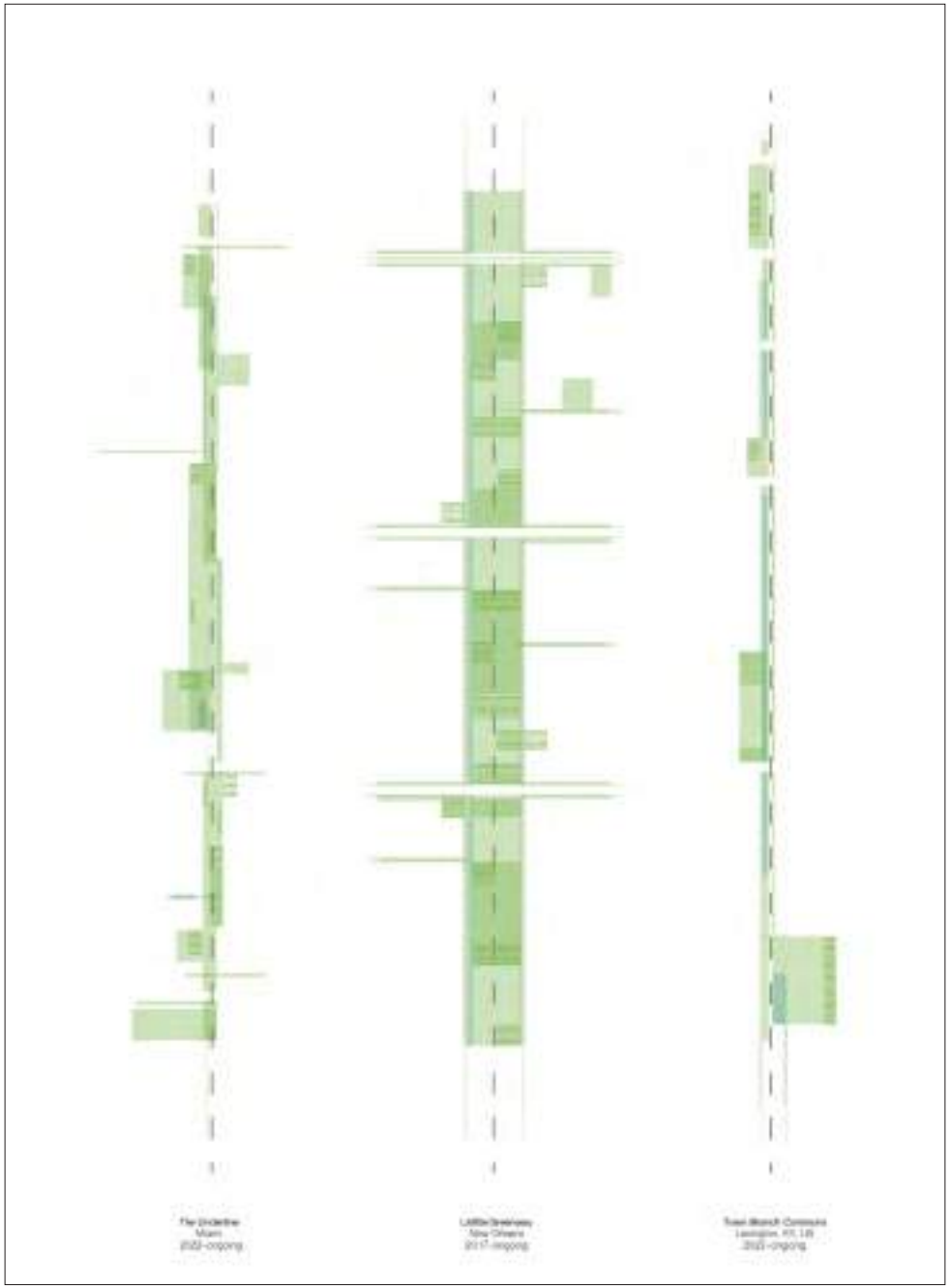

Fig. 1.
Diagrams for green regeneration of infrastructural spaces as new commons via Nature-based solutions.

Redevelopment and upgrade of existing sports facilities within the framework of the Coordinated Plan for the improvement of the Tamburi district

Simona Sasso, Vincenzo Piccolo, Mariana Recchia*

The project consists in the redevelopment of an existing sports area, and it aims at providing the Tamburi district and its sports associations with a new, modern, recognizable and high quality facility. The interdisciplinary approach adopted is aimed at creating a facility that inspires a sense of belonging for the inhabitants of the Tamburi district and guarantees new spaces for different sports.

The project starts from an approach to design that focuses on the needs of the athletes; the design concept then addresses the relationship of the facility with the outdoor spaces and the surroundings, to achieve maximum integration of the new building envelope in its urban context.

The area is currently characterized by the presence of a natural grass playing field, an asphalt track, changing rooms and an area that hosted an indoor field. These sports facilities require complete demolition and reconstruction, as their current condition is very precarious and unsuitable for use.

The surroundings are strongly characterized by the presence of residential buildings and uncultivated grounds, both without any characteristic features. The design proposal is based on a combination of functionality and aesthetics, and it aims at conveying a renewed appeal not only to the sports infrastructure, but also to the surrounding areas.

The redevelopment includes the construction of a multidisciplinary sports facility, through the renovation of the existing football field with the fitting of a new-generation synthetic turf, annexed services, artificial lighting and specialized technical systems, and the construction of a tribune complete with public toilets and spaces for office and general logistics. The redevelopment also entails the construction of an arena for indoor sports, covered with a tensile structure and complete with services, changing rooms and a small grandstand able to accommodate 98 spectators.

The road system and vehicle parking areas will be reconfigured. The new concept of the movement flows and accesses envisages separate access routes for vehicles and pedestrians for both athletes/staff and spectators, in compliance with current regulations and quality standards. The new development will use part of the existing road network, but a portion of the adjacent road will be modified with the creation of a new roundabout, to improve access to the sports facilities. Two public car parks are located to the north and south of the grandstand, while the pedestrian access is near the grandstand. The sports complex is fully fenced and the two main areas (stadium and arena) will be kept separate, to ensure total independence and freedom of use of the facilities.

The project will make the sports centre accessible and inclusive for everyone in all its parts thanks to a careful and targeted design. There will be seats in the grandstand for people with disabilities that will be easily accessible through the access ramps on both sides of the grandstand.

The rear of the stands, serving as main façade of the complex, will be covered with vertical elements that will be repeated on the lining of the block hosting the changing rooms of the football field and of the tensile structure, using natural materials and neutral colours to guarantee integration with the surrounding landscape.

Because of the peculiarity of the project area, a site strongly compromised by the activities of the adjacent steel plant, the refurbishment of the playing field will be carried avoiding excavations. The new field flooring will be fitted above the current soil layer.

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A context located near the sea and a vegetation in which there are many varieties of tree and shrub plants of different species create a highly characteristic scenario that pushed the design to enhance the harmonization of the external spaces to the surrounding landscape.

The project adopts principles of energy efficiency and environmental sustainability, compatible with the conservation and enhancement of the existing environment, with the aim of increasing the sense of belonging of the inhabitants of the neighbourhood and increasing the offer of high-quality services. The new identity of the complex is configured as an aggregation of elements that are related to the natural vocation of the context. The new image of the sports complex "Atleti Azzurri" of Tamburi will give iconic and representative character to the district, with a view to delivering to the community a facility that meets overall quality and safety standards, with the main objective of giving dignity to the abandoned places of the neighbourhood, the regeneration of which represents an absolute priority.

Fig. 1.
View of the grandstand from the field side.

Fig. 2.
View of the outer facade of the grandstand Designer: Progetto CMR Engineering Integrated Services Srl, arch. Palmisano Domenico, arch. Giuseppe De Martino, geol. Mario Alfino.

Urban co-existence
Luigi Cosenza's ex Regional Milk Factory and Cupa Perillo's communities

*Lorenzo Renzullo**

The fragility of sociopolitical ecosystems calls for new adaptation practices that try to resolve the antithesis between individual and collectivity. Many attempts have failed "because man has not been placed at the center of transformation"[1], producing new urban configurations that seek to gain right in the contemporary city. Such configurations are the outcome of an "unresolved" intermediate condition between reconversion and crisis, between formal and informal spaces rooted in complex urban-territorial phenomena. We refer specifically to the process of divestment of multiple industrial complexes that, in the suburban areas of the Municipality of Naples and Caserta, is represented by a huge architectural collection of authors: from Mangiarotti's 1962 Siag factory, to Luigi Cosenza's 1968 Ex Fabbrica del Latte, to Zanuso and Eduardo Vittoria's 1972 Ex Olivetti factory and Gianluigi Ghò Aldo Favininella's 1974 Kodak factory. Such heritage, part of that "category of the existing"[2] in which the architectural project is placed and operates, continues to trigger mutations of the contemporary city and processes of arresting urban growth. In this sense, such industrial artifacts are "waiting stones"[3] or, rather, complex entities that can be rethought in a general design logic that takes into account the interrelationship between context and local communities, and therefore represent an opportunity to experiment with "transformations and modifications"[4]. In the northern area of Naples, between Scampia and Secondigliano, Luigi Cosenza's 1968 former regional milk plant stands at the opposite ends of the better-known Olivetti Factory in Pozzuoli but it iterates some of its principles: in fact, the origin of some of the solutions he adopted is to be found in the "intelligent evaluation" of the conditions of the present in a continuous effort to inspire, rework and overcome the "old" patterns of production places towards a new factory model capable of affecting the modification of urban and peri-urban territories[5]. The building has a cross plan and is divided into a series of factory bodies partly 4.50 m high and partly 7.50 m high, which functionally housed the administrative offices and production departments. The bays have spans of 18 m and rectangular base pillars, beams cast in place using formwork and industrial-type floors. The reasons for the disuse of the complex could refer to the failure review of the road system that, in variance to the indications of the original project, caused its complete segregation fostering, similarly, the establishment of informal settlement "logic" by the Rom community "Cupa Perillo". In fact, in the general report "Intervention on the road system: variant connection Appia-tangenziale di Napoli "of 1985, it is reported as "with the arch. Mario Rispoli and Giancarlo Cosenza, the positioning and proper characteristics of the already planned freeway axis on the western front of the plant (...) were questioned. All previous constraints were called in discussion because they lacked a general unitary project." This drift has led to the construction of fences, which "seem to be the devices to 'secure' urban space and keep others 'out of sight' (...). But when invisibility becomes visible, urban informality becomes a law and order problem. The informal community "is thus associated with the formal and exclusionary character of architecture"[6]. Therefore, the research aimed to prefigure possible scenarios of coexistence between two liminal processes; on the one hand, the divestment of an author's complex and on the other hand, the informality of the contiguous settlement, in order to understand how such heritage could become an integral part of the city again. The removal of physical barriers between the factory, the Cupa Perillo community and the residential neighborhood occurs through new crossing devices. Three main objectives have been pursued: to provide a response to the housing need through the construction of temporary housing consisting of prefabricated

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1 Cosenza, G., Moccia F.D. (1987) Luigi Cosenza, l'opera completa, Celan-Electa, Napoli, cit. p.13.

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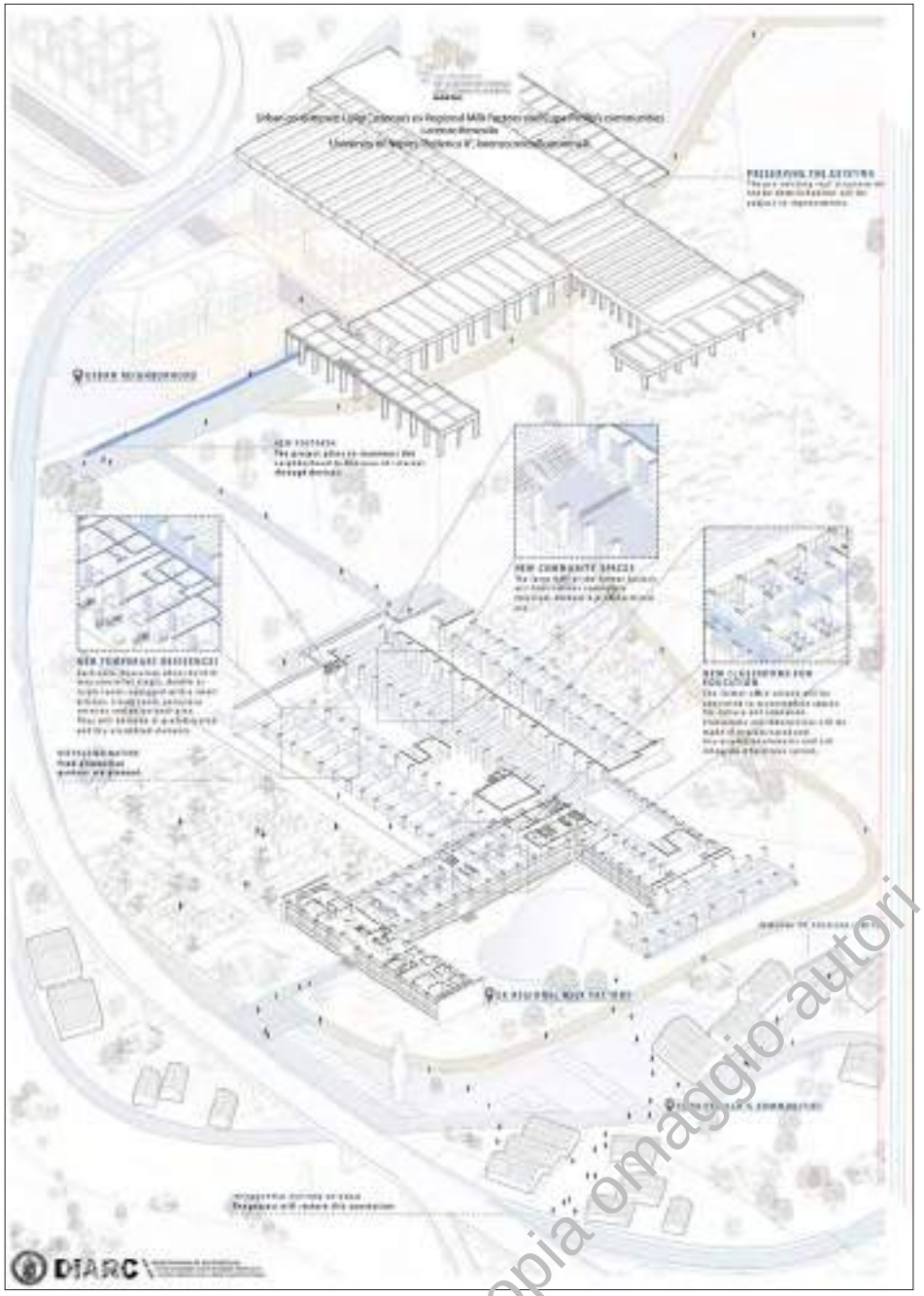
4 Gregotti, V. (1984) Modificazione, in Casabella, n.498-499.

5 Giordano, G., Sorbino N. (2003) Luigi Cosenza: architettura e tecnica, Clean Edizioni, Napoli, cit. pp.7-9.

6 Fierro, M. (2023) Spazi fuori-luogo, in Scienze del Territorio, Ricerche e progetto dei luoghi, Firenze University Press, Firenze, n.2, v.11, pp.42-52.

elements and drywall uprights; to ensure access to safe and quality education through the remodeling of interior spaces; and to increase the presence of community spaces where participation and encounters can be encouraged. These goals will be achieved through gradual and incremental execution mechanisms supported by actions of a decision-making nature, as project cultures have accumulated a normative ideal that is managed and governed by a complex bureaucracy, and therefore the capacity of the contemporary project is to have the principle of indeterminacy as its background. Finally, such a project is not the solution but is a response that offers scenarios for coexistence and integration.



The street: walking and staying

*Leonardo Rignanese**

The variety in the development, history and life cycles of the cities, as well as the transformations they undergo and the rules by which they are built, all prompt the urban designer to keep upgrading their toolbox, in order to make use of the devices most suitable for each problem or the vision specific to these processes, in many cases elaborating new visions of cities: from additions to the foundation of new cities, from the linear city to the garden city, from utopias to futurist cities and, more recently from recovery to redevelopment to urban regeneration. In this, Urbanism, in its being discipline that includes a set of proven practices, techniques and regulations, essentially works by renewing the toolbox.
Periodically, the discipline returns to deal with some "urban material", with their design, rediscovering its design dimension, a step of its tradition that was too soon abandoned. Among these materials, one of the most crucial is the street, the primary space of community life, a place of exchange and conquest, of markets and festivals, of gallows and auto da fé, as well as a matrix of settlement and construction rules. This material "for a long time the mark of distinction of the city, of city life", has been the subject of attacks from several directions that have stripped it of its ancient functions and analyzed in the abstract: the story of a "separation" and a "reduction to pure technical device". The rationalist vision aimed at defining general and universal principles, at finding standard solutions for a typical man in the scenario of a modernization dominated by speed and by the machine have contributed to this impoverishment of the street. The theme of the street, around which has revolved much of the debate and experience of urbanism, is always current. However, even today, after the blunders of the modern, it is still difficult to recapture the meaning of architectural fact and ordering element, to consider this material as the space for standing and walking, two necessary conditions to reuse the city and give meaning to the themes of living, the daily, the proximity, the city of the hour, the public space etc.

The paper's intent is a reflection on the fact that the street is (been) seen through the order of motion rather than movement. The space between two urban fronts has been sliced into space for pedestrians (little) and space for cars (much) divided into lanes for the march, parking spaces. The solution of organizing the different functions on separate levels with elevated pedestrian platforms, vertical paths between the different levels of large architectural structures is somewhat unnatural and a sign of failure. To recover the street means mainly to take back the quota 0,00. The street remains the fundamental place of public space, although many claims to the values of public space refer more to the concept of the square than to that of the street.

In addition, we want to highlight how the use of representation used most to describe the street, the cross section, in its attempt to inform us about the characteristics of the street responds to a vision of the street only as technical infrastructure. The longitudinal section that draws, in the profile, the sequence of the facing facades, the possible continuity or discontinuity of the elevations and the resulting skylines is little used. The cross section, although precise and rich in detail, makes extensive use of vertical or horizontal patterns, to satisfy the need for zoning. It, therefore, is a normalized representation: a simplification and conceptual reduction of the street itself, which responds to an obsessive taxonomic intent. But if it favors "cataloguing" and the comparison does not capture its character, its being or not the *locus* of human communication, it does not express the conditions for a city at eye level. What is drawn is a sliced road, where, at best, even sidewalks are sliced, and NBS is located. Something different is found in the Anglo-Saxon guidelines that deal with providing tools for road design. They are very detailed guides that deal with the topic of the road in its complexity with very few sections, but many views, axonometrics and descriptions; the name of the various types of streets refers to the characters rather than the characteristics, to their urban role rather than to the hierarchical one, to the levels of accessibility it guarantees rather than to mobility.

The paper aims to compare some of these sections and the elements which compose them, with particular attention to the role attributed to the ground floor of the buildings defining the street.

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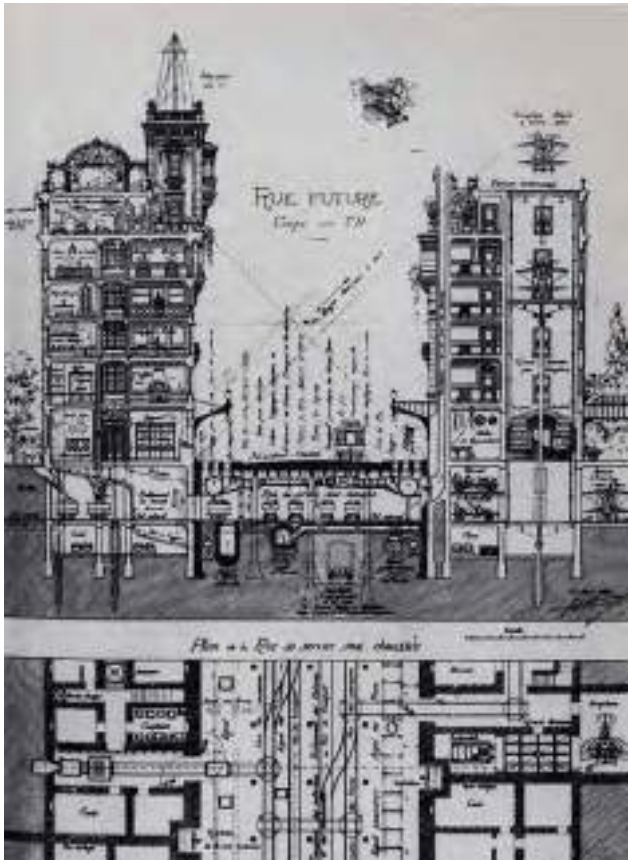

Fig. 1.
Hénard, Future road, 1910.

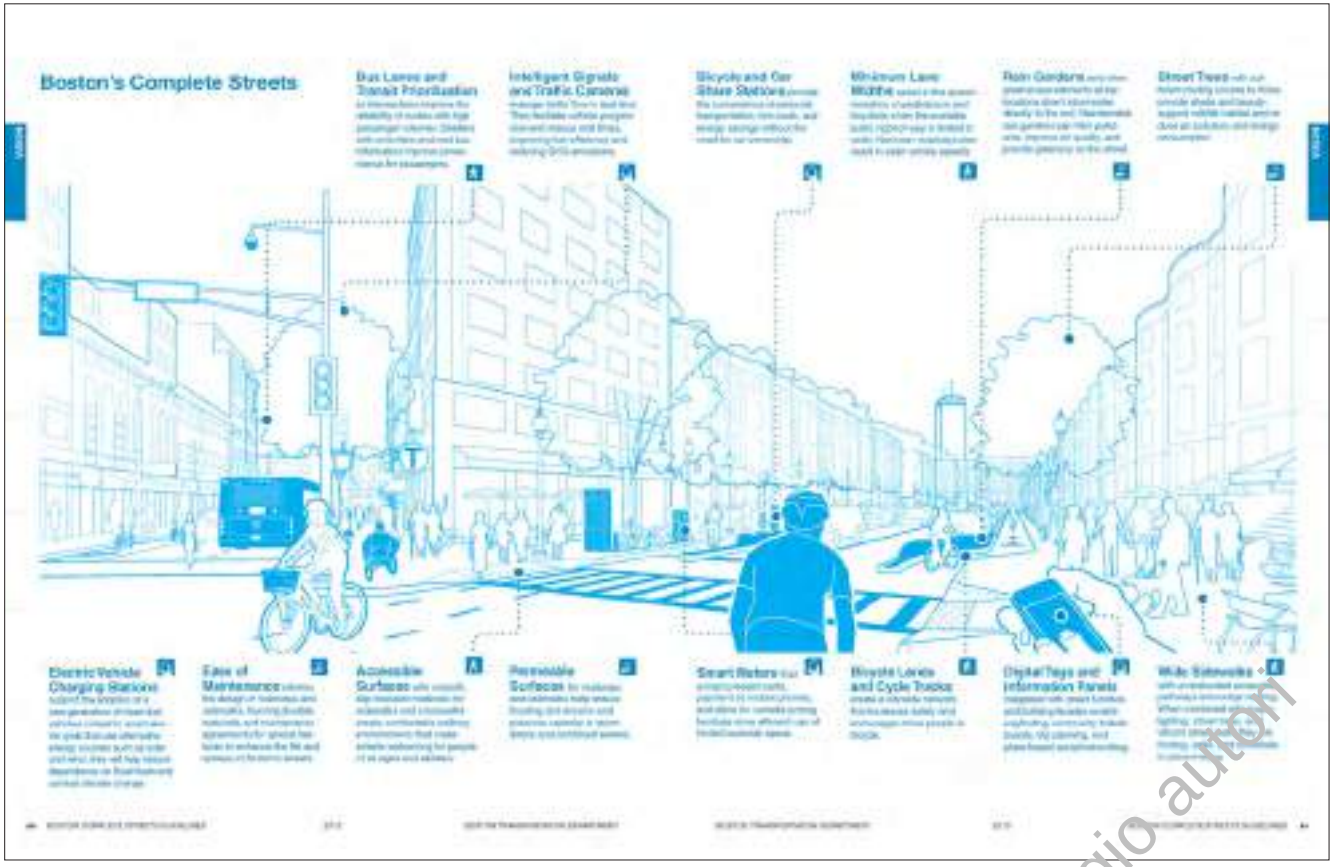

Fig. 2.
Vision, City of Boston, Boston Complete Streets. Design Guidelines, 2013.

Stories of proximity and collective spaces
Design History and urban regeneration of the 'Torrevecchia' neighbourhood in Rome

Flavio Graviglia, Aurora Riviezzo***

This study provides a comprehensive analysis of the Torrevecchia neighborhood (1978-1984) in Rome, focusing on its design process, the realized project and its evolution over time. Part of the broader framework of the ongoing Prin project "Places and stories of proximity: A methodology for the regeneration of collective spaces in modern neighborhoods", Torrevecchia serves as a case study for a multidisciplinary investigation about Italian housing neighborhoods of the second half of the Twentieth Century. The analysis spans between history of architecture, design and urban studies. It explores the potential of re-appropriating abandoned or underutilized collective spaces to improve housing conditions of Italian cities, focusing on a selection of neighborhoods in the different urban contexts of Turin, Rome and Naples. The research methodology is structured into three stages of analysis starting from the historical research to the urban and architectural investigations, including mapping and digital modeling. Central to the project is the exploration of residents' utilization of collective spaces and their potential role in urban regeneration. And, despite encountering challenges during its development, the Torrevecchia neighborhood emerges as a compelling case study for understanding the complexities of contemporary urban planning and the use of collective areas.

In its initial phase, the research contextualized the project of Torrevecchia within the national regulatory framework and local town planning instruments, examining its relationship with involved institutions and professionals. It was conceived as part of an experimentation analysis of housing typologies promoted by Regione Lazio under the provisions of the Law 513, involving a team of renowned Italian practitioners: the architects Pietro Barucci and Lucio Passarelli, and the urbanist Marcello Vittorini, selected as main experts respectively in the field of prefabrication, architectural design, laws testing and enforcement. Their analysis output was documented in the technical manual "Programmi, normative, tipologie per l'edilizia residenziale pubblica" (1978), and it took shape in only one case, that is the Torrevecchia neighborhood.

The attempt to document the district's main changes since its construction until today involved a combination of various sources publicly available, including archival, cartographic, photographic and printed documents. Firstly, archival research conducted at the Pietro Barucci Fund at Archivio Centrale in Rome provided a retrospective observation of the design process, revealing deviations from the original draft. Located in the North-West part of Rome, the design area was defined within the parameters of the first city's Plan 167 (1964), with a variant proposed by the Istituto Autonomo Case Popolari (IACP) in 1978. Initially envisioned for 3600 inhabitants and comprising 5216 rooms across 1074 accommodations, the neighborhood was designed to incorporate various functions, with a non-residential area with public facilities and offices ('R1'), an exclusively residential area ('R2'), schools and educational facilities ('M3'), and a huge public park ('N'). Collective services were dimensioned in accordance with the urban standards introduced in 1968, emphasizing a higher proportion as to serve a larger urban area. However, the realization of these functions was partly hindered by the involvement of various institutions and authorities, such as ENEL and ATAC, which imposed design revisions long before the construction site. The observation of the neighborhood's current condition highlights some discrepancies from the original design idea that altered the whole urban configuration. In addition, public areas and services were only partially realized, or at a later time or in a different location.

The overall organization of the project moved beyond the typology of the 'macrostructure' spread in Italy from the end of Fifties. It comprises three building types. The first, with three floors, establishes an in-line two-way access system from the main road (via

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Torrevecchia) with an internal pedestrian street, only partly realized, and driveways on the sides. Public and commercial facilities were not designed as autonomous nuclei, but integrated into building solutions at the ground floors that were almost completely the object of illegal residential occupation. There are only a few shops today in the district, totally concentrated along the southwest perimeter of the neighborhood that serves mostly a different residential area. On the same side, a school has been realized as part of a different plan, although also identified previously. At the north side, a public square should have housed a multifunctional building for the inhabitants that has been never realized, producing a huge urban void. It is bordered by four fifteen-floor towers that define two main collective green areas on both sides. The pedestrian path from the main front to the square is not completely realized, undermining the internal wheat expected by the project. The larger open space, west oriented, features naturalistic elements and it is today part of an ongoing recovery program to improve its possible uses. On the opposite side, the second area houses sports equipment, fully realized according to the first draft, and today also part of the recovery. Alongside the parks, the third building typology is made of 3 to 5 floor blocks, and it seems to be the best preserved one. This preliminary analysis will help the research unit to lead to some hypotheses to rethink the use of collective in a design participatory process in collaboration with the inhabitants, provided to encourage a redevelopment method for Italian contemporary neighbourhoods.

Environment, landscape, territory and community. Community Projects and River Contracts: taking care of the commons

Paola Rizzuto, Ferdinando Verardi**, Antonio Leone*** and Domenico Passarelli*****

Environment, landscape and territory bring with them the theme of citizens' participation and involvement – in different aggregative forms – in the care of 'common goods' such as water, soil, air, biodiversity and eco-systems. The constitutional reform of 2022, which saw the reformulation of Art. 9) and Art. 41), is part of this scenario. This means attributing to the citizen a role of primary centrality in public life, as well as a new power of initiative with further regard to urban planning and design, and enables the generation of open and inclusive decision-making processes within integrated strategies in the spirit of the Lisbon Treaty. In other words, the opportunity is outlined for the use of instruments of co-planning, co-planning and co-management of common goods in line with the idea of 'open government'. Community Projects (e.g. the Inner Area Strategy, Green Communities, River Contracts, Renewable Energy Communities, Community Cooperatives) are ascribed to practices inspired by the principle of participatory/collaborative governance that enhances forms of consensus-based decision-making processes. With this in mind, a community assumes responsibility for the care, reuse and regeneration of an 'asset' that thus becomes a 'common good' cared for in the general interest. Economists speak of the 'positive externalities' of common goods. Caring for the commons fosters social development by generating 'positive externalities' (mutual trust, sense of 'safety' of places, sense of belonging, awareness and knowledge of places, inclusiveness) that also increases the value of urban and peri-urban physical spaces. In addition to giving rise to functional, ecological, perceptual balances in which town planning is confronted with its own limitations but also with real opportunities for innovation and, at the same time, creates the prerequisites for a new type of local economic development.
Community Projects are the answer to the search for new paradigms and alternative solutions, capable of ensuring innovation and economic growth on the one hand, and social cohesion and security on the other. This is possible because they develop cooperation/collaboration with the involvement of the entire territorial value chain for the spread of a local 'culture' of common goods that regenerates the resources of communities and territories.

Urban and peri-urban areas are often traversed by widespread active citizenship initiatives without much awareness and often in situations of progressive distance from institutions and policy-makers' agendas. Furthermore, there is a need to re-organise 'participation' and to foster the realignment between the public and private parts, in order to promote mechanisms of mutual trust and mutual sense of responsibility of the contexts, bringing the territories and those who live in them back to the centre. Aiming to the growth of a community by taking care of what might be underused or abandoned by activating people with their skills and knowledge. It is a matter of enhancing the local experiences of active citizens for the care of common goods, which from an episodic and fragmentary reality becomes a programme of actions, according to a common vision that experiments with specific policies of shared administration.

In this perspective, 'common goods' such as water, soil, air, biodiversity, ecosystems, well-being (...) assume particular importance.

The public-private partnership is the first form of negotiation between citizens and political-institutional decision-makers. In Community Projects, forms of direct assumption of responsibility by communities and at the same time citizen control and accountability are possible. This is the paradigm of open government which represents the capacity of public administrations to be concretely "transparent" and to be able to listen to and assess the requests coming from outside according to a shared vision based on "voluntariness" and on the idea of the non-exclusive use of natural resources (such as water, for example). A new way, in short, to manage the commons: the way of collective, bottom-up, civic action to control natural resources and, more specifically, to ensure their long-term economic sustainability (Ostrom, 1990).

River Contracts (CoF), in particular, are innovative instruments because they respond to these new paradigms of governance models and integrated projects in which particularly complex needs such as those of the environmental front, territorial safety, redevelopment of a basin, adaptation to climate change, representing an opportunity for the regeneration of river territories. CoFs are open and inclusive participatory processes that take the form of multi-sectoral and multi-scalar agreements characterised by voluntariness and flexibility through the sharing of intentions, commitments and responsibilities among the adhering parties, and conclude with the signing of a formal act of commit-

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ment that defines the specific commitments of the contracting parties.

The challenge is the recognition of River Contracts as tools of aggregation in terms of territorial and social cohesion as well as horizontal subsidiarity, generative of participatory Public Private Partnerships (PPPs), in order to enhance social partnerships and projects involving communities. The expected result is to foster the implementation and strengthening of the practices of Community Projects such as CoFs in order to spread a new culture of water and the environment, oriented towards prevention and resilience along with the idea of ethical citizenship that brings out "common goods" as goods with widespread ownership, as "belonging to everyone and to no one". Not to mention the aesthetic dimension of citizenship, for a new civic education that promotes and practices respect for the common good and well-being and enables territories and landscapes to create a system of alliance-collaboration to bring public policies to a local scale.

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The radical inclusivity of the pattern language approach

*Yodan Rofé**

The pattern language approach has been developed by Christopher Alexander and his collaborators as a tool to radically transform planning, urban design and architecture[1]. It was meant to allow ordinary people to be able to act responsibly and with knowledge in shaping their own living environment. In subsequent work, Alexander strove to find ways in which users could be directly involved in designing and even building their home and community environments[2]. While this objective has transformed over time, and with growing experience of working on projects at various scales, it has never been abandoned. The aim continued to be to reconnect people with their built environment through direct intervention in its shaping.

Various tools were developed over the years, to enable people's direct participation in visioning the future, understanding the site and its problems, and coming to agreement on solutions. These tools are: 'meditative visioning' and 'in-depth interviews' to reveal the deep felt emotions that people have towards their environment, and their hopes for it. 'Feeling' and 'center' maps are used to understand the site, its structure in context, and its strong and weak points. On the basis of the data gathered with these tools a specific project language is created, which allows the users to form a shared understanding of the place. Further study of the local architectural language results in a local 'form language' whose role is to make sure that the project is cognizant and respectful of the local building culture. In this paper we will show the use of these tools in the renovation of a garden of a public institution. The possible adaptation of the tools to larger scales and different contexts will also be discussed.

Most people feel that they are helpless in shaping even their closest public spaces. People also lack a language in which they can transform their dreams and feelings into a tangible reality. The tools developed by Alexander and his colleagues at the Center for Environmental Structure, are further taught and developed by Building Beauty[3]. They are demonstrated in a project carried out at the Sant'Anna Institute in Sorrento, and show that it is possible to overcome these gaps, and give people tools through which they can directly influence the design, and even construction of their public space.

The presentation describes the approach to the site using feeling and center maps, and the interview process with the institute's staff, and other students. The outcome of this predesign stage is the project language which was reviewed and commented on by the school's community. The next stage in the process, is the compilation of the form language, based on a study of other gardens in the vicinity of Sorrento, and the design of the garden – culminating in a large scale model, also reviewed by the community. While the model shows the implementation of the project and form languages in the garden, it is not a design to be mechanically produce. Each project undertaken by the students has to examine its site and context and develop the design and built it based on the students own understanding – and input from the community. The presentation shows the two projects developed over two consecutive years – which follow, but also depart from the original plan for the garden, in response to a stronger understanding of the local conditions.

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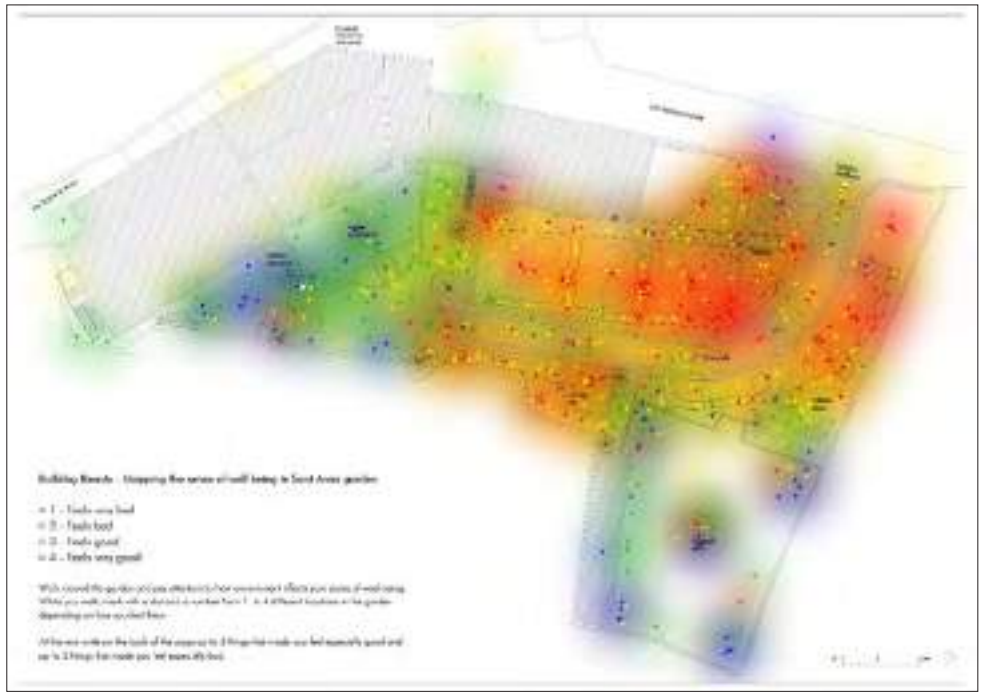

Fig. 1.
Compiled 'Feeling Map' of staff and students of Sant'Anna Institute in Sorrento.

Fig. 2.
The bench built in the institute's garden built by the building Beauty students in 2018.

Making Place
Exploring potentials and limitations of temporary urbanism in Hong Kong

*Francesco Rossini**

How to reconnect people and underutilized public spaces with low-cost architectural interventions? How temporary architectural interventions could promote alternative uses in public open spaces? How to challenge outdated design guidelines and rigid planning rules by using pilot urban projects?

The key questions above were an essential step for the conceptualization of this research/design work. This study aims at reconnecting people and underutilized open spaces by using temporary architectural interventions. In addition to exploring alternative solutions that could positively impact the community, the project seeks to question the rules, limits, and guidelines present in government-managed spaces implemented by using a top-down approach. Hong Kong is a world-class metropolis characterized by an extreme form of vertical urbanism. In this intense urban context, public open spaces are very limited, especially in old urban areas. Furthermore, most of these spaces were created by adopting a rigid, top-down approach by applying standard solutions to a variety of different sites and urban conditions. These valuable but often underutilized open spaces do little to serve residents' needs, as they neither facilitate social interaction nor encourage community activity. The project responds to the need of having high-quality open spaces that can become new gathering places for the people living in this dense urban area by making use of existing but dysfunctional public open spaces.

In the first of three prototypes to be installed in selected public open spaces, we explore how to promote culture in the city by implementing a temporary self-managed community library. The bright red colour and a white geometric pattern used for the project intends to capture the attention of passers-by and invite them to uncover and use a hidden and underutilized pocket space in one of the oldest district of Hong Kong. The wooden structure of the tribune was partially pre-assembled at the School of Architecture (CUHK) and brought in situ where it was built and completed within three days by students, volunteers and local residents. The project consists of a series of steps and platforms that offer a flexible and multiple seating spaces. The concept was inspired by the stairs and ladder streets that are scattered throughout this area of the city and represent an important part of Hong Kong's cultural landscape heritage. On its side, the tribune incorporates a sequence of shelves for storing over 350 titles related to architecture, design, history, philosophy, education, and a wide range of children's books. The library is characterized by a sequence of interlocking shelves that generate a series of set-backs aimed at optimizing the use of space. Aside from providing more rooms to pick up books, this spatial configuration creates an intimate reading area near the existing tree. The idea of transforming the area into a reading space emerged from the various discussions did during the community engagement process. This community library has been self-managed by its users and residents for over six weeks who were invited to swap their preloved books.

According to the data collected, CWLane Reading Space was visited by an average of 37 people per week, a number that is consistently higher compared to the existing non-use of the space. The average time people spent in the space during the weekdays was around 5-10 minutes. At the weekend, however, when the space was mostly visited by families, the average time was around 10/15 minutes. Approximately 34% of visitors use the space for sitting (34%) and book browsing (24%), while a portion of them stay on site to read (8%) there are also people who visit the space without doing anything particular (18%). We also observed the user location within the space, finding that 31% of people still prefer sitting on the existing bench, 28% on the steps, and 15% on the moveable cubes. Data shows that a total of 170 books have been exchanged during the project's six-week implementation. To promote the use of the space, we organized an event called 'Steps Talks' where a number of speakers were invited to present their work to the community. These lectures and discussions were not only a moment of sharing knowledge, but also an opportunity of bringing architectural discourse to the streets.

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This research aims to establish a method to intervene within public spaces that share similar characteristics and urban conditions in order to address their common deficiencies and enhance crucial qualities such as accessibility, comfort and the capacity to facilitate social activities. The cycle of testing and calibrating design interventions outlined in this research will address particular site conditions, community, and regulatory issues, yet at the same time branch out towards a more strategic, city-wide operational proposal. The proposed research is among the first few research endeavours in the field to systematically address these questions.

We are currently working on the development of two other pilot projects that will be completed by June 2024. The overall scope of this research is to provide new places for social interaction, and the impact of each temporary urban design intervention will be measured by using empirical research methods comparing data collected before, during, and after the realization of each project.

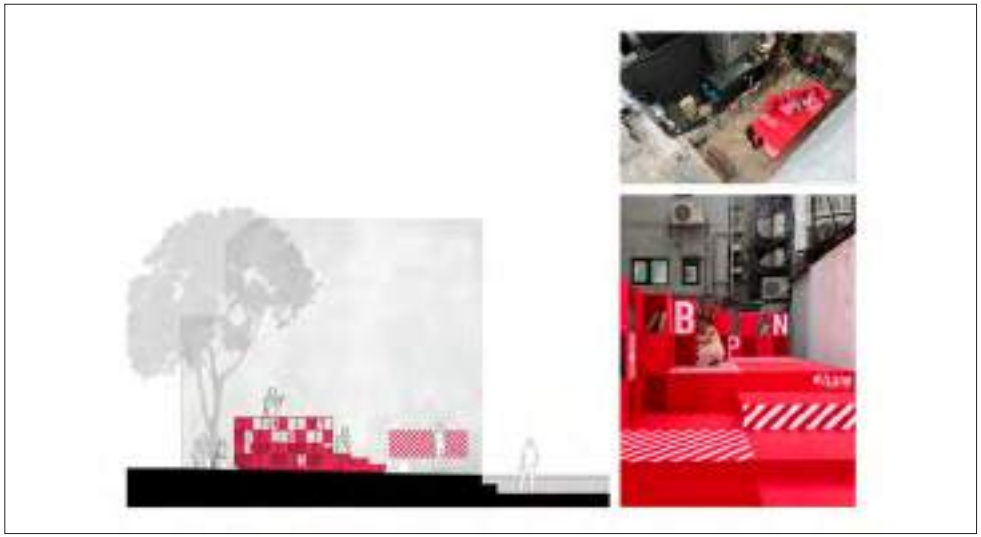

Fig. 1.
Section and people activities observed in CWLane Reading Space
(Source, Francesco Rossini).

Fig. 2.
Axonometric drawing and book lovers exploring CWLane Reading Space (Source, Francesco Rossini).

Living in the City in the Third Age

*Maria Argenti, Anna Bruna Menghini, Francesca Sarno**

The changing demographic composition of our country – childless couples, families with a single child (including single-parent), elderly individuals living alone in advanced age, and "young" healthy seniors – is increasingly evident in both urban and suburban settings, with slight differences between the North, Central, and Southern regions of Italy.

The Istat Report 'Previsioni della popolazione residente e delle famiglie | base 1/1/2021', released in September 2022, clearly hints at the challenges that lie ahead. These challenges will need to be addressed, even in the fields of architecture and urban planning, by acting promptly with a circular approach aimed at harmonizing the needs of the young, adults, and the elderly. This approach is essential for managing the inevitable intergenerational imbalance that is emerging today.

The reduction in the resident population, the increase in life expectancy, and consequently, the growing number of elderly individuals will result in people aged 65 and older reaching 34.9% of the population by 2050, compared to 23.5% in 2021.

Aligned with the objectives of Age-IT, a national partnership funded under the National Recovery and Resilience Plan (PNRR) dedicated to addressing the challenges of aging, it is necessary to reflect on how to regenerate our cities. This reflection should follow inclusive principles aimed at defining new models of living and housing in old age. In this perspective, urban areas, where the elderly population is often victims of social marginalization, must serve as the starting point for the definition of an inclusive system that responds to new needs. This approach should aim to alleviate the specter of loneliness and community exclusion for this population.

While the progression of old age necessitates reflection on care-related facilities, a better quality of life, fueled by healthy and active aging, can enable elderly individuals to take on increasingly dynamic roles in society and thus represent a valuable resource. The various stakeholders involved in rethinking the established urban model are converging on the idea that the best response lies in the definition and construction of intergenerational communities: sustainable entities structured with a mix of housing and shared services capable of catering to the different stages of life. These are the future neighborhoods envisioned by NORD Architects (Denmark) and the Housing Learning and Improvement Network (England, Wales, and Scotland); it's what the University of Tokyo is experimenting with through the Kashiwa-Toyoshikidai Projects for Enabling Age-friendly Communities. Therefore, it is necessary to define a new city-system and establish flexible and widespread multipolarity for aging within the urban context. Such intervention, in the realm of architecture, opens the possibility for multiple actions: interventions on housing stock, as well as the redevelopment of underutilized or disused buildings to be repurposed as day centers.

A capital age-friendly?

The idea of the day center, as a hub attracting and catalyzing social interaction, has recently found concrete expression in the intentions of Rome Capital, whose effective implementation is highly desirable. In fact, it was in May 2023 that the Assembly of Capital approved the 'Regolamento per il funzionamento delle case sociali delle persone anziane e del quartiere' (CSAQ), as a local public service that will lead to the overcoming of the more traditional elderly centers. Focused not on care practices, but on the principles of participation, self-realization, and protection of the dignity of the elderly person, the CSAQ aim to stimulate social, cultural, and recreational life in old age, thus ensuring a healthy aging process within one's own territorial and relational context.

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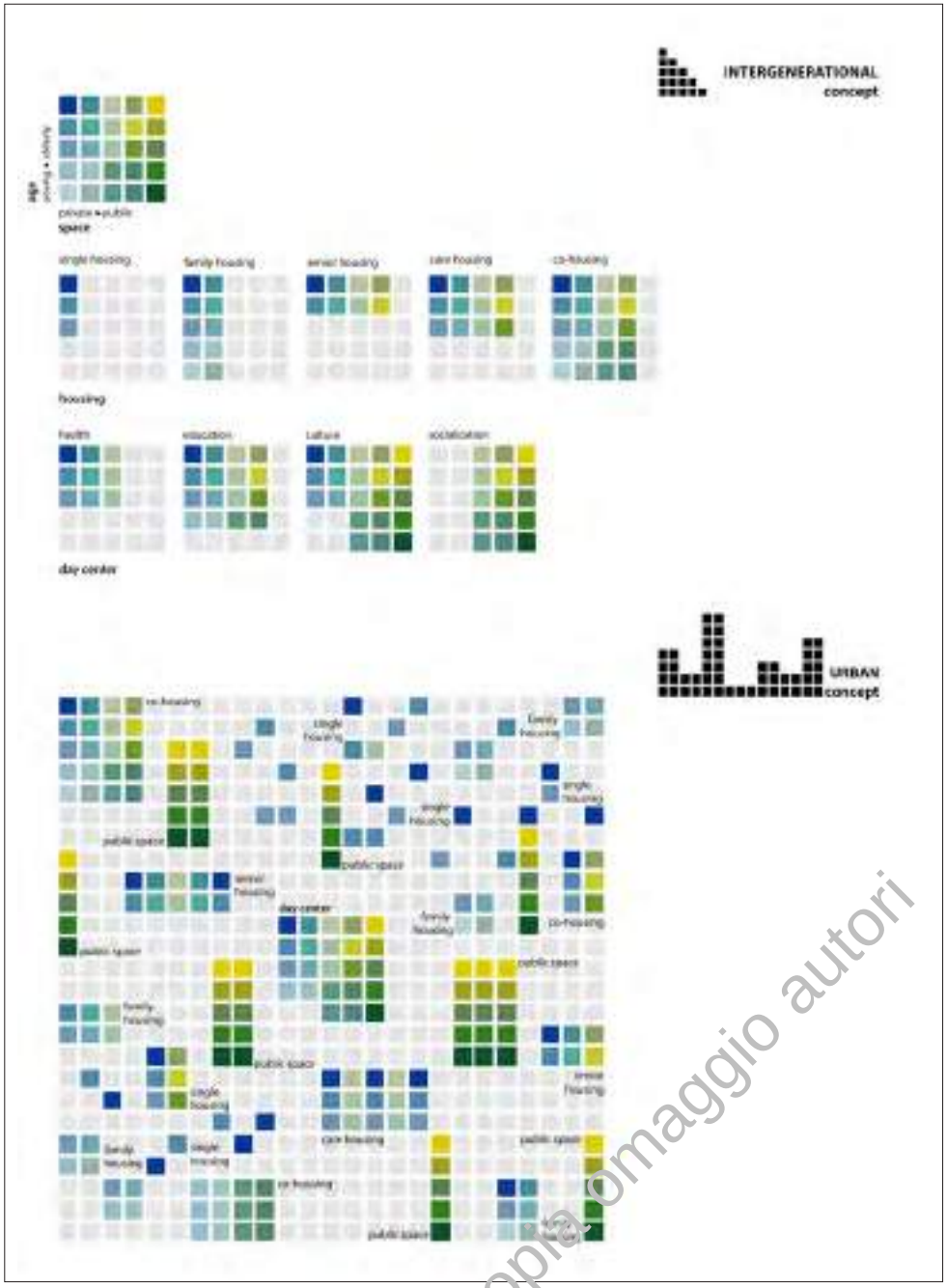
Fig. 1.
Intergenerational and urban concept. Graphic design F. Sarno



The European Model

Today, Rome is initiating a project to rethink spaces dedicated to the psycho-physical well-being of the elderly and their active presence within the urban-social fabric, a concept already established in many European countries such as Spain and Portugal. These countries, like ours, are experiencing a significant increase in the average age of the population. In these countries, two main types of day centers can be observed.

On one hand, these places aim to stimulate elderly individuals with cognitive impairments, in order to prevent the worsening of the disease and total social isolation. On the other hand, the day center can assume a cultural and recreational role within the community: elderly individuals are engaged in daily activities, promoting exchange and interaction, allowing for free spatial appropriation without a rigid and predefined functional division.

From the analysis of numerous case studies of both types, it has been found that unfortunately, such centers – many of which are newly built – are often located on the outskirts of established urban areas or "on the suburb of the suburb". Historic city centers rarely host these facilities, and experiments in existing buildings are also rare.

The challenge for Europe now is to consider day centers – both care-oriented and recreational – as an integrated system within the city, distributed like other essential social services, as they are indispensable for individual well-being. They should be envisioned as neighborhood hubs capable of supporting self-sufficient elderly individuals, even remotely, and enhancing their participation in community life, in line with the goals of the Agenda 2030 and the National Recovery and Resilience Plan.

STEP UP - Walkability for Women in Milan

A Data-driven Approach to Assess the Level of Walkability for Women

Rawad Choubassi, Lamia Abdelfattah, Andrea Gorrini, Federico Messa, Lily Scarponi, Catalina Valenzuela, Gerardo Carpentieri, Carmen Guida, Valerio Martinelli, Tonia Stiuso, Floriana Zucaro**, Florencia Natalia Andreola, Laura Da Re, Azzurra Muzzonigro***, Carlos Cañas, Eleonora Gargiulo, Jim Walker*****

This contribution is part of the research project "STEP UP - Walkability for Women in Milan" (funded by Fondazione Cariplo, Grant No. 2022-1643), involving Transform Transport, TeMA Lab - Laboratory of Territory, Mobility and Environment, Sex and the City, and Walk21. Advanced urban and transport planning activities are shifting towards sustainable urban mobility solutions, with a focus on walkability (Speck, 2013), namely referring to how friendly the urban environment is for walking. Women experience the city differently than men, mainly because they are more concerned with safety issues related to aggression and harassment.

The STEP UP research project evaluates the elements that affect women's level of walkability based on the perceived safety at night, in the city of Milan. By means of data-driven techniques and an intersectional approach, the project collected and analysed four main data sets: location-based data, Wher app data, online survey and focus groups. The project was divided into phases: an initial literature review confirming the key role of safety and perception of safety in gender walkability (Scarponi et al., 2023); the collection of relevant data through differentiated methods (e.g., app, geo-localized data, online survey questionnaires, focus groups, etc.), and the analysis of such data as a benchmark for the development of design guidelines for public space, in order to support local decision-makers in the urban planning process.

The data collected was divided into four main data sets: location-based data, online survey, focus groups and Wher app data, a route planner application operated by Walk21 Foundation, aimed at collecting geo-localized data about women's perceived level of safety while walking in urban areas. These data sets provided both quantitative and qualitative data, equally important in the process of understanding a complex phenomenon such as perception of safety. The management and integration of these datasets were carried out through an intersectional approach, in order to evaluate existing biases and contribute to a more complete and accurate understanding of urban safety dynamics.

The data analysis was developed in two main outcomes: the first strongly connected to the city of Milan as revealed through the analysis of georeferenced ratings on the Wher app; the second outcome, more widespread and more easily exportable to different contexts, regards the influence of urban features and the socio-economic status on perception of safety while walking at night.

The first main outcome helped to identify challenging areas of Milan, which could benefit from further investigation and direct intervention to enhance safety perception. The analysis, done through GIS-Geographic Information Systems, was able to categorize areas of the city based on their relation with three indicators deemed significant and reliable by a Geographically Weighted Regression (GWR) Model (Brunsdson et al., 1996), namely: public lighting, frequency of surface public transport service at night and presence of food and drinks destinations. These 3 factors were selected from a full list of 19 safety factors identified during the Literature Review, on the basis of a multi-step methodology carefully designed to give an updated, fine-grained and spatially consistent picture of the city.

This enabled a further analysis to determine areas of the city that could benefit from improvements with respect to these three indicators, and which is defined as any area in which the value of the predicted safety score is less than 2.2 (where 1 is negative; 2 is neutral and 3 is positive), and with a local R2 higher than 0.7. This selection is meant to include areas that could benefit from improvement according to the model and that are reliable according to the model diagnostics, and include about 60% of the streets of Milan.

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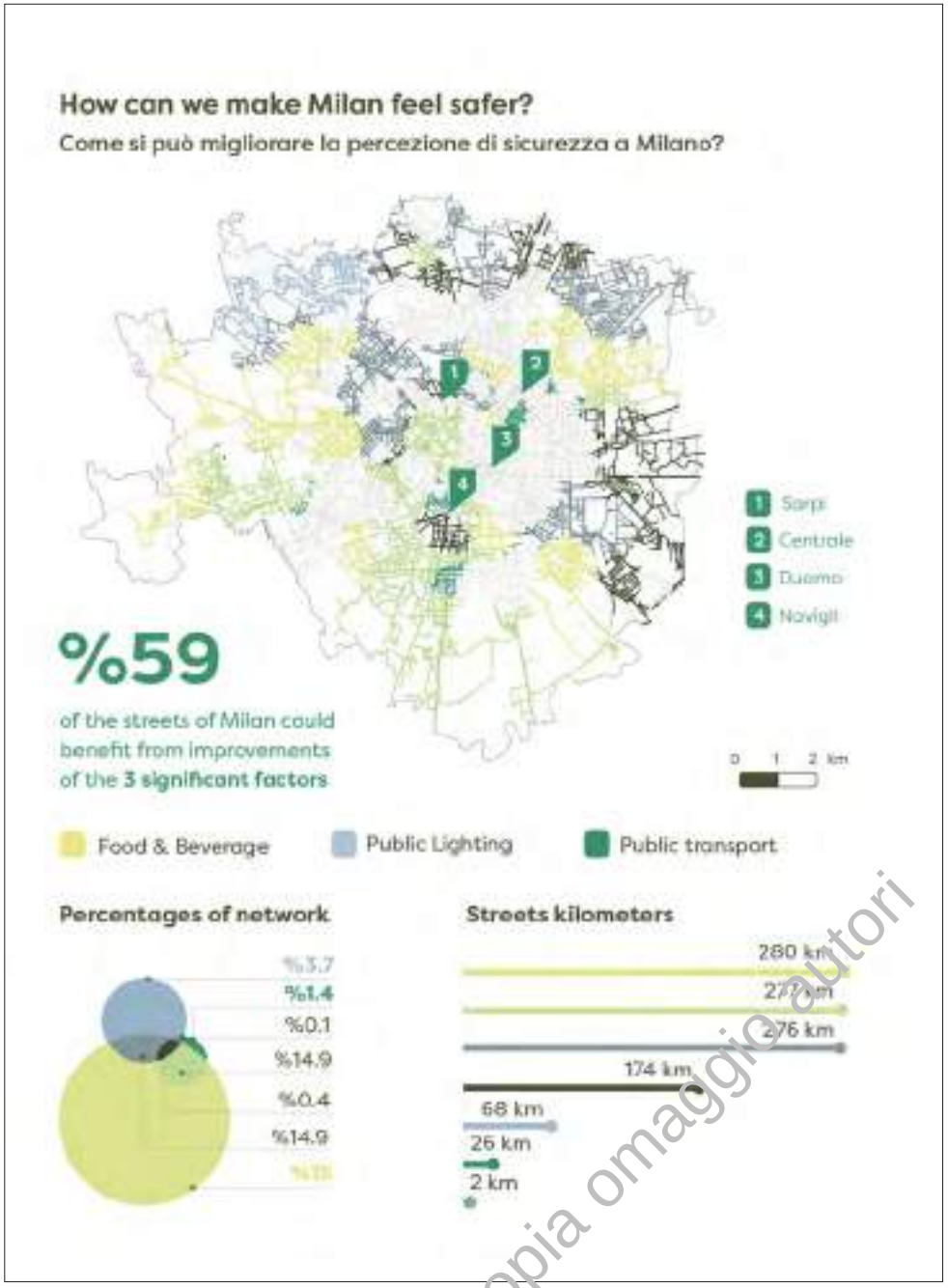
Fig. 1.
Improvable areas
of the city of Milan.



The second main outcome, developed through the analysis of an online survey and focus groups, determined the relevance of a number of urban factors in the perception of safety while walking at night. Based on the three main Safety Factors - Level 1 (SF_L1): (i) Spatial Features (space characteristics/ morphological features); (ii) City Use (traces of behavior and presence of other city users); and (iii) Hotspots (safe havens and no-go areas); further resulting in 19 sub-factors or Safety Factors - Level 2 (SF_L2). The online survey, counting over 1800 respondents, also provided information regarding the influence of socio-economic characteristics on a person's perception of safety while walking alone at night.

Results showed how some urban factors can be very relevant to the perception of safety, either positively or negatively, whereas others don't influence perception of safety at all. Furthermore the results of the online survey reported differences on certain perceptions of safety based on different age categories or different socio-economic profiles.

The results of this research contribute to the final objective of providing insight in issues related to gendered walkability, to support the development of gender-inclusive guidelines and policies for better urban planning in the city of Milan and globally.

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Associations and Community Planning Processes: a case study

Alfredo Pensabene, Marco Picone** and Valeria Scavone****

From the 1960s on, participation has begun to be the subject of studies and research all over the world from professionals, the academic world and public institutions. But the use of the term has led to an arbitrary interpretation of its application: actually, it is often the result of misunderstandings, as well as repeated manipulations. What is certain is that in recent years the perception of the system of relationships between planners and citizens has changed just as the way of living "with" others has changed. "In order not to die, architecture will have to involve those who directly or indirectly use it". This is what Giancarlo De Carlo wrote about participation. Although some experiments have been a failure, the topic remains crucial and requires continuous updating. Just think about the open source culture where people embrace the possibility of sharing information and becoming involved in every single project. For example, several PPGIS (Public Participation GIS) have been developed in recent years, allowing the interactive participation of users and going beyond the practice of the three-dimensional model in the hope that architecture will be able to "make a similar curation-design ecosystem operational" and "give birth to a project with the peculiarities of each group and the context in which it operates" (Ratti, 2014). Thus, it is undeniable that in the last century a close link has been created between **planners**, a role that has often been taken by associations, and **active citizens**. But are these two sides really so interdependent? The research project presented here aims to delve deeper into this relationship.
Specifically, research work like this requires first a careful historical and territorial analysis of the relationships between **associations** and **community planning processes** and, afterwards, a detailed study of these aspects through their practical implementation: in fact, a real process of participation has been developed by exploiting some of the qualitative methodologies that are mostly appropriate to the context, such as interviews and the Planning For Real© method. In our case study local residents, traders, institutions, students, children and teachers were involved with the purpose to start a community process with the local stakeholders as protagonists. In this sense, the city of **Palermo** represents an interesting reality because it has been and it is the headquarter for a series of experiments such as, for instance, the establishment in 2012 of the "Participation Department" of the local municipality, with delegations in the fields of participation, decentralization, registry services, migrations and also mobility. This historic achievement for a southern Italian city managed to involve citizens in urban regeneration processes through meetings and through the creation of new online participation platforms. In a very first phase it was necessary to carry out a sort of census of third sector realities, that is to say associations and volunteers, a central part of active participation, capable of transforming ideas into action with a pervasive effect. Then we focused on a particular **district**, located inside the historic centre of Palermo, very close to the sea but without any connection to it, due to the presence of a high traffic road. In order to understand every aspect of the district, we developed a detailed analysis of the urban and social context according to some topics that refer to living, ecology, the geography of uses, moving, sharing and producing/consuming.

The next phase of the participation process involved the use of **interviews**, a qualitative technique of analysis that involves open dialogue with the local actors (residents, traders, workers, representatives of institutions, etc.), together with the **outreach** technique, which is based on meeting local groups and individuals, following an invitation from them in their own environment and according to their own availability, to discuss various issues and listen to their suggestions. These informal and unstructured conversations made it possible to involve many types of people who probably wouldn't have agreed to participate otherwise. From the results there emerged some key words shared by almost every interviewee, while others differ substantially depending on the "category" they belong to, showing the difference in vision of the different categories. Four macro-themes

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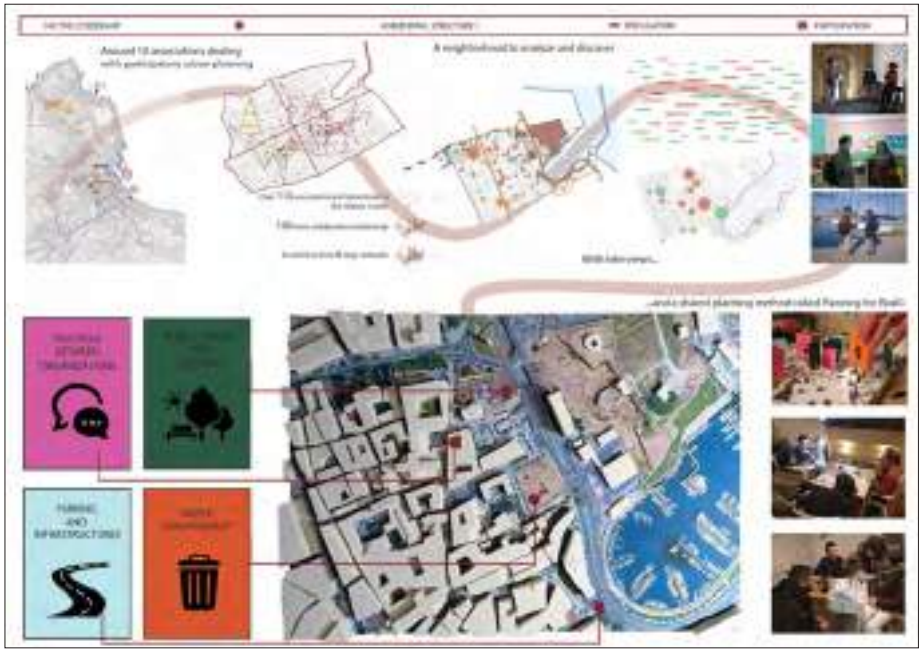
Fig. 1.
The different steps of the entire participatory urban planning process.

Fig. 2.
The final result of the process: an urban project born from participation.



emerged, on which the community expressed the need to work to resolve the problems of the district: dialogue between organizations, parking and infrastructure, management of public space, waste management. Through the use of **Planning For Real©,** a territorial-based planning technique that starts from a three-dimensional model and on which every citizen is called to intervene by placing some **option-cards** on it, the community expressed itself precisely, localizing the interventions and proposals. On the basis of the proposals made, which were rooted in different needs but similar purposes, an **urban project** was developed, based on a thorough comparison between the desires of the actors involved and the several complexities that give rise to a project. It was essential to contextualize the requests, taking on the role of coordinator of the process, to understand if in fact there are possibilities or convenience in their realization. The final result highlighted how, through an appropriate communication designed to be understandable, the involvement of the population in urban transformation processes is possible and effective.

PINQuA: integrated actions to increase spatial and social cohesion in Taranto's Paolo VI neighbourhood

*Simona Sasso, Federica Mitrangolo, Antonio Angelini, Alessandro Sangermano, Angelo Semidai and Francesca Nesca**

The integrated program of interventions in the Paolo VI neighbourhood consists in the energy efficiency upgrading and renovation of several public housing units, the creation of green areas, parks and community gardens, in a vast area spanning between Piazza della Liberazione, Viale della Repubblica, Viale 2 Giugno and Via 4 Novembre, the creation of new bike paths and the partial reconstruction and complete re-functionalization of the disused covered market located in Viale della Repubblica. Paolo VI is a suburban neighbourhood of Taranto, which lies northeast of the Mar Piccolo. During the years of the city's industrial development, as the massive Italsider steel plant was growing, the area occupied by dense expanses of *Macchia Mediterranea* (Mediterranean bushland) known as "Macchie" was identified to build a group of dwellings on the outskirts of the city for the families of the plant's employees. It's a fragile and problematic neighbourhood, where the sparse urban structure has contributed to social difficulties within a context inhabited mainly by families in precarious economic conditions. The lack of services, the absence of places of aggregation or attractive poles, the presence of extensive areas of countryside that isolate the different inhabited volumes, the oversized road system compared to the real circulatory needs, are just some of the critical issues that characterized the neighbourhood. The difficulties of the Paolo VI neighbourhood are perceptible today in various forms but are mainly symbolized by landscape degradation: the vast open spaces between the built-up areas, which have remained in their original semi-natural state but are devoid of vegetation almost everywhere, produce a feeling of isolation, estrangement, lack of comfort and security, and are subject to further decay. At the eastern and northern edges of the district, the relationship of built structures to rural space occurs unmediated and often violently. The marginal buffer zones, as well as the vast interior voids, currently unused, require intervention to determine their functionality and improve their quality. Furthermore, many public buildings in the neighbourhood, once providing key public services, are currently in a state of disrepair and abandonment (e.g. the former Ungaretti school financed through European Social Fund; the former Covered Market on Viale della Repubblica; the ARCA building for neighbourhood services near the Falcone school). In addition, potential commercial spaces on the ground floor of public residential buildings are now unused or, worse, improperly occupied by residents who have made private garages out of them or clandestine game rooms that contribute to the sense of insecurity of the neighbourhood's users. The Project aims to raise the quality of the housing and to increase social cohesion. The Program promotes processes of regeneration of specifically identified urban areas. These processes consist of interventions and measures that can be traced to the following five main lines of action: (a) upgrade of existing public residential housing; (b) re-functionalization of public and private areas; (c) improvement of the accessibility and safety of urban places; (d) regeneration of already built-up areas; (e) identification and implementation of innovative models and tools for the management of public assets to increase social inclusion and urban welfare. The "National Innovative Program for Housing Quality" (PINQuA) is composed of 8 interventions: INTERVENTION 1 - Redesign of public open spaces and re-naturalization of Piazza della Liberazione. INTERVENTION 2 - New public park and "urban agricultural gardens" in the vast area between Via 4 Novembre, Viale 2 Giugno and Viale della Repubblica. INTERVENTION 3 - Enhancement of material and immaterial accessibility to the Paolo VI neighbourhood, through the reconfiguration and adaptation of the road system. INTERVENTION 4 - Redesign of public open spaces in front of the public housing block (72 units) located in Viale 2 Giugno. INTERVENTION 5 - Renovation and fitting out of the Former Covered Market located in Viale della Repubblica. INTERVENTION 6 - upgrade and re-fitting of no. 72 public housing units located in Viale 2 Giugno. INTERVENTION 7 - upgrade and re-fitting of no. 26 public housing units located in Piazzale della Liberazione. INTERVENTION 8 - Intervention of energy efficiency of the public residential housing stock. All interventions aim at durable solutions for the regeneration of the socio-economic fabric, the improvement of social cohesion, cultural enrichment, and the quality of the built environment and of the lives of citizens, with a view to innovation and sustainability, with particular attention to the economic and environmental aspects, without consumption of new land.

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Fig. 1.
Masterplan.

Fig. 2.
Masterplan.

The DE-Sign Urban Lab

The pilot case of the City of Cosenza and energy efficiency as a driver for social inclusion, resilience and integrated urban regeneration

Domenico Passarelli, Ferdinando Verardi**, Ilaria Bertini***, Ilaria Sergi****, Maria Anna Segreto***** and Guido Maurizio Urbani*******

Cities are seen as more than just population centers; they are hubs of knowledge, energy production and innovation. The DE-Sign Research Group, through the National Program for Information and Training on Energy Efficiency "Italy in Class A" is investigating new energy sustainable urban design and building solutions. The group aims to promote a new awareness of energy efficiency and create models applicable to individual territories. The research includes temporary pilot projects with short, medium, and long-term scenarios to transform urban spaces into more livable, inclusive places. The DE-Sign methodology integrates Off-Site Construction due to its advantages in refurbishing large contexts, contributing to the sustainability of interventions from both an energy and socio-economic perspective. The group began active experimentation in the pilot territory of Cosenza in 2023, aiming to guide the transformations of the territory according to the objectives of the New European Bauhaus. The *Urban Laboratory* of the research project "DE-SIGN" aims to assist the City in drafting an Energy Transition Agenda to 2030. The regeneration of the built environment is at the core of the process of change and urban planning that the project promotes in the Municipality. The field experience will provide the municipality with an integrated urban planning document under the lens of energy efficiency by 2023. The proposed *Masterplan* for the identified area aims to contribute to the definition of a planning document that synthesizes the urban policies of the municipality and the transformation objectives of the local actors and stakeholders involved. The development area of the pilot project is located in a barycentric position with respect to the entire Cosenza-Rende conurbation. The identification of the scope of study focused on degraded portions of urbanized territory, recurring in Italian suburbs and metropolitan areas. The technical elaboration of the *Masterplan* starts with the detailed study of the relevant metropolitan and urban context. The pilot project is located in the complex urban area of Vaglio Lise, near the Railway Station. This area is characterized by its location within the Crati River valley and its potential as a mobility hub due to the presence of the railway station. The public housing district, established since the 1960s, presents several challenges including high energy consumption, poor energy performance, and degraded public spaces. These issues present opportunities for sustainable urban transformation and regeneration. From a socio-demographic perspective, the City has experienced a negative trend over the last 30 years, with a progressive depopulation towards the surrounding area, primarily towards Rende and Castrolibero. The vision for the urban areas is centered around energy efficiency and ecological transition. It explores development opportunities related to energy upgrading of public housing (Off-Site Construction), sustainable urban redesign of public spaces, and energy efficiency interventions through Nature Based Solution and Human Based Solution. The program aims to establish an efficient intermodal hub of sustainable mobility, a new city gate, and a strategic location for future regional and metropolitan functions. The redevelopment of public spaces aims to test the "proximity city" paradigm, implement social infrastructure, involve the resident population in transformations, and promote a sense of belonging and collective identity. The *Urban DE-Sign laboratory*, in collaboration with various entities, has initiated an interdisciplinary dialogue on energy application in building design in the urban area of via *Popilia - Vaglio Lise*. The DE-Sign Research Group has developed new methods for decision-making and public policy formation for energy sustainability, focusing on the concept of "proximity." This concept puts professional, economic, social, and human capital at the center of public choices and is applied to both the city and energy. The group aims to create energy communities that bring a paradigm shift and are closely linked to real social inclusion. The concept of "proximity energy" is linked to "caring for proximity," which involves democratic access to

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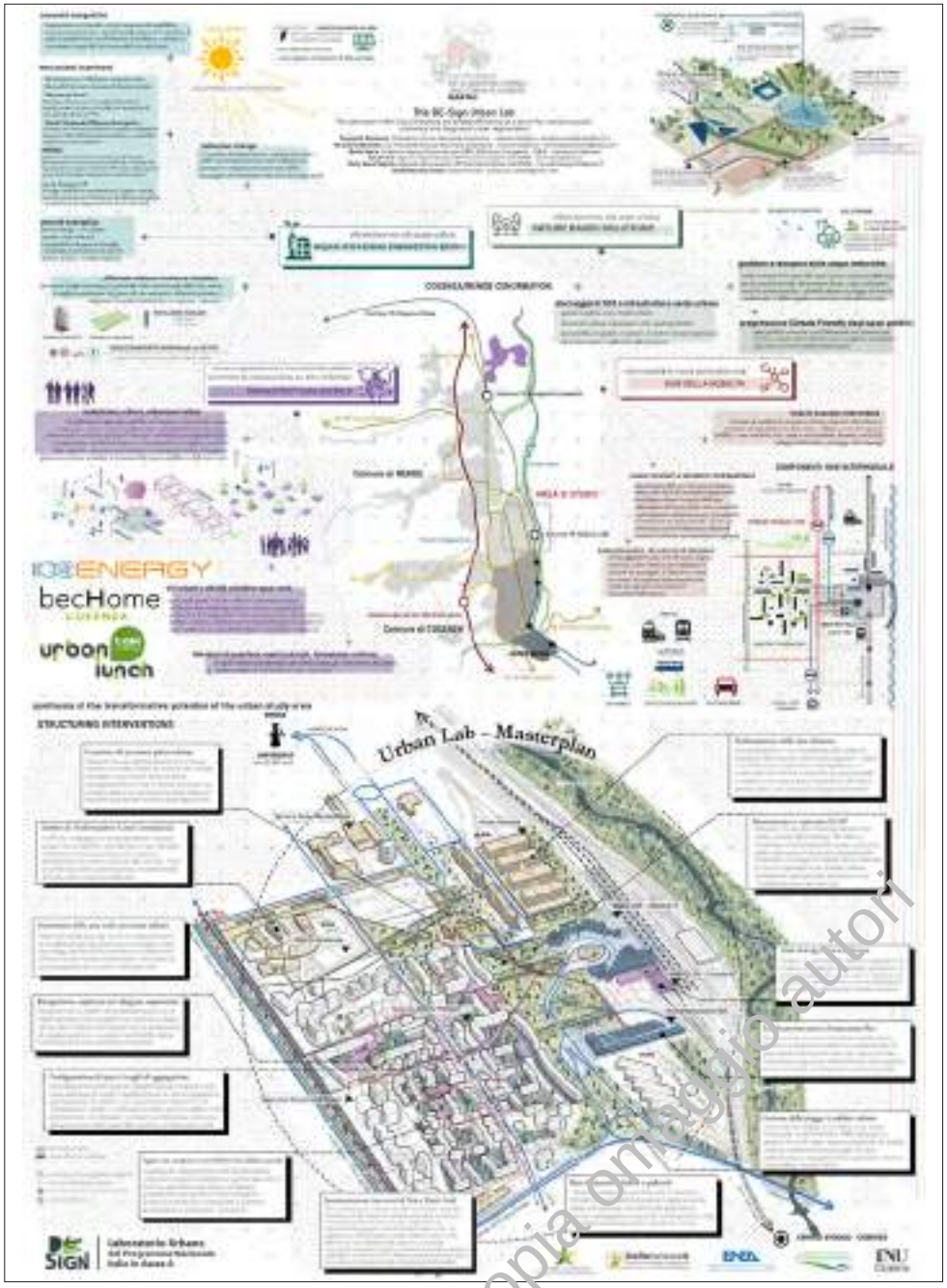
energy, housing, and social principals to foster social inclusion. The laboratory becomes a field of experimentation for an open process, aiming to establish a direct thread between needs and public policy. It also involves training young students in Cosenza in co-design, making them protagonists of change in their city and helping to promote energy sustainability in their neighborhoods. The KDZENERGY edutainment project aims to train young students in Cosenza in co-design, making them active participants in promoting energy sustainability in their neighborhoods. In the fall of 2023, the project will work with schools in the city of Brutia to contribute to a planning document being developed by a Research Group, the Municipality, Professional Associations, Businesses, Citizens, and the Third Sector. The DE-Sign initiative, by engaging with schools at all levels, serves as a bridge for the community to explore energy issues and develop an urban energy strategy. The approach aims to establish enduring relationships with different communities, act on daily living dimensions, systematize various activities, and enhance the unique aspects and networks of each neighborhood to foster urban energy awareness. The *Urban Laboratory* is an experiment that leverages energy efficiency tools to address change. The initiative involves citizens of all ages, with a focus on youth, and employs various forms of assembly for effective planning. An example of this is the Vaglio Lise Station/Via Popilia project, which uses co-design with citizens. The DE-Sign project's second phase aims to ensure all citizens can participate, using appropriate engagement methods and communication tools. DE-Sign's communication model, "Approach, Enable, Act," integrates social media strategy, the *Italy in Class A* program platform, and digital storytelling. This approach allows for shared planning and public narrative, serving as a national best practice adaptable to all territories. The model combines intervention, execution, and explanation, enabling co-designers to devise, execute, share, and explain their contributions. The project will continue to evolve in 2024 with further steps and advancements.



Urban regeneration and inclusive public spaces

A project for the new urban park in San Lorenzo Village in L'Aquila

*Camilla Sette**

One of the Sustainable Development Goals of the 2030 Agenda approved by the UN General Assembly is 'to make cities and human settlements inclusive, safe, durable and sustainable'. Each country must commit itself in the coming years to building more welcoming and barrier-free cities, thus ensuring 'universal access to safe, inclusive and accessible green and public spaces', particularly for children, women, older people, and people with disabilities. Moreover, the UN Convention on the Rights of the Child, approved in 1989, and ratified in Italy in 1991, recognises in Art. 31 the rights of children to engage in play, and in Art. 2 it states that there must be no discrimination of children regardless of their disability (1.). By incorporating these directives into the design approach (2.,3.), over the last decade play and recreational areas for children (and their carers) in equipped urban parks have been designed in such a way that the youngest children can exercise their imagination and social skills: it has been amply demonstrated that play is an important educational vector (4.,5.). Designing and constructing equipped parks accessible to all, is an integral part of beneficial planning for the creation of more open, inclusive, and aware cities and communities in general (6.). As an example of best practice, here it is the case of the new urban park of the 'San Lorenzo' village in the municipality of Fossa, in province of L'Aquila. The village is the solution built to cope with the housing emergency resulting from the earthquake that struck the city of L'Aquila in 2009. Comprising 150 temporary housing modules, it currently accommodates around 360 people. In addition to the residences, there are few other functions and services because the village is decontextualised with respect to the area's productive/industrial use: this is why the municipal administration (meeting with the favour of the residents) promoted the project of an urban park with the aim of improving the quality of life, thus accessing funds included in the National Recovery and Resilience Plan for the "protection of urban and extra-urban green areas". The project stems from the idea of enhancing the vast area of a former quarry, which is now enclosed between the road network and the buildings adjacent to the village. Preliminary analyses show that this area is not subject to regional planning constraints and is owned by the municipality, which are necessary elements for the project to be feasible. Its objective is to revalue the existing urban fabric and promote a sense of belonging and identity among the residents of the village of temporary residences, by creating an equipped green space, maintaining and consolidating the existing rocky masses that act as a filter towards the industrial core facing the area, and recovering the existing buildings, with the creation of multifunctional spaces, intended to host a variety of cultural and social activities, for all ages. The furnishings and paths play on multifunctionality and thus adapt flexibly to different abilities. The architectural solutions adopted have favoured the creation of inclusive places accessible to all types of users, allowing people to use them with ease, autonomy, and safety. The use of new technologies and sustainable design will also help alleviate any form of isolation due to any kind of barrier, be it due to differences in ability, age, or culture. The combination of these elements thus gives the area a central and relevant role in this 'middle ground' between the agricultural area and the artisanal area. At a time when cities and countries all over the world are facing increasingly complex challenges, the creation of accessible public spaces and social inclusion are essential for the sustainable future of our cities (7.): Investing in the urban environment and social ties creates resilient communities, capable of facing challenges and overcoming them. Furthermore, it is well known that more attention needs to be paid to the influence that the natural and built environment has on our psyche and well-being (8.).The design of this urban park demonstrates how urban regeneration is not only a need, but also an opportunity to create a sustainable and inclusive future for all (9.), an example of how an area scarred by trauma (the earthquake in this case) can be transformed into a vibrant centre of community and social inclusion.

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Fig. 1.
Territoriale framework: San Lorenzo Village in Fossa and the new urban park.

Fig. 2.
Example of realisation of the "San Lorenzo" inclusive urban park.

Controversial multi-actor urban regeneration practices: The case of the historic centre of Palermo

*Vincenzo Todaro, Salvatore Siringo**

In recent decades, Sicily has been experiencing late forms of cosmopolitanism. These include the outcomes of migrant flows and the internationalisation processes of cities, especially Palermo. In fact, more than 70 per cent of the province's immigrants live in the Sicilian capital.

The ISTAT data on the resident population in Palermo show how, in 2021, the presence of foreign citizens amounted to 24,376 (+24.1% compared to 2011), out of a total population of 635,439 inhabitants (655,875 compared to 2011), with an incidence, therefore, of 3.8%. Analysing the distribution in the districts, if, in terms of absolute values, the distribution of foreigners affects at least four different districts (First, Third, Fifth and Eighth), in percentage terms with respect to the total population, foreigners are concentrated in the First District, coinciding with the historic centre, with an incidence of 18.7% (Fig. 1). This means that, compared to the recent past, although there has been a substantial shift of the foreign population to other parts of the city, the historic centre is characterised by a clear concentration of foreigners with respect to the total population.

Over the last thirty years, Palermo's historic centre has undergone a profound (yet incomplete) process of urban regeneration that has taken the city from being a Mafia enclave in the western world to an international cosmopolitan city. Even in the 1990s, the state of neglect by public institutions of the historic centre made this part of the city a 'no man's land', amid the rubble of World War II bombings and the direct control of (micro and macro) organised crime. This condition made the fabric of the historic centre, abandoned by local citizens, and particularly accessible to the migrant population mainly from North Africa. In the local chronicles, this phenomenon was trivially interpreted as 'the return of the Moors to the centre more than 800 years after their expulsion'. In reality, it marked a slow but pervasive process of ethnic micro-colouration that over time allowed not only the recovery, but also the socio-economic revitalisation of entire segments of this urban fabric.

In parallel to the bottom-up revitalisation by migrants, a widespread process of redevelopment tended to be driven by the rehabilitation of individual buildings and partly by the action of the public administration (significant was the redevelopment and reopening to the public in 1997, after 23 years of closure of the Massimo theatre, on the wave of a mobilisation that saw public institutions and civil society working together).

Over the next 20 years, this process brought the Palermo's citizens back to live in the historic centre, with an evident gentrification that affected, in particular, two of the four districts (Kalsa and Monte di Pietà). This process has reactivated the real estate market and, at the same time, the interests of the commercial fabric, initiating a tourism push that first saw the start-up of countless tourist accommodation activities (hotels, but above all b&b), and then the opening of tourist and low-quality fast-food restaurants. This happened above all along the central axes of Corso Vittorio Emanuele and Via Maqueda, which after Covid (also thanks to the concessions linked to the economic recovery, such as the facilitation of the use of public land) completely changed their faces. Even the historical markets have been overwhelmed by this phenomenon, becoming tourist routes. Compared to these conditions, however, the socio-economic and spatial dynamics at work do not always manage to find a stable balance. In fact, in the innermost areas of the districts, those far from the main road axes, bottom-up practices of urban regeneration are cultivated, generally conducted by local associations, active citizenship, which includes the participation of resident migrants, who contribute to the maintenance of another image of the historic centre more directly linked to the communities present. In the light of these considerations, therefore, Palermo's historic centre is configured as a crucial centre around which gravitate different and sometimes conflicting interests, promoted by a multiplicity of actors (public, private, mixed), which act autonomously in the absence of effective coordination by the public administration. The outcomes of this process appear uncertain at the moment, but at the same time it give cause for concern, particularly with reference to the risk of strong touristification, which would lead to the expulsion of the migrant population and the interruption of the local population's resettlement process, as well as that of the progressive compromise of the heritage of historical and architectural interest.

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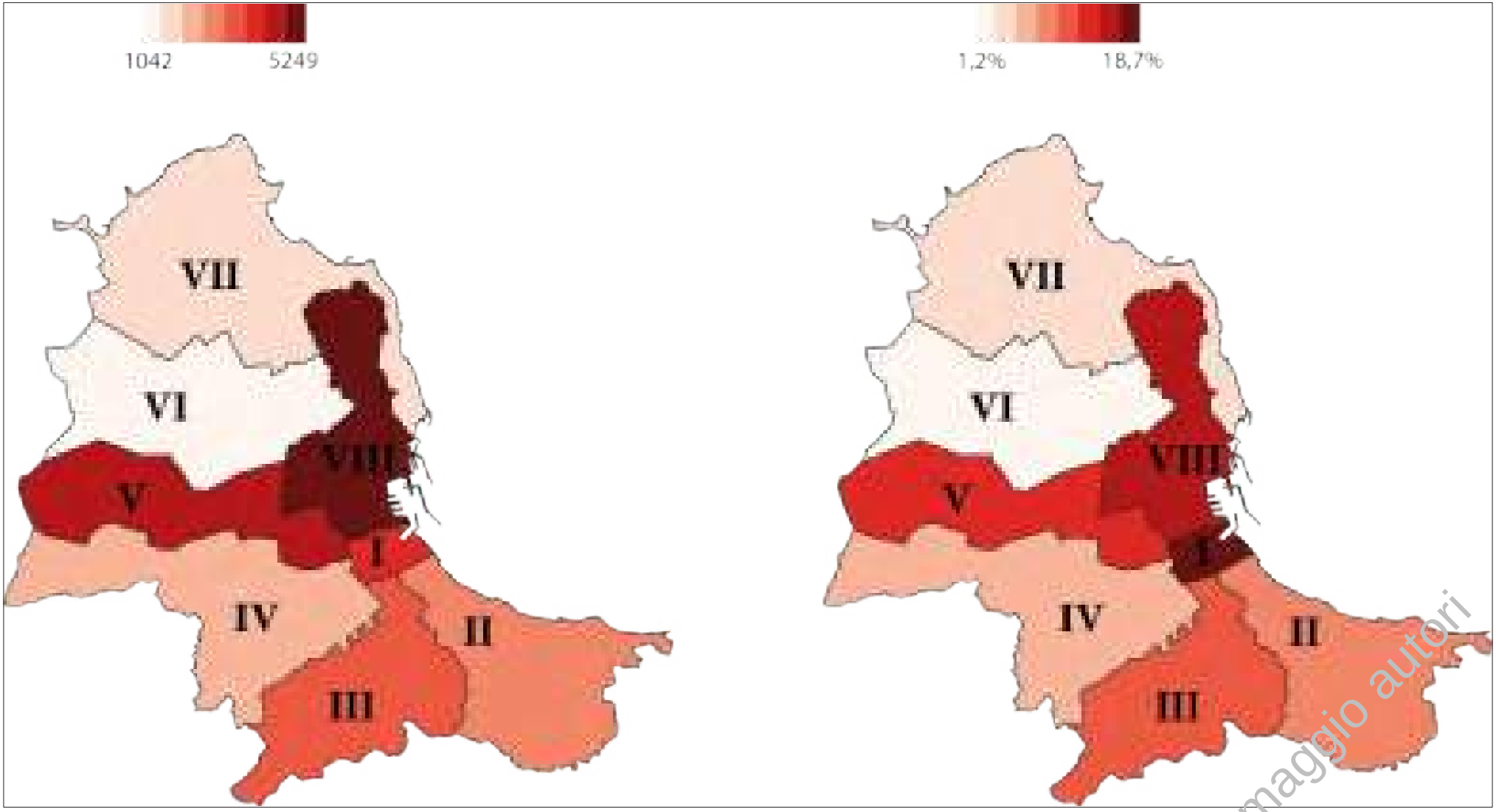

Fig. 1.
Comparison between absolute value and percentage value of the foreign presence in the 8 districts of Palermo. Source: ISTAT 2021, Classification of foreign territorial units: https://www.istat.it/it/archivio/6747

GREENerize Post Industrial Landscape
From the industrial city to the urban ecosystem

*Luisa Smeragliuolo Perrotta, Nahuel Garcia Pastor**

Nowadays a critical and still open question is the future of disused industrial sites. Due to their size and the concentration of activities, in most cases they are not single areas but large-scale landscapes urgently in need of being rethinking and redesigning to understand their role within the city. Despite being so controversial and complex, they can be an opportunity to explore, with inclusivity, virtuous processes, and strategies to face ecological, energy, technological and social challenges. The proposed research investigates the topic of dismissed industrial landscapes through a case study located in East Naples (Southern Italy). The massive infrastructure of private transportation means with the location of extensive industrial areas and highways affected the area. Time passed and the urban sprawl, together with the decommissioning of these colossal surfaces and its pollution left behind, created a degraded environment. The area has been the focus of several proposals that hadn't found concrete real applications. The current research re-designed the area, which is now private and highly environmentally compromised, with a long-term strategy that includes its transformation, together with other disused industrial sites in the neighbourhood, into an urban energy park. The research aims to propose a scenario where a systemic and multidisciplinary vision could lead to several interventions in the fields of infrastructure, urban planning, and landscape architecture, transforming the area from a former post-industrial into a green district focusing on the public space's potential as a support for renewable energy production and sustainable mobility. From the first approach the main critic issue was the area's disconnection to the rest of the city. This critical issue is faced out extending the public transport infrastructure net and deviating it where necessary to achieve a straight-forward connection to the waterfront. Available space on the street's axis and decommissioned surfaces creates environmental corridors where to purify the air through native species foresting and replacing the obsolete energy supply source to a green system of solar panels on the street's axis and on public and private rooftops. The main project tool is the construction of a green network of pedestrian paths and public transport, which includes strategic mobility interchange points (from private to public), parking, cycle-stations, exclusive lanes for sustainable mobility and the addition of solar energy production within the urban tissue, re-interpretating the modernist ideal of the factory's cities into sustainable and green cities. The strategy is carried out through an intensive intervention on the main public space, the street. The heart of the project strategy is the proposal for an urban park located in the former Q8 oil and adjacent areas. The park is a structuring element of the eastern district of Naples, a pivot for the urban regeneration of the area and a point of connection with the city centre. From the spatial point of view the park is structured taking as main reference the Vesuvius, offering a diversity of tours orientated towards the creation of a collective awareness on the traditional landscape and efficient energies. Following this line, in accordance with the park's urban role, sustainable energies play an important game in not only providing the park's electricity in an eco-friendly way, but also to the adjacent neighbourhood and characterizing the space at pedestrian level as well as the underlaying vehicular roads to and from the city centre. The park's design follows a diagonal axis which main goal is to visually connect every point of the park to the Vesuvius, re-affirming its dominant position on the Naples skyline and landscape and as one of the main identity elements of the city and region. Depuration and reuse of rainwater is achieved through 6 canals following the natural slope and arriving to the main pond after the natural treatment through an artificial wetland with the species necessary for a proper depuration. The solar panels array is distributed along the pergola and the main architectures' rooftops orientated to take the maximum profit from the sun, combining a total surface of 91.585 sqm. The native species take a fundamental role in the spaces' configuration and in the park's environmental efficiency due to the reduce maintenance required and to their importance on educate about the traditional landscape. Commercial use, housing, transportation, and cultural/educative functions are combined to ensure the constant utilization of the park and its amenities. Due to the extended times and costs required, the intervention is divided in three stages, each one with dedicated goals to be developed to guarantee the mixture of use in the district. The three stages and their spaces are organized to offer different paths to the visitors, emphasizing the park's educative and environmental role as well as offering a straight connection with the city.

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Fig. 1.
Urban design strategy

Fig. 2.
Energy Park

(In)effectiveness of planning: which perspective for Pietralata?

Sharon Anna Somma, Romina D'Ascanio*, Ana Luiza Milanese* and Anna Laura Palazzo**

The events that affected the recent past of Rome highlight stalemates, contradictions, and reversals in decision-making that have left a series of unresolved problems. An emblematic case is represented by the Pietralata district with about 30,000 residents, bordered to the north by the Aniene river, to the west by the railway line and the Tiburtina station, to the south by Via Tiburtina and to the east by the Ponte Mammolo district. After the Second World War, in the wake of a renewal of the urban planning discipline based on the principles of zoning, the municipal administration approved a proposal for the decentralization of management functions, from the historic center to the east side of the railway ring, named *Sistema Direzionale Orientale* (SDO), envisaged by the 1962-65 General Plan (Lugli P.M.1998). The operationalization of this project began with the Director Project of 1992, within which the main players in the area converged: Lazio Region, Province of Rome, Municipality of Rome, Ferrovie dello Stato, stakeholder in relation within the so-called *Programma di assetto generale* (PAG) for the Termini, Tiburtina, Ostiense, Trastevere, San Pietro and Quattro Venti stations. In support of the creation of the SDO, in the Pietralata-Tiburtina area, which constitutes its northern end, the Municipality started the development of a *Progetto Urbano*, an innovative tool able to integrate urban redevelopment, environmental enhancement and building development of the two adjacent districts. Furthermore, in the northernmost stretch of the district, the Aniene Valley Natural Reserve was established in 1997. At the turn of the century, the Municipality generally declassified the SDO, and concentrated the plan forecasts mainly on Pietralata, defining a *Piano Particolareggiato* approved in 2001, but also this process progressively lost power and policy-makers interest, falling apart both in its urban perspective and in its local implementations. In 2007, the National Institute of Statistics acquired the areas for its headquarters in this district, and Sapienza University embarked on an ambitious development project. In the last decades the *Piano Particolareggiato* has been combined with a *Programma Integrato* (PRINT), with the aim of promoting, coordinating and integrating public and private initiatives and resources, to improve urban quality and the provision of services and infrastructures in deficient neighbourhoods. Despite being the first PRINT in the city of Rome to be adopted by the municipal administration in 2013, within the new General Plan, it has not yet completed the process of approval. More recently, the role of the public city has been reaffirmed with the *Schema di Assetto Generale dell'Anello Verde (Montuori, 2022)*, which reviews the entire eastern sector of the city with new sensitivity, deepening the indications of the General Plan in the strategic area of the railway belt, but this attempt also did not translate into particularly incisive actions, following the change of municipal administration. Whereas the planning process was to provide innovative perspectives from an environmental and functional point of view, the implementation has been once more disrupted by forthcoming needs without resolving previous expectations of citizens fighting for a safe, stable, and enjoyable living environment. In recent years, this area has become central again within the urban planning debate of the city of Rome due to the new forecasts regarding structures on a metropolitan scale: first of all the Roma stadium project, against which a strong mobilization of associations has begun which claim the recognition of the Pietralata park, the so-called *Rome Technopole* as a spin-off and innovation hub of Sapienza University funded by the Recovery Plan and finally the new masterplan in the areas adjacent to the Tiburtina station. Despite the robust planning framework provided by plans and programs, Pietralata is still a space of waiting, weakly interconnected and destined to welcome some fragments of past visions together with new pressing urgencies. Lack of dirigisme of the Capitoline assembly? Rooting of irreconcilable interests? The needs for improving services and public space cannot wait any longer. The proposed working method starts from the systematization of open spaces and collective equipment, the real backbone of the settlement structure.

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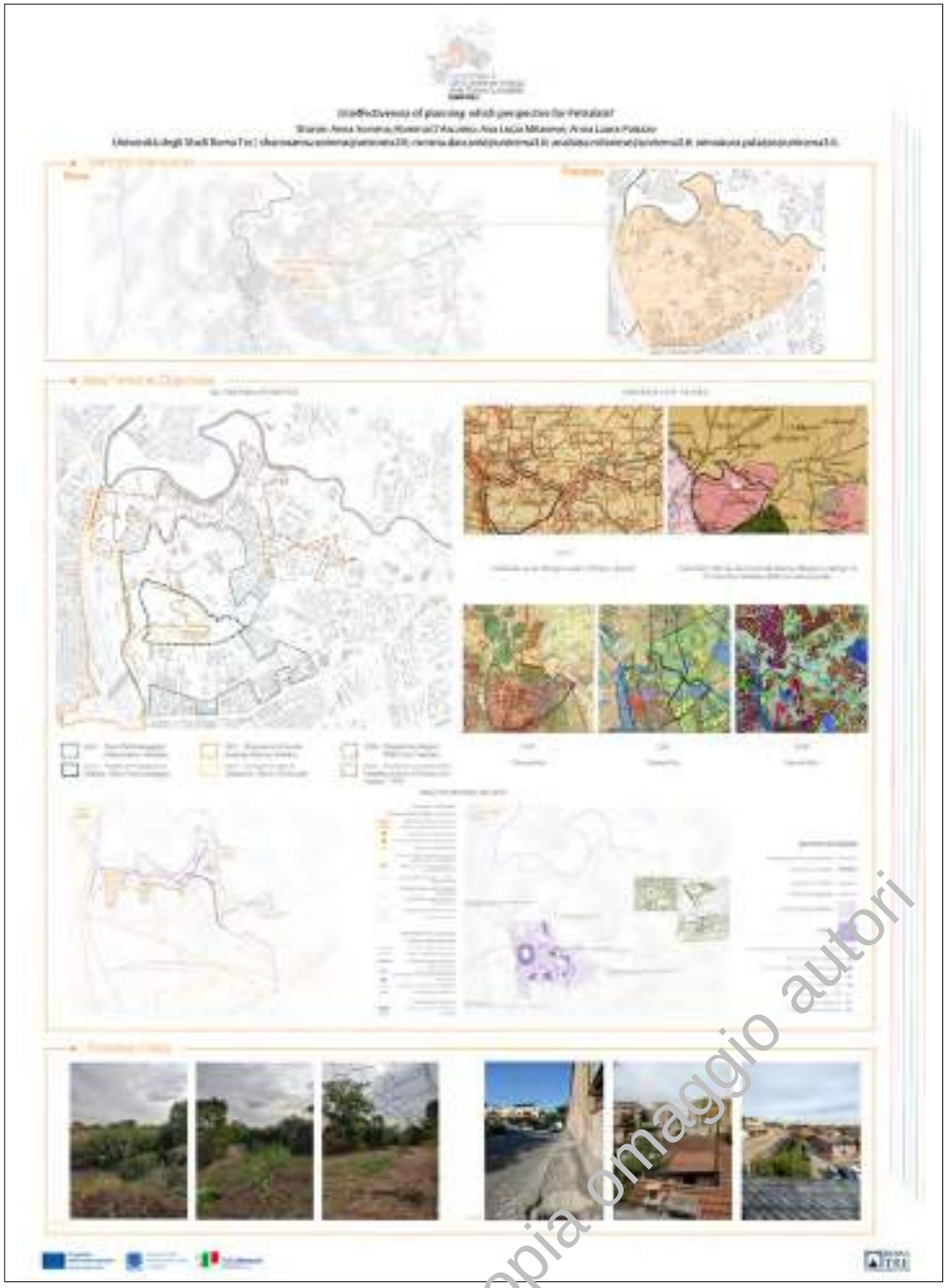
The reference goes to the 'soil project' (Secchi, 1986) which provides the opportunity to reconnect the territory with tree-lined cycle-pedestrian paths and isolated residential areas, adapting existing routes and closing interrupted links. The main opportunities in this sense, with unchanged legislation, are provided by the Ecological Network of the General Plan (2008) which allows the opportunity to combine and test general criteria and specific rules for the treatment of open space both in a functional and morphological forms. At this scale, the components of the ecological network become bearers of specific values of shape and difference of heterogeneous spaces which are attributed a role of active protection and enhancement of environmental performance, in line with the main European indications regarding the implementation of green infrastructure for improving the quality of life of citizens. This approach allows experiments that can be replicated at a municipal level, giving concrete form to the dimension of proximity, and to particular types of open spaces understood as commons through the systematization of bottom-up practices and initiatives.



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The project of a pedestrian network for a city on a human scale. Reggio Calabria no longer unsustainable

*Domenico Passarelli, Francesco Suraci, Antonio Macchione**

The research contribution contextualizes a project in the city of Reggio Calabria on a human scale through a pedestrian network within existing urban spaces. The project defines two pedestrian and cycle paths (fig.1), to regenerate the city with a mobility that interconnects not only with the service nodes and with the railway and road junction, but also with sustainable living spaces. New thought of reading the urban, outlining new urban aggregations for a future 15-minute city, which recounts new conjectures between the canonical concepts of urban fabric and interconnection voids. This means rethinking an urban planning culture that through an experimental approach and an innovative mission on mobility that is implemented with a vision that makes a territory cohesive, both socially and economically, with an environmental perspective contextualized to the local reality. The expected results of the research refer to the need to build sustainable urban areas, with green spaces and economic activities, between central areas and peripheral neighborhoods. In cities there are closed-off spaces waiting to be transformed and completed with services, parks, spaces for sustainable mobility and anything else necessary to regenerate places that are still neglected today, with an eye towards the fringe areas. The research aims to create a walkable urban network that connects neighborhoods and service areas, with the usability of spaces even at times when the main urban function is on standby. The network conceived in this way connects pedestrians, generating healthy effects on the pedestrian with physical activity, the city service hubs and the public transport hubs, as well as the different neighborhoods and the historic centre; the city's pedestrian network in 15 minutes. The start from the research is inspired by a design idea within a Masterplan which conceives an elevated infrastructure (fig.1) for pedestrian mobility in green spaces, above a watercourse, the Calopinace river, with consumption of soil equal to zero and with the reduction of the heat island generated by the cemented riverbed and the roads that run parallel to the riverbed. Then a first pedestrian path (fig.1) which develops longitudinally to the stream, with greenery and urban spaces for social activities. A scenario created by the infrastructure that winds above the river connecting the coast line to the hill (fig.1), the railway station, with its square in front to be freed from traffic (vehicle tunnel along the final stretch of the city seafront), with the hubs of the directional, the neighborhoods separated by the river barrier. A project that recovers and regenerates urban voids, implementing the greenery and sustainable mobility system, a central theme on which to reorganize the urban territory. Territory that needs a better quality of daily living in public spaces. A research that does not remain within the narrow confines of sectoral planning which, as usual, has considered the redevelopment of public urban space as a project in its own right and detached from the urban context. This means interfacing with the global dimension through an integrated and multi-scalar approach, which reads the methodological and operational guidelines of the existing urban planning tool and adds public and social value that generates, in a coherent way, accessible and inclusive urban spaces, shaped on the existing city grid. It means the future recovery of the river park and greenery of the fiumara which becomes a central theme to be evaluated in the development of urban and territorial reorganization programs, moving from a hydrological problem to a resource for the city. No longer unused, canalised waterways, but new urban contexts of valuable river landscape and revitalized public greenery which mitigate the urban heat island, which increase the greenery, which insert urban planning functions with economic aspects into city voids and which improve the quality of daily life. The second pedestrian and cycle route defined by the research is the one that connects, taking advantage of the section of the existing city treadmill which overcomes a height difference of approximately 35 meters (fig. 2), crossing an existing park with panoramic views and green areas, the neighborhood peripheral of San Giorgio with the historic center of Reggio Calabria, intersecting the elevated infrastructure at high altitude. In particular, the route, with a total length of 1500 meters, allows you to reach the church of San Giorgio al Corso and vice versa, starting from the peripheral church of San Giorgio Extra. The research also analyzes the potential planning of the recovery of the disused industrial area near the latter church, as a central area of the fair spread between this area and the CEDIR management hub. A recovery that becomes inclusive from a social point of view, generating new relationships with the inhabitants also from an economic and productive point of view. To paraphrase Mario Cucinella "today we pay the price for wrong policies, an urban planning vision has been lacking'. And therefore for the city of Reggio Calabria it means re-creating a new landscape through the redefinition of a pedestrian and cycle network system, capable of re-establishing a relationship of continuity between urban spaces and the natural environment. New urban planning and new pedestrian mobility that integrates well, coexisting with current vehicular mobility.

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Fig. 1.
Map of the two pedestrian paths and planning of the infrastructure above the Calopinace

Fig. 2.
Pedestrian routes inserted in the central area of the city and views of the route between the churches

Revitalizing urban spaces
A synergistic approach between school spaces and the city

*Nicola Martinelli, Roberta Tenerelli**

The relationship between the educational institution and the territory is at the center of an intense debate in Italy that has taken on greater relevance in the wake of the 2019-2020 pandemic. During this period, the school has emerged as a fundamental point of reference for entire urban communities, both in central and peripheral neighborhoods, and to an even greater extent in marginal urban contexts where it represents the only public institution present. Despite the differences between the various territorial realities to which it refers, school equipment constitutes a stable element capable of catalyzing flows of knowledge and initiatives that go beyond the mere function of education, often also involving actors outside the school community. Especially in areas with low population density, poorly endowed with standard areas, schools represent a garrison with the potential role of social infrastructure that obviates the lack of local community services such as libraries, gyms, civic halls, and generally open spaces for socialization.
A significant example in Italy is the "Roma Scuole Aperte" initiative, which allowed 114 institutions to remain open outside school hours, thanks to funding from the City of Rome. This initiative was accompanied by the "Map of the Educational City," which collected 131 free educational proposals (laboratories, visits, workshops, etc.) offered by the city's main cultural institutions to schools.

The theme of the relationship between school and city induces a reflection that looks not only at the spatial issues of the school building, but also at the urban exteriors in the vicinity of the school site, which should therefore be considered as the priority elements on which to intervene so that they perform an innovative social function. In this sense, a synergy between the actors of the school community (principals, teachers, children and their families) and the public actors that come into play outside the traditional school life times, but especially in the proposal of new educational interventions that are open to the whole urban community starting from the dimension of the neighborhood to which they belong, turns out to be indispensable. Pursuing a synergistic vision between the school community and the urban community, within the framework of the Futura competition for the "Construction of New Schools through Replacement of Buildings," the design proposal for the G. Modugno school in Bitonto, nominated, in fact, by the PNRR for demolition and reconstruction, was developed.

The aforementioned school building had been a case study for a Master's thesis in Architecture at Bari Polytechnic University, entitled "School reform: from innovation in teaching spaces to the relationship with the city" (2022-2023).

Therefore, it became necessary to revise the design submitted as part of the thesis so that it would comply with the design competition announcement. The school building project, which was overseen by the working group that also included the young architecture PhDs from the master's degree workshop as subjects, achieved fourth place in the competition ranking.

The elaborated project has as a priority objective the construction of a new school building capable of upgrading the urban space around it. It is materially placed in dialogue with the urban fabric through the morphological structure of its boundary wall, which, conceived as a shared boundary and interpreting the shape of the lot, defines the tight space of the street and the dilated space of the courtyards, acting as a threshold between the place of education and the city proper.

An index of reflection on innovative didactics is the presence within the building, of flexible spaces. In fact, the functional scheme is defined following the MIUR guidelines and including the environments of the "INDIRE Manifesto 1+4". The result is that each environment, interior and exterior, lends itself to teaching and learning, encouraging innovative teaching methodologies, as well as the delivery of frontal teaching.

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At the east end of the school opens a square that, penetrating into the school space, and characterized by tactical urban planning interventions, is configured as an urban space, usable in extracurricular hours, fenced and controlled when used by the student community.

The ground floor is characterized by a succession of internal courtyards, where green space is designed to serve the educational environments, allowing for the implementation of activities related to sports and outdoor education to frontal teaching, through laboratory experiences in gardening and floriculture. The gymnasium was conceived as an agora, where the school meets the city community even during extracurricular hours, providing for autonomous operation between the body of classrooms and the body of the gymnasium.

In conclusion, this contribution tends to show that the attribution of the role of "catalyst of urbanity" to a school building cannot depend on spatial redevelopment alone, but the latter must be part of an "integrated action" between tangible and intangible interventions, between the educational community, policy makers, and the local community, so that concrete urban regeneration goals can be achieved.

Fig. 1.
Gymnasium/Agorà

Fig. 2.
Entrance to teaching spaces

A green line for the FS Torre Annunziata – Cancello

Regeneration of the territory through a linear park

Anna Terracciano, Teresa Nocerino***

Over the last few decades we have witnessed the decommissioning of a considerable part of the railway system. This phenomenon affected both large metropolitan areas and peripheral territories equally, resulting in the closure of kilometers of rail transport. Currently these infrastructures lie abandoned and have become part of the landscape they cross, constituting breaks with the urban fabric. Apparently they appear to us as places characterized by profound disorder, devoid of harmony, a chaotic set of civil engineering elements such as tracks, pylons and buildings of poor architectural quality. In reality, these artefacts represent an important documentary heritage: built with local materials and techniques, the railway buildings follow the same drawings throughout the national territory, deposited in the FS Italiane Foundation Archive in Rome. In Italy there are thousands of kilometers of disused railways, variously distributed along the peninsula and reported in the Atlas of travel along disused railways, by the Italian FS, with the aim of building a framework of knowledge aimed at making them available for reconversion in routes to implement sustainable mobility. With this work we aimed to build an updated knowledge framework for the section of the disused FS railway that goes from Torre Annunziata to Cancello, in Campania, with the aim of building a set of strategies and actions of a general nature, and that can provide useful guidelines in different contexts, characterized by similar problems. Furthermore, the prospect of a linear park, of urban and territorial value, along the backbone of the infrastructure, constitutes a driving opportunity for the regeneration not only of the disused railway, but also and above all of the multiple areas crossed. It is therefore a question of defining a multi-scalar and multi-level strategy in which a multiplicity of specific design studies can be based, such as the restoration and re-functionalisation of the railway building heritage. These interventions also have the objective of encouraging the development of new economic and social dynamics, as well as giving a positive impulse to the issue of mitigating environmental risks, proposing projects developed with a resilient-adaptive approach. Once the structuring and long-term objectives have been defined, they must then be transformed into strategic actions which must then be specified in the territories and based on the type of project intervention. These actions are aimed at the recovery and reconversion of abandoned areas, disused railway sections, the inclusion of cycle paths, the restoration and re-functionalisation of passenger buildings, roadman's houses, goods warehouses and, in general, the improvement of quality architectural. The use of disused tracks as green lines, with the inclusion of cycle paths, exploits the characteristics of railway roads (continuous route without interruptions, regular and not excessive gradient, interconnection with other mobility arteries) and allows for the preservation, in a pro-active, the historical trace understood as documentary value. However, this project is not limited to the creation of a cycle path, but proposes an integrated approach that promotes the territories it crosses, implementing public areas available to the local community. In particular, for the disused railway FS Torre Annunziata-Cancello, 31 km long, which intercepts various abandoned and degraded areas, and 26 buildings including stations, roadman's houses and warehouses, mostly disused and/or abandoned, the reconversion is proposed in a green way, which is thus a candidate to become an artery of slow mobility, defining a path aimed at the rediscovery and connection of numerous assets of historical-cultural and landscape value present in the immediate vicinity such as the Partenio Park, the National Park of Vesuvius, the Archaeological Park of Pompeii and the network of minor sites, the Regional Park of the Sarno river, etc.

An survey was also administered to a sample of the population distributed differently across the territory and the results obtained were useful for understanding the habits and real needs of the community. The subject of in-depth design study, then, were the areas of the old Marigliano railway station, currently partly used as a totally waterproof mu-

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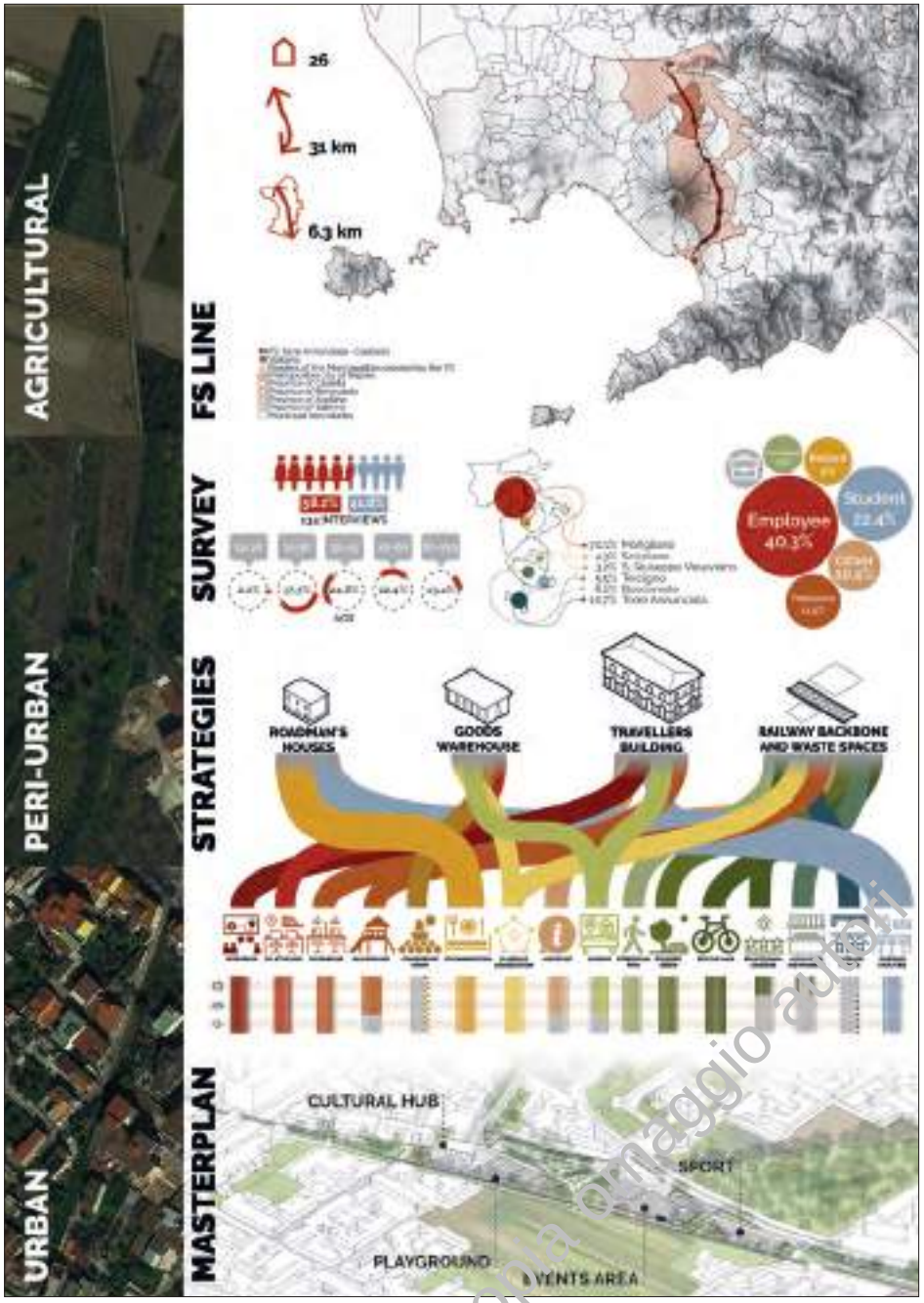
nicipal car park, partly cluttered by disused tracks with the related seating areas. These areas are, to date, abandoned and degraded, as well as constituting a break between different parts of the city. With our project, we therefore propose an intervention that transforms these areas from an urban limit to a resource for the community through the redesign of open spaces, the removal of physical limits, the connection with the urban centre. Furthermore, restoration and refunctionalization interventions of the passenger building and the station are proposed. Consistent with the participation phase developed, it was chosen to place functions on the ground floor capable of guaranteeing full usability and fluidity, such as co-studying areas, spaces for workshops and conferences. On the first floor, however, income-generating functions such as co-working stations, offices and exhibition rooms are proposed[1].



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Slow Urban Planning

Improvising a performative urbanism or a social reanimation of the abandoned city of Tribsees!

*Ton Matton**

System Error

The town of Tribsees, located in North-East Germany, has faced significant challenges in recent years. Despite substantial urban development funds invested following German reunification, more than 70 of its approximately 250 houses have fallen into disrepair. This situation has led to a sense of discouragement among residents, who are confronted with the decay on a daily basis.. The decline of Tribsees raises questions about the efficacy of urban planning policies and the capitalist system's role in shaping urban landscapes. Is it just coincidence and bad luck? Have the policies failed? Is the town in the wrong geographical location? Is it a capitalist system error? Despite significant investments, the town's condition has deteriorated, leading to widespread vacancy. However, this vacancy also presents an opportunity, as rising rents and housing prices in larger cities make small towns like Tribsees increasingly attractive.With this project I present an approach to revitalizing Tribsees through improvisations in a performative urbanism, to attract people from outside the town to consider living there while encouraging current inhabitants to emancipate and remain resilient.

Squatting Abandoned Houses

Recognizing the potential for revitalization, the municipal administration of Tribsees, supported by the Ministry of Housing and Urban Development, has sought to address the issue. That is where I invited a handful of artists and students to Tribsees, with the request to occupied some spaces, squatting in the abandoned houses and to perform, in collaboration with local residents, a possible future for Tribsees. After some months of workshops, debates, questionnaires and try outs, we opened in an improvised urbanist way, e.g. a cinema, a restaurant, a cowering space, a DIY Hotel, etc. One broken house e.g. was ‚renovated' by the women's association. Renovation with men always leads to cement and drilling-machines. The ladies start knitting and stitching, they sew the cracks, crochet the windows and gained a huge self-confident from it.

Social Reanimation

This approach to urban planning, rooted in performative urbanism, has transformed the social fabric of Tribsees. The increased activity and engagement have led to the sale and reoccupation of some houses, as well as a general increase in energy and enthusiasm among residents. This has been reflected in the changing narrative of the town, with new stories of village life replacing old complaints. Minister Pegel, in his speech at the Tribsees Centennial in 2021, acknowledged the success of this approach, noting that it has forced a reevaluation of previous urban planning efforts and the need for alternative strategies.

Tribsees Centenniale

This performative urbanism changed the village-life. Some houses are indeed sold and reoccupied, the energy level increased as did the emancipation of the inhabitants. The old complains you could here in the street are written over by new, enthusiastic stories of village life. In his speech at the opening of Tribsees Centennial 2021, Minister Pegel emphasized that it was actually not a bad idea to occupy abandoned houses: if an owner came forward in response to the occupation, a discussion could finally take place; if not, the residents could take possession of the house and make use of it. You could call this a desperate approach. After all, it is bound up with the realization that previous urban planning efforts in Tribsees had not functioned very well. I, however, am more inclined to think of it as courageous. Courageous in that the minister, is aware of the challenges that are common in small towns. And furthermore, it is becoming clear that the regulations we have been following do not necessarily lead to beneficial developments in small

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towns like Tribsees. It is becoming apparent that alternative strategies need to be developed. So if the system error is in the urban planning praxis, we have to urgently rethink our education models in this field.

Improvisations on teaching

Looking ahead, the question remains: what might new strategies for urban planning look like? It is clear that traditional models have not been effective in addressing the challenges faced by small towns like Tribsees. Instead, a more experimental and collaborative approach is needed, one that values the input of local residents and embraces the unique qualities of each community. This requires a reevaluation of our education models in urban planning and a willingness to embrace trial and error in the pursuit of innovative solutions. We could not offer Tribsees guaranteed success, as we made clear right from the start. But we were able to point to projects I carried out before in Wittenburg (2012) and Gottsbüren (2016)*, both of which were in better positions after the projects were completed. While challenges remain, the success stories emerging from projects like those in Tribsees offer hope for a more sustainable and vibrant future for rural communities.

The Convivialità Urbana Award

Grazia Torre, Chiara Franchetti***

The Convivialità Urbana Award, an idea by Napolicreativa association, is just one of the many ways that have been thought to build a connection between the community and the territory. Napolicreativa association is the owner of many projects: contests, workshops, guides, activities in the area etc. And all of them want to re-think the cities as we know them and change the vision for the future. Napolicreativa association believes that the creativity development is the key for the competitions of tomorrow and it wants to create a space where architecture projects and design meet with the involvement of the citizens, of their needs and their desires. In this context, the Convivialità Urbana Award was born, and it aims to launch a process of collaborative design for areas that need to be given value and promoted. In 12 years, there have been 10 editions and they have involved 10.160 contestants, they have shared 195 projects, and the money prize has reached 91.500 euros. It's an international project that wants to give a new life to forsaken spaces such as buildings, bridges, factories ect. Every year an area is chosen by certain criteria, and a theme is decided to be developed, which is the subject of an international architectural competition. The international architectural competition takes place after a workshop that aims to have an open conversation that involves stakeholders, architects, community members and administration. The attendees develop a project that will be introduced to the community by an exhibition, every project will be judged by a jury of professionals, and it will also take in consideration the votes of the citizens. The exhibition itself is part of the development process, it's in this phase that the professionals and the citizens meet and find an understanding of the vision for the future of that specific area. The goal of the proposal aims to launch a process of urban regeneration by engaging the community that can suggest its needs by directly debating the architects and by sharing its preferences between the projects that have been proposed. Also, these processes make it possible to give a new life to forsaken places that have great potential and give them back to the community. Recently, one of the sites that has been chosen for the award, Ponte S. Giorgio dei Capri – Napoli, is now receiving sins of interest and great consideration from the local and national community. The results that are hoped for and that have become more concrete with time, these results want to create a strong relationship between citizens and architects, a relationship that too many times is not part of the processes of regenerative architecture. The results want to create a network of administration, professionals, and community, but mostly they want to give real answers to the issues of the areas, by making an accurate design and a large-scale project. Of course, the final result would be the regeneration of an area that would reflect the connections, the understanding, the relationships that have been built thanks to the Convivialità Urbana Award. That area wouldn't just be another building, another bridge or another factory, but a place that has re-born with the collaboration of professionals and citizens, in a process where needs, creativity, believes, design and architecture are mixed all together to give back to the community a piece of the city that not just represent the past but also a vision for the future.

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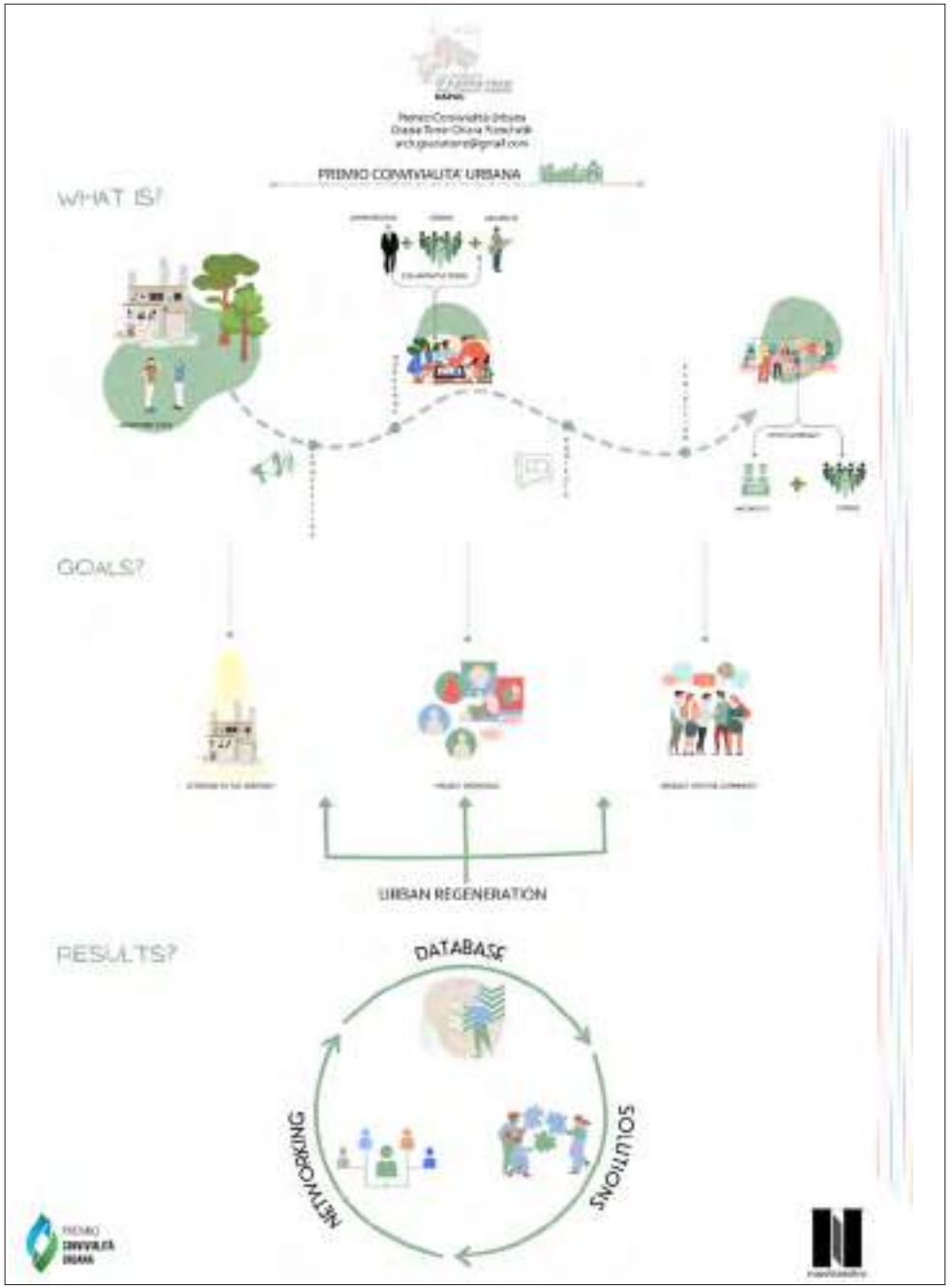

City space and children's skills
New uses of urban space in the Noce neighborhood of Palermo

*Ferdinando Trapani**

The general theme is that of policies such as community education to combat educational poverty aimed at the social and economic contexts of regions and urban areas characterized by hardship and a high level of early school leaving. Understanding the inevitable connections between the role of urban public space indoors and outdoors is crucial in these policies. The concept of poverty is universally known in terms of material poverty, as in the scientific definition of poverty as the minimum income level required for physical subsistence (Rowntree, 1901, 1937, 1941; Veit-Wilson, 1986). However, for the purpose of defining contrast strategies, it is a complex concept with regard to its measurement and comparison (Lister, 2004). The role of urban planning against poverty in the countries of the global south, for example, remains anchored in the "1) reference framework based on sustainable urban development goals; 2) an inclusive city position; 3) a poverty alleviation focus" and finally to "an interdisciplinary and transdisciplinary urban diagnosis" (Bolay, 2020). In addition, in the concept of poverty there is also the fact of the impossibility of participating in social life since the lack of level of education and competence prevents the activity of active citizenship to try to solve one's problems (JRF, 2014). Therefore, the concept of *educational poverty* remains distinct from the concept of *inequality in education* because it can constitute an additional conceptual tool to analyze and enhance the role of education in enabling participation in modern society (Glaesser, 2022). The relationship between educational poverty and urban and spatial inequality was discussed in geography not as the not only physical proximity to services, infrastructures and jobs, but considering instead the development over time of distinct areas of urban decay that render those services present in the same urban context ineffective: social analysis is necessary to identify appropriate policies. (Grant, 2010). Urban planning studies also highlight the role of the overall context in which the learning of young people takes place, which only in extreme cases directly depends on the infrastructure and services for education (Nonnenmacher, 2017). For many years, in fact, the term 'educating community' has been linked to policies to combat educational poverty to unambiguously define the context of learning and their indirect effects on children and adolescents. Planning must take into account the analyses of the educating community and the qualities of the living space in which it is inserted. "PEC - Poli Educanti in Condivisione" (Shared Educational Poles) is a project of integrated actions carried out by a partnership made up of schools and third sector entities and universities (in the role of external evaluator). PEC aims to combat educational poverty in the Noce district of Palermo to activate poles in close synergy with each other, where members of the community meet and train, who become competent and therefore "educating". The extension of the opportunities for integrated development of children/young people aged 5-14 at risk of social exclusion and the growth of the transversal skills needed to strengthen their resilience capacities in the social dimension are the objective considered.The network of social animators that won the competition organized a variety of actions during the after-school hours involving children, their families, teachers and citizens of the Noce district. The aim is to activate the educating community through the innovative use of spaces to make them places of living. A 3-5 year long process (with the delays of the lockdown) in which gardening works were carried out, change of functions (from parking to garden open to the neighborhood through national workshops), an educational carnival for thousands of participants, music courses, occupations of landfills and spaces usually used for drug dealing, etc. In addition to the activities that have changed some spaces that are functional nodes of the Noce district, personalized educational programs have been created for children who needed special care or others who showed particular interest in extracurricular activities: all of them directly and indirectly involved their families and friends in a new community. The contribution highlights how the urban space ends up being the protagonist of almost all the actions of the integrated project that necessarily took place in public open spaces. Social sciences and practical knowledge

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related to child and adolescent care were used to develop the PEC project. While "PEC" is aimed at changing the lifestyles of children in a disadvantaged neighborhood, urban space is not only the physical environment in which all the activities of the project take place but is a vital function of the subject involved in the project both individually and collectively as the relational capital of the educating community.

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Sitography

1. Noce Carnival: https://fb.watch/qDacraEhmC/
2. Il Giardino dei Giusti (the Garden of the Righteous): https://www.iostudionews.it/un-giardino-dei-giusti-allistituto-de-amicis-vinci-palermo/

Fig. 1.
Social event "Carnival of Noce neighbourhood" in Palermo, 2024. Created by the PEC projects experts and children of the schools, families and other citizens involved.

Fig. 2.
The new architectonic solution for the new garden replacing the school parking as a new neighbourhood service.

Student Housing as a driver of Urban Regeneration
The case of Libertà district in Bari

*Giovanna Mangialardi, Nicola Martinelli and Angelica Triggiano**

How does the Italian university system relate to the urban context? They experience internal tensions (Liu, 2019) that push universities to close off, isolating themselves from the surrounding urban context. On the other hand, cities attempt to create new synergies and relationships, although residents often perceive students' presence as a reason for conflict (Ceccarini, Diamanti, 2013). As a result, there is space fragmentation and a growing aim to create new interconnections to strengthen the much-debated relationship between the university and city. Thus, urban regeneration could represent an opportunity to strengthen the liveability of urban spaces characterized by multifunctional systems (university system included), particularly in peripheral districts.
In this context, this study aims to briefly understand how connected student housing and services can represent an opportunity for the periphery's urban regeneration, in addition to fulfilling the constitutional dictate of the right to study. This policy in Italy is supported by a regulatory framework that allows the public co-financing of new student housing, based on the Law No. 338 of November 14, 2000.

In particular, we look at the case study of the *Libertà* district of Bari (Puglia Region), a social periphery in the heart of the city. After a general evaluation of the transformations taking place in the district, the contribution focuses on two important ongoing reuse projects: the *Nautico* Institute and the *Manifattura Tabacchi* complex. The first will become an innovative student housing, the second will turn into a multifunctional pole where research, innovation, commerce, public and community spaces, as well as student housing, will coexist. The description is given below.

The *Libertà* district (Fig. 1) is one of the most densely populated areas in Bari, but also has the highest level of unemployment and degradation (numerous incidents related to crime). Aggregation spaces, from liveable squares and public gardens to proximity shops, are almost completely absent. It is also a mixed and complex neighbourhood where different worlds coexist. In particular, there are residents of other ethnic groups, especially Nigerians, and out-of-town students who choose this urban area for its lower rental costs and its proximity to the "Humanistic Citadel" of the University of Bari, in the adjoining *Borgo Murattiano*, the most dynamic in the city, and therefore also the most expensive in terms of housing prices (Scionti, 2003). For these reasons, the *Libertà* district has been defined as "peripheral" despite its proximity to the urban centre and its urban conformation comparable to the *Borgo Murattiano* (quadrangular blocks on a grid pattern, typical features of nineteenth-century expansion). Despite this, the *Libertà* is recognized as having its history, linked to iconic places of the 1970s and the 1980s (e.g. cinemas, clubs, etc.), and its stratified identity.

After the European Community initiative of the 1990s "PIC Urban" in the historic centre of Bari (Balducci, Moccia, Padovani, 2002) and the regeneration of the *Borgo Murattiano*, the municipal administration has identified the *Libertà* district as a priority area for urban regeneration projects (Di Palma, 2022), as well as the reuse of the large disused heritage, creating new cultural, technological and social hubs at the service of the entire city. Some urban regeneration projects in the neighbourhood have already been realized: the redevelopment of *Redentore* and *Risorgimento* squares, the new *Maugeri* Park in the former Gasometer area, the *Officina degli Esordi* and *Spazio 13*-Urban Center as youth creativity and co-working spaces, inside previously abandoned buildings.

Among the ongoing projects which examine student housing and its connected services, two are important district reuse projects: the *Nautico* Institute and the *Manifattura Tabacchi* complex, both in a state of abandonment and degradation, although the *Manifattura* is still partly used as a municipal market. While the project of *Nautico* Istitute was drawn up by the Regional Agency for the Right to Study (A.Di.S.U. Puglia) and received public co-financing from Law 338/2000, the projects of *Manifattura Tabacchi* is the result of a design competition won by the group led by arch. Vincenti and received a contribution of 20 million euro from the National Recovery and Resilience Plan (PNRR). For the first building is planned (the work is to be completed by the end of 2024) an innovative student housing (85 beds) with a public library, an auditorium and a courtyard to be used as an open-air location for the organisation of city cultural events that will contribute to animating the daily life of the neighbourhood. The second one, which occupies four city blocks, will become a multifunctional pole where research, innovation, commerce, public and community spaces, as well as student housing (57 beds), will coexist. Among the main facilities, the complex will host the headquarters of the National Research Council (CNR), with 13 institutes and more than 700 research fellows, currently spread over different neighbourhood of Bari. Work is in progress and is to be completed by 2025.

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From this development perspective, the knowledge society (Martinelli, 2012) leads the district's change as an opportunity for a social periphery's urban regeneration of the *Libertà* district.

Although the evaluation of the impacts will only take place when the transformation will be completed, the authors are confident that the projects described will facilitate a new urban system and a new physical connection of these strategic realities for urban development, stimulating a new identity for *Manzoni* street as an axis of "neighbourhood commerce" and for *Garruba* street as a walking axis between the extremes of the University of Bari's Citadel and the research and student area. In a dynamic context such as the one just described, knowledge complex spaces are strategic for the transformation of historical buildings/complex that have been abandoned for many years, into innovative spaces destined to offer a real service to the city, as well as to the university and the citizen, also temporary (Mangialardi, Martinelli, Triggiano, 2022).

The contribution therefore, as part of the larger PRIN research "RUSH Responsive University Student Housing. Innovative solutions for the socio-economic and urban regeneration of neighbourhoods in Southern Italy," of which the authors are part, attempt to give back reflections on the role that university residences can play as agents of urban regeneration in peripheral social districts. Can a city of proximity materialize around places of knowledge and tertiary education? This is a great challenge for the public engagement of Bari's universities and its research centres (CNR), where the presence of migrant and students communities settled in the neighbourhood, but at the same time integrated regenerative policies useful for creating a new complex urban system for multiple target users, will be able to contribute to the district multi-ethnicity and its future vitality.

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Fig. 1.
Libertà district (top), Nautico Institute (center), Manifattura Tabacchi complex (down).

How will we live together?

Davide Tumiati

How will we live together? This question arose in 17° architecture exhibition of Venice.

How can we offer to citizens alternative ways of living together? How can we design new forms of social collectivity?

From the use of the existing, to the planning with nature, to reinvention of artefacts inherited from the past to the experienced new form of leaving. We have for example,

1. the "***municipal workshops***" that can be achieved both, in quartier of big cities and in small communities. A "municipal workshop" is a working space which can be reached both, on foot or in bicycles, at temporary use. That is secure, well equipped and well connected. Inside, can work all those who work remotely – but they cannot use their own home.
   The establishment of one "workshop council" – elected by those who have chosen it as their own main work location– assumes importance within different possibilities of ownership model of workshops themselves. His skills could include assisting workers in their work-relationships with the outside world planning.
2. or the "***new libraries***" - where in addition to the library, there must be offices, restaurants or a cafeteria, or even a canteen. This is useful to do, even in a very small town where there's a risk of losing identity (where they are closing the post office, the bank, the school or even the only shop still open). They can be planning new home for health, together to library/cultural center, cafeteria, spaces for community activities, gym, room for informatic.
3. or the "***Covered galleries***" - artefact that can perform to bring back functionality to historical center, also to them of the small size.
   The "Gallery" can restore order and redevelop the existing build fabric. A "promenade" covered is meeting place, repaired from bad weather but also repaired from strong heat. The example par excellence is the "Gallerie degli Antichi" in Sabbioneta or, in recent year, the James-Simon-Galerie in Berlin.
   Or the "simple" covered square on seafront of Marseille . A protected public space that invites people to revitalize the ancient port area. Or interesting as a particular Urban Fact organizing public spaces - think of the San Blas hangar in Mexico.
   The gallery, in Sabbioneta, is a building ninety-seven meter long. It contains: a pedestrian portico (at the ground level) and a closed real gallery (at the first floor). The exterior can recall Roman aqueducts. Sabbioneta was built according to the humanistic principles of the "ideal city". The gallery, in Berlin is born during the competition the "Museum Island". It becomes the element that proposes to merge the surrounding environment into a unitary image.
   The re-proposal arcades are another interesting feature of civil architecture of Italian cities. They are been renowned primarily for this specific peculiarity. Many of these cities present a street, a boulevard, or a main street arcaded - in their historic center. Above all in the north-west of Italy, characterized of the rainfall most abounding compare the south of Italy. Locations characterized by sudden heavy rainfall and high temperature and heat island in summer period. Therefore able to guarantee shelter for citizens who still can reach their destinations without being heavily dependent on climate change.
   "Covered passages" that exploded in the Nineteenth century, and which still retain their charm and architectural innovation of that era. Therefore, designating and producing new spaces that respond to today's social and environmental needs.
4. To think about to new place where "being", is itself a place of sociality, it is culture, information, free time, social cohesion. This should also be the case for new interventions of ***Social Housing*** – where every intervention should also be conceived to offer to the neighborhood in which it is located, new public spaces and services.
   Examples from recent years – demonstrate how the "threshold is no longer in front of the front door, but it is stratified with different spaces and different courtyards, and common areas.

The typological offer includes new ways of living in response to new needs (co-living, foyer, co-housing for elderly etc…):

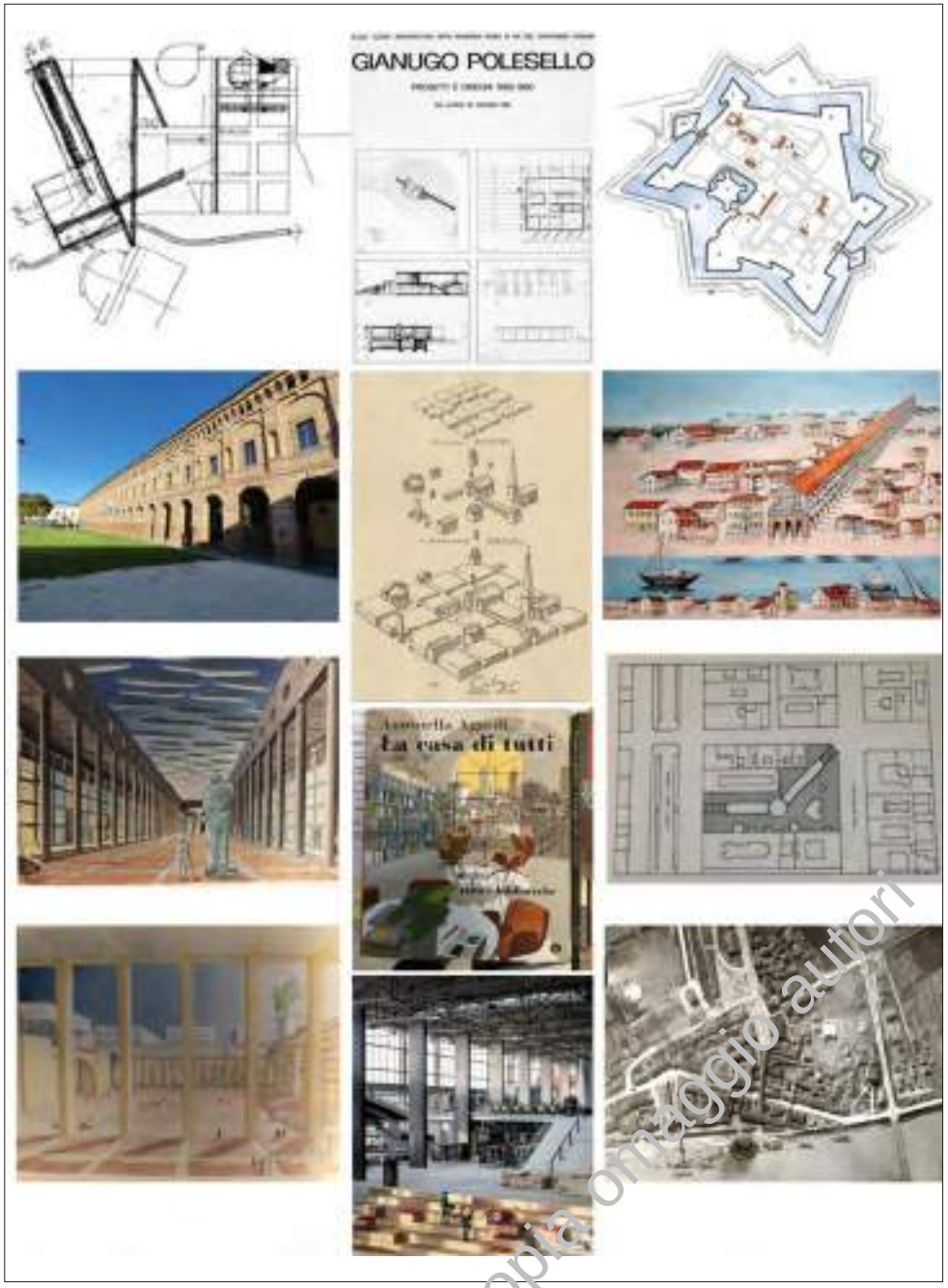
- ***Foyer***: it's a residential model aimed at promoting the independence of young workers. For this aim, the independent living studied as temporary solution that allows for sustainable cost.
- ***Co-living***: it's a hybrid body – it's a halfway between a hotel and a home. Offers spaces for additional services mainly oriented toward the work. But also, space and services dedicated at integrating the home space. Those services support the creation of social networks.
- ***Cluster Flat:*** there are small housing units connected among them from a common space – like area in kitchen; eating; leaving TV; play; working-studying, deposit.

It is important for small cities to "rethink about themselves" - with particular attention to the Architecture of common spaces. Today meeting dissolve on the fast wave of byte flows.

Information arrive directly at home, just as water and electricity, thanks to media. The public agora becomes the leaving room of the house. The village becomes global, but it loses most part of its own physicality.

We must therefore go back and recognize a quality of public space. This was the meaning the ancients consecrated a place.

"The city as the creation of the environment in which the community lives. The city is divided into public and private spaces – monument and urban buildings, architecture and construction, squares and streets – and in this hierarchical order." (LEON KRIER)



An inclusive and breathing intergenerational city

New green spaces on the underground area of the Ferrovie Nord in Busto Arsizio

Michele Ugolini, Caterina Gallizioli, Beatrice Basile, Francesca Ripamonti, Francesco Occhiuto, Maria Maddalena Reggio, Amanzio Farris*

This work is the result of a collaboration between a research group from the Department of Architecture and Urban Studies of the Politecnico di Milano and the Municipality of Busto Arsizio with the support of FerrovieNord. The research outlines an urban renewal masterplan for the Transformation Area 3 FNM Station of the Municipality's planning guidelines (PGT) of Busto Arsizio. Situated along the Milano Cadorna-Malpensa Aeroporto railway, the area's location accounts for its territorial relevance. This is why it is one of four railway stations that would be connected by a bicycle superhighway and the planting of thousands of trees, in the context of FNM's FILI Project, a large urban regeneration project, planned for the Milan Cortina 2026 Winter Olympics.

The area identified by the PGT stretches over 17.3 ha and it is marked by low urban quality, abandonment and impermeable surfaces. It is composed of a plurality of properties: public and, private, the latter being brownfield and already demolished industrial areas.

An intergenerational city that includes and breathes is the goal of the urban and environmental regeneration masterplan. The aim is to transform a historic caesura in the city, caused by the railroad, into a new green centrality livable by all, young and old: a linear urban park more than a kilometer long, with pedestrian and bicycle paths, areas for rest, play and sports, buildings with a social and cultural character, for the well-being, health and spatial inclusiveness of citizens. Ground elevation movements help to create a tree-lined green infrastructure above the hard basement trackbed by de-impermeating the soil and improving urban drainage.

The area covered by the masterplan has east-west development and is located south of the historic center with the FN Railway Station placed in a barycentric position.

In the 1990s, the industrial vocation of the area was lost, the tracks, which had been present in that area since the second half of the 19th century, were but the area still looks like a large caesura between the northern (downtown) and southern (suburbs) parts.

In replacement of the previous station, a new one is built in another location devoid of urban references and with an anonymous architectural character. Above the reinforced concrete slab covering the tracks, only parking lots will be generated resulting in soil sealing, heat islands and a context devoid of urban and social relations that does not promote any kind of inclusiveness.

Within the transformation area, there are three polarities that have the potential to lead the place back to a unified urban identity: to the west, the Ex-Macello, a complex of underutilized early 20th-century buildings of architectural value but in a poor state of preservation; in the center, the FN Station, a building of low building quality; and to the east, a large parking lot used twice a week as a market place.

A linear park to stitch up the urban fabric. In the east-west direction (the urban connection of the three areas) and in the north-south direction(the reconnection of the relationship between the center and the suburbs) is entrusted to the linear park as a green infrastructure characterized by a system of soft mobility that reconnects to the territorial scale cycleways. Instead of the bleak paved parking areas, rest areas, green spaces with lawns, shrubs and trees will be created. This part, together with the station, is already financed with funds from the state (26 mln euros).

The FN Station, hub of sustainable mobility. The Transformation Area is a hub of different flows at the urban and territorial scale thanks to the manyroads, parking lots, railway station, bus-lines. Busto Arsizio is a city of commuters. The FN Station represents one of the main gateways out of and into the city. The masterplan calls for the redevelopment of the station as a sustainable mobility hub by including a velostation and a bus station.

Ex-Macello a hub for training and young associations. The former slaughterhouse occupies almost an entire city block and sees the introduction of a new building dedicated to training: an Institute of Higher Technical Studies dedicated to mechatronics. The interesting existing buildings and open spaces are recovered and used for Scouts, venues for associations and temporary exhibitions. The intervention intercepted two funding calls, national (9 mln euros) and regional (2 mln euros).

The market area, new square, services and intergenerational gathering spaces. This part of the area through Lombardy Region's Urban Regeneration 2021 call for proposals has been funded (15 mln euros) and professional designs are already underway. The masterplan calls for it to become a gathering and social space for seniors, university and school students. A new multi-story parking lot will free the site from cars and transform it into a green space and public square that will accommodate the market and a plurality of initiatives. Overlooking the square will be the new "BOOST" building, a community hub, a condenser of social and cultural activities: bar, conference hall, exhibition space, coworking, Fab-lab, study rooms, and newspaper library.

The masterplan aims a sustainable urban development and will enable an inclusive neighborhood economy and life for all citizens.

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perspective section of the rising park

the three urban polarities

general masterplan and current situation

Urban regeneration as a paradigm of public city project: experimentation of an intervention model

*Marilù Vaccaro**

Within the broader framework of European and national policy objectives, such as the Green Deal and the National Recovery and Resilience Plan (PNRR), the urgent and necessary theme of reclaiming public residential building heritage emerges. These are often unfinished and fragmented urban areas, which in the collective imagination are most often considered places of physical and social degradation. These factors constitute the main elements of the stigma attached to public neighborhoods. The contemporary debate sees public intervention as a significant primary resource in a broader perspective of urban transformation as the outcome of projects that placed a reflection on the issues of urban and social quality. Over time, these reflections translated into different *ideas* of the city and, consequently, different *ideas* of habitable space, constituting a rich heritage of geographical and typological diversity, and shaping different residential landscapes. Public housing neighborhoods, in fact, along with collective facilities and spaces dedicated to meeting urban standards, form what we can define as the public city, have contributed significantly to the formation of the contemporary city. However, over the years, these urban parts have developed various problems, whose performance deficits with standards below the average of traditional housing have been added to qualitative deficits. Expanding the perspective from a local to a broader territorial view reveals new elements and meanings, endowing public residential neighborhoods with strategic importance in terms of both functions and spatiality. Urban regeneration, as a principle of transformation for the public city, is now under the attention of local administrations and European politicians. Considering the various vulnerabilities affecting these areas, the transformation cannot take place only from a morphological and formal level. A project approach capable of generating new forms of economies and social balance is necessary, aiming for a profound transformation of the context. In these sense, a regenerative approach to the project works in symbiosis with the natural system, rebalancing the relationship between space and society, between architecture and nature. This allows us to understand that the notion of inhabiting within the dynamics of territorial transformation cannot remain confined to the scale of housing but must broaden its concept to understand and define the relationships between different scales, from housing to the neighborhood, and from the neighborhood to the urban landscape to which it belongs. A regenerative project works in this direction, generating balances between historical traces to preserve and the insertion of "the new" or a possible reconfiguration that updates the *idea* of the contemporary city.

In line with these theories, the research carried out within the scope of the doctoral program aims to transform the fragmentation generated by the processes of city formation, of which public residential construction is a significant part, into discontinuity, working towards this goal on the framework of open spaces which play a fundamental role in the articulation of the physical and social form of these urban areas. Furthermore, the research aims to outline qualitative and procedural parameters that can trigger a physical and immaterial regeneration of public residential heritage at various levels of fruition. To pursue these objectives, international best practices in the field of urban regeneration of the public city have been identified. In particular, the French case study has been adopted as a model for intervention. The French experience demonstrates how public neighborhoods can become a laboratory for initiating a widespread redevelopment strategy, contributing to the development of physical, social, and landscape connections between neighborhoods and neighboring urban areas (fig.1; fig.2).

An approach to the project of the public city that outlines strategies considering not only the material aspects that indeed concern transformation but also those fundamental immaterial aspects to overcome fragmentation and initiate a strategic process for improving the quality of living. The selected urban regeneration projects in the northeast periphery of Paris have been analyzed at three levels: neighborhood – open space – territory. This analysis allowed identifying the various actions and projects implemented at different scales and understanding how housing policies or territorial governance translate into space.

This enabled the construction and extraction of a background of images, policies, regulations, and reference concepts, different and complementary, as well as a vast field of actions intersecting material and immaterial design actions for the regeneration of residential landscapes. Therefore, a possible intervention model capable of adapting to different contextual situations and combining objectives of spatial justice with those of environmental justice. It is evident that through an analysis and deep understanding of the places of the public city and their social complexities, it is possible to derive the rules for their transformation, suggesting new possible configurations of contemporary public space.

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Fig. 1.
Urban regeneration project of the Cité de l'Etoile neighborhood, Bobigny (93). Photograph taken near Place Carrè Rouge, the area where the project is being implemented. | Source: photograph by the author, February 2023.

Fig. 2.
Urban regeneration project of the Cité de l'Etoile neighborhood, Bobigny (93). Place Carrè Rouge, project completed. Source: photograph by the author, February 2023.

ParticipatiOn Wheels
A playful tool for urban participatory planning

*Eirini Vallindra, Georgia Manousogiannaki**

'ParticipatiOn Wheels' (hereafter 'PoW') is a transformable multifaceted construction, designed to enhance the process of participatory actions in public space. It builds on a social methodological approach that raises public debate as an effective actor force in the policy agenda of urban regeneration. The project proposes a bottom-up approach to urban design practice as a response to systemic planning strategies that fail to effectively address the socio-spatial challenges of contemporary Western city centres. Its name, 'ParticipatiOn Wheels' is informed by the two fundamental concepts represented by its idea: that of "participation" and that of "mobility". It is a structure that can be transformed into a cart, a workbench, a ladder, a display stand, or an interactive board, to serve multiple scenarios of citizen participation by forming diverse ephemeral spatial arrangements in public space. PoW can serve as a reference point in collective actions or can be used as a piece of equipment in experiential mapping/planning workshops. It also serves as a means of storing and displaying graphic materials (drawings, maps, posters, research forms, etc.) and the relevant supplies and tools needed in an open urban action.

The project's aspiration is to simulate a mobile hands-on laboratory in the city. The design concept is based on the repeatability of a modular unit that functions as an interactive surface. This modular unit takes the shape of a frame to which different activity surfaces fit and it is repeated six times. The articulated joints that connect those six units allow them to move freely in one direction. The movement of the frames is stabilised with the help of nodes that secure the connections of the modules at specific angles. This ability of securing at multiple inclinations provides various formations that allow for different possible scenarios of use. The incorporated surfaces can be changed and are made of a range of materials (wood, cardboard, plexiglass, cork) that correspond to different contexts. Thus, surfaces can be designed and applied tailored to groups with specific skills, needs and preferences, broadening the possibilities of interaction with individuals and communities of diverse interests and different sociocultural backgrounds.

PoW's design philosophy and aesthetics draws from childhood play. Materiality and geometries are inspired by children's wooden playsets, while its variability (in the overall construction as well as in the surfaces) produces multi-sensory forms of interaction that are also influenced by children's play. The playful approach the project brings forward aims to activate participants' curiosity and their motivation to join public manifestations. Its idea reflects a need for urban practitioners to conduct field research and communicate their work with all parties involved and for citizens to become familiar with participatory practices and claims of public space. Therefore, the intention is to generate an 'intermediate space' between urban practitioners and citizens and create a spatial core of action where participation becomes more enjoyable and inclusive. The challenge that its application deals with is to invent new imaginative methods to support social fermentations and participatory planning practices in the future European city. A key concern to this challenge is to actively manifest the need to engage children in urban processes that affect them as equally as all. Towards this direction, PoW's threefold 'scale-materiality-variability' together with the way it is applied in spatial exploration of public spaces, seek to ensure children's participation in mapping and design activities.

PoW has initiated its mission in urban neighbourhoods of the multicultural city of Athens. It has so far been applied in experiential workshops with children and adults in public spaces and facilities in the city centre. It has been transformed into an informational cart and an idea booth (in the form of a house) to facilitate mapping and urban equipment ideation and design workshops in central squares. It has also been converted into a workbench, for answering questionnaires or drawing maps, adapted accordingly for young and adult participants. In other cases it has been utilised in ladder mode for a series of neighbourhood mapping workshops with children in public schools. Its

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implementation and adjustments in the field are dynamic and experimental processes. Its presence in the workshops does not aim to make a direct social impact, but rather to reshape the way public actions take place, facilitating the process at various stages and enriching the experience of the participants both spatially and sensorially.

Social Return on Investment (SROI) applications on urban planning for conscious decision-making The VARCITIES project approach

Elisa-Elena Vasiliu, Sara Biancifiori, Adriano Bisello*

The extremes of climatic phenomena and urbanization dynamics, with cities experiencing increasingly critical environmental and social stresses, determine cities to counteract by promoting new ideas, and striving to rethink human-nature design in urban planning. This research addresses the reticence in adopting progressive solutions, deemed not cost-efficient, as this belief is supported by the consideration of benefits on a short-term basis. However, this can be overcome by adopting impact assessment frameworks that provide a comprehensive picture, counting social, economic, and environmental factors. The study is part of the Horizon 2020 project VARCITIES which focuses on a holistic approach of Visionary Solutions (VSs) that combine the natural, digital, and cultural aspects in shaping innovative urban spaces[1], aiming at increasing citizens' well-being by designing healthier and more just cities.

The study investigates the benefits generated by the VSs using the Social Return on Investment (SROI) method. The SROI analysis stands out for the overturning of traditional evaluation frameworks, such as the Cost-Benefit Analysis (CBA) or Cost-Effectiveness Analysis (CEA), by following a bottom-up process that focuses on stakeholders' perception of project impact, placing at the centre the human experience of changes. The scientific relevance of the proposed results is the unique approach in applying the SROI for urban projects, compared to other existing case studies found in the literature. The results fill the gaps in the current social value assessment methods of innovative urban projects that propose the improvement of public spaces.

The SROI analysis is generally subdivided into six stages: Stage 1: Establishing scope and identifying key stakeholders; Stage 2: Mapping outcomes; Stage 3: Evidencing outcomes and giving them value; Stage 4: Establishing impact; Stage 5: Calculating the SROI; Stage 6: Reporting and using the results. Those stages have been streamlined within VARCITIES into three main parts:

1. Theory of Change (ToC) Identification: it encompasses Stages 1 and 2. It involves establishing the scope of the analysis and identifying key local stakeholders, finally mapping out the expected outcomes, i.e. the social changes that the project would generate. Operatively, the first part has been organized into a series of preliminary meetings with each pilot expert group, to shape a clear causal change that connects the VSs to expected outcomes. Once the ToC is shaped, a workshop with the local key stakeholders validates and defines the final version of the ToC by considering refinement from the engagement participants.

2. Quantification of Outcomes: it combines Stages 3, 4, and 5 of the SROI framework. It involves the rigorous process of assigning a financial value to outcomes outlined in the Toc stage and establishing the actual impact generated by considering discount factors. Finally, the SROI ratio is calculated. Practically, this part of the methodology entails at first desk research on possible proxies and discount factors, and it is completed with a validation workshop with stakeholders.

3. Reporting and Use of Results: it focuses on the reporting of outcomes and the strategic application of findings. This entails sharing the estimated SROI value and incorporating the lessons learned into ongoing project and decision-making procedures.

A report detailing the SROI process should be delivered as well as the presentation of results, to the key stakeholders involved and to a broader public as well.

The SROI analysis has been already fully implemented in the Italian pilot area of the project, Castelfranco Veneto, while the other six European pilots have completed the ToC

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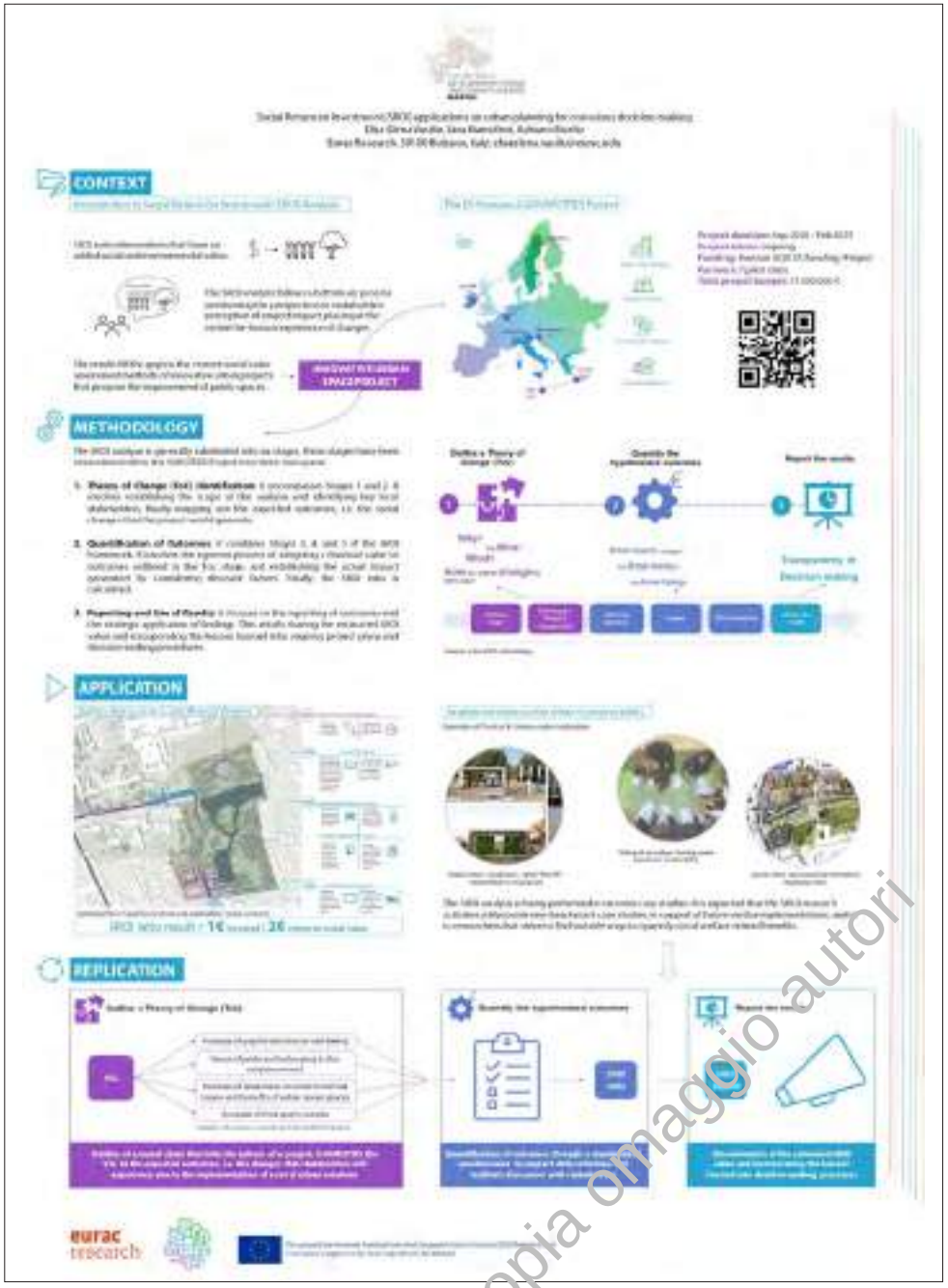

Fig. 1.
Poster of Social Return on Investment (SROI) applications on urban planning projects: The VARCITIES approach

phase. Original outcomes have been collected already attending the validation and quantification phase. Although each case study developed different solutions, the main outcome categories can be listed: citizen empowerment, an increase of awareness on environmental issues and benefits of urban green spaces, an increase of mental well-being, a sense of pride and belonging to the neighbourhood, an increase of time spent outside.

An innovative approach foresaw the elaboration of a comprehensive questionnaire template to streamline the stakeholder engagement process necessary to complete the ToC and the Quantification, as well as facilitating the data collection. The study will provide new benchmarks, supporting decision-making of future implementations, useful to researchers and political actors who strive to quantify social welfare-related benefits.

This work was conducted as part of the VARCITIES project and has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement no. 869505.

The regeneration of semi-confined public spaces in disadvantaged contexts for social inclusion and the well-being of children

*Anna Rita Villano, Donatella Diano, Katia Fabbricatti**

In the recovery of open spaces for collective use, the research addresses the issue of playgrounds for the community, especially for children. The playground is a means of preserving the culture of the settlement, capable of contributing to the growth of children by creating bonds of affection and responsibility in the territory where they grow up and are formed. In 1849, Henry Barnard, in his book School Architecture, first defined the playground as "the open-air classroom of physical and moral education, the place where the good manners, dispositions and personal habits of young people can be better developed than elsewhere". Today, in cities that are increasingly heterogeneous, multiethnic, densely built and saturated with unbuilt spaces, the semi-confined open spaces of schools can take on a new role as infrastructures where young users can rediscover or reconstruct those conditions of sociality, safety, well-being and inclusion.

Recent European [COM (2010) 2020; ET 2020 2009/C 119/02] and Italian (M.D. 2013; M.D. 25/01/2022) regulatory guidelines direct the renovation of school buildings towards an "open school" concept, in which the school service in cities becomes a civic centre for the activation of a process of rethinking community life and the reorganisation of the environments intended for educational activities, enhancing open spaces. Courtyards, terraces and gardens become places to play, meet and experiment, opening up to a mix of ages, knowledge and skills, promoting inclusion and a sense of belonging.

Based on the results of the project Playground and Art for Communities in Transition (Play_ACT), developed by the DiArc Research Unit of the University of Naples Federico II (University Research Fund 2020) for the remaining open spaces of the Rione Sanità in the historical centre of Naples, the research aims to experiment a process of co-designing interventions for the recovery of semi-confined spaces in school buildings through the co-creation of a network of playgrounds as a tool for learning and developing affective and responsible bonds with the territory. The opportunity is provided by the Girasoli project (Next Generation EU 2022), underway in the municipality of Quarto (NA). The process model experimented in Rione Sanità, through a bottom-up community approach complemented by a top-down scientific approach of researchers, educators and architecture students, constituted a way of constructing new roles and relationships between the community, expert knowledge and the place where it lives. This process requires the development of appropriate tools to build a capacity for participation, dialogue and mutual support between the different actors involved in the recovery and maintenance of the built environment, and capable of managing the different stages of economic, social and cultural development while protecting the identity of the built heritage. The experiment of an artist's residency in the fragile context of the Sanità, today the object of renewed vitality and socio-cultural fervour, made it possible to explore and verify these new synergies through art as a driver of innovation in co-designed actions of rehabilitation of the built environment. The construction of a playground with the Turkish artist Ozge Shain and the local designers in the role of critical decoders and negotiators of the site's beauty, with the involvement of the children of the neighbourhood, promoted and encouraged a culture of care and custody of the objects we cherish and the places we inhabit (Fig. 1). The ongoing experience of the Girasoli project, in a context of social disadvantage and educational poverty in the suburbs of Naples, adopts the results of the Play_ACT project's experiments, investigating the different roles and values of the new actors in a renewed process of negotiation and sharing of the design choices. The co-design process of a playground for the recovery of a network system of open spaces in school buildings involves children and their families, through shared tools of dialogue and understanding of needs, with the social cooperative Orsa Maggiore, third sector associations, local public and religious institutions, educators, school operators, the Departments of Social Sciences and Architecture of the University of Naples. Expected results of the project are

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Fig. 1.
The benefits of play on children. In the image, Ozge Shain during the Play_ACT project.

Fig. 2.
Girasoli Project: the network system made of open spaces in school buildings, green areas, courtyards, residual open spaces. Municipality of Quarto (Na), Italy.

aimed at increasing the accessibility and quality of socio-educational services as a social and cultural stronghold in fragile contexts and the replicability of the project process in a networked, iterative and incremental system of reuse of semi-confined and open spaces for collective use as an urban infrastructure for informal learning aimed at building community bonds and new cultural and maintenance models (Fig. 2)[1].

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How to do urban regeneration with certification protocols for a more inclusive sustainable urban district

Marco Volpatti, Elena Mazzola**, Marta Carla Bottero* and Adriano Bisello****

To achieve the ambitious CO2 emission reduction targets set by the Sustainable Development Goals, it is crucial to act on cities. Indeed, cities are responsible for 67% of the world's primary energy consumption and about 70% of energy-related CO2 emissions. Climate change has reached a critical point where its effects are unequivocally evident in our daily lives. From irregular weather patterns to rising sea levels, its impacts are being felt on every continent, forcing nations and communities to confront its multiple repercussions. In response, the European Union has emerged as a key player, directing resources and efforts towards initiatives to combat climate change and promote sustainability.

To support the urban energy transition, a broad implementation of zero-emission districts is envisaged. However, in the development of a sustainable district, it is necessary to consider not only the technical and economic issues of energy systems but also the urban and social spheres. To be effective, it is important to provide decision-makers with tools such as certification protocols for sustainable urban districts so that the inclusiveness and urban-level impacts that a district transformation might have on other urban transformations can be effectively assessed from a multi-stakeholder perspective. LEED for neighborhood development, BREEAM for communities, and CASBEE for cities are the world's most widely used and well-known protocols for assessing neighbourhoods and districts.

The aim of this research, through a review of the literature, is to analyze the current certification protocols at the district level, identifying criteria and scores within the evaluation methods, to contribute to the definition of guidelines to support an increasingly inclusive urban regeneration of public and non-public space that can effectively direct architects and town planners to the best compromise. As can be seen in Fig. 1, the flowchart depicted highlights the salient steps in the process of operations that are performed. It begins with a literature review of the main urban rating systems and continues with an analysis of the different criteria involved in urban regeneration. At this point, it is necessary to identify a definition of urban regeneration and to break it down into its main sub-chapters. The first result leads to a limited number of criteria in current certification protocols that assess urban regeneration. The concept of inclusiveness is introduced to increase the pool of evaluation criteria.

Although the very nature of regeneration makes it an evolving and varied activity, an initial definition of urban regeneration could be: a comprehensive and integrated vision and action that seeks to solve urban problems and bring lasting improvement to the economic, physical, social, and environmental conditions of an area that has undergone change or offers opportunities for improvement.

The result will be guidelines for urban regeneration of public and non-public spaces that are effective and easy to implement according to the evaluation criteria of the protocol certificates. Indeed, important qualitative and quantitative results emerge from the research. Generally speaking, we can start by saying that inclusiveness is a value for both protocol certificates and urban regeneration, firstly because it allows us to broaden the pool of evaluations that can be implemented when making an assessment using protocol certificates; secondly, because it highlights the socio-economic-environmental aspects that are very often overlooked by current assessment methods, which are often disconnected and difficult to identify. Last but not least, this research identifies a new asset of integrated assessments already in use, inherent to the urban regeneration of districts that will involve many cities and suburbs that are today in decay.

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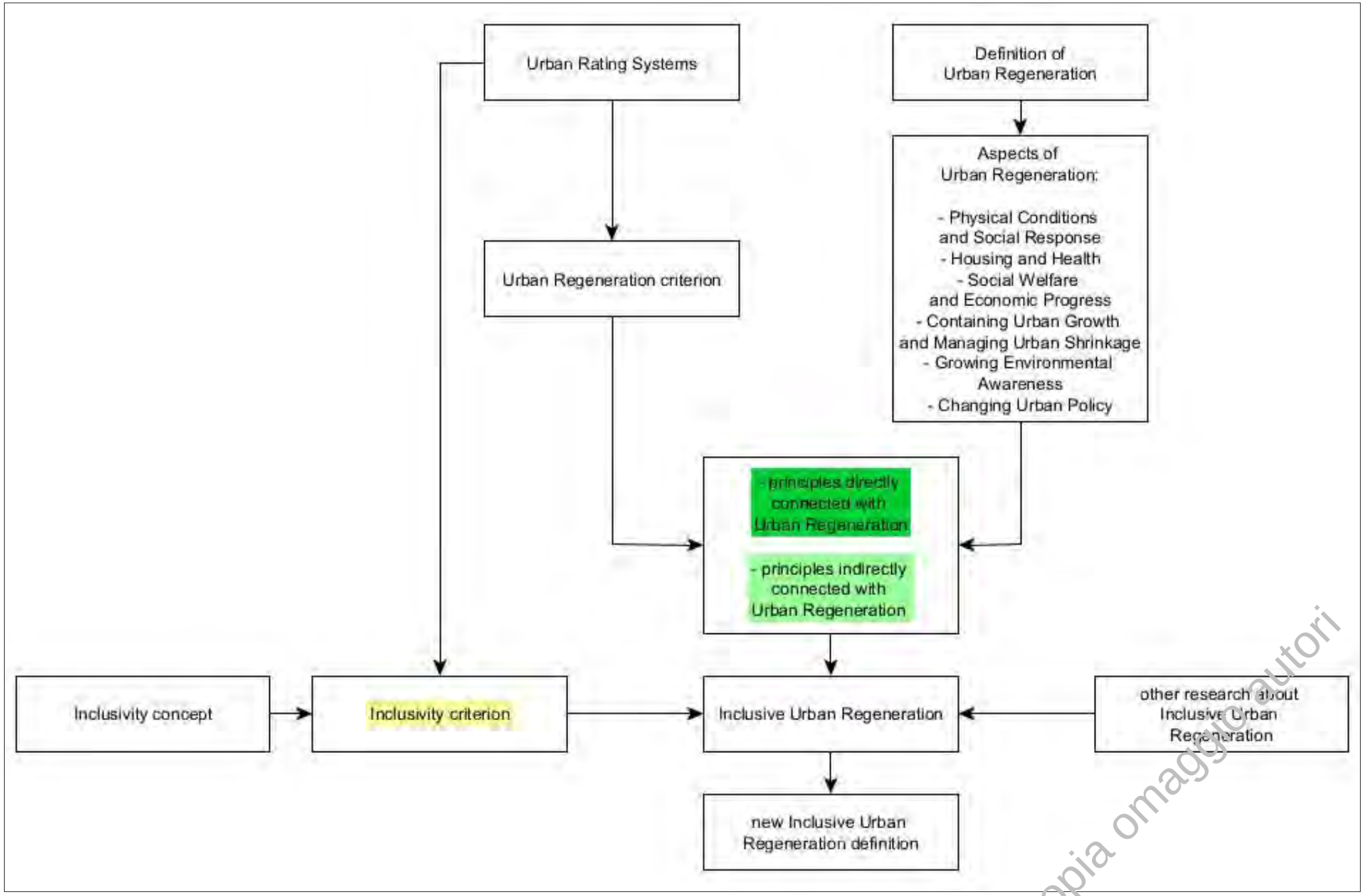

Multiple benefits analysis to support urban regeneration

A practical tool to support project implementation and acceptance

*Irene Bertolami, Marco Volpatti, Adriano Bisello**

Climate change is unequivocally affecting our daily lives, with irregular weather patterns and rising sea levels globally. In response, the European Union (EU) has become a major force, dedicating resources to initiatives that combat climate change and promote sustainability.

The ARV project, supported by Horizon 2020 funds, embodies the EU's effort to test innovative solutions against the climate crisis. The project involves the creation of climate-positive circular communities that prioritise environmental conservation, economic prosperity, social well-being, and aesthetics, in line with the principles of the New European Bauhaus. The project targets six EU Member States (Italy, Norway, Spain, Denmark, the Netherlands, and the Czech Republic) with the aim of presenting, validating and potentially replicating resilient, attractive, and sustainable solutions, with a focus on deep energy renovations to achieve net zero emissions in buildings and neighbourhoods. However, the realisation of such ambitious goals requires not only technological advances, but also a fundamental change in individual and societal mindsets and behaviour. The involvement of local communities, businesses, and politicians in the co-creation of solutions could foster a sense of ownership and collective responsibility for sustainability initiatives.

With the aim of quantifying and evaluating the wider positive impacts of the planned interventions, a methodology was therefore developed to analyse the multiple benefits of the project. Through the rigorous collection, analysis and interpretation of data, this methodology facilitated a comprehensive assessment of the project's potential to generate positive outcomes in various domains, laying the foundation for informed decision-making, effective resource allocation and increased project acceptance by end users.

Multiple benefits in urban regeneration projects encompass all positive impacts within the project, including both expected and unforeseen benefits, ranging from environmental improvements to socio-political progress, in qualitative and quantitative forms. The proposed multi-benefit analysis, pioneered within the ARV project, seeks to identify the most significant benefits for the various stakeholder groups through active engagement via workshops and questionnaires. The prioritisation of results, in line with the needs and priorities of key stakeholders, improves the overall effectiveness and impact of the project.

The methodology comprises several steps, including an extensive literature review, workshop sessions with project partners to identify potential benefits, and the development of questionnaires to rank these benefits according to stakeholder perspectives. Customised benefit analyses, tailored to each case study within the project, ensured alignment with unique contexts, themes and target audiences. The Best-Worst scaling method was used to construct the questionnaires, which facilitates balanced assessments while minimising respondent effort.

Adopting the concept of multiple benefits enables the development of effective strategies that ensure sustainability and resilience, considering the interests of all stakeholders. As climate change intensifies, prioritising sustainability and proactive action becomes increasingly critical. Promoting dialogue between policymakers, end-users and stakeholders aims to improve understanding of the overall benefits provided by sustainability initiatives.

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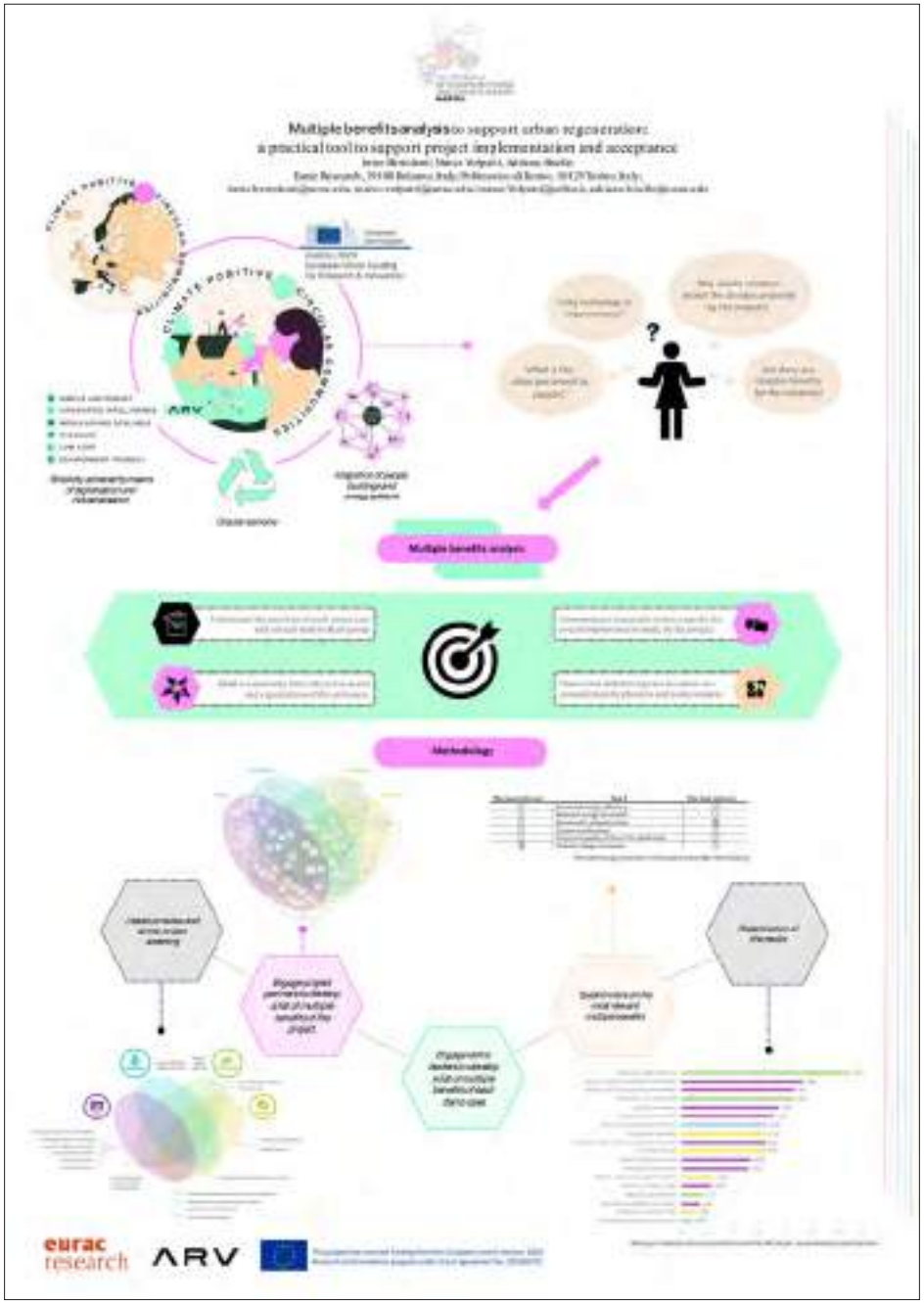

Quarter at the former Flower Market Berlin

*Ulrike Böhm, Katja Benfer and Cyrus Zahiri**

Context

The building of the former wholesale flower market (Blumengroßmarkt) is located in Berlin Friedrichstadt district, within a patchwork of different milieus, uses and building typologies. Built in the 1960s, it has a brittle charm. Instead of its demolition, the building has been transformed into the Jewish Museum Academy, which includes a library and an archive. It is now framed by a new mixed-use neighbourhood that was developed between 2009 and 2020.

The transformation of the site involved a complex development process, including the co-operation of different urban stakeholders and the interlocking of top-down planning and bottom-up strategies. In 2020, the project was given the German Urban Design Award.

TOP DOWN: Urban Design

The new Quarter Ex-Blumengroßmarkt is situated between two different urban textures: Friedrichstadt, a planned urban grid and Köpenicker Vorstadt, a self-organised urbanisation showing the imprint of its initial agricultural parcellation. In the 18th century Philipp Gerlach, royal director of building, tried to connect both structures through a series of plazas and focal points. One of them is the Kollegienhaus, which houses the Jewish Museum Berlin today.

In the following decades, the area went through a succession of different uses. Among them the 1835 creation of Enckeplatz with its observatory situated in a small park; its demolition in 1913, connecting Enckestraße to Lindenstraße; the 1960s replacement of the old market building with a shed roof hall and the 1980s renewal plans of International Building Exhibition (IBA). Following the relocation of the flower market in 2009, it initially remained open as to how the site would be further developed.

The complex planning history provided a base for the concept developed by 'bbzl – boehm benfer zahiri', a Berlin-based planning office that combines expertise in urban design and landscape architecture. It formulates a delicate balance between regulation and laissez faire, understanding urban planning regulations as a challenge and cause for‚friction' and testing new ways of mixing uses and milieus.

The concept prescribes a sequence of urban spaces between Friedrichstrasse and Kollegienhaus. The former flower market hall is preserved as a landmark. Its remaining sides are framed by new building plots, kept typologically open in order to leave space for ideas by future users.

Their design freedom was only limited, where urban rules restrict building lines and heights, taking into account the differing scales and heights of the neighbouring buildings. At the same time, the width of the plots was deliberately set at a level that enforces building typologies that can cope with a very deep plot depth and the lack of private open spaces at ground floor.

BOTTOM UP: Baugruppen

To allocate the building plots, Berlin's first concept based awarding was carried out — a novelty in the state-level and development politics. The allocation was not decided solely based on the highest land price but also the concepts developed by the applicants (60% concept / 40% land price). As part of the application procedure, each participating group and their architects developed a highly specific building tailored to the needs of their respective users.

The projects 'Frizz23' by 'Deadline Architekten', 'IBeB' by 'ifau' and 'Heide & von Beckerath' and 'Metropolenhaus' by 'bf-studio architekten' were selected. The further planning process was supervised by a self-organised advisory board, including municipal authorities, external architects and representatives of the neighbourhood.

The buildings are now inhabited and used by people from different backgrounds and income groups. In line with the intended mix of uses that enliven the adjacent squares, the ground floors include stores, project spaces, cafés and restaurants.

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BACKGROUND

The site of 'Quarter Ex-Blumengroßmarkt' was identified as a nucleus for an independent development for several reasons:

- Heterogeneity: In addition to a central location and a reasonable size, the site is characterised by a heterogeneous stock of buildings and open spaces.
- Context: A number of different urban concepts overlap on the site, each of which was only partially realised.
- Attractiveness: Attractions in the vicinity include Checkpoint Charlie, Jewish Museum Berlin and Berlinische Galerie.
- Preserve or demolish: The flower market hall is a typical post-war modernist building with the potential to become an identity-creating landmark.
- Planning law: The necessary change of land use required a new development plan.
- Ownership: The area is owned by a subsidiary of the federal state of Berlin which made it possible to politically influence the land allocation.

In addition to these planning conditions, the characteristics of the Friedrichshain-Kreuzberg district must also be taken into account:

- Educational capital: The ‚Kreuzberg conditions' include a traditionally lively citizenry that is able to make its interests heard politically.
- Neighbourhood: A selection of residents was concerned about a change in the social milieu and the future increase of rents.
- Subculture: A number of projects such as the Prinzessinnengärten and Aufbau Haus were suitable as points of reference.
- 'Baugruppen': Since the early 2000s, there has been a lively scene in Berlin that has successfully developed small urban plots in a self-organised way, adapting the model of 'Baugruppen' from the southern German cities Freiburg and Tübingen.

Shaping the inclusive participatory processes for urban transformation

Grunwaldzka Avenue Development Study, Gdańsk, Poland

*Piotr Lorens**

Contemporary urban transformation processes are focused on redefining the types of land use and providing space for the development of new projects. In many cases, the local communities are expecting several improvements which should lead to a higher quality of life. In addition, these transformations are planned to serve as implementation tools in the process of sustaining urban development. This term has a lot of meanings and dimensions and includes such processes as the densification of urban structures, the exchanging of mono-use structures with multi-use ones (which serve the purpose of shaping compact urban structures), creating new green complexes and networks of public spaces and civic infrastructure. In addition, the "city for the people" ideas are frequently formulated, which translates into several detailed concepts.

Planning for these changes in the urban structure of our cities requires not only the technical expertise of the planners and political circles but also (or – first of all) extensive participation including all key stakeholders. This includes both traditionally understood public participation involving local communities and citizens but also requires inviting the institutional stakeholders – including the land owners, investors, and developers. This process – although requiring a lot of work and building trust – allows the development of the dialogue between all key partners in the development process. It is also possible to conclude that only in this way the consensus regarding the scope of future transformations can be reached. Moreover, this consensus might be realistic as all key partners usually have to agree on the compromise solutions.

This paper presents an example of the participatory process leading toward the joint vision for the transformation of the key part of the city of Gdańsk, Poland – the Grunwaldzka Avenue Belt. This area is marked by the presence of the main road and railway line, which together form the transportation spine of the entire city and also of the entire metropolitan area. At the same time, this site was dominated by low-rise commercial buildings, including the "big box type" structures. Only recently the more dense office structures and complexes were introduced, but – due to the pandemic – the process of transforming the area into a huge office park was stopped. At the same time, the demand for housing and multi-use complexes increased, which resulted in more than 40 planning applications for changing the zoning provisions and allowing the creation of a mixed-use type of environment. At the same time, the city officials concluded that such a scale of change requires a major alternation of the transport system of the city. As a result, the Transit-Oriented Development model of urban development was chosen and an urban redevelopment study for the site was initiated. This was intended to serve as a point of reference for changing the zoning provisions for the area, for changing the transport system, and as a platform for dialogue with all interested stakeholders. This includes all the above-mentioned parties, as both local communities and institutional stakeholders were actively involved in it. As a result, the main objective of the undertaken study was to define (in a participatory way) a new shape of the commercial strip of the city. It was intended to provide a conceptual framework for the transformation of the study area and as a basis for defining new types of multi-use urban program, and a dense network of green and urban public spaces.

The results of this work include a combination of expert- and community-based diagnoses and proposals, which led to the creation of the final urban development vision for the study area. Among these one can find both a diagnosis of the existing situation, an evaluation of the development proposals (planning applications), a summary of four rounds of the participatory process (including the discussion on the proposed structure of the area, various transportation system development scenarios, and urban design vision for the site) as well as a definition of the final urban development vision for the area.

This study – both the final results and the entire process leading to it – can serve not only as an example of the planning process involving extensive public participation and a set of experts' inputs but also as a model for shaping the truly inclusive co-creation planning process for the transformation of various urban areas. The methodology developed for the sake of this process can also serve as a point of reference for other urban transformation processes in other cities/cases.

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Fig. 1.
Participatory workshop with the use of large-scale model of the area. Source: Piotr Lorens

Fig. 2.
Urban context of the Grunwaldzka Avenue Development Study. Source: Office of the Gdańsk City Architect

ESG principles and urban regeneration
A framework for sustainable cities

Antonio Bocca, Lorenzo Massimiano***

The city's rethinking project must affirm a culture of integrated and open planning in order to achieve a balance between environmental, ecological and socio-economic components. It is no coincidence that the growing interest in ESG (Environmental, Social, Governance) principles, driven by public attention to the issues of climate change, social inequalities, and the role of stakeholders in decision-making processes, can positively influence urban regeneration practices.

In line with the Paris Climate Agreement and the United Nations Sustainable Development Goals (SDGs), the adoption of ESG principles in land-use planning and management can help improve urban quality, as well as promote environmental sustainability and foster social participation and inclusion. This condition is also underscored by recent trends in European policies (proximity, energy, climate change) and stakeholder engagement. These considerations highlight how ESG principles focus on environmental, social and governance impacts:

- Environmental: assessment and implementation of strategies for ecological, environmental and energy transition;
- Social: issues related to well-being, perceived safety, urban mix, and inclusiveness of public space;
- Governance: transparent and accountable decision-making in relation to programmatic choices related to sustainability.

The challenge is to understand how the goal of sustainability and the application of ESG principles can influence and contribute to the implementation of urban regeneration projects. ESG criteria are certainly drivers of innovation in urban transformation processes, but the application in the urban planning discipline has yet to be explored.

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For this reason, governance, and climate adaptation plans need to be guided by decision-making processes that involve communities and stakeholders but can base their decisions on appropriate reporting and evaluation. The resulting framework underpins the dynamic understanding of processes and how they can be enablers for urban planning and transformation.

Recent initiatives undertaken by the European Union and national governments show how ESG principles can contribute not only to the evaluation of public projects, but also to funding strategies and subsequent implementation and management phases. In this sense, ESG criteria, in relation to EU funding for the implementation of Key Enable Technologies (KETs), should promote the establishment of methodologies, frameworks and standards aimed at increasing the degree of sustainability. Not surprisingly, the application of ESG principles, for example, extends from sustainability certifications (e.g. LEED) to neighbourhood Walk-Score assessments. The use of measurable impact metrics makes it possible to assess how the project affects issues of resilience and mitigation of the effects of climate change, taking on the role of a catalyst for the ecological transition of cities. This highlights how, in the near future, advanced analytical tools will play a central role in planning due to their ability to combine urban, environmental and economic data in relation to interests in urban and spatial regeneration processes.

Signs of synergy in the adoption of ESG principles make it possible to overcome cascading planning in favour of strengthening the strategic dimension, in which urban plans are instructed by reuse, urban regeneration, and environmental criteria. The goal is to generate new knowledge about the relationships between ESG assessments and public value for the initiation of processes for monitoring and sustainable development of territories and cities. Experimentation allows not only to ensure efficiency, but also to reduce risks and improve the standards of design processes. This holistic approach makes it possible to properly assess the interests of stakeholders and communities in relation to contemporary issues and integrate them into design. The paper argues that through a multi-actor, multi-disciplinary and multi-scalar approach, open spaces can be regenerated from environmental resources and components. Integrating environmental, social and governance considerations into urban decision-making processes would enable equitable, inclusive and environmentally sound urban growth to ensure that cities can effectively and supportively address climate challenges.

Innovative practices for sustainable development of resistant communities

Emanuela Coppola, Gaia Del Giudice** and Eleonora Giovene di Girasole****

Italian inner areas, marked by ongoing depopulation and service reduction, present considerable challenges to territorial development. The necessity for innovative approaches that integrate regeneration, art, care, creativity, and the management of cultural commons is thus crucial (Ostrom, 1990). This study seeks to investigate how the convergence of these elements can foster resilient communities through hybridization practices between academic and community knowledge, energizing territorial resistance experiences (Allocca et al., 2021). It examines the creation of hybrid cultural ecosystems capable of supporting regeneration across various scales (Cirillo & De Tullio, 2021; Coppola 2023). The focus is on "inner areas," less accessible territorial spaces where marginalization is pronounced, but also where untapped potential for regeneration that respects local identities and fosters new sustainable development models exists. Inner Areas has become a laboratory for social innovation on the margins. The artists, cultural innovators, and their respective networks have rebalanced the territorial narrative by replacing what had been a local absence of an intentional and willing community, thereby transforming abandoned buildings and public spaces through innovative cultural visions. The research project "Calabria Creative Living Lab" (CALL), supported by the POR CALABRIA 2014/2020 under action FESR 1.3.2, provides an innovative analysis of how integrating technological innovation with community participation can significantly enhance cultural heritage. This research underscores how hybrid cultural ecosystems, through a synergy of regeneration, art, care, and creativity, can stimulate community resistance in inner areas. The main goal is to compare various open experimentation laboratories and creative living labs that have utilized participatory tools for community engagement (Coppola & Sica, 2023). It aims to reflect on how these methods can create new opportunities for cultural valorization, connecting key intervention sectors, improving territorial usage, and promoting integrated service networks and systems. Furthermore, it seeks to build a new integrated territorial development model, supported by an ICT system, that leverages local cultural offerings through community collaboration. It also reflects on the social significance of complex processes supporting an innovative model of knowledge, management, use, and communication of cultural heritage and services, emphasizing the importance of collaborative rationality in public policy, crucial for community engagement in decision-making and for constructing integrated territorial development models. The findings reveal that active community participation in managing and valorizing cultural commons (Bertacchini et al. 2012; Giovene di Girasole E., 2023) not only strengthens territorial identity and belonging but also fosters new participatory governance models. Additionally, the spread of territorial projects through artistic and cultural practices highlights the role of these practices in building collective imaginaries that strengthen connections between people and places, underscoring the importance of artistic and cultural practices in promoting social cohesion and community regeneration. The research concludes by stressing the need for integrating multi-disciplinary and participatory approaches in urban and territorial planning, demonstrating how collaboration and innovation in the public sector through co-creation can effectively contribute to inner area regeneration, enhance local community sustainable development, and address complex social challenges through collective engagement.

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Social enterprises as activators of innovation processes

The case of Liberitutti in Barriera di Milano, Torino

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Significant economic, social, and environmental changes and challenges have affected urban regeneration policies in recent years. Cities are struggling to respond effectively to the new needs of citizens in terms of services, employment, and inclusion. The very concept of urban regeneration and its interpretations is constantly evolving, ranging from policies aimed at revitalizing marginalized areas to environmental concerns.
In this context, growing attention has been given to social innovation and bottom-up initiatives that promote innovative forms of organizing able to change the power relations between the parties and the social relations[1]. On the wave of social innovation, new actors from both for-profit, non-profit, and public administrations have emerged mostly basing their initiatives on proximity and community-led approaches.

These actors may define themselves in different ways (e.g. city makers, community hubs, and hybrid actors), or may have alternative forms of organizing due to their statutory and purposes (e.g. social cooperatives, NGOs, associations, etc.), however, they have in common to be active in marginalized areas, prioritizing inclusion and social cohesion.

These emerging stakeholders distinguish themselves through their commitment to delivering a range of services, redefining patterns of employability and housing, and fostering the well-being of the community. They often have complex business models, relying on a range of income sources, able to introduce new paradigms in doing social business. Their innovative practices range from the co-production of services (social, cultural, employment promotion, etc.) to the promotion of commons as well as the renovation of buildings and public spaces, or the promotion of new forms of production and employment.

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In many ways, they are becoming new protagonists, able to influence urban policies, so much so that local institutions themselves are looking at them with renewed interest, recognizing and supporting their practices.

The paper analyses the evolution of regeneration policies from the perspective of social enterprises, emphasizing their business model based on creating connections between institutional policies and community needs. After summarising the changing nature of social enterprises, and highlighting their organizational models, governance, and legitimacy, the paper shows that these new emerging stakeholders can play a leading role in the evolution of regeneration policies. We will illustrate this through the case study of *Liberittutti* in Turin. This social cooperative manages several projects and services in the city among which the paper explores the cases of the Bagni Pubblici di Via Agliè, one of the Neighborhood Houses (Casa del Quartiere) in Barriera di Milano neighbourhood, and the *Glocal Factory, a* platform of services for the social entrepreneurship.

The case study is carried out by reconstructing of *Liberitutti* cooperative evolution, from its foundation, its organizational design, and its projects. The Bagni Pubblici and the Glocal Factory represent different investments in terms of aim, type, and number of resources and outcome, but show the relevance of *Liberitutti* as a promoter of urban regeneration on different dimensions and scales. Some closing remarks focus on the role of actors as *Liberitutti* in the future. While in the beginning, *Liberittutti* was an intermediary of the public authorities designed to help with the management of the "last mile", today it has also new roles as the *inclusive business matchmaker*[2] that expands the social innovation beyond the border of proximity.

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The Participatory GIS as a tool to support decision-making processes

*Simona Stella, Massimo Clemente**

In Italy, only a few regions have adopted laws on public participation, promoting and supporting the inclusion of the population in public decision-making processes for the regeneration of territories. Similarly, urban planning laws only provide for a mere consultation with citizens, giving them the opportunity to express opinions only near the conclusion of plans or projects. Starting from this issue, an attempt has been made to build a method to support participatory decision-making processes structured online[1,2] and therefore easily accessible for institutions and citizens, to strengthen democracy through new opportunities for participation. Digitization is a fundamental part of the process: digitizing participation mechanisms allows involvement of a plurality of actors that would be difficult to reach otherwise, promoting inclusion. In the era of digitization, traditional participatory processes must make room for new technologies. In the last 20 years, there has been growing interest in participatory mapping approaches applied to other research fields[3]. Currently, participatory mapping methods (PPGIS, PGIS, VGI) lack a unified system of organization and implementation, and in literature, there are still few attempts at systematic organization of the process, especially when it comes to digitized processes. In this context, Participatory GIS[4,5] can support the regeneration of territories[6], expanding the level of citizen involvement in decision-making processes and their access to information[7], data, and tools useful for participating in decision-making processes. The main objective of Participatory GIS is to locate social values on an electronic map, giving anyone the opportunity to use tools made public for the purpose of claiming their right to participate in the decision-making process[8] or even being a promoter and activator of urban and territorial regeneration processes. It is particularly useful for both communities and public administrations, managing to give a voice to disadvantaged classes and to all those who cannot assert their opinion in decision-making processes. Community participation is fundamental and can become a valid political tool, capable of providing public administration with the concerns, difficulties, and expectations of the population, as well as knowledge. The research›s goal is, therefore, the construction of a method that can support technicians, experts, and citizens in building a fully online Participatory GIS that can facilitate collaboration between citizens and institutions, ensuring that anyone can participate in the decision-making processes thus generated. Aspects related to the psychological and social sphere of the population should not be underestimated but considered a plus in the definition and construction of physical transformations of the territory. The contribution of the individual citizen cannot override the experience of the planner; however, it is the citizen who lives in the territory that knows its needs, as well as traditions and culture. A healthy and mutual collaboration can only lead to the realization of territorial development that is satisfactory both in terms of design and human aspects, livable, and tailored to the citizen. Information technologies, when combined and support the psychological and social sphere, can be promoters of change, significantly influencing the transformations of cities, especially to the extent that these aim at innovating strategies to support urban and social dynamics.

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Parallel Workshop

4. Migration and cultural inclusion

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A realistic geography of the presence of migrants in the city of Naples: shop owners and street vendors

*Antonia Arena**

The presence of migrants is a privileged point of observation in urban studies: the presence and distribution of their housing, on the one hand, and their labour, on the other, are possible approaches to understanding and explaining the dynamics of migration, their impact on the transformation of public and private spaces, and related urban policies[1]. Indeed, the spatial dimension highlights the presence of migrants in the urban context, making it both visible and perceptible[2]. Within the framework of path dependence, in which social paths influence the developmental dynamics of open systems[3] and the resilience of geohistorical patterns intersect with the persistence of urbanisations[4], the research succeeds in describing and interpreting some characteristics of the phenomenon of migrant presence, starting from their localisation at the municipal level.

The research underway at the Department of Architecture of the University of Naples Federico II from 2020 aims to show if and how migrants play a role in the social division of space in Naples[5]. The study has been developed through quantitative and qualitative GIS analysis. The data collected and processed – until December 2020 – come from the archives of the Chamber of Commerce of Naples.

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At the municipal level, the distribution of migrant traders – shopkeepers and street vendors – integrated with consolidated knowledge of urban geography allows enriching the knowledge of territorial dynamics in Naples.

According to the localisation, the presence of shopkeepers and street vendors – interpreted as a mirror of employment and dwelling respectively – draws a first central area composed of the districts of Mercato, Pendino, San Lorenzo gravitating around the railway station, a hub for migrants; a second ring with the districts of San Ferdinando, Montecalvario, Avvocata, Stella, San Carlo all'Arena, Vicaria; a third level composed of the districts of Pianura to the west area and Barra and Poggioreale to the east; this class also includes Chiaia and San Ferdinando and Secondigliano, which are on the edges of the second ring.

The first and second classes overlap the well-known geography of the central area of Naples, while the districts of the last class, known as the peripheral areas of the city, become a core area for migrants. A peculiarity of the phenomenon of the distribution of migrant traders is their low presence in the consolidated northern peripheral areas, composed of the districts of Scampia and Piscinola or in the eastern areas of Ponticelli and San Giovanni a Teduccio.

An interpretation of the data shown in the maps suggests that the presence of migrants is higher in the traditional central districts, where the lower classes live. From an urban studies perspective, the incidence of foreigners is facilitated by both urban features and social factors. The former are linked to spatial issues, such as the availability of small, cheap dwellings, good level of accessibility ensured by public transport networks, the persistence of a natural micro-commercial district able to protect and maintain retail trade and neighbourhood trade, which includes the foreign retailers. Social factors are the previous attendance of fellow foreigners, which facilitates the progressive embeddedness, the presence of brokers, which makes it easier to set up of a business, and the lack of the intragenerational change in specialised craft activities, which leaves empty commercial spaces.

These considerations are based on a double use of GIS: firstly, as an instrument capable of providing a detailed description of an area dense with morphological, settlement and socio-economic heterogeneities, such as Naples, and secondly, as a method capable of supporting decision-making processes for defining urban policies.

In conclusion, the results of the research are twofold: on the one hand, the processing of maps through GIS, which suggests a characteristic geography of the city of Naples, identifying central and peripheral areas according to the presence of migrants; on the other hand, possible reflection on policies aimed at real intercultural integration through common actions carried out daily and stable attendance and presence in an area for work reasons.

Fig. 1.
Classification of districts according to the presence of migrant traders.

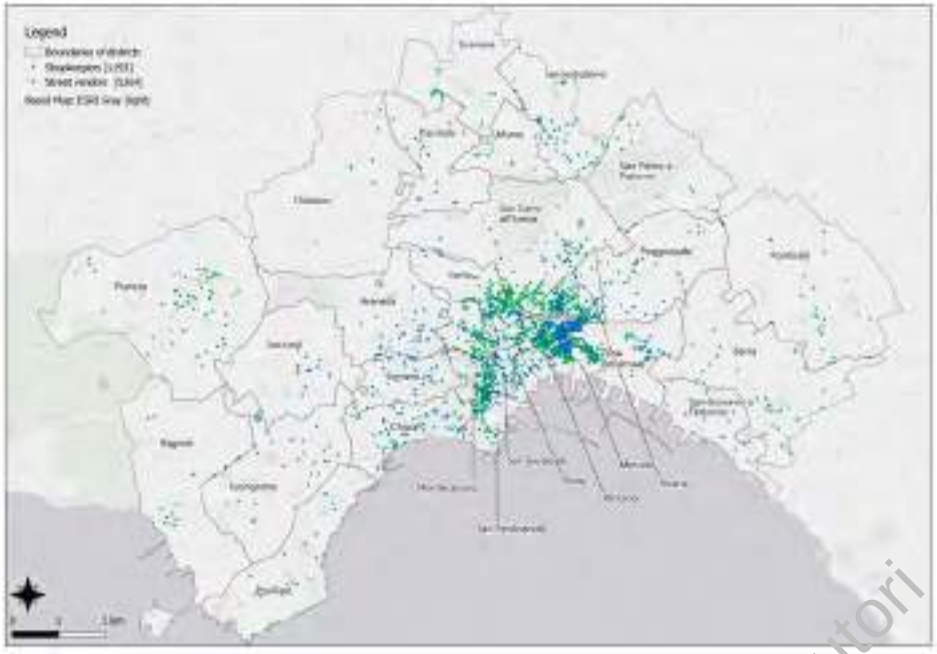

Fig. 2.
Distribution of foreign shopkeepers and street vendors in the districts of Naples

CIDADE DE ACOLHIMENTO_HOST CITY

*Ana Bordalo, José Carvalho, Vitor Alves**

The school

ISMAT, Instituto Superior Manuel Teixeira Gomes, it's a quite tiny school, and the Architecture Master gathers a student population of about 100 distributed over a 5-year curriculum. This means it can move and act swiftly, somehow compensating for the relative lack of critical mass. A way of counterbalancing this circumstance was resorted to by developing a broad international network of architecture schools.

Based in Portimão, at the southernmost point of Portugal, the school is located at the arc formed by the southern Atlantic coast of Iberia and its Moroccan counterpart, in other words: at the gateway to the Mediterranean.

Portimão, a riverside port city, is a paradigm of *host city* due to its strategic location dominating the gateway to the Mediterranean. Positioned between land and sea, and between Europe and the rest of the world, Portimão witness the confrontation between the morphology and identity of the site, and the change due to the negative/positive buoyancy of its demography, contrasting with the slow speed at which it historically processes the urban metamorphosis.

Host City: the problematic

Historically, the Mediterranean Sea was the scene of the birth, development, death and – at times – rebirth of an important number of civilizations. This circumstance dictated that Mare Nostrum would forever be a territory of permanent exchanges and connections, whether of people, goods or cultures. Since the differences found in the different places surrounding the inland sea and its connection to the Atlantic Ocean are clear, it is possible to affirm that these differences create a varied and rich culture.

Many port cities in Southern Europe are experiencing an exponential increase in the movement of people, migrants (not all refugees, not all tourists) who sometimes cross the urban area sometimes settle in it. An issue spread along the northern Mediterranean arc that illustrates the relationship between people arriving from the impoverished South, those arriving from the wealthy North, and the *traditional* waterfront city. *Host City* also deals with a climate change specific risk factor: the rise of the sea water levels.

Nowadays, the Mediterranean also finds its unity through the different problems that emerge from its condition of indivisible territory.

Against the backdrop of climate change and permanent north-south inequality, we are currently witnessing an exodus to the north imposed by these conditions. A transhumance that is often cruel, capable of awakening the most terrible demons, whether among decision-makers or simple witnesses.

To this negative panorama is added the (not necessarily so negative) constant flow of people that develops along its banks, in a transversal direction, in a cyclical migratory movement. This transit – which can have seasonal or perennial characteristics – is fundamentally fueled by tourism, business or simply the search for a more clement climate (and attractive prices). by a group of people undergoing retirement, or simply a change in life scenario, in the case of an active population.

Host City: the project

In view of these findings, ISMAT's master's degree in architecture developed a line of research, entitled HOST CITY, which attempts to analyze the deep and immediate causes of the problems linked to the persistence of an oscillating, highly mobile population, which sometimes crosses and sometimes settles, in urban riverside territories. Against the backdrop of a situation that is considerably difficult to predict, both in terms of numbers, time, and demographics, the ISMAT master's in architecture developed, in collaboration with its international partners, the study of a highly flexible urbanity adaptable to the fluidity of current demographics, it's construction and government. Today we present the first results of a 3-year research:

A series of prototypes for an floating urban typology; it's execution, management and possible dissemination to other similar territories.

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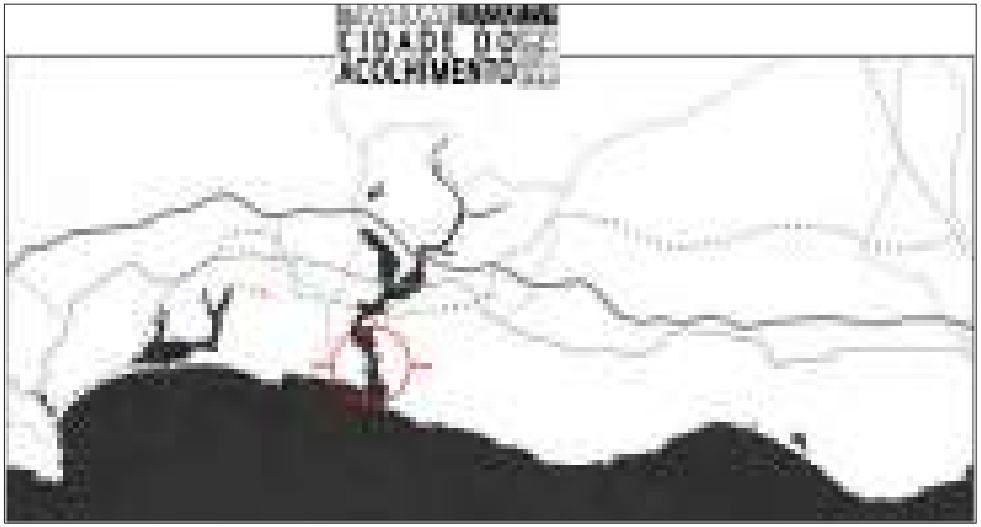

Fig. 1.
City of Portimão [site plan, without scale].

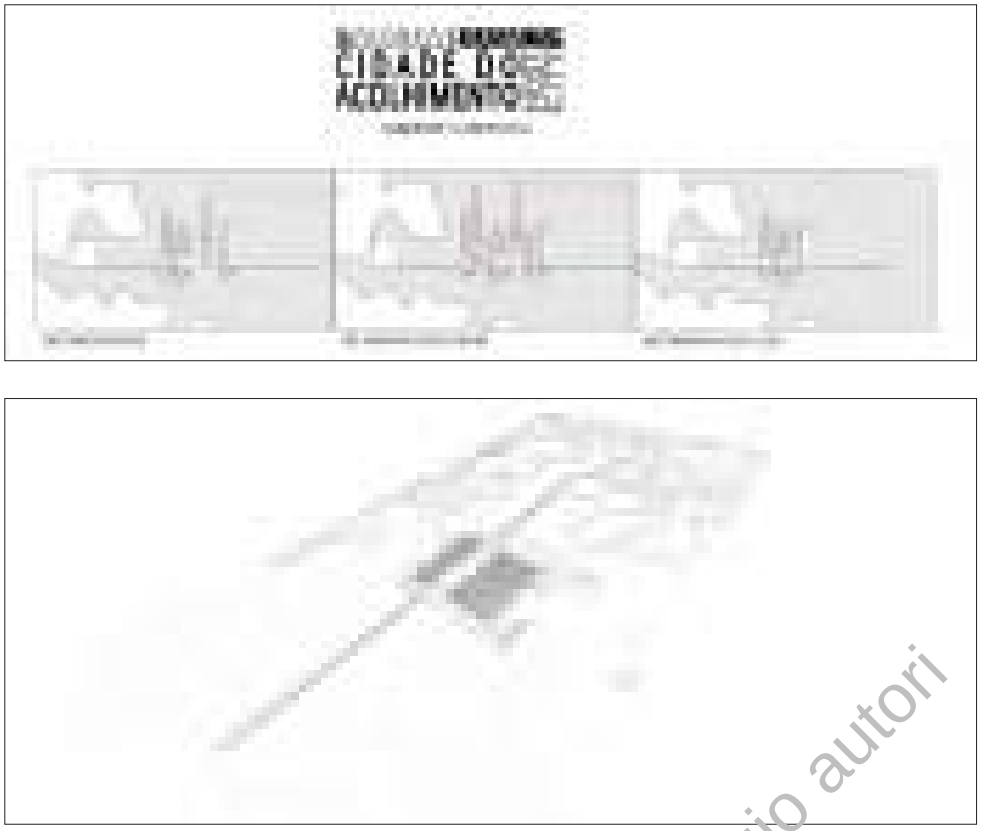

Fig. 2
City of Portimão [Host City Proposal, without scale].

The gender gap in participatory processes: exploring the River Agreement as a tool for investigation

*Elisa Caruso**

In recent years, the urban planning debate has also initiated some reflections on the city from a gender perspective, and reflections on the transfeminist city and gender urbanism have been proposed in the literature (Bacciola et al, 2021). However, gender remains closely linked to the city and public space, design and ergonomics, and little to open space and territory. The same theme is little addressed, if not completely ignored, in the practices and participatory planning of large areas.
The aim of the research is to shed light on the gender gap and the gender data gap in participation and co-planning practices related to large-scale issues, such as River Agreements (RAs), and to initiate a debate on the outcomes of co-planning.

Achieving this goal is challenging because, in addition to highlighting the gender gap in participatory planning, it is also necessary to bridge the gap in available data in order to build a framework for analysis.

The research focuses on the region of Tuscany. The quantitative research is based on the few available data disaggregated by sex and gender, resulting from the evaluation of the Regional Law on Participation (Gelli,2018). The Regional Authority for the Guarantee and Promotion of Participation (APP) does not have a survey on the number of participants in participatory processes, although it does have an aggregate number of participants for each funded project. Therefore, in order to carry out an initial qualitative study, interviews were carried out with privileged witnesses, including the facilitators of the main consultancy companies doing business in Tuscany, the national coordinator of "The Women of Water" of the National Table of RAs and the founding architects of "Sex and the City" who produced the Milan Gender Atlas.

Three elements of reflection emerged from the interviews: i) the methodology of participation; ii) the promoting entity; iii) the scale of the process.

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The methodology and type of citizen engagement can influence the participation of women. A 'street participation' approach, based on life stories and Point labs or walks, tends to attract more women during activities on the territory. Additionally, online questionnaires show significant participation from women.

Another relevant fact is that in bottom-up processes there is a higher number of women who are already active on the territory, through voluntary work or third sector associations. However, women are not significantly present due to care work that does not allow them to combine leisure time and participation. According to the National Strategy for Gender Equality 2021/2026, women devote 81% of their time to family and home, compared to 20% for men. It is incorrect to assume that women do not participate in public affairs due to indifference. On the contrary, women do not participate because they do not have the time, and the timing of events is often prohibitive, especially for women with children.

Another factor affecting the low presence of women is the large area scale of inter-municipal, RA, energy community and mobility plans. These plans are mostly attended by stakeholders and technicians of the administrations, who are usually represented by working-age men. In Italy, men still hold most of the ruling class and top roles. However, this trend seems to differ in relation to care and social-health issues, where there are more women among the stakeholders.

Although women today have diverse interests, societal stereotypes still limit their participation. The collective imagination still associates women with only participating in issues related to the public space of the city, such as talking to other women, taking their children to public gardens, and using public transport for daily commuting to school, work, and caring for the home and elderly.

In particular, the underrepresentation of women in co-planning and RA building pathways

highlights a masculine and exclusive approach to addressing outcomes and main issues. If only white, able-bodied men are involved in the RA construction process, the resulting outcomes will reflect their lifestyles and ways of using spaces. It is important to ensure inclusivity and diversity in the planning process to avoid such biases. This means that the participatory design of a public space or the RA Action Plan will be developed by men, for men.

However, if the RA is activated from below and promoted by the associations in the area, there is a significant number of women, confirming the above assumption. The 'Women of Water' campaign of the National Table of RAs was created to strengthen female empowerment and raise awareness of the importance of women in water and territorial issues. The meetings organised also saw a significant female presence.

In conclusion, if public policies and planning do not consider gender, public spaces default to a masculine design. This results in an asymmetry in the data infrastructure and non-inclusive design outcomes (Perez,2020). This contribution aims to initiate a proactive debate on the issue of gender in participatory planning.

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Fig. 1.
The experience of the Mugnone Torrent Agreement in Florence.

The cross-border urban space
Urban forms and territorial identities in European cross-border cities

*Fabiola Cristalli**

Cross-border systems propose spatial solutions that go beyond the very imaginary of the frontier space as they are characterized by the development of urban forms in continuity between different states and nations, proposing a new point of view to investigate the border shape. Cross-border cities have developed over the centuries insisting on natural or anthropic frontiers each one following a singular historical-morphological process of genesis. Each conurbation is therefore characterized by its own border landscape, its own urban morphology, its own settlement patterns, its own typological models, finding itself to be more or less dependent on the border on which it stands[1]. The numerous presences of cross-border models admit insistently the need for a mapping that can build a territorial network between these cases and to return example of success in use and shape of the border: on a global scale, if on the one hand we have conurbations still strongly characterized by closed and blocked systems potentially still attributable to the Roman *limes*, on the other hand we have systems such as those granted by the European Union that recognize at the border an unprecedented potential that finds precisely in the *limen* – in the threshold – its dimension, a condition of active exchange and a space in which something can be transformed into something else[2]. Precisely the ideal use of the border and the theme of passage prompt to make some primary considerations on two first particularly relevant urban cores in which effective proximity could possibly guarantee results in cultural, political, and spatial terms. On the Italian – Slovenian frontier, the proximity between Gorizia e Nova Gorica has led to remarkable results especially in term of cross-border cooperation, due to their nomination in Capital of culture 2025. This condition allows different levels of action around the border which are expressed in the "Obiettivi e Progetti GO! 2025" including the modernisation of cross-border heritage, the increasing of investment funds, the rethinking of infrastructures and architectural ad urban projects affecting the "Transalpine/Europe square", the annexed historical railway station and the so called "buffer zone" that goes from Salcano to the area of "Cassa Rossa". An analogous debate can be made on the Strasbourg-Kehl binomial at the border between France and Germany, divided by the river Reno. Here, in a context of islets and urban bodies, a total of four connections takes from one city to the other: the first two serve the railway and tram lines while the "bridge of Europe" is the only vehicular connection. The pedestrian and cycle connection are guaranteed by the "walkway of the two shores", a project by the French architect Marc Mimram that fits into the wider context of the "Garden of the two shores", a green lung that acts as a real landscape landmark of the conurbation. These examples promote different perception of the border space also concerning the morphological asset, which is different in the final configuration, allowing and/or denying effective correspondence between the urban settlements and presenting ever-changing borderline element, dividing, or blending them. These two happen to be remarkable models because they tell of urban spaces that have had to face radical changes in conformation and of natural and anthropic historical frontiers that have had to adapt to the demands of contemporaneity, always addressing a temporal dimension, which is informed by the movements of the border and corresponds to phases of transition between two territorial statuses[3]. Moreover, the dimension of living, understood as a process of attribution of shared meanings practiced in individual places, provides a key to understanding their identity process. Settling in a certain place is equivalent to sharing that territory with other people, with all the social, cultural, economic, and political consequences that this entails[4]. Wondering where the life of a

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community might be found, usually leads to focus on the centre, but, as anthropologist Richard Sennet argues, in the contemporary era, the tendency to intensify the "vitality of the centre" has brought to a neglection of the edges. However, giving importance to the edges could instead breathe vitality into the contact between various communities, thereby restoring porous and permeable boundaries.

The aim of the research is to deepen the study of porousness and permeability of cross-border cities boundaries through the study of morphological structures and typological models, of the flows of people, goods and information that pass through these areas and how they modify the closures, surfaces, environments, and objects that make up the boundary landscape, as well as investigating the control of space and the perception of it. In this process, it becomes necessary to delve deeper into the border imaginary to devalue its stigmatization and recognize its value in its anthropological and urban dimension, capable of revealing the multiple attitudes of humans in living and inhabiting spaces. In this process, the architectural approach can become the tool through which to mend disconnected urban fabrics, bring conflicting communities closer, help fragile territories find dignity, and enable a new inclusive, resilient, and identity-bearing border space.

Fig. 1.
Gorizia-Nova Gorica border.

Fig. 2.
Tijuana-San Diego border.

From formal to informal in the border city Miserabilia. The tax-selective formalism crumbles

*Silvia Dalzero**

A dominant complexity appears that cannot be governed and whose confinement imposed by an exasperated gigantism of walls and divisive structures that become the symbol of a state satisfied with its sovereign power is passively accepted. Contrary to what might have been expected, after the fall of the Berlin Wall, the concept of the border has moved away from the idea of a line of contact, of an ideal place of exchange. On the contrary (and the construction of the walls is a physical representation of this) it has become the space of division, exclusion and social marginalization which conditions flows and landscapes and distinguishes spaces which are no longer places of contact but of exclusion. It could be said that, in the wake of migrations due to war or famine, where the migrant is stranded, a Third Place stands out, able to identify an even stronger instability than that of informal cities and able to invent unexpected, visual openings, or physical, to overcome them, or to settle them as new cities of waiting and desperation which find their only organizing element in the wall. Real loose splinters of a malignant urbanity: the walls, the controlled areas, and the precarious settlements represent, in the contemporary panorama, something that goes beyond the idea of an informal city and comes to assume, in the most relevant cases, a stability that appears as its variant. A phenomenon that has an enormous impact in fortified border areas where millions of migrants set up their "suspended life" and, in the hell that these settlements often outline, distinguish forms of resistance that could anticipate even larger phenomena of architectural-urban construction. Well aware of being beyond the same concept of informal settlement, and well aware of the political and economic background that causes these situations, we remember that these settlements, in different forms and weights, express a contrast within the same cities. No longer considered just an evil to be eradicated but rather a privileged field of observation of the city which, in going beyond the usual planning criteria, considers these "suspended places" as real resources to be valorized. In this regard, a revolution in design thinking that overcomes the hegemony of the planned city and discovers how architecture can react to these "migrant realities" whose isolation, lack of complementary services and the urgency of responding to the role of the border in its being a physical barrier. For this reason, similarly to what architects have done in recent years, for example, in the urban-architectural regeneration of Latin American favelas, architectural projects are configured starting from the bottom or from self-construction and recognition of architectures or infrastructure plans capable of fueling integrated regeneration, and renegotiating the border as, not a wall border, but rather a threshold, edge, contact corridor, binational-cross-border region. In this scenario, the project becomes a driver of settlement development from which comes a platform of mutual knowledge that challenges the limit and "blurs" it in sharing and decolonization to co-produce new narratives, new alliances and new more equitable projects for the city. Cognitive horizons are envisaged able to discover an amplified spatial reality in which the contradictory becomes an authentic force through which to understand urbanity in the balance between structural and natural. Having said this, given that the border is a "wall in itself" and is capable of imposing: an inside and an outside, it is worth focusing on the multiple architectural aspects willing to renegotiate, by building, the relationship between individual and territory, and therefore between formal and informal, between temporary and stable. For this reason, it becomes strategic to read the intermediate state, of contact and isolation, and interpret the aspects of interaction between opposing compositional processes: excluding and including. Processes are now synthesized in a hyper-informality of settlement in which: trans-scalar, flexibility, and social interaction become constitutive elements and which are willing to fuel an all-encompassing constructive development. The process of trans-scalar is recognized as a factor which, from the propulsive centre of the wall, puts into tension, in being "marginal", dichotomous and contradictory realities. Flexibility stands as a factor responding to the instability of the border closure which reveals, throughout history, a continuous "renegotiation" and therefore innate temporariness responding to the migrant character of the "interrupted movement" which only at times takes on forms of rooting in the ground. At this point, we understand another distinctive factor in the suspended living of the migrant, namely: flexibility which, combined with architectural temporariness, proves to be an instrument of opening that sets in motion a dynamic interactive composition. With this, the experience of the border area recognizes the central role of the architectural project that is created, an agreement between otherness, since its ability to predict allows the dense network of delineable connections to be enhanced. For this reason, starting from the recognized dialogic relationship, self-construction processes are promoted which, born from below, compose spontaneous, dynamic and multiple spatiality. The tension that is emerging in the confrontation, in the interrelationship and the coalition, presents a different idea of settlement organization-composition which, in the dichotomy, composes the hyper-informal space of migrants living at the barricaded border.

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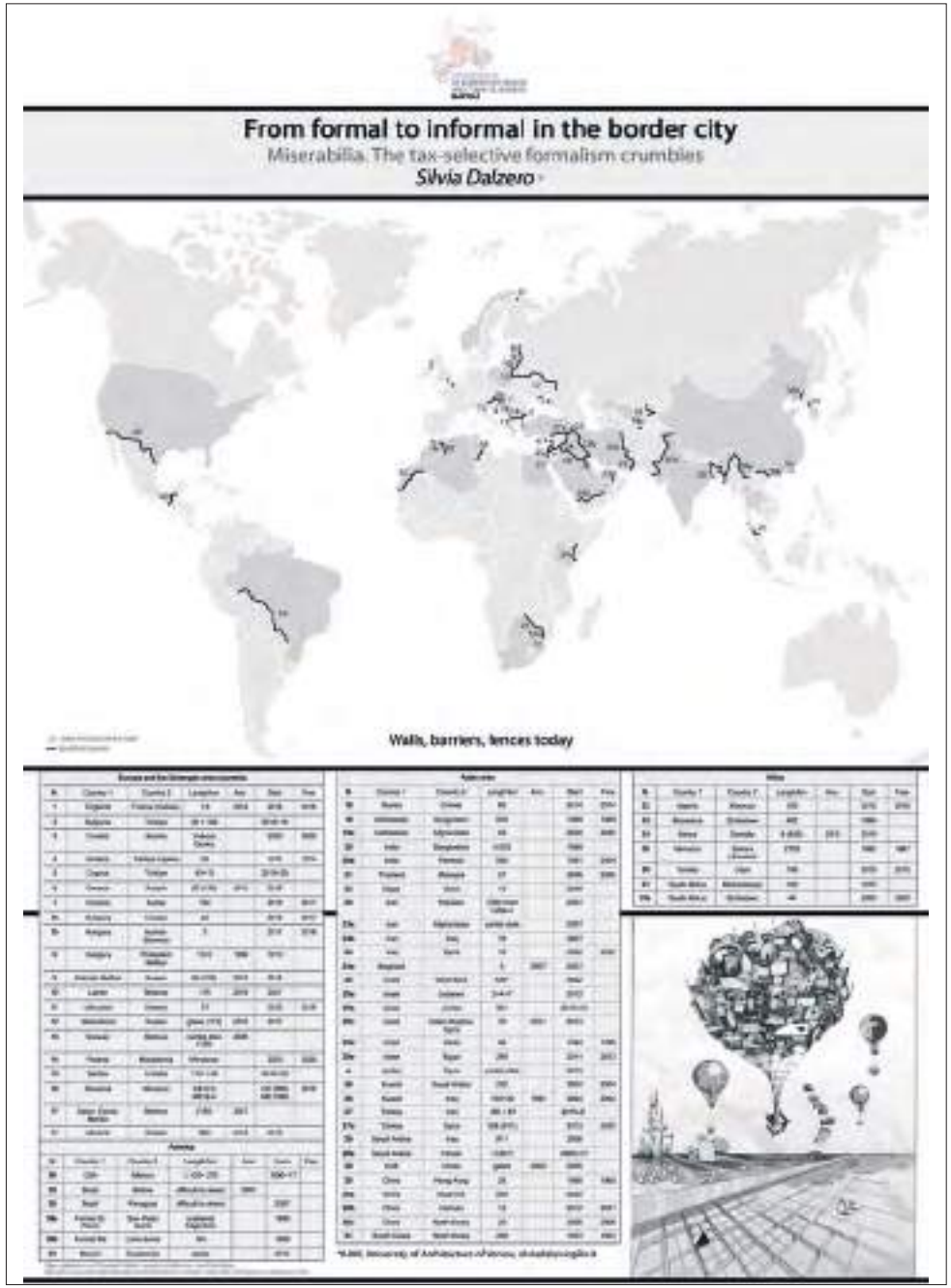

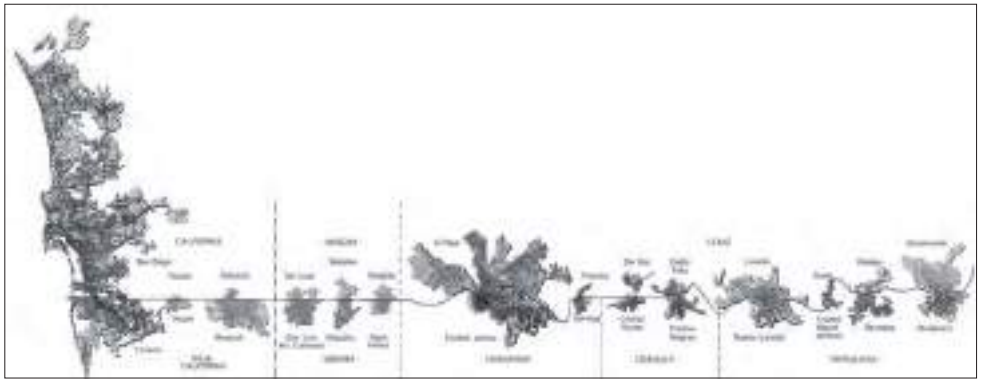

Fig. 1.
"Double cities" on the US-Mexico border that are subject to the migratory flow.

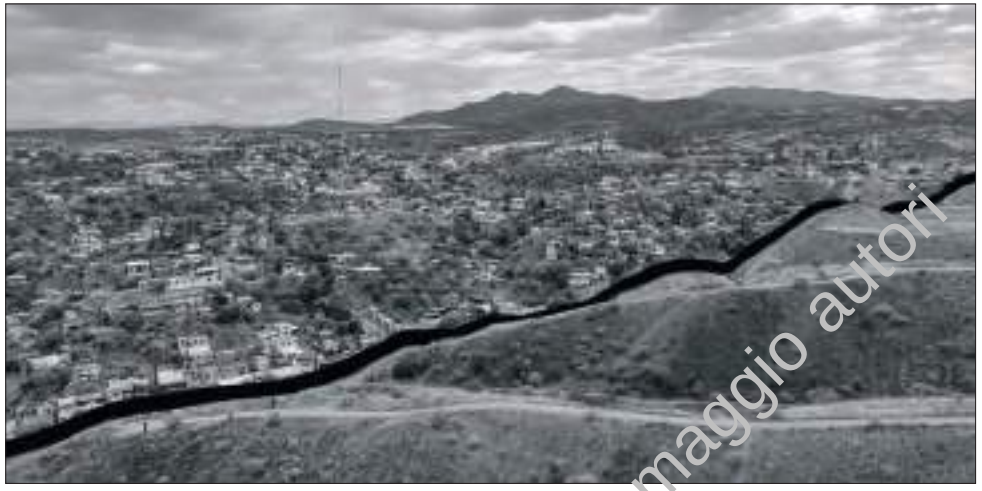

Fig. 2.
The wall between the USA and Mexico.

Designing the city of poor

*Andrea Di Giovanni**

In many European cities, marginalisation processes often lead to the spontaneous formation of multi-ethnic communities characterised by a high concentration of cultural, economic and legal status fragilities. The research conducted in the Satellite Town of Pioltello has been selected and awarded by the Polytechnic of Milan as part of the Polisocial Award programme. It aims to investigate the peculiar nature of the place mentioned above and to propose relevant strategies and actions to regenerate this compromised neighbourhood within the Milanese metropolitan suburbs.
Pioltello is one of the municipalities with the highest percentage of foreign residents in Lombardy and Italy. Here, the Satellite neighbourhood comprises approximately 1.850 apartments built under private construction initiatives in which about nine thousand people live, more than 70% coming from other Countries. The ownership is fragmented and widespread, while executive foreclosure measures have affected many residential assets. The general maintenance conditions of this heritage have been poor and, in some cases, critical over the years. It presents itself as a particularly fragile and multi-problematic urban context, characterised by some social conflicts in the use of spaces and episodes of petty crime, and it is particularly exposed to the risk deriving from the presence of organised crime.

All these aspects have determined the overall physical decay of the buildings and the weakening of social bonds in the Satellite district of Pioltello. In this context, many individuals and families have found, over time, an affordable housing solution within a widespread, highly speculative informal market, which has exploited many apartments without making any investments and maintenance.

The project 'M.O.S.T. of Pioltello – Migration Over the Satellite Town of Pioltello' promoted educational empowerment through playing and the design of urban spaces; professional training and job placement for young immigrants; the activation of micro-economies based on the renovation of housing stocks; the triggering of widespread maintenance processes. The project's final objective concerns the experimental definition of an integrated programme encompassing urban policies and design strategies, which should be transferable to several other places, similar to the one investigated in Pioltello.

In particular, the "M.O.S.T. of Pioltello" project has designed and verified the feasibility of a methodological framework based on self-recovery and the functional rehabilitation of singular apartments through the involvement of the youngest and under-trained segments of the neighbourhood population. The subjects involved in the program are offered the possibility of inclusion in a professional training career in the construction field and the prospect of employment with the companies involved in the neighbourhood housing recovery program. In this perspective, the inhabitants are engaged in this endogenous urban regeneration program and would be the first actors and protagonists of this regeneration programme.

As part of the project, a check was carried out on the compliance of the accommodation with the requirements established by the Building Regulations of the Municipality of Pioltello and those of the Hygiene Regulations of the Lombardy Region. Consequently, the extent of the necessary work was assessed, and estimates for the renovation were made.

This programme was also presented during some focus groups to young unaccompanied minors who arrived in Italy after long and difficult migration experiences. The experimentation conducted made it possible to verify the positive reception of the proposal by the potential beneficiaries of the programme oriented to training, employment and urban regeneration, both in terms of possible participation in the training and job start-up program and the interest in the possibility of accessing the rental of accommodation in the Satellite district.

The testing of this device during the project verified the conditions of social, technical and economic-financial sustainability of the planned interventions. The methodological framework is based on the fact that individual housing recovery interventions, repeated over time, could allow an overall regeneration of the residential heritage, preserving the private nature of the neighbourhood: of its housing stock and the forms of enjoyment.

The project's outcomes, regarding the investigation and the proposal of relevant programmes for housing stock retrofitting and public spaces sustainable design for a local multicultural society, are presented in the book *Un quartiere mondo. Abitare e progettare il Satellite di Pioltello* (Quodlibet, 2022) edited by Andrea Di Giovanni and Jacopo Leveratto.

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Fig. 1.
Pioltello, Satellite Town, Courtesy Claudia Verga.

Fig. 2.
Satellite Town, Omar and Ojeniyi. Courtesy Claudia Verga.

Neo-Population: A Potential Remedy for the Depopulation Crisis in Inner Regions

Diksha Dody

Migration has long been a defining aspect of human history, shaping societies through the exchange, merger, and integration of peoples. This ongoing phenomenon continues to exert influence on modern society, reflecting humanity's inherent drive for mobility: the pursuit of new territories for survival, the quest for an enhanced quality of life (QoL), the escape from catastrophic events and wars, and ultimately, the pursuit of knowledge, all of which have historically served as pivotal forces driving human migration.
In today's interconnected world, driven by conflicts, poverty, inequality, and the pursuit of a better QoL, international migrations have become a widespread reality impacting nearly every corner of the globe. However, compared to the past, modern means of transportation—faster and sometimes more economical—and the development of telecommunications contribute to a large-scale migratory phenomenon involving not just Italy but all of Europe. This phenomenon includes immigrants from both European countries (internal immigrants) and non-European countries (external immigrants), with Sicily serving as the primary entry point for the vast majority of immigrants coming from or passing through Africa en route to Europe.

Another significant "migration event," distinct from the previously described types, concerns the depopulation (D) of rural areas in favor of cities a growing problem leading to economic, social, and service inequalities. Initiated since the post-World War II period, the D of internal areas (IA) is now a growing phenomenon and a serious challenge for political governance, as it has devastating effects on the "areas significantly distant from centers offering essential services" (SNAI National Strategy for Inner Areas). Nonetheless, it is crucial to note that despite D and the progressive decline in QoL, the AI of Sicily possess a wealth of natural, agricultural, and cultural resources that, with appropriate planning and management strategies, could become engines of local development.[1]

Within this historical context of migration and D in Sicily's IA, this project aims to evaluate the potential of relocating migrants (neo-population (NP))[2] to enhance human capital in rural Sicilian centres. The research identifies suitable IA, conducts demographic and skills assessments, and explores the challenges and advantages of relocation. The objective is to develop effective tools aligned with national and EU financial instruments (NEFI), fostering sustainable NP and contributing to long-term economic, social, and QoL improvements.

Aligned with these established parameters, this research seeks to address the following inquiries regarding recent migratory events:

- With an understanding of the dynamics shaping current migration trends in Sicily, can we identify the most suitable migrant relocation policies to enhance the human capital of inland Sicilian centres facing D decline?
- Is it possible to identify the optimal area within Sicily's IA for new settlement, through a comprehensive analysis of challenges (such as service desertification) and values (including material and immaterial heritage) that define them?
- In an era focusing on resilience and sustainability (R&S) as solutions to urban and rural challenges, can we link immigration to rural R&S?[3] What are the main challenges, proposed solutions, and the roles immigrants play in contributing to rural R&S?
- In small urban communities, integration between foreign immigrants and locals may differ from that in larger cities. How would interaction between these communities unfold in a small urban setting? How can knowledge sharing, learning, collaboration, and innovation be fostered between these groups? What potential challenges might arise from relocating to a small town and how can they be addressed?

The research project focuses on how immigration impacts Sicily's territory, examining positives and negatives in less-studied IA, in four phases. First, identifying the best project area within Sicily's SNAI regions and mapping its potentials and challenges. Second, assessing how incoming immigrants intersect with locals leaving for urban coastal areas to determine if relocating migrants to IA can revitalize these places and address D. Third, studying the skills of the foreign population through field research to ensure their relocation meets area needs and avoids segregation. Finally, developing models and guidelines aligned with the NEFI for sustainable local development and effective NP for positive economic and social outcomes.

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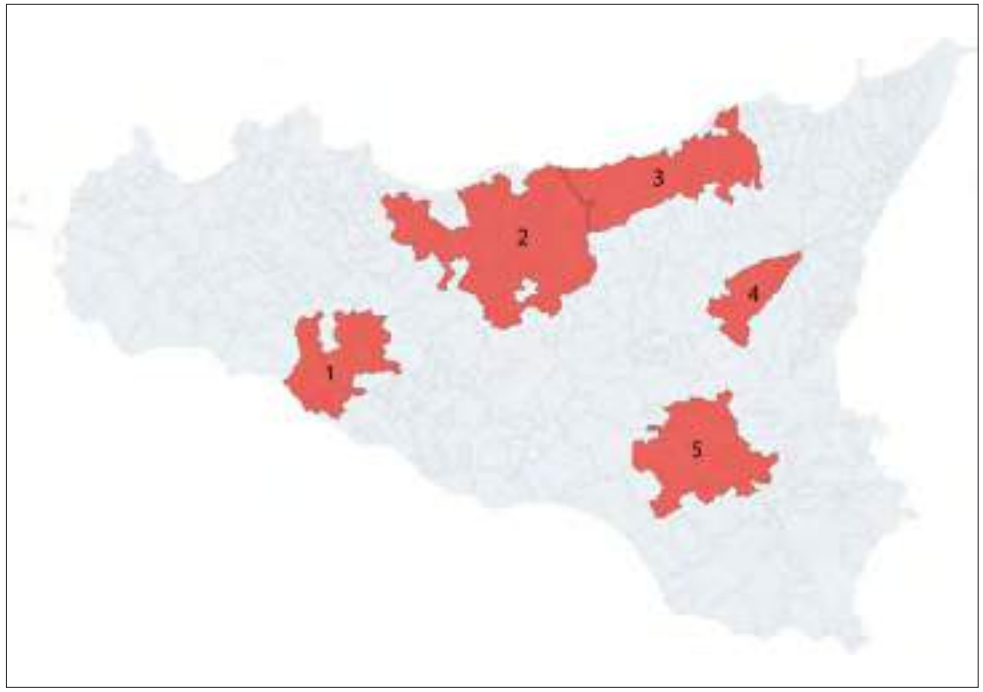

Fig. 1.
Sicily's 5 SNAI regions include: 1) SNAI Terre Sicane, 2) SNAI Madonie, 3) SNAI Nebrodi, 4) SNAI Val Simeto, and 5) SNAI Calatino.

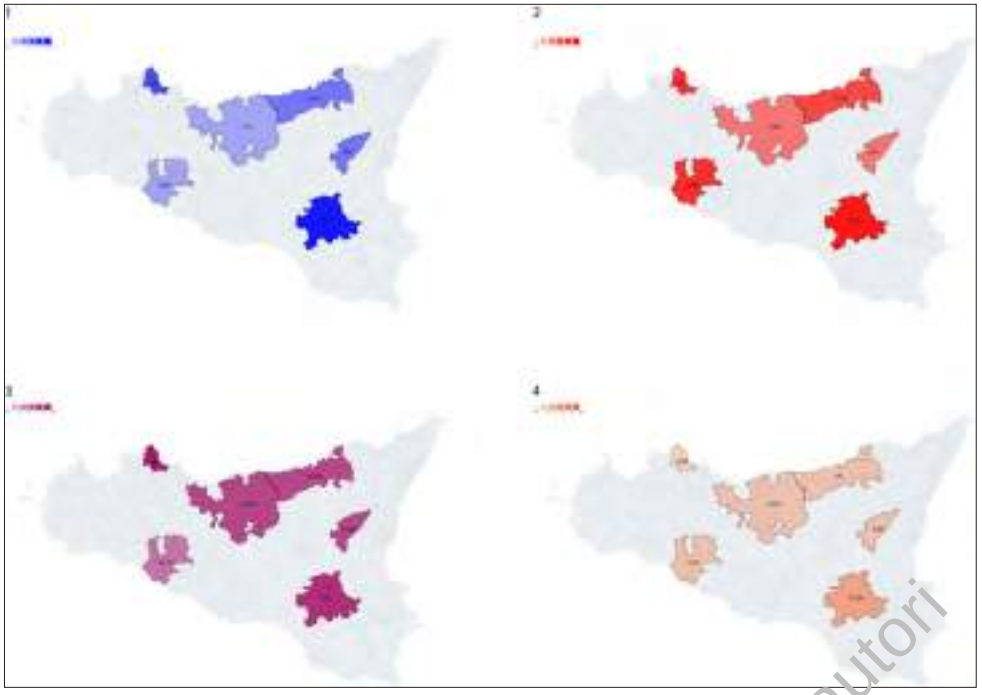

Fig. 2.
Distribution of immigrants in Sicily. 1) Shows the ratio of the entire immigrant population (European, non-European, and stateless individuals) to the total population (immigrants and Italians) of an area. 2) Displays the ratio of the immigrant population to the local population. 3) Illustrates the ratio of non-European immigrants to the total immigrant population of an area. 4) Indicates the ratio of the entire immigrant population to the total population of an area. The higher values in the Calatino area are attributed to the significant presence of non-European immigrants working in NATO Bases located there.

Intersecting Rights: Immigrants in Urban Realities

Maryam Karimi, Grazia Concilio**, Aliaksandra Rameika*** and Giorgia Trasciani*****

Immigrants often experience a complex set of human rights violations and discrimination when trying to interact with public services. This study explores the concept of intersectional human rights (Bouchard and MeyrBische, 2016), specifically examining the implications for immigrants' capabilities, empowerment, and actualization of rights (Concilio et al., 2022). Drawing on Sen and Nussbaum's Capability Approach (Robeyns, 2005), we highlight the gap between acknowledged and enforced rights, emphasizing the difference between formal freedoms and actual integration. Immigrants also often face significant barriers, exclusion, and marginalisation in urban areas influenced by various factors, such as power dynamics, unrecognised rights, cultural differences, conflicts between rights, etc. While the right to the city is championed by many progressive scholars in urban studies and human geography at a theoretical/conceptual level (Kafui, 2011; Sugranyes & Mathivet, 2010), little attention is given to the role played by services shaping the cities and working as interfaces between citizens and their rights and especially between vulnerable groups like immigrants and their rights. The interconnection and interdependence of the fundamental rights under the umbrella of this concept also demonstrate that, in real implication, it is hard to state that migrants thoroughly enjoy their fundamental rights and, consequently, the right to the city (Harvey, 2008; Marcuse, 2009). The right to the city is a multifaceted and intricate concept that is challenged by the evidence that cities work as service platforms and, as such, represent the door to several rights that, in the end, contribute themselves to shaping the rights to the city.

In many cases, immigrants' inability to navigate and complete procedures for accessing basic public services, such as education or housing, hinders them from fully participating in and integrating into the city. Focusing on education as a crucial example, this research, based on the città-IN project's preliminary findings, examines the interplay between rights actualization and access to public services in the neighbourhood of San Siro, Milan. The study maps the constellation of school services and procedures, revealing interconnected obstacles faced by immigrants and the lack of possibility to exercise rights and underscoring the need to look at the problems in a systemic approach. The results show that the limited access and understanding of services and procedures by immigrants and the actors involved in the service ecosystems can lead to the incomplete realization of citizen rights. Consequently, the immigrants' lack of awareness of their entitlements creates "spaces of immobility," hindering their ability to exercise their rights. Grounded in the right to the city and qualitative data analysis, this research underscores the crucial role of education in addressing diverse rights within the city. By advocating for user rights and dismantling barriers to access, the città-IN project aims to influence policies related to service providers, user rights, and inclusion. It calls for further exploration of similar cases to enhance observations, underscores the limitations of current human rights monitoring systems, and proposes Mediation Grammar as a measurement system to assess the experience and the degree of success of an immigrant interacting with a public service or agency. By proposing the adoption of Mediation Grammar, the study contributes to a more systematic, holistic, and inclusive approach to realizing human rights universally in cities.

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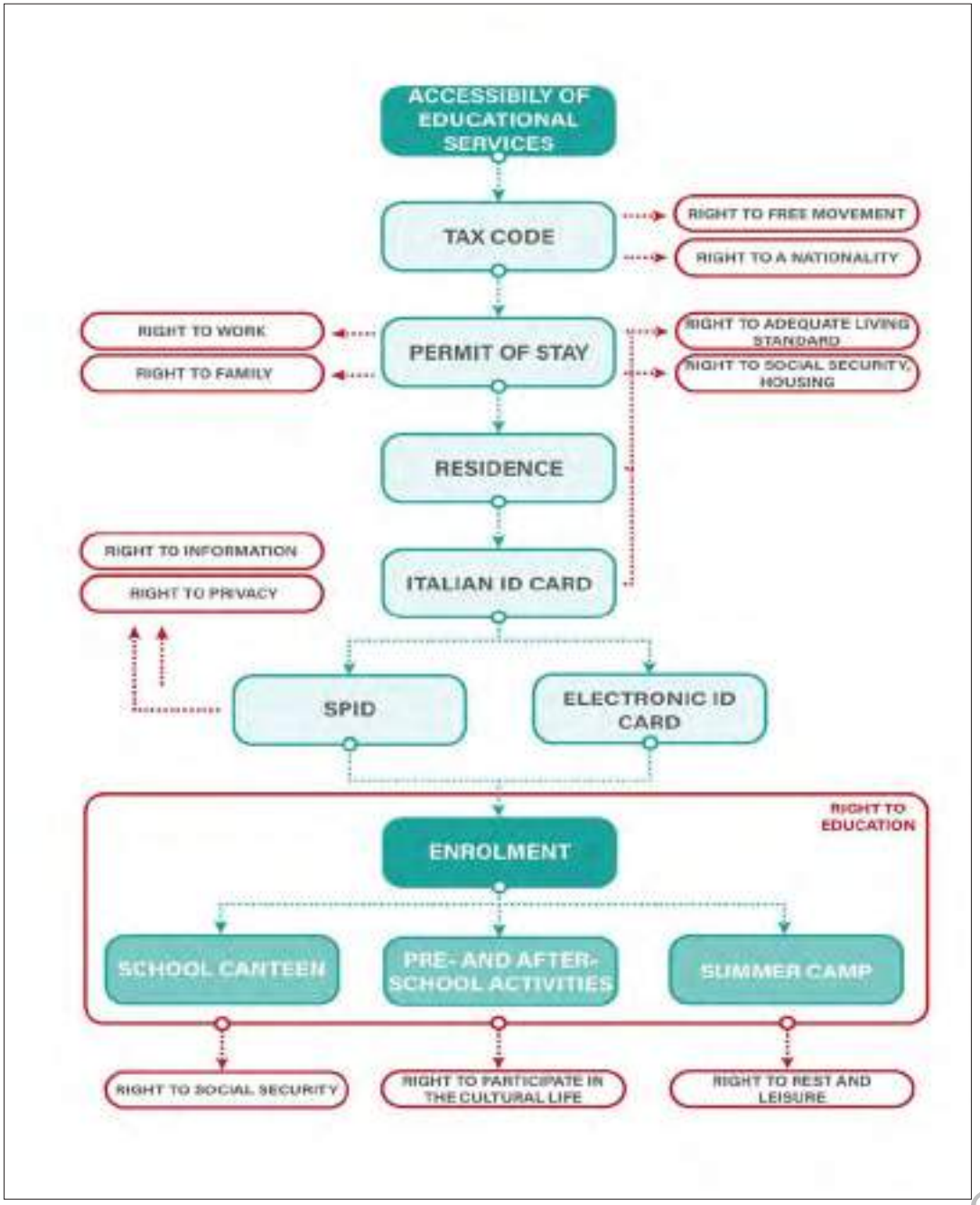

Fig. 1.
Basic rights accessibility. Requirements to access the school enrolments in Italy.

Migration, Social Transformations and Impact on Urban Attractiveness: Riace as a Model of Inclusive Urban Planning

*Silvia Paldino and Ferdinando Verardi**

The municipality of Riace, located in the province of Reggio Calabria, has experienced a unique inclusion model based on the welcoming of migrants. Since 1998, under the guidance of former mayor Domenico Lucano, Riace has welcomed thousands of migrants from various parts of the world, radically transforming the social and economic structure of the community. According to data provided by the National Institute of Statistics (ISTAT), Riace witnessed a 500% increase in its population between 2000 and 2018, mainly due to migrant integration. The inclusion policies adopted by the municipality of Riace have been characterized by a combination of reception, integration, and active participation of migrants in the social and economic life of the city. Training programs, healthcare assistance, and housing have been offered to migrants, enabling them to integrate into the local community. Out of the approximately 1800 current residents of Riace, 400 are foreigners, many of whom have found homes and jobs through a government financing program that has been running for ten years. For each migrant, the administration receives 30 euros per day, which are used to provide them with housing, money to spend, and for some, a job. To ensure that the money is not dispersed but remains within the community, migrants are not given money but rather bonuses of different values that are only accepted in Riace. This has slowly restarted the town's dormant economy. It all began in 1998, with the landing of two hundred refugees from Kurdistan in Riace Marina. The association Città Futura helped the newly arrived migrants by making old houses abandoned by their owners, now far from the village, available to them. Since 2004, the town, particularly the depopulated historic center, has hosted over 6,000 asylum seekers from twenty different nations, integrating them into the city's cultural fabric and embedding them into the small village's workforce, effectively giving Riace a new life. In the Calabrian village, the practice of diffuse hospitality has long been in place, with migrants accommodated in independent apartments. In 2016 Mayor Lucano was included by Fortune magazine among the 50 most influential leaders in the world. Migrant integration is ensured by around seventy cultural mediators employed by the municipality and part of the Sprar system (Protection System for Asylum Seekers and Refugees), created to propose, in addition to assistance and protection measures for individual beneficiaries, the social and economic integration process of which Riace is a promoter. An integral part of Riace's inclusion model has been the allocation of houses and abandoned artisanal activities to the migrants welcomed. Many of these activities, such as weaving workshops or ceramics production, became focal points of economic activity, offering unique products that attracted the attention of both residents and visitors. This initiative not only provided new opportunities for housing and employment to migrants but also contributed to preserving and valorizing Riace's cultural and historical heritage, blending tradition and innovation. Despite the successes of the inclusion model, it has not been immune to criticism and controversy. The media resonance of the initiative brought to light a series of issues related to racism and xenophobia, both within and outside the Riace community. The tensions and controversies related to immigration highlighted existing divisions and prejudices in Italian and international society. The former mayor Lucano was subject to attacks and criticism from political and social sectors opposed to his welcoming policy and placed under house arrest on 2018 on charges of inciting clandestine immigration. This research does not aim to delve into these issues but rather to acknowledge their existence and complexity.

A University of Calabria study found that migrant reception spurred new economic activities and increased local employment, with around 70% of migrants finding work in local businesses. Integration efforts also fostered a multicultural community, enriching Riace's social fabric. An ANCI survey showed that 85% of residents believed migrants made the city more open. The migrant inclusion model significantly enhanced Riace's tourist appeal, with a 300% rise in tourist visits over the last decade, including a significant portion from abroad. The revival of Riace as a tourist destination was attributed to its reputation as a welcoming and inclusive community, where visitors could experience the city's cultural richness and diversity, contributing to improving Riace's image and making it more appealing to national and international tourists. Despite the challenges and criticisms faced, Riace's inclusion model has demonstrated the transformative potential of migrant reception policies. Through the allocation of houses and abandoned artisanal activities, Riace managed to revitalize its social and economic fabric, offering new hope to a community otherwise destined for oblivion. In conclusion, Riace's experience represents a tangible example of how migrant inclusion policies can generate positive impacts on the local community, promoting social, economic, and cultural development, as well as tourism and attractiveness on a national and international scale. The approach adopted by Riace could serve as a replicable model for other communities facing similar challenges, transforming diversities into opportunities for growth and development.

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Mental Mapping for New Urban Perspectives

*Sanja Platisa**

In critically observing the complex phenomena of contemporary cities, we face the challenge of accommodating increasing heterogeneity. Cities, traditionally regulated by national-level policies, find these policies insufficient for addressing the complex urban issues, the highly diverse lifestyles of city inhabitants, and specific local conditions. As a result, there is a growing demand for innovative, local-level practices tailored to unique urban contexts, since broad national policies cannot effectively manage these. Understanding the evolution of urban spaces involves acknowledging the collective effort of various actors and forces and recognizing diverse citizens as active contributors in shaping these spaces. Urban planning practices are being redefined, shifting towards more citizen-centric models, aiming for inclusivity. Migration presents a complex challenge to urban planning, as individuals bring their unique narratives to the urban space, influencing both its tangible and intangible aspects through their spatial practices. Capturing these socio-spatial practices is crucial for a deeper understanding of how citizens interact with the city and to better adapt urban environments to their needs. Uncovering the perspectives of diverse city inhabitants, particularly newcomers often overlooked, through the application of innovative tools, offer new perspectives and ways to see and understand the city.

This research explores mental mapping as a methodological tool in urban studies. Mental mapping, which visualizes individuals' cognitive representations of their environments, is used to understand how residents interact with and perceive their urban surroundings. The focus is on understanding and decoding patterns that exist but aren't immediately apparent, exploring how residents, through their spatial practices, shape the city. It seeks to discover how a collective's memories, histories, and daily practices translate into tangible urban transformations, revealing the diverse ways in which inhabitants claim and interact with their urban spaces. The research considers not only physical occupations but also the intangible contributions that give a city its character, encompassing different spatial appropriations and interactions. Critical questions posed are about urban space creation and ownership: Who is actively shaping the city, and for whom is the city being shaped? The research focuses on varying urban experiences and perceptions, observes and articulates the specificities of contexts and their dynamics. It also aims to identify differences in perception and use of urban space among inhabitants of different cities.

Specifically, a selected focus group serves both as a subject of investigation and as a means to test the hypothesis. The research investigates the relationship between the perception of urban space and the sense of possession of the city in spatial terms by people originated from the former Yugoslavia, who are now residents of one of four European cities chosen as case studies (Geneva, Brussels, Turin, and Hamburg). The focus is on understanding spatial patterns, highlighting different spatial issues and challenges for this population in the mentioned cities, discovering which factors explain them, and whether these arise from their common identity.

Through the analysis of mental maps, and interpreting the process of mental map creation, new urban perspectives emerge that can be useful for planners to develop new decision-making approaches. The analytical framework is still being questioned and adapted, but four guiding elements for interpretation have been defined: the narrative process, the content of the map, the representation, and the socio-demographic profile of the participant. In interpreting mental maps, the emphasis has mostly been on analyzing the content. What remains to be discussed is that beyond the sketched maps, as products of the mapping process, which provide valuable information about specific city elements, the map creation process itself can offer important insights into the relationship among the city's elements and new perspectives. Uncovering components of this process can identify and interpret new layers of information about city perception. During the map-making process, participants often share emotions, comparisons with familiar places,

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and insights beyond what's drawn. Capturing these details is essential as they provide context to the static elements of the map. It's crucial to note that the value of mental maps is significantly enhanced when interpreted alongside interviews, as the interviews provide additional context and reveal the participants' spatial logic, thereby facilitating the identification of patterns and correlations.

Preliminary findings suggest that mental maps offer profound insights into the personal and collective urban experiences of citizens, uncovering unique urban narratives that might be missed with other methods. This approach emphasizes the importance of participatory processes in urban planning, enabling a more nuanced understanding of urban spaces and their inhabitants.

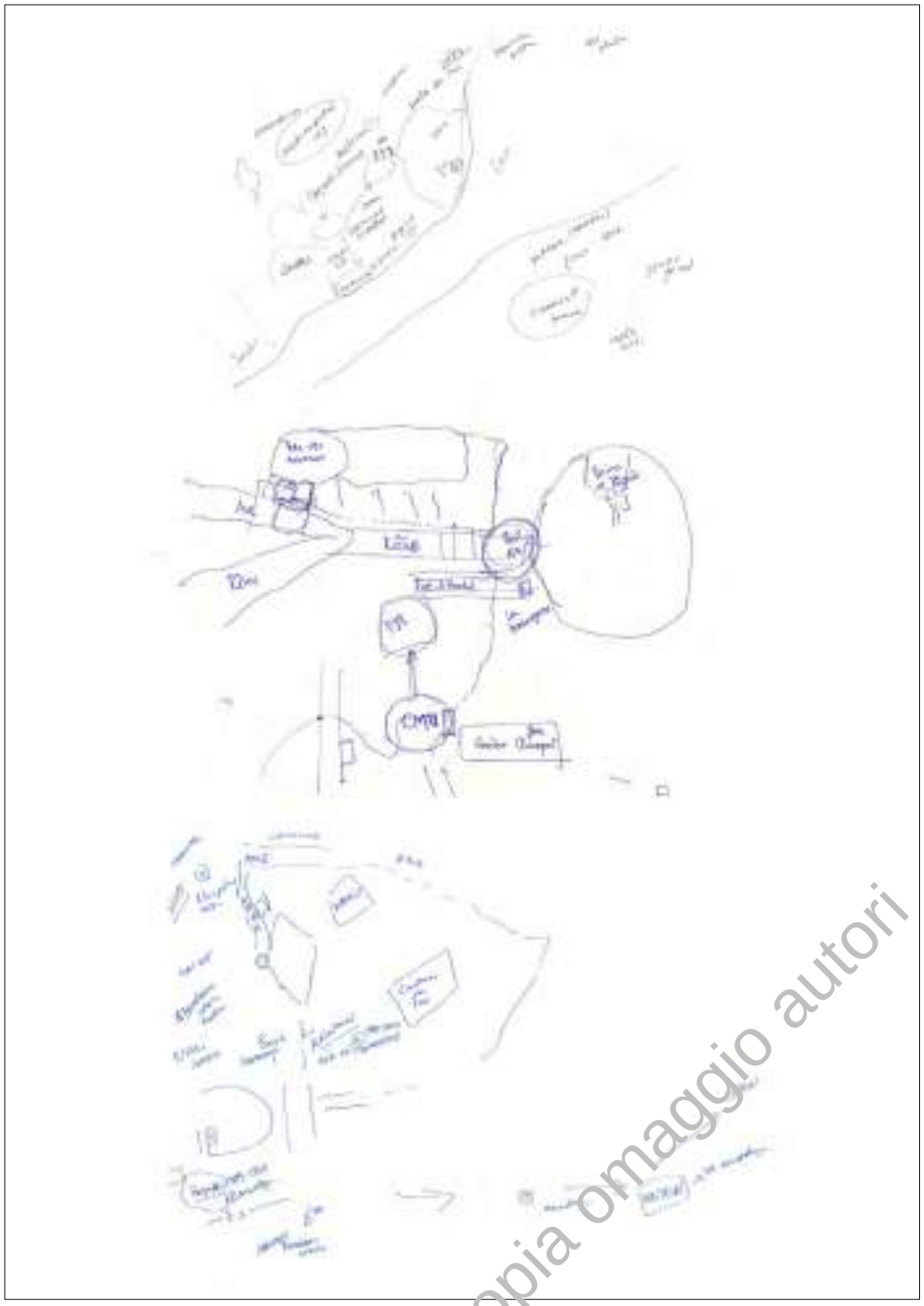

Fig. 1.
Examples of mental maps: Three mental maps of Geneva, sketched by inhabitants during fieldwork interviews in 2022/2023, guided by author..

The inclusion of migrants through gastronomic and cultural markets

*Manuel Sanches**

General Introduction

Due to different public policies, Brazil welcomed around eight million immigrants from all over the world in 150 years – from 1870 to 2020. Of these, those coming from Italy, Spain, Portugal, Germany, Austria and Switzerland stand out. We can divide these eight million migrants into four periods: 1) initially – from 1870 to 1883 – approximately 250 thousand had already arrived; 2) then, from 1884 to 1933 – in the 50 years of the Great Immigration – 4.5 million Europeans arrived; 3) From 1933 to 1970 approximately another 1.5 million Europeans came in. Some of the latter were from Europe, although in smaller numbers. All of these people left important economic and cultural marks that are still significant today.

From the point of view of the percentage relationship between migrants and the local population, Rio de Janeiro, formerly the Federal District, later the State of Guanabara and today the capital of the State of Rio de Janeiro, stands out: "it starts with the highest percentage in the period of the Great Migration — 21.70% in 1872. In 1890 it was still higher than São Paulo (35.37%), falling in 1900 to around 18%.[1]

More recently, due to changes in citizenship policies in Portugal, Italy and Spain, many of the grandchildren and great-grandchildren of the previous migrants return to the countries of their relatives. Some of these, now in better conditions than their former families and with the advantage of being European citizens, seek a form of cultural inclusion that allows them to avoid continuing to be seen as strangers or outsiders. These "new citizens", "new metics", "returnees", join other legal or illegal migrants, refugees or not, who are looking for a better life.

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[1] Levy, M. S. F. — O papel da migração internacional na evolução da população brasileira (1872 a 1972). Rev. Saúde públ., S. Paulo, 8(supl.):49-90, 1974, em https://www.scielo.br/j/rsp/a/gSZkx3b5kCrf8TkWjGRxmfx/?format=pdf&lang=pt , acessado em 28/02/2024).

Nowadays, the concepts of migrants, or migratory movements, have not been so easy to define. Today, entry records in destination countries differentiate between those with dual nationality, permanent residents, temporary residents, treaty beneficiaries, etc. These are legal differences. Nevertheless, from the local resident's point of view, the significative difference is that they are "migrants", foreigners.

Objectives

In the specific case of Rio de Janeiro-Málaga, and always in accordance with our basic hypothesis, the objective of the research was to collect data on the activities of those so-called "migrants" or foreigners. Every who worked or work in the areas of gastronomy and culture had, in our assumption, better acceptance in the arrival regions.

This is because, some of the cultural differences from those people attract the taste and interest of local's residents, like for instance cuisine, music, dance, parties, regardless of the "exotics" that produce these cultural facts.

Local inhabitants seek out these attractions just like tourists do, without having the need to leave their own city. The areas of these gastronomic and cultural events end up becoming appealing urban areas as touristic sightseeing.

This can be seen in other cities: "Litle Italy" or "China Town" in New York; Bexiga, an Italian neighborhood in São Paulo; the Sahara, an Arab-Jewish neighborhood in Rio de Janeiro. Cultural and gastronomic markets, especially those that include different ethnic groups, become visiting points. This happens even when these markets are formed by migratory groups originating from their own countries.

Results

The results of this research are to provide information for the public policies of the Andalusian authorities and, at the same time, provide subsidies for a gastronomic and cultural market project that favors social integration and creates economic value. It is hoped that both migrants and local inhabitants will find points of identity and common interests through this project.

A market of this type, in our opinion, fulfills the function of social inclusion better than, for example, museums and immigrant clubs. New research may define whether it is possible to extend these conclusions to the most diverse ethnic groups that live in the areas studied by this investigation. It is finally hoped that this research will be replicated in other port areas and cities, in Spain, Italy and Portugal.

Fig. 1.
Brazilian Restaurant in Spain.

Fig. 2.
Making America: Immigration to Latin America.

Embracing social and cultural Diversity in Eleusis: Exploring Possible Composite Tourism experiences After the ECOC 2021 title

Panagiota Tsolakaki, Sofia Avgerinou Kolonias***

Eleusis, a medium Greek city, a suburb of Athens, honoured as the European Capital of Culture for 2021, aspires to become a vibrant hub for composite tourist products, celebrating its unique blend of cultural, historical, and industrial elements. This vision encompasses not only a diverse tourist experience, and a pathway to local development but also positions the city as an emerging destination with a rich tapestry of experiences. The study deals with assessing Eleusis's current tourist offer, identifying untapped potential. It places a specific focus on the city's industrial heritage, recognizing it as a key tourist resource. Beyond diversifying tourism, the objective is to revitalize and preserve Eleusis's industrial heritage, acknowledging the contributions of different populations and nationalities of the city over the years.
Delving into Eleusis's ancient sacred significance, the research explores as well its folk culture as a mosaic shaped by various nationalities, cultures, and customs, a constantly enriched environment while the population flows to Eleusis for work reasons is an ongoing process. This emphasis on inclusivity underscores Eleusis's potential not just as a cultural hub but also as a welcoming space for a diverse workforce.

Additionally, Eleusis's role as a European Cultural Capital, has formed a new status for the city taking into consideration the potential tourism development for local growth. It envisions this designation as a catalyst for creating sustainable tourist products that celebrate the diverse workforce that has contributed to Eleusis's growth till now.

Despite the feasibility of developing a new tourist product, shortcomings exist in targeted planning. The abundance of resources contrasts with the challenges in converting them into final products. A targeted policy is crucial for promoting tourism development and addressing the contradiction between resource abundance and product conversion.

Current priorities focus on maintaining the secondary sector and tertiary activities, hindering tourism development. Strategic planning is essential to enrich Eleusis's tourism product, emphasizing cultural and industrial heritage. Coexistence with other activities is possible with specialized policies addressing negative impacts and creating a conducive environment. Effective planning will unlock Eleusis's full tourism potential. The preservation and enhancement of Eleusis's industrial heritage are discussed within national and regional policies, showcasing a commitment to protect the industrial legacy and integrate it into the broader tourism narrative. Various programs and local policies are highlighted, emphasizing their dual contribution to heritage conservation and tourism development.

Eleusis, shaped by deindustrialization, possesses historic industrial buildings slated for preservation. The Municipality, anticipating the 'Cultural Capital of Europe 2021,' initiated sporadic alienation, restoration, and reuse processes. A comprehensive strategic plan is needed for urban regeneration, emphasizing identity, advantages, cultural production, investments, and social cohesion.

City branding, involving identity formulation, landmark recognition, and potentially city marketing, is essential. Aligning with Athens master plan and the its cultural revitalisation plan, this approach seeks long-term economic and social prosperity.

Eleusis holds untapped potential for innovative tourist products derived from its unique local and historical characteristics. Diagram 1 illustrates the current tourist offerings and the prospect for new composite products. The case study confirms Eleusis's capability to design complex tourist products, transitioning from an industrial past to a new tertiary environment.

Concluding the study, potential new composite tourist products for Eleusis are presented, leveraging the city's unique attributes, including its cultural, historical, and industrial elements. The paper underscores the importance of these initiatives in revitalising local economies, preserving cultural heritage, including different nationalities and populations to local development and offering tourists a multifaceted and meaningful experience that reflects the contributions of diverse populations and nationalities throughout Eleusis's history.

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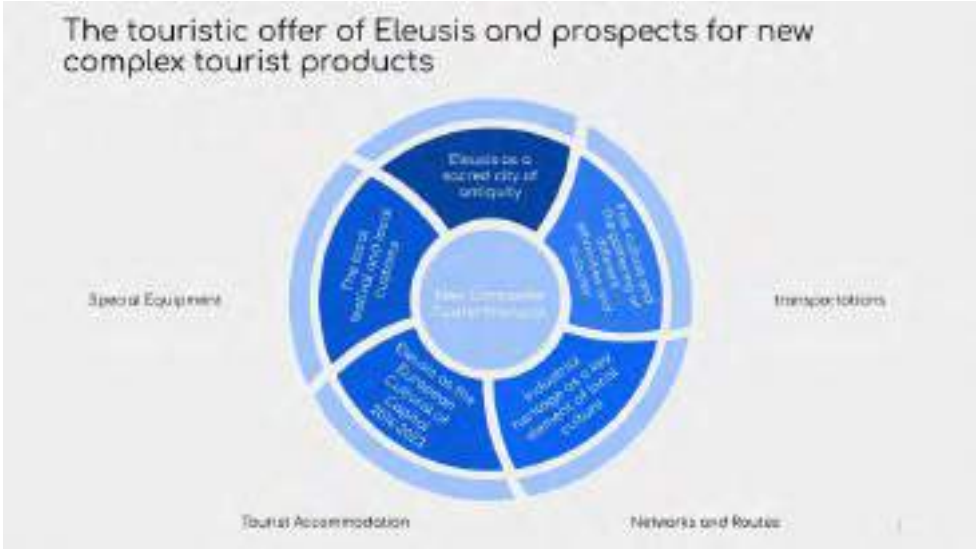

Fig. 1.
The potential of new composite tourism products in Eleusis, GR.

Fig. 2.
View of a cultural gathering of the European capital of culture, within the city's archaeological site Next to industrial ruins in Eleusis, GR.

Scenario's planning participative workshop as tools for inclusive policies for inhabitants and citizens

*Andrea Marçel Pidalà**

Many of the planet's critical issues pose interesting questions and stimulating challenges to urban planners about the new dimension of sustainability and consequently new perspectives for renewing their commitment to planning. There are many questions that are emerging in the most recent ones and mainly concern the needs of the inhabitants of the territory and citizens to deal with the issues of consumption. There is also the challenge posed by sustainability to co-living on earth seems to require a convergence of a plurality of institutional, scientific, technical, cultural and above all urban and territorial policies to which reference will have to be made for the governance of the territory (Palermo, 2021). Today, more than ever, the complexity of the disciplines tends to interact and often to integrate, creating a new framework necessary (also methodological, De Certeau, 1990) for the articulated declination of sustainability in the various transformations, which cannot be achieved without a protean dimension, which contains the needs of the present, the awareness of the past, the experimentation on anticipation, increasingly visionary and holistic (Pidalà 2014a; 2021b), of the future (Foster, 2024). This is also the case for the scientific community of urban planners, where it already constitutes and will increasingly constitute new research in order to trace the re-interpretation or re-imagination (Carta, 2014) of a new idea of city and territory government, and in this sense it will be necessary to carefully verify which planning systems and policies will guide and support these new governance processes (Magnaghi, 2021).In the construction of visions, planning is linked to social planning, which consists in the involvement of citizens in the foreshadowing of a necessarily common future, in a democratic process. The search for the future as the basis of balanced planning of the city and the territory is an artifice to know the present or to understand it better. From a theoretical point of view, the visioning method is part of the constructivist approach to the future and is part of the broader line of techniques that can be traced back to future studies and visionary planning. Recent urban (e even international) situations make us think more and more about the real need for a different involvement of citizens in the processes of government of the territory. In this sense, it will be necessary for the *planner bricoleur* (with the ability to synthesize, but never superficially) to be able first of all to break it down in order to analyze it more effectively and then recompose it in order to consolidate it; The re-composition will have to be guided by an effective imagination with the help of the communities. Today, first of all, it is necessary to reestablish a real "laboratory" for territorial planners and urban planners: a place of reflection/action (of immagining and doing) that can sometimes be represented by the context on which a process of experimentation is activated, where elaboration, study, application of ideas and intuitions find expression and envisage the elements of reterritorialization that give substance to the visions to the scenario. The urban planner, with visionary skills, will be able to guide the planning of cities, territories and even urban neighborhoods, through scenario/think techniques. An increasingly necessary planning that comes from the increase in uncertainty and risk in today's world and the consequent impossibility of predicting exactly what the future holds. The recently visionary models studied (Pidalà, 2014) are essentially structured by evolutions and simulations produced in a collaborative way (open and flexible that allow hybridization with other knowledge) designed to make visible different probable lines of development, and to prepare actions in the perspective of a desired future. The responsibilities of planning no longer belong exclusively to institutional subjects, many other subjects intervene who contribute to the activity of urban and territorial transformation: the model of government of the territory can no longer be exclusively Top-down and not even exclusively Bottom-up, a point of junction is needed, as we have seen, as Alberto Magnaghi emphasizes well in his last book. A new welfare process is needed – which can be tackled with visioning methods combined with the various technical tools available – which actively involves the entire polytechnic class; citizens, inhabitants, communities, civil society, the world of associations, local communities; businesses, we need the right flexibility and coherence also in the institutional apparatus. Scenario's planning participative workshop became as tools for inclusive policies for inhabitants and citizens.

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Parallel Workshop
5. Cultural heritage

Coordinators
Maria Somma
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PINQuA: the conversion of an abandoned *Palazzo* into student housing to regenerate a portion of Taranto's *Città Vecchia*

*Simona Sasso, Giovanni Carbotti, Antonio Angelini**

The project's main aim consists in the restoration and refurbishment of a municipal building located in Largo Calò, in the Old town of Taranto, and its conversion into university student housing. The general aim of the PINQuA program of interventions is to improve the urban and environmental quality and, consequently, the liveability of a part of the historic centre which is currently in a severe state of decay. In particular, the planned transformation will contribute to enhance the architectural, cultural and historical heritage that the old town (Isola Madre) preserves. This PINQuA (National Innovative Program for the Quality of Living) is titled: "Re-inhabiting the Old town – Integrated proposal for the recovery and revitalization of the eastern part of the Isola Madre". The Program envisages a series of actions closely related from a functional and strategic point of view, aimed at regenerating (and re-opening for public fruition) a part of the historic centre near Piazza Castello and the University headquarters in via Duomo, which is now characterized by the presence of uninhabited dilapidated buildings, mostly in precarious static conditions. Indeed, the project envisages the conversion of the municipally owned building located in Largo Calò n.30 into university student housing, for a total of 24 residents, including new services on the ground floor to support the students but also open to public use. The project is aimed at the creation of a significant new public facility characterized by architectural quality, and by spaces that will guarantee the students' access to high quality educational and residential services. Teachers and researchers will also benefit from this new facility since it will also house new support services for teaching and research as well as cultural and recreational activities. The cost of the restauration and conversion of Palazzo Calò amounts to €.3.558.271,25. In particular, the Project involves the recovery of the existing building envelope safeguarding its historical-architectural peculiarities, the reconstruction of the structures and architectural components that are greatly deteriorated and/or collapsed, the elimination of additions improperly built over time, the restoration of the vaulted rooms, all in line with the current legislation on building conservation and the strategic guidelines of the Municipality of Taranto. The project involves the creation of 4 integrated residential units, for a total of 24 beds, as well as a cafeteria and common services such as study and leisure rooms. The different integrated residential units are composed of a variable number of bedrooms, single or double, capable to accommodate from 3 to 8 students, and feature reserved areas for domestic functions (preparation of meals, lunch and living room, etc.). The design choices include in particular: maintaining the typological characteristics of the existing spaces unchanged on the ground floor, the renovation of the upper floors by aggregating existing rooms without modifying their typological characteristics, the restauration of the existing decorative elements (cats and rose window of the entrance door) and the renovation of all wooden floors. The works will also include interventions necessary to remove architectural barriers, the creation of a new elevator shaft, the reconstruction of the staircase, which will be built with an iron structure in order to highlight the new intervention, the complete reconstruction of the electrical, water and mechanical systems. The building works will also entail the reconstruction of all the floors on the upper levels and the structural consolidation of the vaulted masonry rooms. In choosing the materials, particularly for the internal flooring, the toilet tiling and the architectural elements of the stairwell, special attention was paid to proper historic contextualisation. In fact, when choosing the flooring, we tried to preserve and reuse the very few floor elements that were still intact and with the possibility of reuse in floral "cementine tiles". Alternatively, stone and "cementine-effect" stoneware flooring will be used. For the finishing of the facade, all elevations will undergo a "scialbatura" treatment, including the internal ones. The lighting of the main facade on Largo Calò and the secondary one on Vico Gagliardi will involve the use of small lighting fixtures that will be positioned near the string course of the elevation.

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Fig. 1.
Current north elevation.

Fig. 2.
North elevation of the project.

Historic Urban Landscape and Cultural Diversities

*Mariarosaria Angrisano, Ferdinando Verardi**

The city that is the place where economic wealth is produced also becomes the place where the greatest poverty and social inequalities are gathered. The city is the place of highest concentration of needs that may remain unsatisfied leading to conditions of non-justice, non-inclusion. The city is a complex adaptive and evolutionary system that sees its identity in its cultural heritage.
In this context, cultural heritage and landscape should be considered as a resource for urban regeneration capable of fostering the inclusion of cultural, social and environmental diversity and reducing the phenomena of marginality.

The Historic Urban Landscape is the space of diversity, where the inclusion of cultural diversity can be fostered and the conditions of non-justice reduced through new governance strategies.

The objective of this contribution is to identify established transdisciplinary approaches to support reuse/recovery policies for cultural heritage and landscapes. Approaches based on the culture of human rights interpreted to contribute to sustainable and circular development are needed.

The expected results of this paper are an ex-post analysis of some historical buildings reuse projects that have been a successful experience in terms of local community regeneration, generating social inclusion and reduction of cultural diversity.

Urban areas provide as dynamic hubs of economic activity and cultural diversity, playing a pivotal role in driving regional and global economies (Florida, 2002). This diversity enriches the social fabric of cities, contributing to a vibrant cultural scene characterized by a multitude of languages, traditions, cuisines, and artistic expressions.

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Furthermore, urbanization contributes to the emergence of multicultural and cosmopolitan identities, as cities become areas of diverse ethnicities, languages, and cultural traditions. But cities very often are the places where the greatest poverty and social inequalities are gathered.

In this perspective, cultural heritage and landscape play a crucial role in addressing various urban challenges by fostering social cohesion, economic vitality, and environmental sustainability (UNESCO, 2011). Cultural heritage and landscape should be considered as a resource for urban regeneration capable of fostering the inclusion of cultural, social and environmental diversity and reducing the phenomena of marginality (Fusco Girard, 2020).

There are some best practices of reuse projects that have shown how cultural heritage is capable of generating inclusion and reducing cultural diversity.

For instance, the High Line in New York City stands as a testament to the power of adaptive reuse in transforming an abandoned elevated rail line into a vibrant public park. By repurposing this industrial heritage, the project not only created a recreational space but also triggered economic growth, attracting businesses, tourists, and residents to the surrounding neighbourhoods of different ethnicities.

Similarly, the Distillery District in Toronto revitalized a collection of 19th-century industrial buildings into a pedestrian-friendly village, reimagining the site as a cultural destination that fosters community interaction and supports local artisans and entrepreneurs. This adaptive reuse project not only preserved the historical character of the area but also injected new life into the neighbourhood, stimulating economic activity and creating a vibrant hub for arts and culture, promoting social inclusion.

The Tobacco Warehouse in Brooklyn was transformed into a multi-use cultural venue, offering affordable performance spaces, art galleries, and community facilities that

promote social interaction and creative expression among residents from various backgrounds.

Similarly, the De Halle building in Amsterdam repurposed an old tram depot into a mixed-use complex, providing affordable services and amenities that contribute to the well-being of all the local community.

The Battersea Power Station redevelopment project in London preserved the industrial heritage of the site while introducing a mix of residential, commercial, and leisure facilities that celebrate the area's cultural diversity.

Similarly, the Tate Modern in London, housed in a former power station, has become a leading cultural institution that showcases contemporary art from around the world, transforming industrial structures into dynamic cultural hubs.

In conclusion, these projects have not only preserved cultural heritage but also provided places for diverse cultural expressions, fostering cross-cultural dialogue and understanding.

Therefore, the presented historical building reuse projects represent successful models of urban regeneration that have revitalized urban spaces and cultural heritage, promoting at the same time social inclusion and cultural diversity.

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Restoration and enhancement of the Historic Gardens of the Monumental Complex of the ex-Monastery of Saints Severino and Sossio in Naples

*Alessandro Seravalli, Paola Caselli**

The project for the Restoration and Enhancement of the Historic Gardens of the Monumental Complex of the ex-Monastery of Saints Severino and Sossio in Naples intends to encourage the opening to the public of a very significant complex for the city through a partial musealization and a new accessibility of its spaces, both internal and external, with the aim of returning to the city a heritage of history, art and culture.
The musealization project is part of the path of enhancement undertaken by the Archives and the Superintendence aimed at ensuring that the complex can best express its potential, which has often been mortified especially with 19th-century interventions. Specifically, a free access area is planned from Vico Monte della Pietà and includes the first 17th-century cloister and the adjacent Capasso Cloister. Laterally to the Capasso Cloister, the project plans to develop two autonomous places: the first dedicated to the Bookshop and the ticket office, the second dedicated to the cafeteria with services and entirely freely usable by citizens. Crossing the Cloister, one arrives at the Atrium of the Statues, a barrier to control access to the museum. Subsequently, the museum route is divided among halls, cloisters and gardens, specifically the Marble Cloister, the Platanus Cloister, the Cadastre Hall, the Filangieri Hall and the Citrus Garden. In this sense, the project also aims to preserve, protect, maintain and enhance the historic gardens in the complex. Therefore, some essential priorities have been identified to pursue the stated goals. These include the structuring of maintenance interventions, the adjustment of irrigation and sub-irrigation systems, the restoration of walkways and paths with the necessary works on the curbs and bottoms, fostering the knowledge of the historical-architectural heritage and greenery through initiatives aimed at the fruition and popularization of the complex but also the recovery of the signs and paths identifying the place according to the rule of St. Benedict.

Within the musealization project, a number of thematic routes have been identified that retrace the halls, gardens and cloisters in different ways. The routes specifically are six: Historical-cultural, Historical-artistic, Technical-scientific, Botanical, Benedictine and Experiential. The fruition for each of these routes is supported by the use of an audioguide app/webapp that, through the reading of QRcodes for example, allows access to the textual content present along the information panels.

The project, oriented to promote as much as possible the accessibility of the places and their knowledge, precedes the installation of a monitoring network that consists of meteo-environmental sensors (temperature, rain gauges, air humidity, noise, pollutants, soil moisture), agrometeorological (soil moisture), hydrological (PH), phenological (trunk diameter), observation cameras for visual control of the green. The data collected will be stored in databases that will feed into a DataLake whose indicators and processing will support monitoring for preventive and knowledge purposes and communication to the city. The infrastructure and system will allow the establishment of environmental characterization, determination of phytosanitary risks, optimization and planning of interventions, observation of the general state of the garden and its variability over time correlated with climate change.

The project also includes the installation of a wifi network to enhance connectivity along the entire route and in the different places for the benefit of the public but also for the transmission of image monitoring systems. The wifi network will be accompanied by a LORA network aimed at the acquisition in a Cloud environment of data derived from the sensors distributed in the main halls, cloisters and gardens. The project also includes the provision of intelligent signage and QRcode equipment for a visit accompanied by a multilingual audio guide.

The project to enhance the monumental complex, therefore, will return to the city a new space representative of its history and culture by transforming itself into an inclusive and usable place for all, but also a new space where it is possible to go beyond museum enjoyment, while also studying of the impacts of climate change in the context of monumental architectural assets.

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Fig. 1.
Rendering representing the restoration of the Cloister of Marbles.

Fig. 2.
Rendering representing the restoration of the Cloister of Marbles.

Assessing the reuse compatibility of cultural heritage for the built environment regeneration

Francesca Ciampa, Stefania De Medici***

At the United Nations Framework Convention on Climate Change (Dubai, 12/12/23), COP28 recognised in the Mitigation and Adaptation section the need to identify appropriate strategies for transforming cultural heritage. Aligning with it, on 21/12/23, Italy launched the National Plan for Adaptation to Climate Change (D.M. 434/23). Among 361 measures, the research focuses on the implementation of actions to improve the adaptive capacity and enhancement of the vulnerable cultural heritage.
Adaptive reuse as an enhancement strategy could have effects on an urban scale through an extensive study of the relations between regulatory instruments and settlement transformations. Adopting a systemic approach to the analysis of the city, the project for the reuse of buildings follows a logic of consistency for the urban context, to contribute to the start of an organic development process on a broader scale[1].

The research aims to orient the local authorities' choices towards valorisation actions, assuming the abandoned or decommissioned public real estate assets as a strategic resource. Starting from the assessment of compatibility for the reuse of the Ragusa historical centre, the research copes with the cultural heritage on a multi-level perspective (urban, architectural, technological), intervening in the interaction between its tangible and intangible components to enhance the place and communities' identity. The city was observed with a diachronic analysis, starting from the catastrophic earthquake, which in 1693 destroyed not only the built heritage of the cities of south-eastern Sicily but also the economic and social fabric of the entire area. The research interprets architecture as a system of systems (signs, places, performances) of the built environment, distinguishing the physical system into: the physical system of natural conditions and the man-made physical system. This natural physical system favours or prevents human settlement and conditions the activities, works and modes of proposition and organisation of the built physical system. The latter is determined by the human presence, which is organised in social structures, which choose the locations of new settlements and act on how resources are used[2]. In the settlement system, the man-made physical system of the built environment is the product of the slow accumulation of the actions outcomes, generated and realised by the social system. The transformations of the physical system are the mirror of socio-economic changes, linked to particular historical events, periods of development or economic crises, variations in the employment sector, catastrophic natural events, regulations, the transformation of productive activities, and migratory processes that have modified the population's behaviour and lifestyles, shaping the image of the city.

The method developed for the Palazzo Nicastro reuse project was based on two types of analysis. The first analysis was carried out on the building (framing, architectural survey and performance analysis), making it possible to identify its performance (Fig. 1). The second phase analyses new use to be settled, according to the transformation dynamics observed in the area, defining desirable development directions. From the analysis of the settlement requirements, different hypotheses of new uses were identified, and submitted to the local community's attention through a survey. The analysis of the regulatory framework enabled to identification of the performance requirements of the chosen new use. The comparison between the requirements and the performance offered by the building made it possible to define a functional layout, which was subsequently verified according to the constraints on transformation[3].

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The case study is Palazzo Nicastro, an eighteenth-century building in the historic centre of Ragusa, along the ancient road connecting Ragusa Ibla and Uptown Ragusa. The project to reuse this building not only prolongs its lifetime, giving it a function and, consequently, favouring its preservation; but also contributes to its valorisation, promoting its awareness. Moreover, being located in an area that acts as a hinge between the city's two historical districts, it contributes to the regeneration of the ancient pedestrian link of Via Scale, consisting of 350 steps, which runs from *Piazza della Repubblica* (Ragusa Ibla) to the Church of *Santa Maria delle Scale* (Uptown Ragusa). A route with a strong perspective, with natural backdrops that led to the definition of the small square, on which the main facade of Palazzo Nicastro stands (Fig. 2). The reuse project allows the community to appropriate again the disused built heritage and, if conducted in compliance with the constraints expressed by the building, helps to protect and consolidate its cultural value[4]. The research outcome concerns a circular valorisation model based on the regeneration of disused heritage extending the life cycle of the built heritage, attributing it a function for favouring its conservation and, activating its use; it contributes to its enhancement, fostering knowledge of it. This model guides the effectiveness of reuse choices for each building, reintroducing it into a broad-scale circuit of development to protect values and their increase over time.

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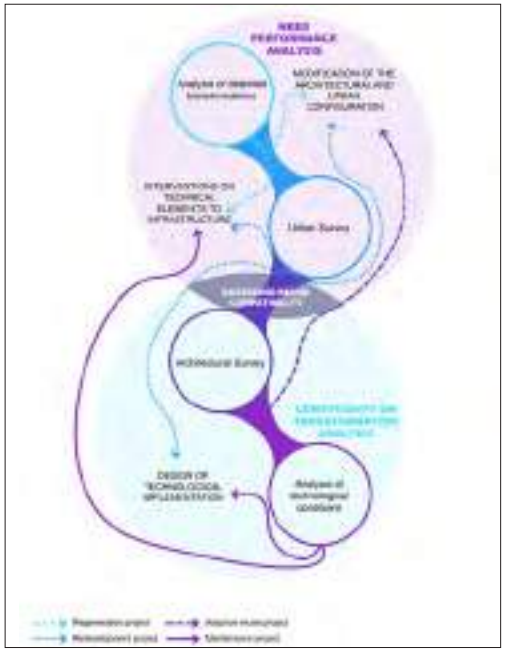

Fig. 1.
Assessing the reuse compatibility.

Fig. 2.
Case study of Ragusa.

Unveiling Urban Narratives. The "Pop Up City" project in the city of Formia, Italy

*Diana Ciufo**

There exists a physical city and a hidden one, a parasite of the tangible city, made up of underground, private, forgotten, inaccessible places, but also of songs, customs, and tales. Kevin Lynch (1960) in "The Image of the City" asserts that all cities possess a public image, a composition of many individual images or a series of public images held by each citizen. Cities have the following quality: they all speak of their stories, myths, and narratives through their buildings and spaces, with each place holding the potential for infinite narratives, one for every person who lives in, visits, or studies it. In its multiplicity of languages, the city can be approached as an allegorical space, or even tautegorical, as it speaks of itself by displaying the temporal and narrative stratifications that have shaped it. It is through the interaction between its places and narratives that a city comes to life[1]. Collecting, documenting first, and then deciding to return these narratives is the path through which this project has shed light on work concerning social inclusivity and the construction of a shared collective memory, with the ultimate goal of empowering the resident community. "Pop-Up City" is a regeneration project born from an award granted by the Lazio Region for innovative ideas. The name is inspired by the technique of pop-ups, which in both publishing and computing fields, refers to the opening of temporary three-dimensional windows that function as signals, aids, or navigation tips. Surrealists believed that urban space could reflect the complexity of our minds, revealing the presence of an invisible reality; similarly, ephemeral windows were imagined to be applied to the physical city, which, thanks to augmented reality technology, could add content to the existing cultural heritage. Urban pop-ups overlap, overwrite, and interpret the landscape by integrating virtual information with the physical territory. Inspired by the fantasy imagery of "Alice in Wonderland" and "The Chronicles of Narnia", "Pop-Up City" unveils the invisible by opening a physical portal to a virtual world. The pilot project was developed in the city of Formia (LT), involving the local administration and a series of cultural associations. After an initial ethnographic and historical-documentary collection of materials, an authorial path of artistic reworking followed. Today, eleven plaque-portals distributed throughout the territory seek to give back to the citizenry a path that leads them through the stories of their past, allowing them to reclaim narratives and characters whose memory has been lost. Rooted in local culture, these stories empower the community, fueling the creation of a shared imagination and providing a social foundation for urban regeneration. Three types of virtual pop-ups were created in the development phase: 1- portals to inaccessible monuments: using 3D reconstructions, it allows a glimpse of places that cannot be physically visited (e.g., the underground cistern from the Bourbon era in Piazza S. Teresa); 2- narrative windows: through the use of short documentaries, forgotten stories are given a voice (e.g., the tumultuous history of the former Seven Up nightclub narrated by journalist S. Minieri); 3- reworking lost landscapes: lost places and viewpoints are recreated through digital painting (e.g., the old dockyard of Mola, now turned into a parking lot). The web is the main platform of this system. No dependency on app stores, neither on the user's phone model. The contribution is uploaded to a web page, accessed via two QR codes. When the augmented reality marker is captured by the camera, a three-dimensional cube is rendered over it. This virtual cube represents an imaginary room that literally emerges from a physical space. The virtual camera is positioned inside the cube, and artistic productions are used as textures on the inward-facing side. Hypothetically, every point in the city could represent a potential portal for a virtual room, making the process infinite and intriguing. The choice of technological medium and multimedia storytelling aims to create a product that appeals to younger generations, although the ease of use achieved does not exclude other age groups. The goal is to contribute to the creation of a new, active, and responsible community that takes care of the "polis" and its treasures. "Stories are not only excellent means with which to register a diversity of viewpoints, most importantly, they are unrivalled in their ability to generate empathy among human beings. In an urban setting, the viewpoints diversity and empathy offered by stories provide citizens, institutions and professionals who are responsible for the development of the built environment with indispensable instruments and methods for the individual exercise of citizenship, and for the collective construction of the city as the basis of that citizenship"[2]. Therefore, the narrative of the historical and anachronistic city is always joined by the real in its historical stratification, an inexhaustible reservoir of potential cities[3].

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Visual Sensitivity: towards more culturally-inclusive planning approaches

*Jessica Comino**

« Seeing comes before words. The child looks and recognizes before it can speak» (John Berger, Ways of Seeing, pag. 7, 2008) art critic and painter John Berger states, «but there is also another sense in which seeing comes before words. It is seeing which establishes our place in the surrounding world; we explain the world with words, but words can never undo the fact that we are surrounded by it. The relation between what we see and what we know is never settled» (J. Berger, Ways of Seeing).

For decades, the cultural and emotional power of space have been deeply challenged by the rapid and speculative system of planning generating culturally-detached places, resulting in incoherent and unwholesome representations of diverse cultures, citizens and identities within designed spaces. According to professor and urban planner Leonie Sandercock, in order to grasp the «"strange multiplicity" and astonishing cultural diversity that characterizes 21st-century cities and regions» a different *sensitivity* from the regulatory planning that dominated the 20th-century is necessary. (L. Sandercock, 2004, Towards a Planning Imagination for the 21st Century). On these terms, the present article introduces two examples of visual experiences (un)intentionally dealing with cultural heritage, with the aim of exploring documentary filmmaking potential as complementary tool for spatial representation, collector of stories but also enabler of new power dynamics and possibilities within the communities. This is the case of *Living on One Dollar*, the award-winning documentary filmed and directed by four at-the-time American student of Economics, Chris Temple, Zach Ingrasci, Sean Leonard and Sean Kusanagi. Interested in the actual efficacy of micro-finance loans in relatively small community businesses, they decided to spend two months in the rural Guatemalan town of Peña Blanca, where 70 percent of the residents live under the poverty line (The World Bank, Guatemala, 2023), which means on less than one dollar a day. Due to unstable and unpredictable systems of retribution of the Guatemalan farmers, the students early discovered that most people do not know the next time they will be paid for their work. For this reason, the group divided the total amount of two-months income into random tickets from zero to nine dollars, that the students had to pick every day, in order to "mirror" the unpredictability of financial possibilities for those informally employed. The documentary tells the stories and extreme difficulties of Peña Blanca inhabitants and the students, who then found the impossibility for informal employees to actually receive loans from the banks, nor to access more formal jobs, because of native Mayan language that is not accepted in formal jobs, unless it is Spanish. Very few people managed to obtain banks loans, whose micro savings aided families in absorbing financial shocks caused by unexpected health conditions and/or natural disasters (K. Keaveny, 2015, Lessons Learned from "Living On One Dollar Documentary"). The generosity of the residents allowed the students to overcome all the challenges while in Guatemala, although the mutual sense of trust and actual impact was yet to happen. The sharing of these stories, particularly that of Rosa, a 20 year-old woman and Chino, a 12 year-old boy that constantly help and inspire the group, teaching them local habits and know-how, evolved into a subsequent impact of the documentary: the raising of more than 1.5 million dollars for the community of Peña Blanca, where the first preschool for the community has been realized, following the funding of scholarships for young women, including Rosa, to go to university; and finally, the implementation of more than 1.700 small business loans to female entrepreneurs. As of today, the collaboration between the group and Peña Blanca still continues, believing in the power of film and visual representation as tools to raise awareness and give voice and visibility to those who are normally not heard nor shown (The Optimist). The importance of visual tools as ways to address inclusivity and wholesome representation can be found also in the story of Arturo, the protagonist of *Cosas Que No Hacemos*, the 2020 film documentary by Bruno Santamaría Razo. Well-paced and intimate, the documentary blends with the community costumes and practices, utterly visualizing the astonishing landscape of rural Mexico coastline, while focusing on the emotional perception of place and own body of the protagonist. The intense relationship between the protagonist journey over his gender and sexual orientation, the inner social dynamics of the village, the silent co-existence with local criminality and the socio-cultural, spatial limits and possibilities of rural village where he lives are utterly expressed and narrated.

Also in this case, visual methodologies provide a complementary, more inclusive, form of listening, representing, so as understanding the complex system of cultural values, socio-economic entanglements as well as individual and collective identities composing the society we live in today, paving the way for potentially more conscious, as well as culturally-sensitive, planning approaches.

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Fig. 1.
Scene from the documentary Living on One Dollar, ©TheOptimist (2013)

Fig. 2.
Scene from the documentary Cosas Que No Hacemos, ©MUBI (2020).

BNB-COMMON
"Bnbificazione" of cities

*Silvia Dalzero**

BNB-COMMON is the first step of a study focusing on analysing "tourist rental" in privately managed structures, and its widespread in the city of Brescia. The project aims to safeguard the city of Brescia which in 2023 (elected Capital of Culture together with Bergamo) records an increase in tourist influx and risks falling into that obsolete paroxysm of economic interest which links: cultural heritage and financial interest aimed at tourist reception. In this, communication and advertising promotion play a primary role, revealing cultural heritage as a pretext for real estate valorisation, aimed at rising into the skies of finance. Starting from a now well-known literature on the distortions caused by *over-tourism* that tear apart tourism capitals around the world and which, in some cases, reveals good defence and regeneration practices, BNB-COMMON, as mentioned before, focuses on the municipality of Brescia and indexes all the rental structures tourism widespread in the urban centre and which, in 2023, will amount to around 400 against 140 for medium-long term rent. Starting from this localized data-numerical survey, a pilot case is identified, chosen for its particular modes of operation and architectural distortion and architectural design strategies are suggested which in a software system include assembly as a governance matrix to which to formulate a minimum space, according to the typological archetype constructed starting from the definition of a basic module. Next, we orchestrate the different specialities, divided by functions and dimensions (from basic to very large), composing a volume in which the software inserts the distribution elements, such as stairs and galleries. Secondly, the accommodation takes into account the necessary negotiations to find the optimal configuration concerning views, openness, and natural lighting of the spaces, as well as degrees of accessibility and use (public or private). Ultimately, a design process capable of parameterizing all the variables brought into play by the multiplicity of subjects and architectures that the software processes to create a building as a material expression of the desires of a group of individuals and as such flexible concerning changes in needs and preferences of tenants and guests. The pilot case is preparatory to re-evaluating urban identity in terms of the diffusion of cultural and identity values, or rather the democratic participation of citizens who are no longer helpless victims of *over-tourism* but active parts of the "architectural and urban reformulation" plan. BNB-COMMON intervenes as a counterpoint in the eternal dialectic between renewal, exploitation and social conservation: a dialectic that is difficult to manage so that it does not transform into a destructive mechanism. For this reason, BNB-COMMON is organized in different times: first on a broad scale, analysing the effects and strategies implemented in other places, and then narrowing the field of action and revealing the actual state of the city of Brescia, describing both the current status and its development over time, proving the data (quantitative, qualitative and localization) in turn explained with graphs, photographs, drawings and maps. Ultimately BNB-COMMON formulates an innovative method of parameterizing data through software which finds its architectural-material expression in the pilot case, formulated to understand the shared, and multiple living spaces. In conclusion, BNB-COMMON fuels research in the fields of architectural and urban design useful in the development of a new identity and a new social and territorial culture that considers living as a multiple architectural composition, more open than closed, more flexible and temporary than unalterable and stable. The tourist market, the home and the space of private domesticity intervene in agreement, mindful of the Japanese concept of *en* (the art of creating connections and relationships between people, things, nature and cities) to generate new spaces of sociality and sharing. The result is a city of the tourist, of the mobile subject in which an unexpected urban development is envisaged in which the relational, managerial, functional and cultural forms are discovered to be intrinsically changeable and capable, over time, of implementing innovative practices and projects of architectural construction but not only that but also as an opportunity to trigger processes of social development and tourist attractiveness. The first step is, therefore, to explore the innovative design power capable of parameterizing all the variables and formulating a database model composed of typological sheets of the architecture created to interpret the shared-tourist, and multiple widespread living spaces in urban areas based on impact indices. So, BNB-COMMON proposes a pioneering idea of parametric-architectural investigation which becomes a design model for a new narrative of contemporary living which wishes, among other things, to contribute to the promotion and implementation of sustainable development programmes. It is believed that BNB-COMMON represents the spark from which to envisage an urban reality in which the cultural heritage and the financial interest, aimed at tourist hospitality, ensure, in agreement, social cohesion. However, the criticality of the parametric method must be recognized which, given its descriptive data-numerical nature, declines the quality of a single numerical factor which could have a crucial role in the analysis phase whose challenge remains that of denouncing, in a clear way, a sample of data linked to a phenomenon that risks involving and irreversibly compromising Brescia, in its form and structure.

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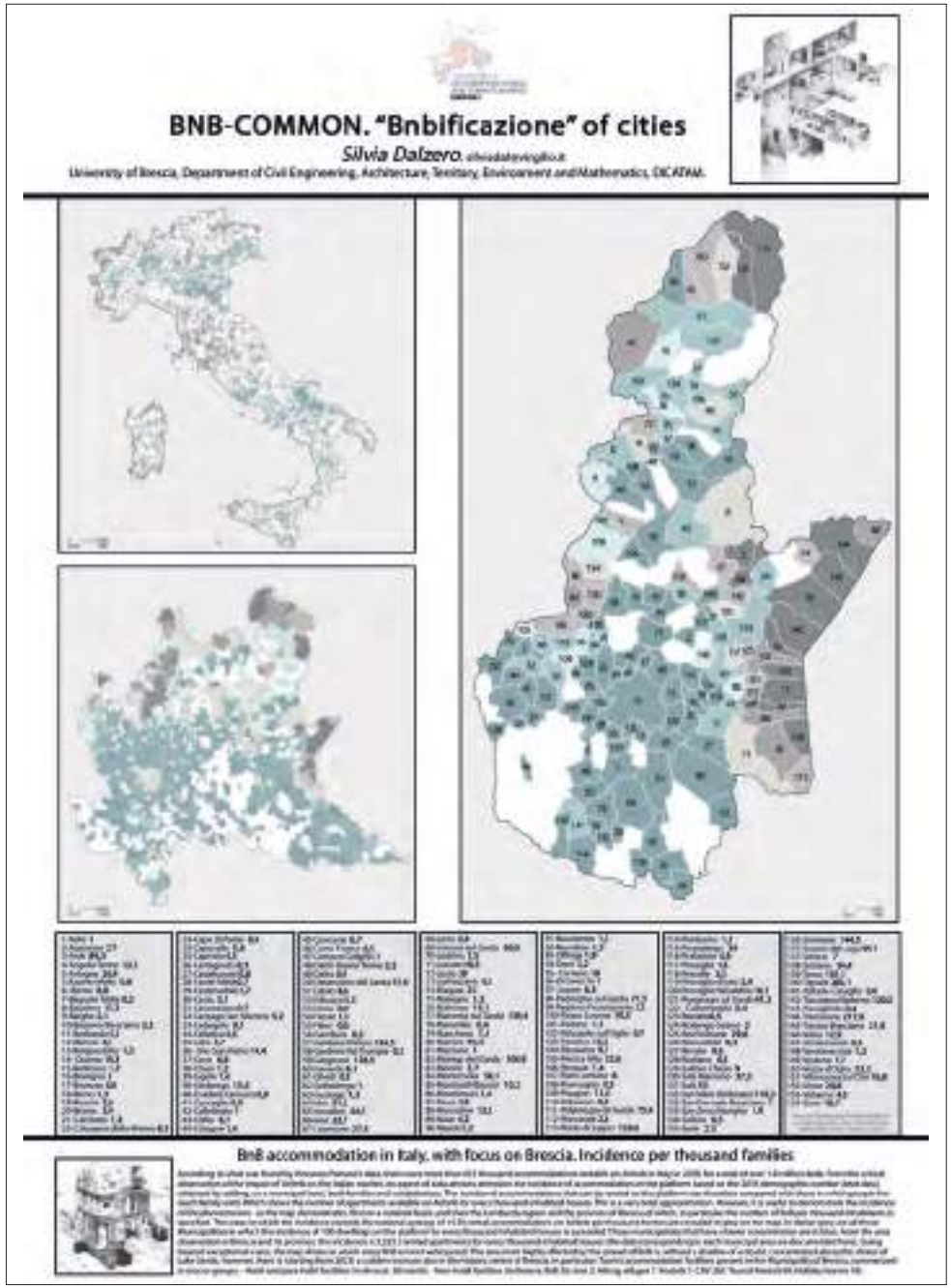

Fig. 1.
BNB-COMMON. Pilot case, formulated for the assembly of a typical cell from which a series of spaces make up the shared, multiple and multiple living spaces.

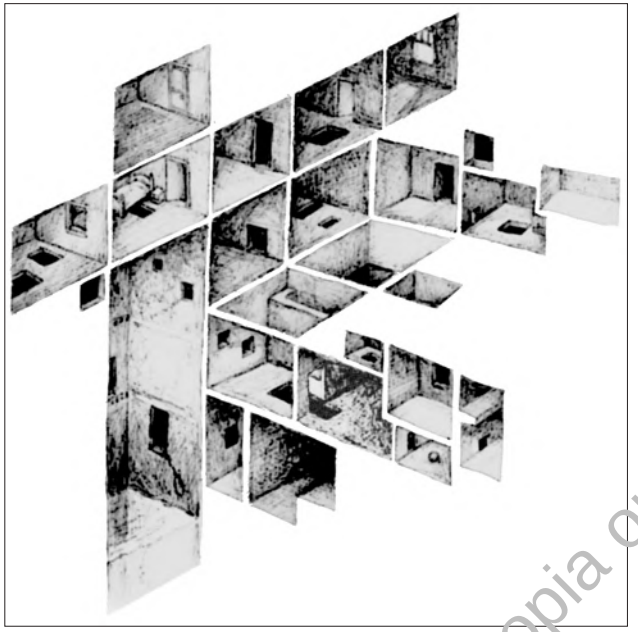

Fig. 2.
BNB-COMMON. The type section of structure altered by the "bnbification" plan

The Future of Post Extractive Mining Ruins

René Davids

Interest in photographically documenting abandoned industrial buildings with their large crumbling structures and desolate atmospheres began in the latter part of the twentieth century and has been recently a subject of much debate as scholars argue about the role their social, political, and environmental history should play in their appreciation. In some ways, industrial ruins are no different from others such as Ancient Greek or Roman ruins; many have written about the eighteenth- and nineteenth-century fascination toward ruins characterized by a rejection of the Enlightenment's rationalism and materialism, the aesthetic, political, or religious implications of the original construction, or the cause of destruction, especially when the buildings had been broken and defunct for some time emphasizing instead" the individual, the subjective, the irrational, the imaginative, the personal, the spontaneous, the emotional, the visionary, and the transcendental". The newly arisen appreciation was, therefore, not about the works themselves but about their impact on the viewer's experience. One of the most significant aspects of the twentieth-century approach, as opposed to eighteenth and nineteenth centuries' interests in ruins, is what Austrian art historian Alois Riegl called "the age value" of the object, that is, the value-based first and foremost on the signs of age which the object carries by way of natural, or intrinsic representation. Compared with his "historical value," "age value" does not rely on the significance of its original purpose or context, nor does it require such knowledge from the viewer .

Riegl wrote about ruins before the impact of economic restructuring on income distribution in the United States comprising many high-skilled IT and knowledge sectors made deindustrialization "inevitable" in developing countries, but most of the attributes embodied in traditional ruins can be extended to decaying industrial and post-mining buildings. Mining building in developing countries when coal started to be replaced as fuel by gas and more sustainable practices. The difference with classical ruins is the larger quantity of abandoned buildings is more ubiquitous and consequently less precious than the ruins of the past. They also clearly have less of an age value factor as they would, by necessity, have emerged after the Industrial Revolution, but their relative youth is not an impediment in them becoming ruins.

The newness of industrial ruins might, in some cases, make them feel different from ancient ruins, such as, for example, the Roman Forum, where the interior and exterior have disappeared into just form or elements in the landscape, and the difference between the inside and outside might still be present. In contrast to classical ruins, which are considered precious and protected from further decay, industrial ruins are, for the most part, allowed to change as their sheer numbers in the environment don't make them particularly special. This means they may either continue to deteriorate or have new elements added to them.

Paradoxically, while classical ruins have been disinterred and their landscapes sanitized so that the true nature of time's impact on them is obscured rather than revealed, industrial ruins become more of a genuine physical manifestation of time as by not being preserved monuments, the process of gradual deterioration is allowed to take its course. Hugh Hardy believes, that industrial ruins resound with power stemming from the romance of their abandonment—the saga of what was once so mighty brought low. In that sense, the actual type of industry such as for example the manufacturing of coal that was fundamental for energy production in the 19th and for most of the 20th century also has an impact on our appreciation of the ruin as we might have less interest in for example a furniture manufacturing facility in ruin as their impact on the economy is most likely of little importance on society as a whole.

Some scholars have questioned the embrace and pleasure of photographing industrial ruins, calling the whole fascination "ruin porn," a term coined by blogger James D. Griffioen because it entails the photography of an aesthetic indulgent appreciation of hauntingly

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Fig. 1.
Duisburg Nord
(photo by the author)

Fig. 2.
Zollverein
(photo by the author)

beautiful off-limits structures that dismiss and or ignore the social economic conditions under which workers had to live, and the environmental damage they may produce.

In the view of these writers, the images do not do justice to either the historical context or the present state of these spaces – as evidence of rampant social inequality and a failed welfare state. The photographs essentially construct the present of the spaces as more ruined and abandoned then they are, given that many people may still live in or near them. The criticism of ruin photography is not universally shared, however, as scholars such as Tim Edensor celebrate these abandoned areas as "unpoliced, extra spaces" existing outside of capitalism's sanctioned spaces, believing that in our "over-regulated" cities, these areas provide a space of relative freedom. Edensor has pointed out, that many industrial ruins may host activities that differ from those usually accorded preferential status in the city, for they are not regarded as 'respectable' and 'appropriate' in the inscription of urban norms of conduct.

The decaying buildings Edensor sees performing this special relief task do not, by definition, include industrial ruins that are sanctioned by society as historically important or aesthetically significant and have become official tourist destinations as they are unlikely to host activities that are not sanctioned by urban authorities.

These buildings can, however, stimulate or inspire the making of new environments (architecture and landscape) and the hosting of uncommon albeit socially acceptable activities. Certainly, the success of projects like the Highline in New York and the Tate Modern in London, make fantasies based on ruins enticing but mining complexes with large abandoned machines such as the transformation of the blast furnace complex belonging to the Thyssen ironworks company Duisburg Nord Park by Peter Latz and partners and the Zollverein Coal Mining complex redesigned various architects including Norman Foster and Rem Koolhaas have inspired not just inventive architecture and landscape but made room for new urban activities and spatial sequences.

Forms and signs of the city drawing
(aesthetic lexie)

*Andrea Donelli**

"*It seems to be a thing of great importance and difficult to grasp the – Topos – that is, space – place*". (Aristotele). The set of signs, traits, textures, colour, codes acquired appropriately to describe and represent the city and the method and procedures through which the data obtained relating to urban morphology are expressed and defined highlight the wide articulation from which the process starts, initially mental, cognitive and perceptive. Consequently, it is possible to understand the participatory and cultural manner, both visual and communicative, which investigates the constituent elements of which it is composed drawing of the city. The question of phenomenology both with regards to the cognitive and perceptive aspects, as well as the characterizing aspects of an analytical matrix, the example refers to the modal language of possibility and necessity, is analyzed through the semantics and semiology of possible worlds which constitute a process of representation in which the signs and hierarchies they report allow the forming form to be delineated of the drawing morphology of the city or a habitat. The building is fully included in this, as it is understood in its meaning as a complete object and conceived as part of a formed and complex organism, precisely because it is a city. From this we can deduce the functional and formal difference of the housing layers; drawing morphological cadence the times of experience by transferring the constituent elements into permanences and immanences which in turn determine the "topographic" reproduction, i.e. drawing of the soil. The dual relationship building – city, of Albertian citation, is always found in urban studies, especially in multi-scale relationships. Particular attention in the study and analysis is given to the "form and sign of the drawing of the city" which in the subtitle appears in the referent of the "aesthetic lexie", and which is discussed here as a significant functional unit of urban morphology. In this, the structure of the urban space from which general work tools can be obtained is fundamental. The essential theme concerns an ideal city, not observed as a historical-cultural abstraction of a specific morphological order given to us by literature. It is agreed to consider the ideal city as a moment of possible investigation into morphological and spatial models of any historical-urban reality. For example the venetian *forma Urbis* it lends itself very well to this special experience. In return, the literature relating to the cognitive, graphic-perceptive investigation of the city and the reading of space is attested in specific cases, such as in Camillo Sitte, who investigates through "The art of building the city", multiple case studies, of a set of experiences and observations referring to the specific rules of space that underlie the historical urban organism. Kevin Lynch instead, it analyzes the concept of figurability and legibility and discusses their effectiveness, considering them as parameters to be used appropriately through the instrument of the drawing of the city itself. Gordon Cullen publishes "Townscape", where in the way of observing places and materials, they appear dishomogeneous and are articulated in a polysemous concept, in which perception is used as a tool for reading space and form of the city. Agostino Renna with Salvatore Bisogni in "The drawing of the city" investigates the formal characteristics of the city and its habitat. They carry out a clarification study by attributing the role of analytical matrix to the analysis method, demonstrating how the urban and territorial structure was constituted. In fact, it is clear that the term drawing or its "synonym" of construction almost always appears in the major expressions of the elaborations of urban researchers. Therefore, questions arise aimed both at regulating the case of drawing as "language and communication" also in lexical terms whose objective leads to considerations of structuring urban space, through which to define the characteristics of the main constituent elements. This is revealed and clarified in certain ways, through a series of facts and factors, of an orographic, topographical, historical and settlement type; to continue in the peculiar aspects in which the constituent elements generate permanence and/or immanence. The material and physical use of the drawing (sign) has an impact, in fact, fixing itself as an image. It represents the finished form of reality (the city) with the derivation of overlapping elaborations of different elements which

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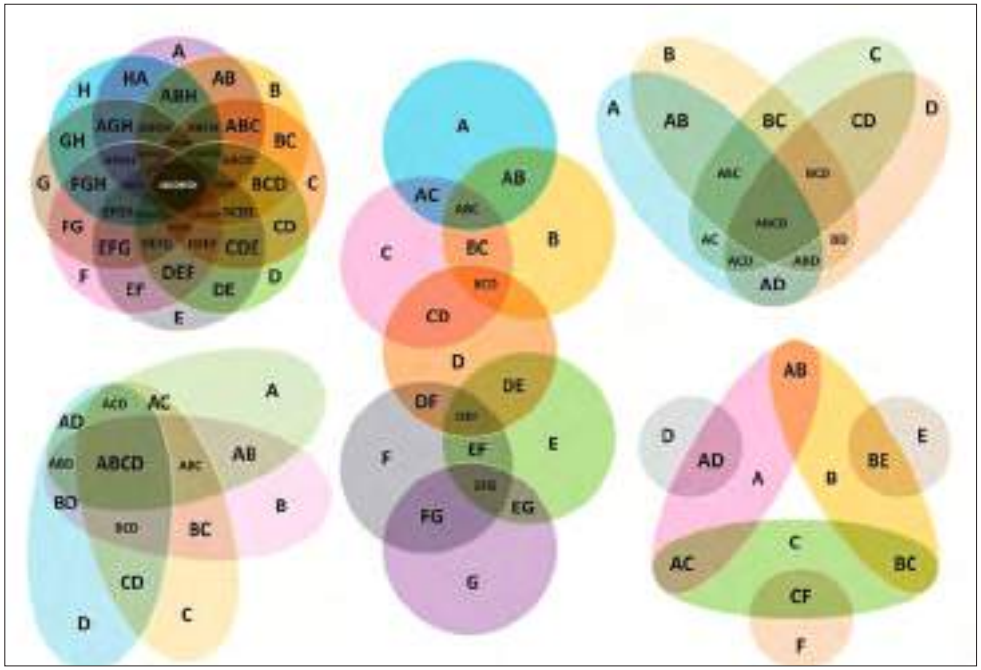
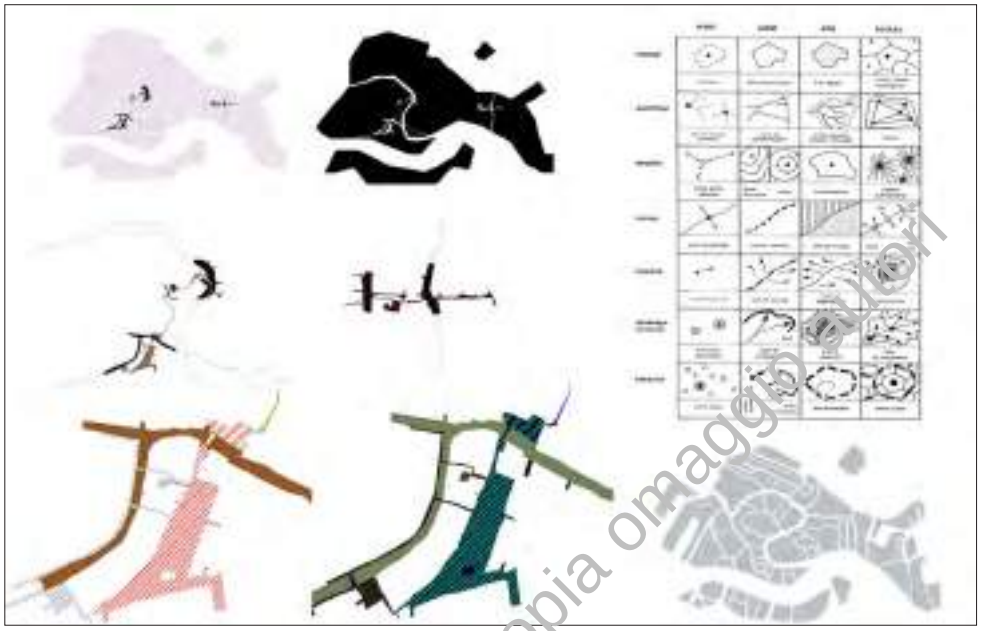
Fig. 1.
Venn diagram: a graphical (topological) expression representing overlapping circles to illustrate similarities, differences, and relationships between concepts, ideas, categories, or groups. Similarities between groups are represented in the overlapping parts of the circles, while differences are represented in the non-overlapping parts of the circles.

Fig. 2.
Aesthetic Lexie: morphological synthesis of the city of Venice. It is possible to list the urban relationships based on the cases reported and summarized in: calle/bridge/calle; foundation/bridge/foundation; foundations/bridge/street; calle/bridge/calle/camp; calle/rio or canal; bridge/sottoportego – calle - camp; foundation/bridge/building; building/street; building/foundations; building/field; field/stream or canal. (author's drawing). Source other images: chorème: néologisme géographique, Roger Brunet, 1980 and reworked: venicebackstage.org (www.pinterest.it/pin).

their specific languages and functions are summarized in a code. With these relations, intercurrent and clarification relationships are established in terms of both a topological and philosophical conceptual matrix. Representation, code, region, camp, frontier, model, pattern, constitute the corpus of phenolomegy and gnosiology. This experience concerns the will to represent the city through a syntagmatic and paradigmatic analysis of which we intend to grasp the intrinsic and extrinsic meaning and signifier, i.e. to pose an "aesthetic lexie", where the term "aesthetics" refers to the process of agreeing on significant and functional units, perceive knowledge that reveals stable relationships. In conclusion, representing an urban topos, that is, investigating and representing a semiotic-urban planning system means recognizing a system in which each of the signs contributes to organizing the space, both urban and architectural, referring to distinctive conceptual categories, with the possibility of describing the multiple aspects making up the physical space (urban-architectural) such as to admit of modeling procedures. The question of the relationship between organization and expression of facts and factors that can be combined with the construction of the form and unitary rules that order the drawing of the city as a cultural heritage.





Approaching "Athenian Modernism" with sensitivity in the linear park of Fokionos Negri Street

*Georgina Eleftheraki**

UNESCO's approach to managing Historic Urban Landscapes [HUL] is holistic, integrating the goals of urban heritage preservation & economic and social development. In my PhD thesis, which is in progress, I argue that such a holistic approach to the historic urban landscape is necessary in Athens, where the legal framework, which protects the architectural heritage of the city centre, promotes, for historical & political reasons, the archaeological wealth and its neoclassical interpretation. It does not include, however, the protection and highlighting of important buildings and open spaces of the 20th century. But these modern monuments complete the image and identity of the city. The result is that many such buildings and complexes are altered or even destroyed. In this essay, we focus on interwar apartment buildings located along the Fokionos Negri Street linear park through maps, archival research, personal observations, interviews, storytelling, films and photo reports when the park was the central leisure pillar in Athens. Kypseli is located north of Pedio Areos Park (Field of Mars) and east of Patision Street and it is one of Athens' oldest and densely populated districts. Fokionos Negri Street together with Konstantinos Kanaris Square form the district's core. It is a street-linear park where residency coexists with leisure, services and commerce. Built during the interwar years, this neighbourhood immediately attracted upper-class and middle-class residents as a highly sought-after place to live. It is one of the few newly created urban green spaces during the interwar period and a unique example of a linear park in the heart of Athens (Fig. 1 & 2), thus many "Athenian Modernism"-style buildings still stand there (Fig. 3). The apartment building ("polykatoikia") has been chosen as the main type of residence. During the interwar period, the buildings were following the vocabulary of the modern movement and the apartments were particularly comfortable. Modern apartment complexes, parks, fountains, famous bars, and above all, the "polite society" that frequented the area (from artists to businessmen, from the rebellious youth of the 1960s to the elegant ladies of Athenian high society) gave the street an unmatched charm. It is worth noting that in the 1950s and 1960s, Athenians dubbed it the "Via Veneto of Athens," drawing a parallel to the famous street in the Italian capital. The insistence of film production companies of the post-war period on "exterior filming" in Fokionos Negri is due precisely to its recognition as a place representative of the "Athenian way of life and recreation". The architectural legacy from the interwar era is showcased in 1950s films, which highlight the street's identity from that time. One notable example is the renowned "Lanaras apartment building" (1938) on 23, Fokionos Negri Str., the residence of a prominent family of industrialists from Naoussa-city of northern Greece-who played a significant role in the Greek textile industry's early days. This building is featured in A. Sakellarios' film, "*Neither cat. Nor damage* (*No harm. No foul*)" (1955), serving as the opulent home of the main characters (portrayed by Vasilis Logothetidis and Ilya Livykou). In Figure 5, we can observe another protagonist (played by Lampros Konstantaras) patiently waiting for the beautiful Ilya Livykou in the well-known pastry shop of that era, *Select* (Fig. 4 & 6), which is situated across from the "Lanaras apartment building". The iconic apartment building featured in the film "*The Drunkard*" (1950), directed by G. Tzavelas, is accompanied by the neighbouring and captivating "Tompros apartment building" (1935) on 21, Fokionos Negri Str., which can be seen on the left side of the Figure 8. In N. Tsiforos' film "*Lost Angels*" (1948 - Figure 9), a portion of the interwar "Zounis apartment building" (1939) facade is visible, showcasing the main entrance for the bourgeois residents and a smaller service entrance on the right for the building staff. To the left of the main entrance, a concierge can be spotted with a spacious opening, allowing for monitoring of individuals entering the building. Additionally, in a scene from the movie "*The Beauty of Athens*" from 1954 (Figure 7), the first potential interwar modern apartment building of the area can be observed in the background on the left side. In the 1950s and 1960s, Fokionos Negri experienced a surge of construction activity, with the replacement of single-family and semi-detached houses by towering apartment buildings that lined both sides of the street (Fig.10). Remarkably, all of these interwar apartment buildings have withstood the test of time, enduring the extensive reconstruction of these decades. They have now become iconic landmarks in the area, with the renowned "Lanaras apartment building" being the most easily identifiable. From a methodological perspective, the artistic approaches to the area provide valuable testimonies and assessments of how people use the space (practically and symbolically) and the importance of the area in relation to the wider mutations of Athenian space. By documenting, interpreting, and evaluating the architectural, natural, and cultural heritage of the early 20th century in relation to recent elements of the perceptual and functional whole of the urban landscape of central Athens, the research project aims to contribute to research and evaluation methods for the historic urban landscape of Greek cities that can be used to implement more sensitive and comprehensive protection and management policies.

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Approaching "Athenian Modernism" with sensitivity in the linear park of Foklionos Negri Street

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Historical Centre and Historic Urban Landscape (H.U.L.)

Historic characteristic of urban centers is their historicity and, therefore, their ability to evoke memories that fascinates us as the city "tells its story" through its buildings and structures. Historic urban landscapes (H.U.L.) contain all the tangible and intangible elements manifest their history: human creation, inclusion and context clarified which humanity has an obligation to preserve. In other words, it represents a barrier that humanity is obligated to preserve without interfering with the inevitable force of change that is the city itself.

UNESCO's successors to managing dynamic urban landscapes by actively integrating the goals of urban heritage preservation and economic and social development.

The Protection & Management of the H.U.L. in Athens

In my PhD thesis, which is in progress, I argue that such a holistic approach to the historic urban landscape is necessary in Athens, where the legal framework, which protects the architectural heritage of the city center, promotes, for historical & political reasons, the archaeological wealth and its neoclassical interpretation. It does not include, however, the protection and highlighting of important buildings and open spaces of the 20th century. This type of architectural heritage remains unrecognized by the public opinion, although the School of Architecture and other bodies have made significant contributions in recent years to its documentation and evaluation. The result is that many such buildings and complexes are altered or even destroyed.

The interwar buildings and have operate, consider the image and identity of this city as modern ecosystems, underpinning the interventions of its inhabitants and how people accept it in their daily lives.

Foklionos Negri Interwar linear open space

Kypseli is located north of Pedio Areos Park (Field of Ares) and east of Patision Street and it is one of Athens' oldest and densely populated districts. Foklionos Negri Street together with consecutive Kerameis Square form the research area. It is a west-facing park (Fig. 1&2) where residency coexists with leisure, services and commerce. Built during the interwar years, this neighbourhood immediately attracted upper-class and intellectuals residents as a highly sought-after place to live. It is one of the few nearly created urban green spaces during the interwar period and a unique example of a linear park in the heart of Athens, thus many "Athenian Modernism"-type buildings still stand there. The apartment building ("polykatoikia") has been chosen as the ideal type of residence (Fig.3). During the interwar period, the buildings were following the vocabulary of the modern movement and the apartments were particularly comfortable. Modern apartment storerooms, joints, bunkers, balcony bars, and above all the "polite society" that frequented the area (from artists to businessmen), from the rebellious youth of the 1960s to the elegant ladies of Athenian high society) gave the street an unmistaken charm, it's worth noting that in the 1950s and 1960s, Kerameikos suffered of the "fair decline of Athens," drawing a parallel to the famous street in the Italian capital. The built environment in Foklionos Negri resembles mixed-type of interwar and postwar urban apartment buildings (Fig.4) with the interwar Municipal Market of Kypseli as a landmark, the reinvigoration of which recently raised a strong controversy over the importance of public space and the architectural heritage in Athens. Around '60s, this area has received the negative impact of suburbanization and attended immigrant groups. "Today, it has developed a cross-cultural character and seems to be experiencing the "metamorphosis story".

The PhD research aims to study the historical urban landscape of the green park name of Foklionos Negri, a very important area for the social and functional evolution of the Kypseli district and the Athenian center. The research approach have a multi-actors' participation approach, with primary data collection by the questionnaire and study of interwar buildings, which constitute an inseparable, essential part of my architectural heritage, which is not understood on the one hand, and is threatened by modern building activity on the other. In this presentation, we focus on interwar apartment buildings organized along the Foklionos Negri Street linear park through visuals, personal, personal observations, interviews, documentary work and photographic analysis to find out how people perceive them.

music

interview

cinema

photo

'50s &'60s

Interwar apartment buildings

Cultural accessibility to overcome physical, cognitive and sensorial barriers

Maurizio Francesco Errigo, Irene Poli***

Introduction and methodology

The projects presented were the subject of participation in a call for tenders from the Ministry of Culture for the removal of physical, sensorial and cognitive barriers in places of culture and are aimed at three museums in the city of Viterbo, two public: the Museo dei Portici (admitted to financing) and the Civic Museum, and a private one: the Colle del Duomo Museum. The projects were drawn up following the Universal Accessible Design approach, taking into account a wide range of users and considering people with disabilities as an active integral part of society. Accessibility, also extended to users with temporary impediments, including people with food intolerances, elderly people and families with children, is understood with different meanings, from the social to the economic one and with particular attention to digital communication which often constitutes a real barrier to the accessibility of a service. The museum must be accessible and usable in all its public parts to all visitors, users who demonstrate difficulties must be able to fully enjoy the visit and the services, with attention to sensory disabilities in the design of the exhibition. Normally, the categories of users who experience greater difficulty in accessing museums are people hospitalized in healthcare facilities and prisoners; in this project, experimental cultural paths for inmates of penitentiary facilities were hypothesized. The methodology is based on the axiom that "The project is the creative synthesis of different needs, where what is done to remove barriers takes on, like many other functional needs, the role of normal providence intended to ensure, for everyone, the best enjoyment of the property."(1) and is built following the contents of the Guidelines for overcoming architectural barriers in places of cultural interest (2) which take into account the new disability model identified in the United Nations Convention on the Rights of Persons with disabilities whose meaning also becomes the key to defining – in an extensive and articulated way – the concept of architectural barrier including elements of the most varied nature, which can cause perceptive, as well as physical, limitations or particular conformations of objects and places which may be a source of disorientation, fatigue, discomfort or danger. The project statement can be found in the phrase "Accessibility is project" which was also the title of the inaugural conference and which aims to underline how every accessibility path is characterized by a project defined with competence and sensitivity and how accessibility must be the outcome of an inter-project carried out with competence and ability but also peppered with numerous checks and adjustments to the initial project.

Expected results and testing laboratories

Among the results expected as main project interventions, access routes and shuttles with disabled stalls have been planned; a new website and a communication project, the creation of an App – Wayfinding and entrance to the museum with acoustic and Braille orientation system, the creation of a Smart user profiling system capable of switching the orientation system, tactile maps, LOGES tactical routes, the creation of the LAP (Permanent Accessibility Laboratory) with interactive educational workshops for various types of users, in particular children and the elderly but also for cognitively disabled people and special programs for access to prisoners. In order to enhance multisensory perceptions, three-dimensional scale reproductions of the main objects on display, relief reproductions of pictorial works, audio-video guides, open wi-fi for downloading applications and accessing cultural contents in a digital environment (virtual reality) have been created. , increased use); of particular importance for the accessibility of the blind is the tactile reproduction of some works which were made of high density polystyrene and finished with a layer of resin to allow resistance and durability.

The Permanent Accessibility Laboratory (LAP) is the central hub of the three-year activity planned for the Museum; the LAP coordinated and managed by the PDTA Department

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Fig. 1.
The inauguration day of the museum accessibility project

Fig. 2.
Tactile reproductions

of La Sapienza University of Rome (Scientific Manager Maurizio Errigo) is a laboratory started on 3 February 2024 and which will see its conclusion in June 2026; in these three years, cultural activities are planned with access reserved for schools, meetings dedicated to associations, and open conferences on the topics of accessibility to culture and places of culture. The LAP is therefore configured as an inclusive culture project/process that will develop different forms of knowledge (tactile, chromatic, intuitive, open, simple..). A museum must be a learning environment, a place of training, awareness and continuous interaction; an accessible museum is an environment of participation, creates innovation and interprets the identity and values of the city in which it is located.

If this Museum can be considered a successful model, a national best practice, it will be due to the disciplines that participated in the project, ranging from architecture, to urban planning, to design and which were enriched by a highly qualified external component, the archeology and museum management expertise through which we have somewhat validated the different operational choices.

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Coastal heritage for adaptive and inclusive strategies

The case of the Trabocchi Coast along the mid-Adriatic

Lia Fedele, Angelica Nanni***

The coastal territory of the mid-Adriatic Abruzzo region is characterised by the pervasiveness of urbanisation processes and the presence of a dense network of morphological, landscape, as well as socio-economic and cultural values. The proximity of natural and anthropic landscapes, along with the land-sea interactions over time have characterised the settlement processes of the coastal areas, nurturing the relational aspect of the cultural heritage of these places. At the same time, environmental challenges related to land consumption, reorganisation of the production and tourism sectors, and the ongoing climate crisis portray a fragile geography affected by multiple levels of vulnerability.
Based on these premises, the relevance of the mid-Adriatic case study emerges, with particular attention to the section of the Trabocchi Coast, from Ortona to Vasto, which in recent years has been affected by transformative processes linked to the conversion of the disused railway line into a cycle-pedestrian path parallel to the coast. The ISPRA national mosaic data (2021) of the areas identified by the Flood Risk Management Plans (PGRA) and the River Basin Plans (PAI) show the flood and landslide hazards along most of the coastal stretch under examination. Moreover, the area corresponding to the mouth of the river Sangro has been included by ENEA (2018) in the list of forty Italian Mediterranean areas at risk of flooding by 2100, in the absence of mitigation and adaptation measures. However, the analysis of critical issues related to climate change and associated strategic planning opportunities cannot be limited to the observation of physical processes but must also consider the interactions between the characteristics of the natural and anthropic environment (Bruno et al. 2016).

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The contents presented are being investigated at the Department of Architecture in Pescara (Ud'A) within the framework of the *PRIN 2022 - COSTA | Med project - Catching Opportunities for Strategic Transformation and Adaptation of Mediterranean Coasts*, as well as in the doctoral research conducted by the authors of the current contribution.

The complexity of the relationships along the land-sea interface, coupled with the strengthening of slow mobility networks and development dynamics between the coast and the hinterland, become relevant, especially where conflict situations arise between anthropogenic pressures and environmental values. This is because the coastal stretch considered is characterised by the intermittence of valuable natural "episodes", with which the issues defined as "anthropogenic" interact. From north to south, the Trabocchi Coast features the presence of regional nature reserves such as Ripari di Giobbe, Punta dell'Acquabella, Grotta delle Farfalle, Lecceta di Torino di Sangro, Punta Aderci, as well as four Sites of Community Importance (Habitats Directive). The preservation and regulatory framework have not curbed the pervasiveness of some urbanisation and infrastructure processes, such as the development of the railway line – now disused –, the industrial area Porto di Vasto and the post-World War II coastal settlements. In some cases, this occurs within 300 metres from the shoreline, currently legally protected areas under the Code of Cultural Heritage and Landscape (2004).

In the preparatory studies for the risk assessment of the Abruzzo coastline (AnCoRa research 2017, n. 1), the relevance of the contextual characteristics, previously described, are explored in the assessment of the coastal exposure. It includes references to demographic data, building density, infrastructure, and the presence of elements or areas of environmental or cultural importance. However, in the final report of the risk of the most naturalistic coastal stretch, corresponding to the Trabocchi Coast, these aspects tend to take second place to the geomorphological vulnerability of the context. This points once again to the need to deepen the risk assessment with an integrated approach, identifying in the specificity of the contexts new categories to observe the vulnerability of a system, conceived as a combination of sensitivity and adaptive capacity (IPCC AR5 2014).

According to this, coastal heritage is intended in contextual terms, integrating the two initially separate concepts of natural and cultural heritage (UNESCO 1972). The research assumes a territorialist definition of heritage, that goes beyond the merely conservative vision. It recognises the processual and incremental dimension of heritage, which encompasses the identity features of landscapes, and it is entrusted to the dynamic interactions between local society and the "natural" heritage (Magnaghi 2020). It is not only a matter of elements and sites, but also of traditions and collective imaginaries of coastal communities. It means focusing on relational spaces as buffer zones where overlapping and land-sea uses transitions occur, variably defining the range of influence of land-sea interactions. The research therefore aims to investigate the coastal cultural heritage conceived as a shared communication device (Rykwert 2010) that can play a role as a catalyst for spatial inclusivity processes in transforming territories, affected by multiple levels of vulnerability, and fragmented by sectoral regulatory frameworks.

The systematic interpretation of coastal heritage, both material and immaterial, as an active resource can enhance the territorial cohesion of a dense and heterogeneous stretch like the mid-Adriatic coast. The current transformations along the Trabocchi Coast have prompted a lively debate related to the traditional perceived dichotomy between environmental protection and economic development. This contributes to making the case study an interesting laboratory for observation and experimentation, guiding the development of adaptation strategies to address the growing vulnerability.[1]

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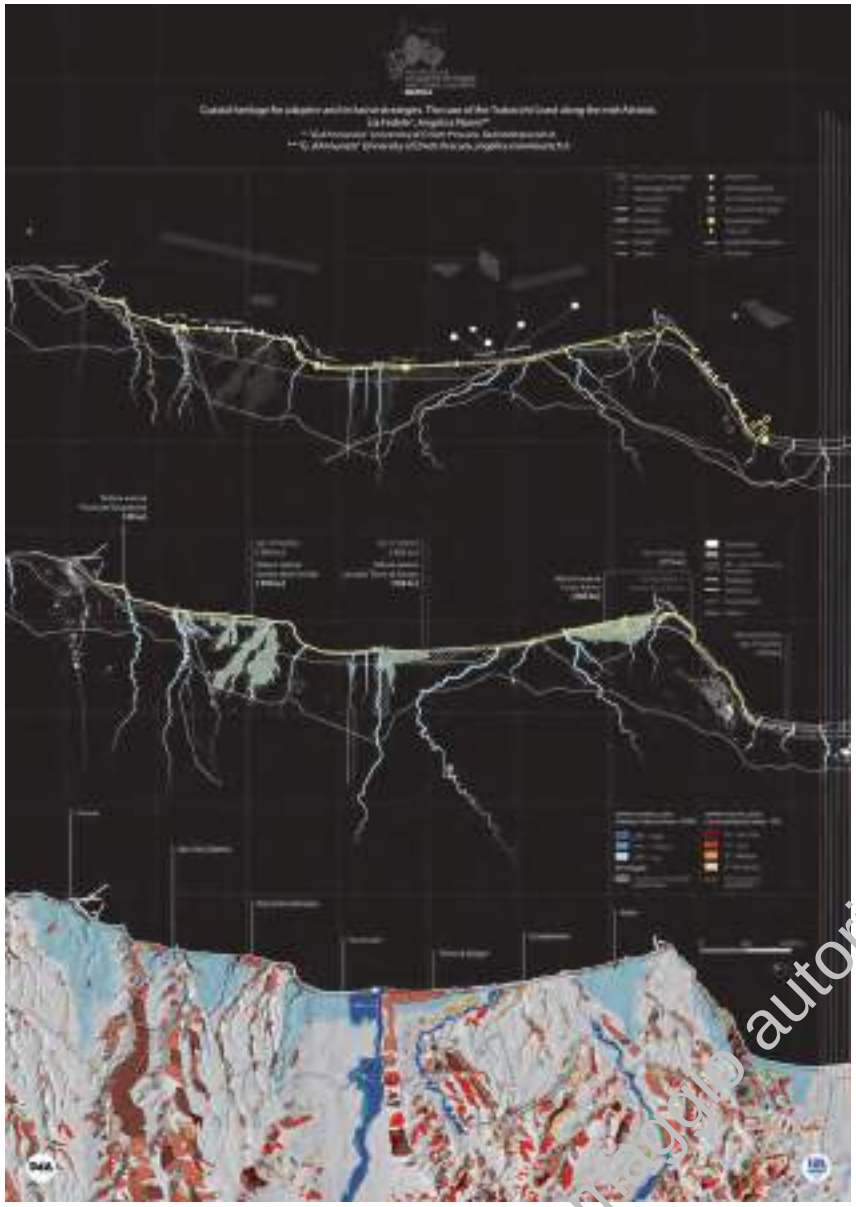

The case study of the Trabocchi Coast – graphic elaboration by the authors L.Fedele, A.Nanni

[1] In 2017 AnCoRa research project (Risk Analysis of the Coastal Area of the Abruzzo Region) was developed as part of an agreement between the Abruzzo Region and Univaq - DICEAA. The results are available online at: https://www.regione.abruzzo.it/content/analisi-e-documenti-propedeutici

Effects of religious practices on the urban planning through time on the case of Rome and Christianity

*Daria Fontana**

Rome was one of the biggest first social spaces on ancient times in a form of a city or, to be more precise, a metropolis. Some historians consider that Rome was born after a lengthy process of aggregation of villages (synoecism) in the eighth century BC as a square civitas (Roma quadrata). This means that Rome as many other cities of ancient foundation, had no initial urban plan and many of its urban characteristics were due to the geography of the territory, like hills and rivers, unlike (relatively) more modern cities that were built with a specific structure in mind for the purpose of the city and the practices, including religious ones, of its inhabitants. And as the culture, for example, but not only, the religious practices, changed, so did the city of Rome itself, adapting to the new realities of its inhabitants, old and new ones.
The true issue, however, is *how* Rome adapted to the constant changes. According to the approach established in social history, urban spaces should be viewed as a set of various cultural landscapes, where each urban landscape could be understood as a together of coded information about the life of the city, including the religious situation (historically) in that urban space (4), (7).

In case of Rome the cultural landscapes changed dramatically over the centuries and one of the most radical changes came because of the transition to the dominance of Christianity on the urbe of Rome. But instead "starting a new religion" on top of the previous one as it was the case for many other old Roman cities, in Rome Christianity developed on the outskirts of the city due to the conflict between Christians and Romans (specifically those with power, like Emperors and senators). And though it is not unheard of that in other old Roman cities there were churches further away from the city center, the main church was still in the city center. But in case of Rome, all the focal places for Christian practices were outside of the city walls and they remained there with urban life developing around the new urban nucleus.

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For example, the decentralized position of the cathedral of San Giovanni in Laterano, just like many other city churches, with the city's depopulation and the thinning of urban population, meant that they had to be equipped with their own baptisteries to make it more practical for the inhabitants and to maintain their parish, and thus concentrating the social life around themselves.

So, instead of developing steadily from the city center to the outskirts in a "mountain shape" pattern, Rome developed more in a "circles on the water" pattern with constant fluctuations of the population hence the urban development from the outskirts to the city center and back. And the cause behind such pattern is Christianity.

Such fluctuations meant that the city develop unevenly from an urban planning perspective, focusing on the areas of interest or the problematic areas, instead of viewing the city wholly. This means that Rome developed in clusters that while being quite neatly developed on their own, are not always coherent with one another and are not properly connected (like with the bridges to St. Peter's), creating issues in the infrastructure. Furthermore, the cluster like structure of the city fortified the social segregation, because of the different social productions of areas (6) within the clusters, which was only reinforced by law.

We must learn from history, so instead of demolishing and building anew to conceal the effects of Christianity on Rome, we should develop the existing clusters to be completely functional and codependent one to the other, to even out the social production in these areas. But instead of building, Rome should concentrate on developing, so that each cluster is "desirable" by the inhabitants with high quality of life to evenly distribute the population of Rome on its territory.

However, it is important to imply the "5-minute city" principle while developing, so that the clusters do not become isolated one from another but become one from a planning perspective.

Fig. 1.
Map of Rome expansion from the Republic era until the Aurelian Rome

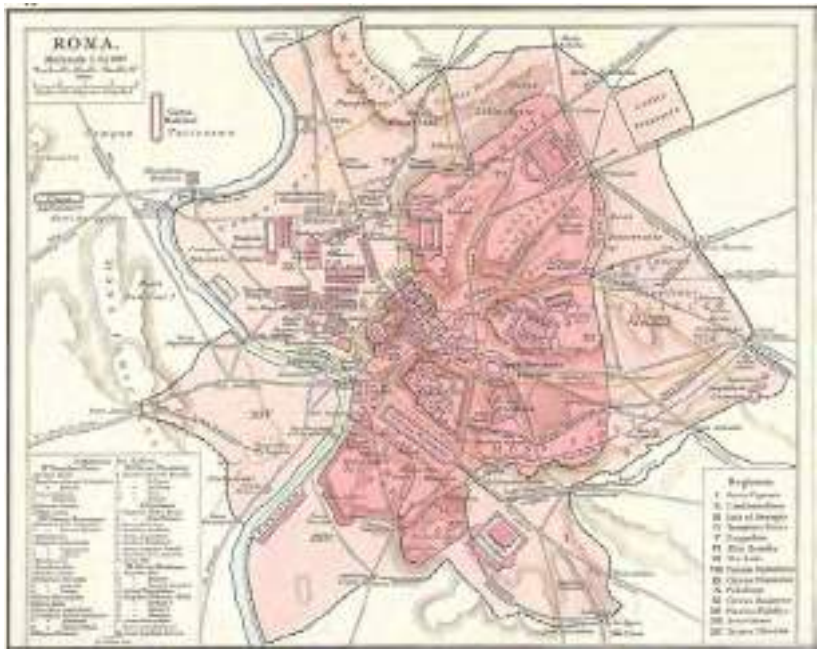

Fig. 2.
Urban plan of Rome in 1883

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Participatory incubator of cultural initiatives within a local development strategy for the "Sicani" area in Sicily

Alejandro Gana-Núñez, Vincenzo Todaro***

The "Agency for Territorial Cohesion" (ATC), which served until 2023 as the coordinating entity in Italy for the implementation of the "National Strategy for Inner Areas" (SNAI), considers resources for action-research projects that could serve as catalyst in initiating a process of valorization of local identity, improve the territorial cohesion, and enhance the inner area's capacity to attract and retain human capital and economic resources. Moreover, within the framework of "local development projects", the SNAI underscores a significant role to the cultural sphere, alongside tourism and environmental considerations. Additionally, the Partnership Agreement for the sicilian Sicani Inner Area of 2020 delineates specific actions within the domains of culture and tourism. This proposal is situated within the framework of the development strategy design, in the cultural sphere, for the just mentioned inner area.

The "Sicani" area in Sicily, made up of 12 municipalities of the "Agrigentino", with an important rural, hilly and mountainous component, is characterised by a high rate of depopulation, a high ageing population, lower income levels compared to nearby urban areas and difficulties in accessing public services and road mobility networks. Despite the social and functional problems of the territory, the resident communities of these small towns still have deep-rooted traditions and cultural and festive expressions that socially and economically activate the area by attracting emigrants and tourists during specific seasons. Every year, the territory encompassed by the Sicani Inner Area hosts a series of cultural events and activities, including religious festivities, agro-food events, carnivals, music and theatre festivals, historical re-enactments, among others. The organization and implementation of these events are significantly shaped by the existing social capital in the territory, structured around various associations for social promotion and volunteering, artistic and cultural groups, local producers and merchants, as well as active informal groups. This social and relational potential is in a vulnerable condition due to the depopulation process of these territories, as well as the cultural activities that they develop, some of which are historically rooted in these territories and their inhabitants. For this reason, it is necessary to develop initiatives that, on the one hand, provide funding for the management and sustainability of these activities over time, and on the other hand, offer technical support to the organising entities and teams for a better design and implementation of the events they undertake. The primary aim is to support initiatives that enhance cultural events already rooted in the territory, considering territorial integration and complementarity among local entities and actors, and promoting the valorization of intangible heritage and free access for various social segments of the community.

The project aims to identify rooted cultural events and festive manifestations with positive impact at the local level that need to be promoted; set up a technical team to conduct mentorships for the different projects presented; convene the different associative actors, organisations and local administrations that manage cultural and festive events; set up monitoring and incubation tables for the development of permanent and integrated cultural initiatives; develop participatory project management models that integrate associations and territories; manage funding and collaborate in the implementation of projects. The proposal incorporates elements from two instruments used in local development strategies, particularly in Spain and Latin America: Project Incubators and Participatory Budgets. Concerning the first model, its inception is rooted to promote new enterprises and businesses, driven by the initiative of public-institutional entities, providing public funds, services and transferring expertise to facilitate the constitution of innovative ventures. However, the model has been adapted to support research projects in universities, as well as to stimulate the emergence of creative industries and cultural projects. The Participatory Budget model empowers the community to collaboratively define the allocation of specific resources within the local administration, through the creation of small assemblies or working groups comprising individuals or associative agents. This groups develop project proposals, working together on their formulation, subsequent implementation and monitoring.

This initiative is expected to incubate one project per municipality per year, seeking the territorial integration of initiatives, inter-institutional partnership and collaboration between associations, for the management of cultural and festive events with local roots and with identity and heritage implications. For this purpose, the proposal intends to create a technical team tasked with the selection, monitoring and follow-up of projects. Additionally, it proposes to set up a working group in each municipality, guided by the technical team. The purpose is to ensure the effective implementation of projects and their adequate financial and programmatic accountability.

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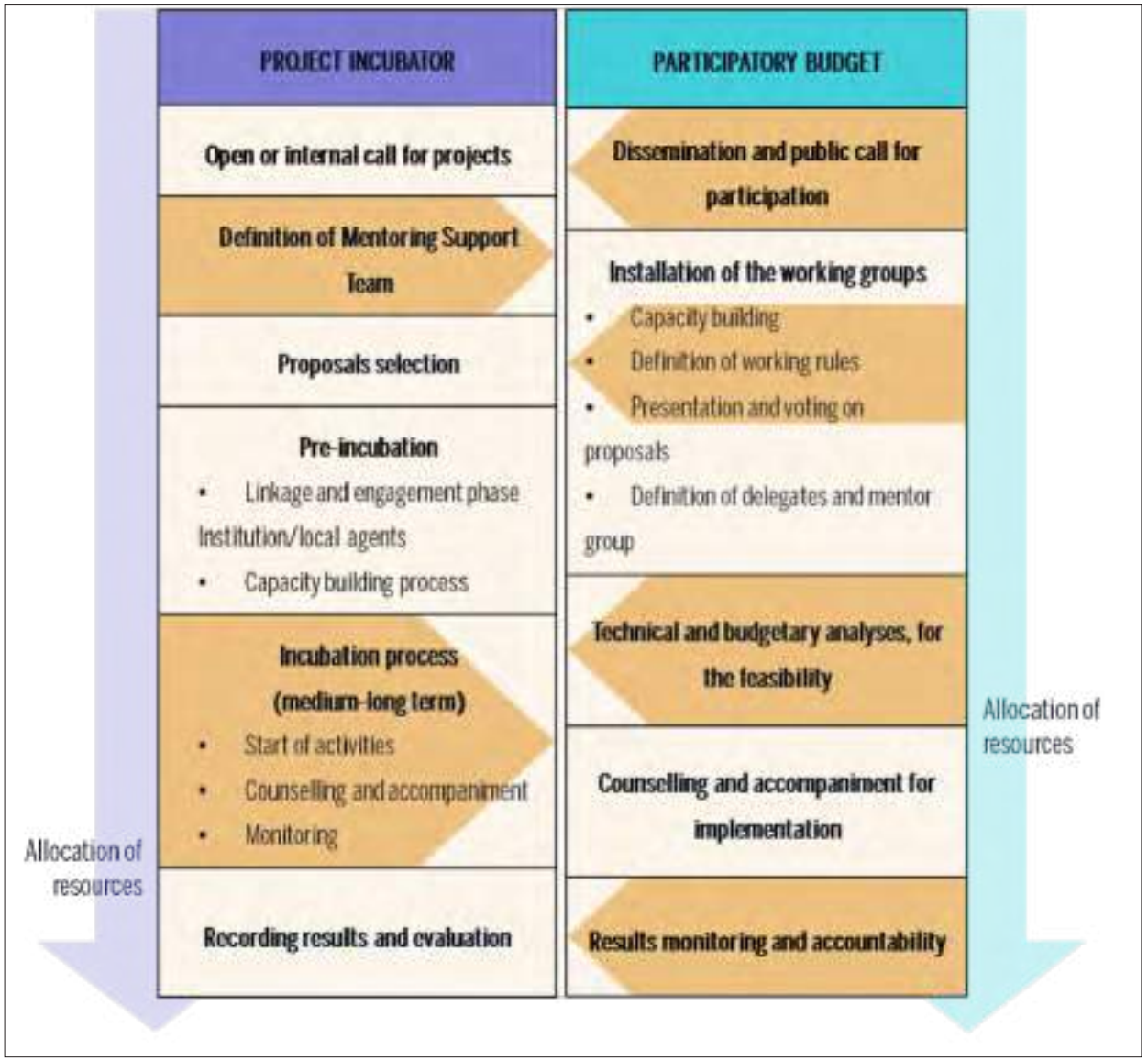

Fig. 1.
Phases to consider in the models "Project incubator" and "Participatory budget" to propose for Sicani Inner Area.

Mapping the Intangible: an interdisciplinary exploration of transhumance cultural landscape

*Ilaria Gesualdi, Mariacristina Mona**

This research is based on two ongoing doctoral theses, in the fields of urban planning and cultural anthropology. It focuses on transhumance in Basilicata, which is a form of transhumant pastoralism involving the seasonal movement of livestock between different geographical or climatic regions. The study examines the economic and productive aspects of transhumance, as well as its cultural significance in constructing a collective imaginary of a 'cultural landscape of transhumance'. The practice has been attested in central-southern Italy since the earliest evidence dates to pre-Roman times (Petrocelli, 1999) and involves an entire socio-economic system that has been developed around the heritage of transhumance, which is linked both to material traces in the form of paths and buildings, and to the intangible elements of beliefs and knowledge. The UNESCO Intangible Cultural Heritage and Council of Europe Cultural Itinerary recognitions assigned to transhumance provide significant opportunities for cultural, social and economic development in the areas involved in this traditional practice, which are mostly marginal. Lucanian institutions and organisations are building a public space that promotes transhumance as a cultural heritage and a tool for developing new values and activities.

In Basilicata, contemporary transhumance is mainly focused on breeding Podolica cows. This bovine species is mainly found in the inland areas of the southern Italian peninsula and is characterised by exceptional adaptability to the environment and the capacity to live in a semi-wild state, characteristics that provide added value in terms of the origin and sustainability of the products.

The aim of this paper is to define a method for documenting and cataloguing contemporary cases of transhumance in Basilicata, selected based on their territorial, landscape and social relevance. The information gathered through territorial analysis and ethnographic research is reorganised in a model table. (Fig.1, Fig. 2) The table combines cartography, which is the primary tool for representing and analysing the territory, with ethnographic research. This approach involved methods such as participant observation and walking interviews (Evans J., Jones P., 2011). Firstly, general information is collected about the land, the breeder and the route taken. To describe the physical movement, a map will be drawn showing the route itself and the main natural (geomorphological, hydrological, botanical), infrastructural and anthropic components. The outcome will be an 'identity card' describing the characteristics of the territory covered by transhumance. This description is accompanied by an ethnographic section that provides information on the current situation, reconstructing past development dynamics and presenting hypotheses for future changes as reported by the herders.

The collection of information on Lucanian breeders and their movements also reveals the extent of transhumance in Basilicata, which is not merely a nostalgic reconstruction of a past practice that has fallen into disuse, but a productive activity that is still widespread and needed. The significance of this practice in the regional context is emphasised by the various support measures. For instance, the conferences '*Rethinking transhumance. The contribution of Basilicata*' held in Tricarico last June and '*Along the sheep-tracks of Garaguso*' held in Garaguso last November, reflect the desire to 'rethink transhumance' with a view to its development. The Basilicata Region, with the introduction of the Regional List of Shepherds as Guardians of the Lucanian Territory (Regional Law 54/2021), protects extensive wild or semi-wild breeding as a regional heritage and recognises the strategic role of breeders as custodians of the environment, landscape and agri-food production. Other institutions, such as the *Associazione Regionale Allevatori Basilicata* (ARA), with its numerous promotional events, and the *Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria in Basilicata* (CREA), with the creation of its School of Dairy Farming, are actively contributing to the revitalisation of the sector.

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Fig. 1.
Territorial analysis model table

Fig. 2 .
Ethnographic analysis model table

The data collected through these analyses will make it possible to monitor the ongoing changes in practice (due to the introduction of tourist activities, economic and/or social factors, etc.), the changes in the perception of the phenomenon of transhumance (from a symbol of backwardness to a heritage to be protected) and the evolution of the figure of the shepherd (from a marginalised figure to a technically trained and competent one). The research aims to highlight the important role of transhumant herders and their work in maintaining pastures, a semi-natural landscape whose importance is institutionally recognised by Europe (Directive 92/43/EEC "Habitat") and which can provide empirical evidence of ecosystem changes linked to climate change.

The combined action of research, local initiatives, and current regional policies can support and highlight the cultural heritage that transhumance represents, but also the production sector, the territorial context, and the community of knowledge that is too often marginalised, in order to change the perception of the transhumance phenomenon and achieve results in terms of economic, social, and spatial inclusion.

Local development and the regeneration of the historic architectural heritage: case studies of historic buildings in Taranto

Simona Sasso, Vincenzo Piccolo, Cristina Giannico*

Within the framework of Taranto's CIS (a nationally sponsored programme for the environmental and economic regeneration of the Taranto area, launched in 2015), Taranto's municipality has developed an Action plan (Piano interventi) for the renovation and enhancement of the Old town, also known as Isola Madre, which includes the restoration and refurbishment of several historic buildings. The Action plan itself was funded in 2018 by the Ministry of Culture through the Operational Plan 'Culture and Tourism', using resources of the 2014-2020 national Development and Cohesion Fund (FSC). In detail, the above-mentioned historic buildings are: Palazzo Troilo, Palazzo Carducci and the Garbaldi-Novelune building block.

The promotion of research and development initiatives to rebuild links that have been dissolved and have led to the gradual oblivion of the island, is key to the regeneration of the old town. In the *Isola Madre*, the state of general degradation of the building stock strongly reflects the socio-economic deprivation of the context. In this perspective, effective mechanisms to recover abandoned areas should promote new occasions for aggregation and socialization.

The strategy for the renovation of the buildings in the historic center started with finding their optimal vocation and assigning them new destinations, in a process of adaption to contemporary urban dynamics.

Palazzo Troilo will be turned into a cultural, multifunctional centre. The building is composed of a series of structures built over time starting in the sixteenth century. They are centred around the main staircase and a main courtyard. Each level of the building will be refurbished and made available for new uses. Commercial activities, including a café and a book shop will be located on the ground floor; the first and second floors will be dedicated to museum and exhibition areas; the roof will become an ideal location for events, exhibitions, and a bar/restaurant thanks to its the conversion into a series of green panoramic terraces overlooking the Old town.

Palazzo Carducci, the former residence of a Florentine family, will be turned into a tourist attraction hosting exhibitions, cultural and commercial activities. The transformation consists in structural consolidation, conservative restoration and technical plant and distribution revamp. Moreover, Palazzo Carducci's fine finishes, decorative and architectural elements will be restored and properly enhanced in the renewed context. The new functions will be diversified between the different floors. The central courtyard, in Art Nouveau style, will serve as reception space and will provide access to the various levels and areas of the building. On the ground floor there will be commercial premises, including a café. The first floor, *Piano nobile*, will host spaces used for cultural, exhibition and museum functions. The basement areas, which are part of the broad network of underground spaces that characterise the *Isola Madre*, will be renovated to make them accessible and visitable.

The Garibaldi-Novelune block will be dedicated to student housing, including flexible sharing spaces for different needs, and commercial activities on the ground floor. The building was in a state of advanced degradation and was uninhabitable. The crumbled image of Palazzo Garibaldi was characterized by three main features: an almost intact volume overlooking the Mar Piccolo; a central void, resulting from the collapse of the floors and the elements of the side facade; another full wall, overlooking the *Postierla*, with residual architectural features to be preserved. A full restoration has not been possible or sustainable due to the building's state. Therefore, having to proceed with the reconstruction of the building, the *concept* sought to preserve the relationship between

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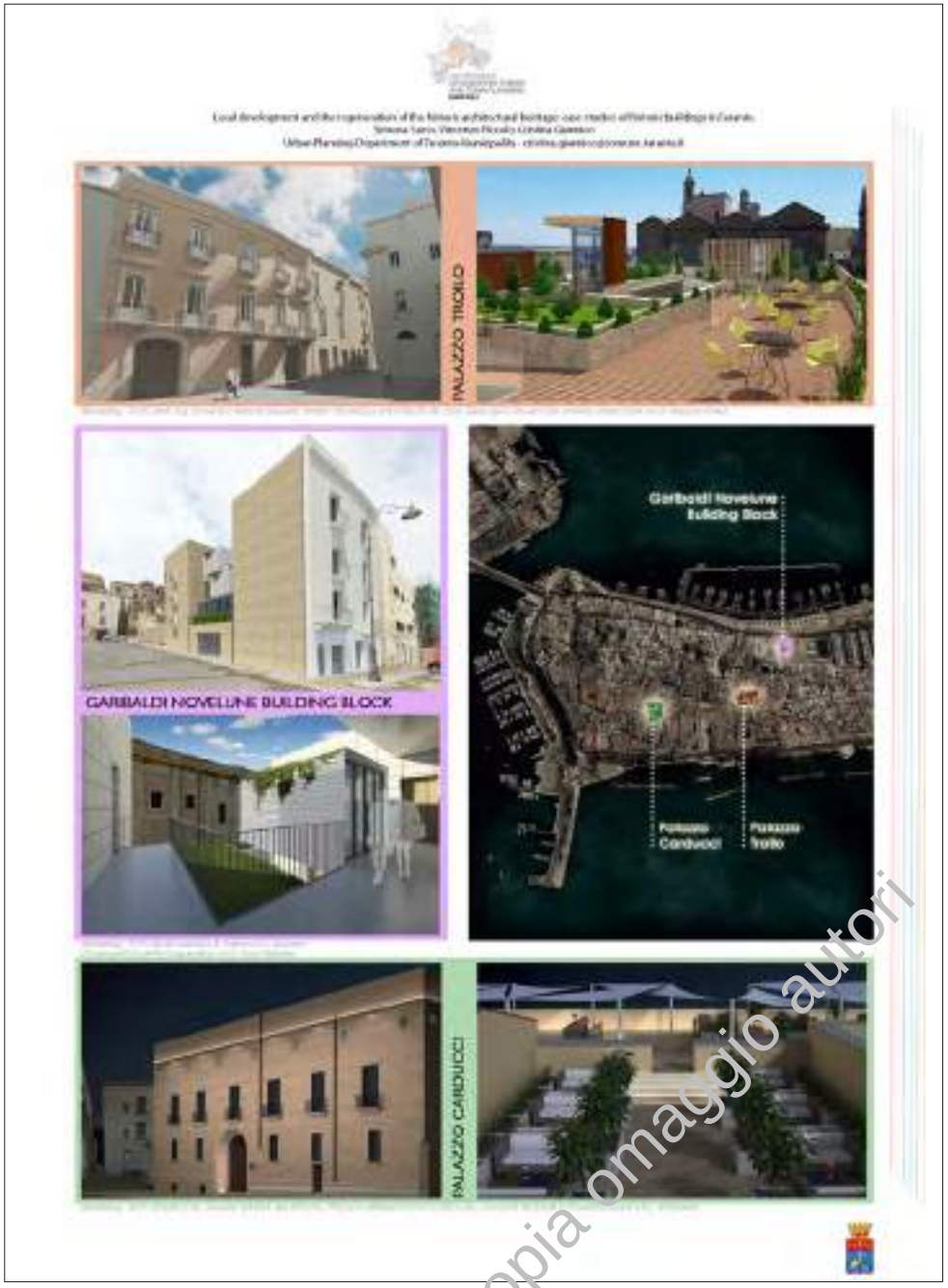
the existing full and empty spaces. The main facade will be the only element to be safeguarded, as historical evidence and the Mar Piccolo's architectural backstage.

These buildings will undergo interventions that will attempt to preserve volumes, structures and pre-existing features, and, at the same time, thanks to careful design choices and the adoption of new technologies, will provide maximum accessibility for disabled users.

The three historic buildings being renovated are part of a broader effort to achieve the urban regeneration of the old town. The Administration has undertaken a complex challenge in pursuit of the objectives related to sustainable local development and socio-economic revitalisation.

The *Isola Madre Action Plan* has triggered a process to preserve and recover buildings, considering them non-renewable resources for their historical and cultural value, and to stimulate social and cultural activation at local level through the use of public spaces.



Visualizing Cities: Making Cultural Heritage Inclusive

Kristin Love Huffman, Andrea Giordano***

Visualizing Cities (VC) is an interdisciplinary, trans-institutional research initiative dedicated to Cultural Heritage. It combines advanced digital and scholarly methods in the analysis, visualization, and public dissemination of architectural and urban histories. Foundational work on Venice in 2010 resulted in a new methodological prototype, soon after applied to Padua, Carpi, and Naples. Collated archival-documentary material and built digital content, such as interoperable models and interactive maps, has resulted in shared knowledge. The objective of VC is to make the cultural heritage of cities—the complexity of urban spaces and systems— accessible to audiences via a range of visualization strategies. Synergistic collaboration among architects, engineers, and architectural historians had led to the organization, presentation, and publication of content to an international public. Exhibitions, online repositories, and print publications include diverse audiences—scholars, government officials, and public at large. Inclusivity stands at the core of methodological practice and resulting outputs. Case studies of VC projects presented here illustrate and underscore the objectives, methodologies, and innovative results.

For over ten years, VC exhibitions and applications in Italy and America have skilfully curated scholarly research and made this content available to audiences in engaging, interactive formats. As the research project *TUCULT – Cultural tourism knows no crisis. Innovative strategies for the recovery, conservation and multilevel accessibility of the artistic-architectural asset for the improvement of intelligent fruition* – financed by the European Social Fund in 2018 (with the participation of IUAV and DUKE universities). *TUCULT* intended to make historic monuments within the city of Padua accessible to a broad public, involved a collaboration among scholars, city government officials, and business stakeholders (see: https://youtu.be/6WmMcuzDBgA?feature=shared). Using digital methods, both in the methodological conception of architectural monuments as well as the representation and presentation of interactive content, heightened the cultural tourism of cultural sites, such as the medieval church of Santa Maria dei Servi and the Renaissance ecclesiastical complex dedicated to Santa Giustina (fig. 1). Specifically, digital reconstructions based on scanning technologies and 3D modeling programs, have produced visualizations of the material construction and artistic idiosyncrasies of these urban phenomena. Via downloadable online applications, viewers can understand spatial connections between interior and exterior spaces as well as the artistic heritage contained (literally embedded) within the walls and placed on their surfaces.

Two exhibitions at Duke University enhanced visitors' understanding of the value of historic representations of Venice as well as expanded cultural understandings of their major monuments, even when removed from the actual city. The installations (*A Portrait of a City: Jacopo de' Barbari's View of 1500*, 2017 and *Senses of Venice*, 2019 – (fig. 2)) bracketed the chronological typology of printed European cartographic representations by focusing on Jacopo de' Barbari's *View of Venice*, 1497-1500, and Ludovico Ughi's map of the city, first published in 1729. For each of the exhibitions, the original works of art served as points of departure for interactive multimedia displays. While each of the displays contained unique thematic content, they all communicated sophisticated research in accessible formats; they all had the intention of encouraging viewers to investigate places and spaces in novel ways while learning about the cultural significance of Venice. The on-site application, specifically, allowed visitors to explore the concepts of past and present via representational strategies and 3D models. The technologies of the early modern world were given new life with the digital tools and methods of the twenty-first century.

In conclusion, VC's use of digital tools and methods as integral to research processes have resulted in new discoveries about urban systems, phenomena, and the cultural heritage that makes cities unique. VC's multimedia modes of visualization, scientific advancements in the communication of information, have led to new forms of historical documentation, critical for the precariousness of cultural heritage sites. The greatest value of this work is that is moves outside the traditional realms of scholarly publication to include a wide public and engage interest in the value and cultural significance of culturally rich cities.

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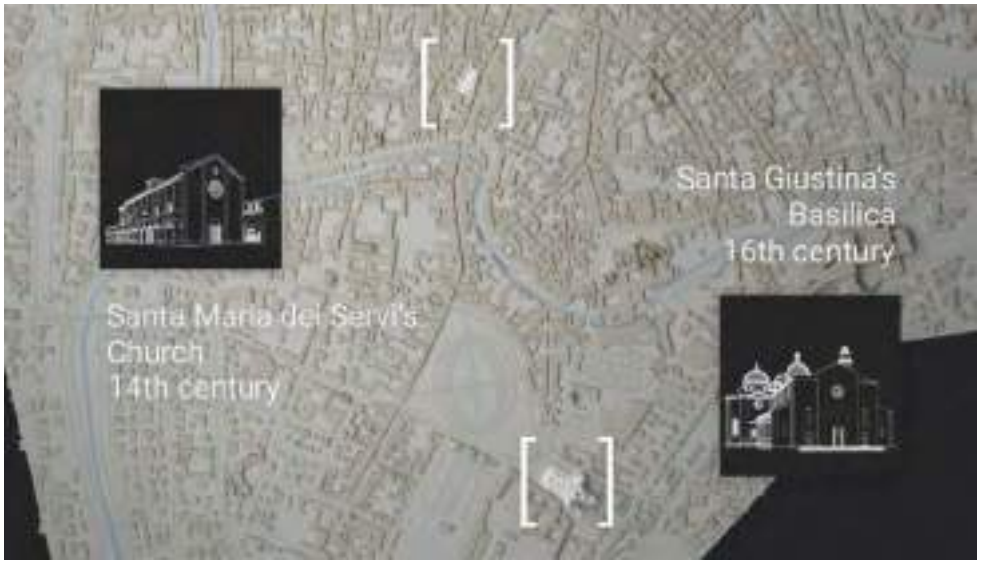

Fig. 1.
TUCULT - Digital interactive/interoperable models of the churches of Santa Giustina and Santa Maria dei Servi in Padova (elaborations by A. Bortot, C. Boscaro, C. Cecchini, F. Condorelli, M. R. Cundari, V. Palma, F. Panarotto, L. Siviero)

Fig. 2.
Opening and installation of Senses of Venice with three touchscreen displays. September 2019.

Resilience as a cultural heritage value. Planning scenarios for the Libarna archaeological site

Michela Benente, Ombretta Caldarice**, Benedetta Giudice*** and Irene Ruiz Bazán*****

In the current age of crisis, resilience is emerging as a widespread concept in the common international lexicon and one of the key policy messages to deal with unexpected events and slow on-setting stresses that increase the vulnerability of cities. Leaving aside the rhetorical use of the term, the real understanding of resilience has to be put into action in a "bounce forward" perspective to strengthen the adaptive capacity of territorial systems to the impact of current and future crises on relevant megatrends and emerging issues through radical transformations. In particular, the intersection of resilience principles with cultural heritage management represents a dynamic response to the multifaceted challenges that European heritage faces today. As the international community increasingly grapples with unexpected events and persistent stresses, the concept of resilience emerges as a linchpin for preserving both the tangible and intangible dimensions of cultural heritage as a possible response to challenges such as climate change, abandonment, and loss of meaning. In such a context of policymaking, resilience should support redefining technical skills and public responsibilities, shifting from a top-down process to a proactive vision by institutions and communities to implement collective and individual actions.

The introductory seminar "Resilience and Heritage" of the master's degree programmes in Architecture of the Politecnico di Torino falls under this conceptual framework. By developing teaching and scientific research on the emerging relationship between resilience and cultural heritage, this didactical activity contributed to understanding how local communities can foster territorial resilience, underscoring the significance of comprehensive assessment approaches that incorporate planning tools analysis, community participation and stakeholders' analysis. The seminar, structured with an interdisciplinary approach that integrates the disciplines of Architectural Restoration and Urban Planning, aimed at cultivating knowledge and awareness to design resilience strategies within a cultural approach to sustainability. Reflecting and examining the concept of territorial resilience was the starting point for discussing global dynamics and ongoing changes in cities and rural contexts.

The testbed of this interdisciplinary approach was the archaeological site of Libarna, situated in the municipality of Serravalle Scrivia (AL) in the southern part of the Piedmont region. Libarna was a Roman city located along the via Postumia whose ruins were discovered during the construction of the railway lines in the first half of the Eighteenth century. Despite its historical and cultural value, its acknowledgement is limited in the non-scientific community. Nowadays, the management and accessibility of the site are quite tricky since it is mainly based on the voluntary activity of a nonprofit association, Libarna Arteventi. Additionally, the archaeological site is located in a complex territorial context. Indeed, it is enclosed between two railway lines, it is positioned in a hydrogeological risk area, it is not visible from the road as it is in a low-lying territory, and its distance from the city centre makes it difficult to reach it.

To support students, we adopted a didactical approach that welcomed a paradigm shift to overcome the valorisation of the archaeological site itself by assuming a territorial perspective to define planning scenarios. In this perspective, the identification of strengths and weaknesses of the territory was supported by the dialogue with local stakeholders, such as institutional representatives (Direzione regionale musei, Soprintendenza Archeologia, Belle Arti e Paesaggio per le province di Alessandria, Asti e Cuneo and municipalities of Serravalle Scrivia and Arquata Scrivia), local wine producers, tourism associations and civic associations. To promote territorial resilience, this dialogue triggered dynamic future scenarios based on planning orientations and a comprehensive heritage value analysis. To this end, the study and analysis of international documents such as the *Nara Document of Authenticity*, the *Burra Charter* or the *Faro Convention* profoundly influenced the seminar's approach to cultural heritage management. The integration of insights from these international documents during the seminar ensured a well-rounded framework, enriching the values analysis conducted at the Libarna archaeological site. This approach extends beyond traditional conservation, embracing resilience principles that actively involve communities, acknowledge cultural significance, and position heritage as a vital contributor to contemporary societal development.

Ultimately, the envisaged scenarios and analysis conducted empower practitioners and policymakers to recognise the distinct values of the Libarna site within its territorial framework. At the same time, the territory can benefit from the archaeological site by supporting its valorisation and enhancing the strengths of the context.

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Fig. 1.
The entrance to the archaeological site of Libarna

Fig. 2.
The amphitheatre

The Historic Town as vector of the urban development

Sofia Avgerinou Kolonias, Alvaro Gómez-Ferrer Bayo***

1. - Humanity is confronting many changes, which concern human settlements and cause shifts in population towards urban areas. Changes in governance and practice are necessary to counteract segregation and social rootlessness as part of attempts to reinforce identity .And on the other hand, new parameters as sustainable development, uncontrolled growth and urban sprawl, new patterns of tourist occupation, Climate Change, global health risks, dramatic migrations, should be considered in terms of their impact, not only on all aspects of inclusion: social, spatial, economic or cultural, but also on the structures and the morphology of such urban areas. Historic urban landscape is affected more intensively because of its particular fragility.

2. - However, the core of the city is a much appropriated area to experiment new solutions face to all those pushing parameters based in two concepts:

a) The importance of its cultural heritage frame that is contained in those places, which must be conserved and renewed. b) The real necessity to act in rehabilitation through creative interventions in the heritage fabric, equipment, and open spaces.This kind of innovative actions should be extended towards other undifferentiated areas surrounding the core of the city in order to be a vector for a sustainable urban development as a whole.

3. - In order to give not only a frame but an instrument for these actions, we must promote urban projects as expression of the planning process with three main components:

a) A strong knowledge of the value of heritage; the memory that the historic city contains. A precise and detailed analysis is therefore requested so that the current situation must be recognized, and that the coherence of the urban core be recorded, in order to adequate solutions including strict rules of preservation.

b) **A broad participation of all the sectors concerned**, which leads to what is actually called "**new governance".**

The necessary conditions for this governance are:

The implication of effective and concerted planning between the different levels: local, regional and national. The respect for all aspects of cultural and social diversity, in order to establish new democratic institutions. The clear information and active participation in urban processes by all stakeholders. The establishment of permanent consultation, and the commitment to safeguard the agreed historic city model. Finally, a developed legislation with services, in order to make historic urban areas, safe, inclusive, resilient and sustainable.

c) The conception of this kind of work as a **project to be shared and carried out.**

4. - The Historic City Project: a heritage urban planning project

Historic cities were rooted in their natural environment and adapted to it climatically, so they had many of the characteristics that are now recognised as components of sustainability. Historic cities could therefore be a source of inspiration for defining future sustainable urban development policies, which is a strong reason why their protection should be ensured. Historic towns must have the capacity to absorb, recover and be prepared to become resilient face to future shocks, prepared for climate change, pandemic health attacks, financial crises, increased migration and tourist flows, uncontrolled growth and a wide range of unexpected risks .As sites of memory, they must preserve their historical and cultural heritage, and, at the same time, to have spaces of social connectivity, creativity and services. Its conservation requires efforts to maintain traditional practices, and to protect its population, with particular attention to marginalized groups. A dual conservation and management plan should preserve the authenticity and integrity of the historic core of the city.

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Fig. 1.
Mantova. Piazza Sordello

Fig. 2.
Athens. General view.

Some concreate actions:

a) It is necessary to reassure the positive role of public spaces for health and well-being and for the reduction of the social and spatial inequalities in urban areas.

b) New facilities must be designed to provide new activities, through innovative working methods, different types of relationships, and to resolve cultural needs for communities located in adjoining historic neighborhoods.

c) Conservation plans should encourage the repairs of old buildings, the greening of urban centers, and by the replacement of unwanted or unnecessary areas by means of additional green spaces.

d) It is essential to establish a detailed inventory list for the buildings and the urban fabric of the urban heritage, composed by all elements according to the historical, cultural and architectural models. Those elements listed must be protected by a control perimeter ensuring their protection against any inappropriate intervention.

5. - Results of the proposal: The results of this proposal can't be measured in a short time. However some items regarding the implementation of the process can be evaluated step by step. The success of a Historic City Project starts with a thorough information, in terms of analysis and recording of the historical evolution, and the current state of its situation. It should be followed by with a consistent plan taking into account social, economic, cultural balance and compatibility, which ensures authenticity, integrity, density and flexibility of urban actions. Finally it should conclude with the control of the management plan in order to focus and to evaluate some concrete and exemplar cases of conservation and development actions that have already done.

Following this process, the historic town would be a vector of the urban development keeping its historical essence.

Recreating agricultural production to restore a heritage landscape

The Reine's Vineyard WHS (Turin, Italy)

*Claudia Cassatella, Enrico Gottero**

In the framework of policies promoted by European Landscape Convention, "Landscape planning" means strong forward-looking action to enhance, restore or create landscapes (Council of Europe, ETS 176, 2000). Being landscape a continuous and irreversible process of change, the term restoration must be interpreted, and linked to another complex – and not well defined – policy: landscape management[1]. The cultural landscapes inscribed in the UNESCO World Heritage List provide many examples to reason on potentials and limitations of measures aimed at restoring and managing heritage landscapes. We illustrate an Italian case study, Villa della Regina [the Reine's Villa and Vineyard] in Turin to reason on governance mechanism that allow for an "active management" of heritage landscapes. The following notes are based on semi-structured interviews, the discourse analysis of documents, agreements, plans and policies, and site visits during the last fifteen years.

The Reine's Villa is baroque-age estate of the House of Savoy on the hills of the Capital City Torino, a summer house for recreation. An orchard and a vineyard were designed as components of the garden, a vegetable amphitheatre around the Villa along with its axial structure. The WW2 bombing damaged the structure and caused a decades-long period of abandonment and degradation. In 1997 the nomination of the World Heritage Serial Site of the Royal Residences of the House of Savoy (which includes 22 sites)[2] fostered a renovated interest for the Villa, resulting in direct acquisition by the Ministry for Culture and restoration works (2003-2006). Nowadays, the site is open to the public, offers a unique panorama of the city, and constitutes a landmark in the urban landscape.

The restoration of the garden posed the question of how to recreate the vineyard and how to manage and maintain it. Many other properties in the same WHS had large parks and estates (see, for instance, Stupinigi, Venaria, Agliè, Racconigi), where the farming activity had not been interrupted in the past, despite the change in cultivation types[3]. In the above-mentioned cases, although the farmland constitutes an essential landscape context, the presence of parks weakens its relationship with the core zone. On the contrary, the Vineyard and Orchard of the Villa were intrinsic components of the intentional architectural and landscape design, on a small site, 0,8 hectares out of 12. Vineyard cultivation requires very specific and sophisticated skills. Consequently, the Ministry for Culture signed an agreement with a local winemaker in 2008. At the time, in the Italian context, a concession to the private sector for direct management of a public good was quite innovative and anticipated a turn established by the Italian reform of heritage legislation in subsequent years.

Thanks to historic documents and direct investigation, the type of grape and the vineyard inter-raw were identified. The inter-raw is so tight that requires handwork, making the costs very high. The producer is allowed to sell the product, and its name is well advertised within the site, although the UNESCO label of the WH Site cannot be used for commercial purposes otherwise. Since 2011, the wine is labelled as 'Freisa di Chieri DOC, a denomination of controlled origin typical of the area. Interestingly, the Ministry had to negotiate with the Piedmont Region Directorate for Agriculture to obtain the needed authorization and labelisation on a defined area (being the production of wine strictly regulated)[4]. Another step out of the ordinary practices for the heritage sector.

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Fig. 1.
Drawing showing the estate of Reine's Villa (source: Audiberti C. M., 1711, Regiae villae poetice descriptae)

Fig. 2.
The Vineyard after its re-creation in 2008, and the panorama towards the city of Turin (photo: C. Cassatella, 2021).

From the perspective of the private farmer, cultivating the site is very costly, but provided reputation benefits beyond the revenue for sales. This small and certified production is also used by local institutions for territorial marketing on official occasions. Moreover, Villa della Regina was a founder of the Urban Vineyards Association, a network that links sites in Paris Montmartre, Lyon, Wien, Venice, among others. In 2023, expired the existing concession after 17 years, the Ministry launched a tender and identified a new manager, who made and offer for a (ten times) higher loan for concession.

In conclusion, the site is productive (and not only gardened as an ornament) and the historic appearance of the site is revived and guaranteed by living farming activity, in an equilibrium between public and private interest. The public-private partnership creates the condition for the active management of a heritage site, its economic sustainability and for the provision of cultural services to citizens. A citizens' association was also created to support the site conservation and valorization.

The landscape approach allowed for innovating heritage conservation, introducing new actors, new public-private partnerships, and new inter-sectoral relations. The active management and economic sustainability are a fundamental key for landscape operations. The agricultural sector plays a key role in shaping cultural landscapes, however, too often, landscape planning design future scenarios without a clear connection with its actors and resources. This is the case in Italy, where landscape planning is regulative in its nature and not strategic. The case of heritage landscapes reveals the need for a strong linkage between planning and management, and the relevance of strategic governance models. Experimenting with new forms of governance are issues that still requiring a further conceptual effort in the planning perspective.

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Historic infrastructure and urban regeneration

Bottom-up approach for an identity-inclusive city

*Paola N. Imbesi**

Historic and environmental networks for the regeneration of the contemporary city

In Europe, and even more so in Italian context, urban regeneration strategies are balanced between protection and enhancement of historical heritage and instances of transformation. The research "Italy and China. Historic infrastructure and ecological networks for an integrated strategy of urban regeneration," by the PDTA of Sapienza University of Rome (SR L.Ricci), analyzed relevance of historical-environmental components as "engines of development" and reference strategies to activate regeneration interventions for the governance of contemporary city (UNESCO, 2011).

The research adopts an interscalar and integrated approach seeking operational and theoretical-methodological references to be introduced for the definition of assets in contexts strongly characterized by the presence of historical infrastructure, in the awareness of the deep link between quality of historical urban contexts and development opportunities (Ricci L., Mariano C,. 2019). The aim is to identify alternative solutions to the traditional approach of transformation as construction being a condition for intervention, toward the definition of a project centered on public space (RICCI L., 2018) and the promotion of innovative uses compatible with the historical-cultural value of permanences.

The Padua Walls Park: a process of participatory regeneration

Among the case studies analyzed is the project of the Park of the historical Walls of Padua, carried out since 1986 by the Walls Committee through a planning process shared with associations, IUAV and with the support of the Region, Province and Municipality.

The city walls of Padua represent an important fortification testimony of 16th-century military engineering, come down to the present day. This is not only because of the considerable size of the perimeter development (about 11 km), the first one built to defend a large city in the plains, but also because of the complexity of the system consisting of historic canals, roads and military areas inside and outside the walls for a total of about 1,100,000 square meters. Already Luigi Piccinato in the 1954 PRG of Padua picked up on the importance of the walls and the river-canals system, linked to them as an exceptional resource, and designed a green ring that was, however, never realized due to strong settlement pressures: perhaps the most striking example is the construction in the 1970s of Polyclinic above the walls and the tombing of several canals.

The first study by the Walls Committee dates back to 1986 and highlighted the need to look at the city walls as a single system, going beyond the logic of restoration for purely conservation purposes. In 2014, the same Committee presented a much more comprehensive project, which obtained a first tranche of funding. The Land-use plan, approved in 2014, assumes the Wall Park, as a strategic objective by fielding new forms of planning capable of reinterpreting the identity of places and contexts.

In 2020, the Walls Committee's project was further developed with the definition of seven levels of attractions: seven overlapping circuits articulated according to different historical-cultural, architectural, landscape, naturalistic, and artistic values. At the same time, again the Walls Committee has pursued the experimentation of a diffuse multimedia museum, MURA VIVE, consisting of Narrative Environmental Installations, and educational stations, which provides diversified and interactive modes of enjoyment. Recently, thanks to the interest aroused by MURAVIVE, the IUAV University of Venice and the ICEA and DEI departments of the University of Padua promoted and implemented a project financed with ESF European funds, called PAMU – Multimedia Park of the Walls of Padua – which through a dedicated website offers diachronic 3D renderings and virtual reality models.

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Fig. 1.
Padua, Bastione Impossibile or dei Crociferi, 1513. Photos of the author.

Fig. 2.
Bastione della Gatta or Codalunga, 1509. Inside the bastion, the city's water tower was built in 1926. Photos of the author.

An unending final reflection

More and more often, in recent years, the experiences of "regeneration from below" propose an integrated aproach based not only on physical and structural arrangements, but also on the activation of projects and paths of social innovation and integrated management Such an approach leads to a gradual process of space re-signification and allow to reconfigure social network and symbolic values of the territory (Cellamare, 2019).

These experiences allow a reflection on the objective difficulty of initiating effective policies for the regeneration of cultural heritage: the contemporary city is a complex of articulated, discontinuous and specialized situations (Poli, 2018) in which historical infrastructure can play a role as a supporting framework between different urban parts, even more if carried out in a participatory and shared form. Regeneration processes have by their nature a character of "complexity and overlap"(Ingallina 2004) and a participatory design process allows to measure up to the context by combining strategies and tools (Ciardini, 2014).

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Food Plants Consumed and Grown in Salvador, Brazil

*Isabel Maria Madaleno**

Brazilian universities play an important role in the discussion of public policies, conducted by elected governments. That's because the 1988 Constitution of this Southern American country gives all citizens the possibility to democratically have a word in the design of the urban planning. Recent actions devised to preserve the cultural heritage for the old center of Salvador, as program Revitalize, proved not to have totally met their goals, due to inefficient tax incentives. Nevertheless, the museum house of writers Jorge Amado and Zelia Gattai stands as an excellent result of the cultural and architectural heritage renovation and exploitation in the first capital city of Brazil. It is in Rio Vermelho neighborhood, and not exactly in the old center of the city.

Most of the buildings targeted by revitalization have been using international developers' funds, such as five-star hotel entrepreneurs, because Salvador is a highly sought touristic Northeastern urban site in Brazil. That's because of its slave heritage (food, music, and religion), of its typical Portuguese architecture, inherited from the colonial days (1500-1822), as well as its carnival and music festivals. International projection of several Bahia musicians (Veloso, Bethania, Caymmi, etc.) have contributed to bring national and international tourists to the urban settlement. Figures 1 and 2 illustrate these aspects regarding the Bonfim Church entourage and the Pelourinho, (the monument is no longer there), which was the square where slaves and bandits received body punishment for misbehavior in colonial times (Fig. 2).

This paper is a case study focusing a culturally rich Brazilian city. Materials used were twofold:

1. Old manuscripts, such as the letter of Caminha, who accompanied and recorded the first historically recognized trip of a Portuguese navigator to Brazil. In fact, Cabral is accepted as the official discoverer of the new colony, having arrived at Porto Seguro in 1500, located south of Salvador.
2. Flora records from a scientific mission conducted by the author, in August 2023, at the service of the Tropical College of the University of Lisbon. The aim of this study was to gather the flora grown and consumed in the capital city of Bahia and compare it with the early colonization records. It totaled 50 interviews to urban gardeners and traders.

Figure 1 displays a typical Bahia black community man, which role is to welcome tourists to the Catholic Church using ancestral slave practices of blessing. The survival of these religious herbal aspersion is part of the municipality heritage preservation effort (candomblé) because the immaterial culture is as important as the material. The African cultural practice uses flora and divinizes Nature. This is a charming display of conviviality among different peoples and religions, so much desired in these hard war times. The material heritage is in the colored Portuguese buildings, recovered in the old center of the city of Salvador (Fig. 2), as well as in the walking promenade floors, also typical of times when horses and carriages were wondering through the royal capital of Brazil.

Results show that in 2023 the residents of Salvador, the first capital city of Brazil, consumed a total of 151 plant species, nine of them mentioned in Caminha manuscript in 1500. The sample of 50 interviews recorded 51,7% food species, mostly native but also from Africa and Europe; 19,2% were curative plants; 14,6% were cosmetics or perfumes and 10,6% spices. The remaining species were nutraceutical or ornamental. Food dishes are part of Bahia cultural heritage as most of them use palm oil (*Elaeis guineensis*) taken to Brazil together with the African slaves. Delicacies such as fish or shrimp *Moqueca*, *Vatapá* or *Bobó* use this oil instead of olive, corn or sunflower oils preferred elsewhere in Brazil. These dishes also contain coconut milk, onions, and local pepper, and frequently peanuts and cashew. Cassava and potatoes are American flora, also preferred in Salvador.

The four food gardens researched in Salvador possessed several fruit trees: coconuts, bananas, cashews, guavas, and custard apples, climbing passionfruit and mango trees. The Amado and Gattai food garden also had Brazilian grapes, chicle trees, and Brazilian cherries, together with spices. Jazmin was a flourishing bush existent in this museum garden too, as well as within Rio Vermelho neighborhood. This Brazilian colonial capital, Salvador, is one of the most remarkable cultural heritage sites in Brazil, where the triangular trade presence of the 16th century sea routes meets (Africa, America, and Europe).

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Fig. 1.
Candomblé reception at Bonfim Church

Fig. 2.
Fig. 2: "Pelourinho" Square walking area

Tecniche Sapienti Suite
Mapping the legacy of Italian women designers

*Claudia Mattogno**

Many women have contributed to transforming physical space over time: designers, philanthropists and architecture critics, landscape architects and urban planners, scholars, militants, or activists. But we still know very little about them. There are many reasons for this void: the historical subordinate position of women in the design professions; the difficulty of scholars in identifying primary sources; the lack of presence of female figures in History of Architecture books.

This underlying opacity has been broken down by feminist literature which has highlighted the existing interrelationships between bodies and spaces since the 1970s. However, become a designer remains a quite recent achievement for women. The profession is still characterized by a strong male presence, while it must remember that women's access to university was only possible from the last decades of the nineteenth century. Our story starts in Berkeley when in 1876 the first female engineer, Elisabeth Bragg graduated. In Europe, the first woman who graduated as an engineer was Alice Jaqueline Perry in 1906 from Queen's College in Galway, Ireland. She came from a family of technicians capable of supporting this unconventional choice.

And what happened in Italy? The first female engineer was Emma Strada, who graduated at the Turin Polytechnic in 1908. She immediately started working in her father's construction company, confirming that family paths were the easiest to follow for young women of the early twentieth century. It was the same with Bice Crova and Lidia Ganassini. The first graduated in Civil Engineering in Rome in 1916 and was the daughter of a railway engineer; the second graduated in Electrical Engineering in 1934 in Rome after working on some patents with her aunt Adelina Racheli. These names formed a first genealogical line thanks to the results of a research called "Tecniche Sapienti" which examined 120 female profiles (students and teachers) of the faculty of Engineering of the Rome Sapienza University from 1910 to 1968. We have divided the profiles into three chronological groups, each of which is defined by specific laws and provisions relating to university administration. According to this periodization we called: Pioneers (1910-1935), Forerunners (1936-1945) and Entrepreneurs (1946-1968).

After the first chapter regarding the Sapienza University, the second one extends the investigation to the whole of Italy to map designers from different fields. The new survey refers to a National Research, just funded by the Ministry of University to fill a gap in knowledge on women's planning. The target is to create network between the archival funds and the Italian designers. The network is also extended to Italian scholars who are studying:

- the work of Italian designers in architecture and urban planning, landscape and engineering, interior and industrial design.
- gender issues linked to the project of transformation of physical spaces.

A first step just took place in February 2024 to investigate the consistency of studies within universities, research institutes and public cultural institutions. It allowed us to compose a first frame of the state of the art in our country.

It was an amazing result! We received 70 proposals that dispel the apparent Italian marginality of gender studies in design. In fact, we had 38 sheets relating to female figures and 32 sheets relating to ongoing studies. The files are made up of 2 clients, 32 designers active between 1910 and 1968, 4 foreigners who chose Italy as scholars, 6 associations and study groups active today, 15 ongoing research, 1 Master in Gender Planning.

We found names of already established protagonists, such as Lina Bo, Gae Aulenti, Anna Ferrieri Castelli, Franca Helg and Egle Trincanato. Others are pioneers in their field, such as the first engineers Bice Crova and Maria Bortolotti, the first architects Elena Luzzatto and Stefania Filo Speziale, the landscape designer, Maria Teresa Parpagliolo, or come

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from a feminist militancy like Marta Lonzi. Others are the subject of recent studies such as the urban planner Vittoria Calzolari and the architect Paola Salmoni.

We cannot name them all here, but these first results allow us to dispel some bias about the limited presence of Italian women in architecture and the presumed marginality of their working fields. These women were not limited only to domestic spaces or interior architecture but worked in the restoration of monuments, in landscape, in industrial design, in the design of green spaces and public buildings, including markets and schools, they also dedicated themselves to the criticism of art, teaching and journalism. A second call is scheduled this year, fall. It will be launched on dedicated platforms and aimed at systematically reaching all Italian universities with the aim of bringing out female projects in their great variety of contents and approaches. It will therefore be the foundation of a new construction of memories through five steps: Naming; Rediscover profiles; Implement Archives; Promote new narratives; Enhance female projects.

We are sure that this research will give a new push to women studies as well as to the history of architecture, construction, and planning. It will also have the task of creating a network among scholars. The lives, works and scientific production of these women designers ask new questions to contemporary historiography and lead us to reflect on the motivations, real or presumed, that have led to so many removals from the most authoritative reference texts.

A memory gap that's time to fill!

BARIUM
A new model of knowledge and preservation of the city

Nicola Cavallera, Dario Monsellato**, Nicolò Montuori*** and Francesco Paolo Protomastro*****

Barium, a new notion on the architectural heritage of the twentieth century (by di Nicolò Montuori)

The project of *Barium* has been conceived starting from the need to reevaluate the modern and contemporary architectural heritage of the city of Bari. In fact, although the concept of "heritage" has been acquired by the scientific community, ordinarily it still appears exposed to processes of deep devaluation by the administrations' practices, often motivated by the logic of mere building speculation. Modern architecture, according to the most recent notions of *heritage*, represents a substantial part of the palimpsest of our cities, a support on which the communities keep on producing writings and overwritings, whose consistencies coincide with the choice, never incontestable, of what must be valued and safeguarded. Only the formulation of a reasoned judgment can favor the recovery of this consistent quantity of architecture, a practice that can represent the key to redesigning, in a virtuous manner, the new urban space. The modern and contemporary architectural heritage, in fact, represents an indispensable value for communities, a shared good that is part of a collective imagination in which an intrinsic character of great importance can be recognized, which tells of the way in which each city has defined its own image. In this sense, reducing land consumption and rethinking the pre-existence can become the main practices to regenerate a city, interpretable as modern but not an enemy of its history.

Barium, reasons and purposes of a "modern" research (by Dario Monsellato)

There is a strong belief that much of the architectural heritage of Bari is still largely unknown and the reason seems to lie in its scarce recognition. Therefore, Barium's project aims, through a precise method of research, to a cataloguing and archiving, through its own digital database, the works that define that heritage. The phase of consultation of bibliographical sources is the premise of the research, but it is not difficult to find gaps and ambiguities. For this reason, the support of the State Archives and, above all, the consultation of what is kept by the technical offices becomes fundamental. Thus, this process leads to obtaining reliable data, through which the architectural objects of value can re-emerge. At this point, the practice of divulgation becomes a means to enable citizens to participate in the rediscovery of a heritage that, once understood, can be valued. The process of *dissemination*, *involvement* and *sharing* that Barium proposes does not look simply at the academic and institutional channels but, above all, at the potentiality of the social networks, where photographic documentation becomes an icon of the research method described.

Photography as a tool to preserve cities (by Nicola Cavallera)

In fact, photography becomes the privileged tool to document the urban space of Bari and the architecture of which it is composed. The assumption of some models deriving from the study of the past is useful for the definition of a method of representation, which, being consistent along the entire research path, gives organicity to the final result. In this sense, the *Typologies* research by Bernd and Hilla Becher constitutes the aesthetic matrix of the project. A mostly frontal approach, the reduction of shadows, the positioning of the subject at the center of the composition allow to abstract it from its context, focusing on it the eye of the observer. An alternative method is adopted when the place is characterized by a more articulated context or by the presence of complex spaces of relationship between the buildings. The concept of *hypervisibility* introduced by Gabriele Basilico takes on a fundamental role, and the elements represented by the shot, suitably selected, contribute together to its understanding. The result is a photo in which the city re-appears as a complex of architecture and places, whose new image can be associated to a mosaic that, for its renewed beauty, is able to capture the attention of an inexperienced audience.

Active citizenship as a practice of protecting the "right to the city" (by Francesco Paolo Protomastro)

The results of this research are aimed at tracing a credible alternative to the logic that in recent years have governed the planning of urban processes. By awakening the consciousness of the citizenry, leading them to the rediscovery of the authentic beauty of their city, *Barium* wants to institute a recursive process, in which the users of the expected results from urban strategies and practices are an integral and indispensable part of their planning and definition. In a logic of mutual subsidiarity, the introduction of moments of confrontation and active listening between citizens, finally active, and administrations

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can allow a gradual focus of strategies, goals and different declinations of interventions that, while aiming at the renewal of urban space, ensure that it continues to match to the aspirations of its inhabitants.

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Fig. 1.
Palazzo de Florio (Bari), 1957-1959. Arch. Onofrio Mangini. Picture of Nicola Cavallera

Fig. 2.
Palazzo Conte Celio Sabini (Bari), 1958-1961. Arch. Vito Sangirardi. Picture of Nicola Cavallera

BARIUM | A new model of knowledge and preservation of the city

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Landscape design as an extension of welfare

*Marco Patruno**

The development of European cities during the 20th century is characterised by an accumulation of collective services and facilities that constitute a common heritage of urban and territorial endowments. Schools, hospitals, counselling centres, civic centres, libraries, cultural spaces, parks and sports facilities, to name but a few, are the material repository of long-term welfare practices and policies (Secchi 2005). Questioning today about the role, relations and potential of the network of collective services means constructing new interpretative categories capable of restoring the complexity of welfare landscapes and undertaking policies to raise the level of habitability, guarantee the right to citizenship, build democratic spaces (Collettivo per l'Economia Fondamentale 2018).
First, it is a question of taking stock of this collective heritage, which, while representing tangible and intangible capital, often constitutes a cost for the community in terms of forms of management, the dating of artefacts and the lack of functional alignment of responses to territorial needs. Therefore, it is a matter of rethinking the system in a sustainable, accessible and efficient way. Secondly, the construction of welfare spaces goes beyond the concept of *quantitative standards* (regarding the definition of standards in Italian planning, see DM 1444/1968), planning the development of qualitative indicators to accompany the allocation strategies and the identification of typologies peculiar to the different contexts (Munarin, Tosi 2014). Lastly, it is a question of focusing attention on the characteristics that urban standards should possess today in order to guarantee their effectiveness, aligning the offer distributed throughout the territory with the new social demands and needs; we consider, for instance, of the different attention paid to the environment and landscape and to sustainability issues, to the change in the perception of rural space that the productive function is flanked by new living and leisure practices, to the rediscovery of valuable historical-cultural and natural resources that take on new roles in the scale of values of collective goods (De Marchi, Zadeh 2020).

Such reflections seem to be more urgent if we look at the territories of the Italian provinces, which cannot be framed either within a metropolitan area or as inner areas (SNAI - Italy's National Strategy for Inner Areas), but rather can be identified within the broad intermediate structure of *Italia di Mezzo*, and in which the processes of demographic contraction, ageing of the population, environmental degradation and heritage disposal are amplified on the one hand, and on the other a strong growth in the need for greater habitability and quality of public space (Curci, Kercuku, Lanzani, Zanfi 2023). In these areas, the non-implementation of local planning standards, linked to a presumed urban expansion or to expropriation practices that have not been avoided due to a lack of administrative funds, often leaves the field open to the search for innovative practices of design exploration, through the valorisation of the heritage elements of the territory, towards the search for new tools for the construction of collective spaces. These considerations were the starting point for the territorial landscape project *Parco Agricolo Multifunzionale del Negroamaro* (Negroamaro Multifunctional Agricultural Park), which is proposed as an innovative experiment in the construction of a *welfarescape*, through the use of the landscape as an element of value for increasing the wellbeing of urban liveability (for a deeper insight into this topic see the Strategic Scenario of the PPTR - Regional Landscape Plan of Apulia). The background of the project is the increase in the endowment of urban standards, in terms of green spaces, through the remodulation of the park concept, here understood as a part of the rural territory to be valorised and reconnected to the urban areas in support of daily land use practices. In response to the global climate crisis, peri-urban environmental degradation and land use by intensive agriculture (post-Xyella crisis), the landscape project attempts to work in an intermediate and multi-scalar dimension, proposing a strategy of ecological adaptation and reconnection (Martella 2022). The idea of the project is to build, through a system of micro interventions of green and blue networks, an ecological connection that can combine different degrees of naturalness of the territory (from naturalistic oases to

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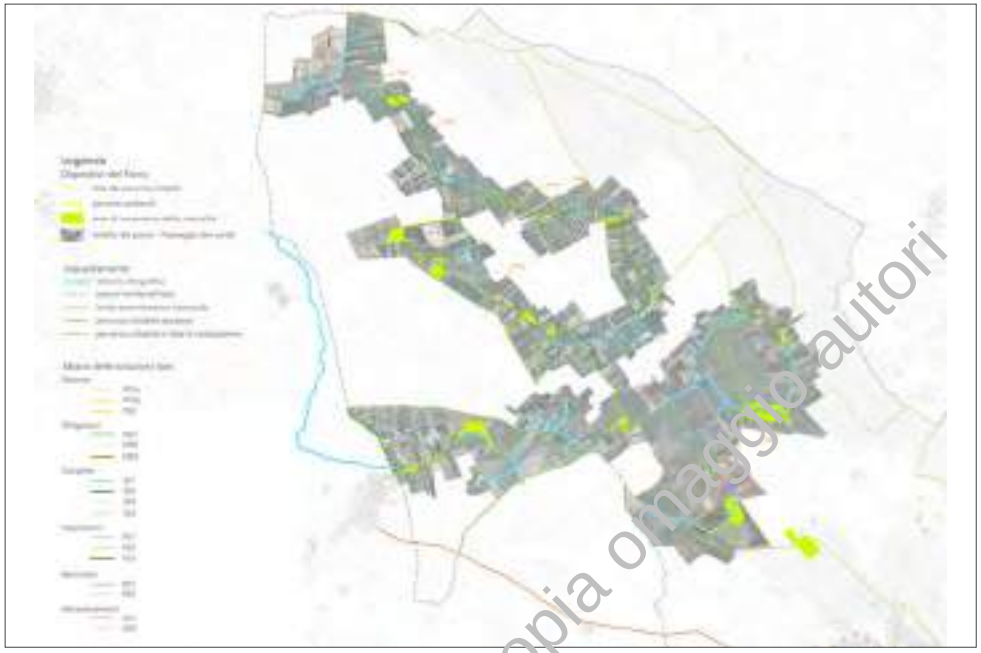
Fig. 1.
Negroamaro Multifunctional Agricultural Park - water landscape resources

Fig. 2.
Negroamaro Multifunctional Agricultural Park - water landscape design tools



areas of specialised and intensive cultivation) with the multiple ecologies of living (from compatible use practices to the greater fruition of rural space). The urban fringes become a thick boundary, where the deep countryside is understood as another form of habitable texture with strong landscape connotations, and the forms of crossing the territory move towards the idea of a multifunctional sustainable mobility at different degrees of speed (Parolotto 2024).

The aim is to make the use of the countryside as a park accessible by covering the multiplicity of forms of mobility related to the area's use practices, both long-term and newly conceived. The landscape project thus becomes a territorial equipment aimed at raising the quality of urban and extra-urban living through the redevelopment and enhancement of the local territorial heritage.

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Cultural heritage as an interpretative framework to address new global challenges

*Thomas Pepino**

In the beginning was "Geography", a monumental fixity of forms in space, superior to all else, authoritative, free from any judgment and rhetoric. The time before Man precedes, outpaces, overflows the space of silence and is placed before the verb, the word. The millennial immobility of forms constitutes a principle of "geographical polysemy", an absolute and universal importance of a geological activity that slowly deposits upon itself, collides, and stratifies. The origin of the cultural heritage of Sanremo is to be found high up, among the shapes of the past, in the deafening silence of the orographic structure, among its territorial geographical archetypes, characterized by ridges, slopes, rivers, and valleys. The anthropic factor, before formalizing itself among eloquent silences, blends into a fabric made of experience that has an archaic and ancestral origin. In order to be recognized, identified, and subsequently classified, geographical entities need to be named. The significance of the relationships between architecture and geography belongs to the time of Man, it fluctuates at the edges of memory, thus crossing fear and sublimation. The territory of Sanremo reflects the geographical condition of the Ligurian west, where it is possible, to describe the ancient relationship of Man with the territory on different levels. Not only does the study of the micro-discontinuities of the greenhouses investigate the geographical characteristics of the site as a physical study of the world but also as a determining formal tool in the history of urban and territorial transformations. These artifacts reveal criteria and analogies between form and geography in their technical solutions, hence making intelligible the logical processes from which cultural heritage and the settlement logic of the anciently founded city — la Pigna — derive. The recognition of the archetypes mentioned in the *incipit* is manifested in the process of geometrization of the territory through the last anthropic event involving the scale of the territory: the invention of the "Crystal Hill". This invention represents a specific reading in which greenhouses assume the function of analytical devices — *les machines du soleil* — which, by measuring and recognizing the human-territory relationships, allow the legacy of a people and the architectural character of geography to emerge from their relationship with the soil. This geographical gaze on the forms of the territory identifies the material and immaterial heritage and acknowledges the manifesto of a culture and its traditions in the formal outcome of the human experience with geography. Today such places, where the forms before the time of Man represent a superior idea from which everything originates, offer the possibility to build the themes of the future and imagine sustainable scenarios that, from the study of the relationships between form and geography, reveal the character of cultural heritage. The ancient relationship between the characters of the territory and the settlement form can be recognized in the comparison between *les machines du soleil* and the archaeological fragments of the *vicos et castella*, in which analytical devices help theorize the relationship between land use and the form of the settlement, by re-reading the architectural, urban, and territorial heritage in a retrospective that starts from the formal relationships between the inhabited nuclei of the ancient Ligurian tribes and the territorial syntax. The intertwining of these episodes, to which the culture of cutting flowers *en plein air* supervenes, crystallizes in greenhouse cultivation around the mid-20th century, when territorial transformations — either cultural, social or economic — together with travelers' descriptions and the iconographic apparatus showcase the typical characteristics of Sanremo. *Les machines du soleil* unveil the formative nature of cultural heritage; they represent the millennial history of the *maixei* — dry stone walls — and constitute the fragments of the time in which the cultivation of the vine, olives and lemons, alongside the work of the Benedictine Monks and the farmers, contributed to the arrangement of the form and structure of the terraces. The research, aimed at building notes for an idea of a plan for the Valle Foce, aims to re-signify the places of the greenhouses to remove them from their state of obsolescence as cultural heritage capable of prefiguring sustainable models to face new global challenges. To construct the reasoning in which cultural heritage becomes the tool of interpretation to address the new global challenges, *the dashboard* was created. This scientific machine

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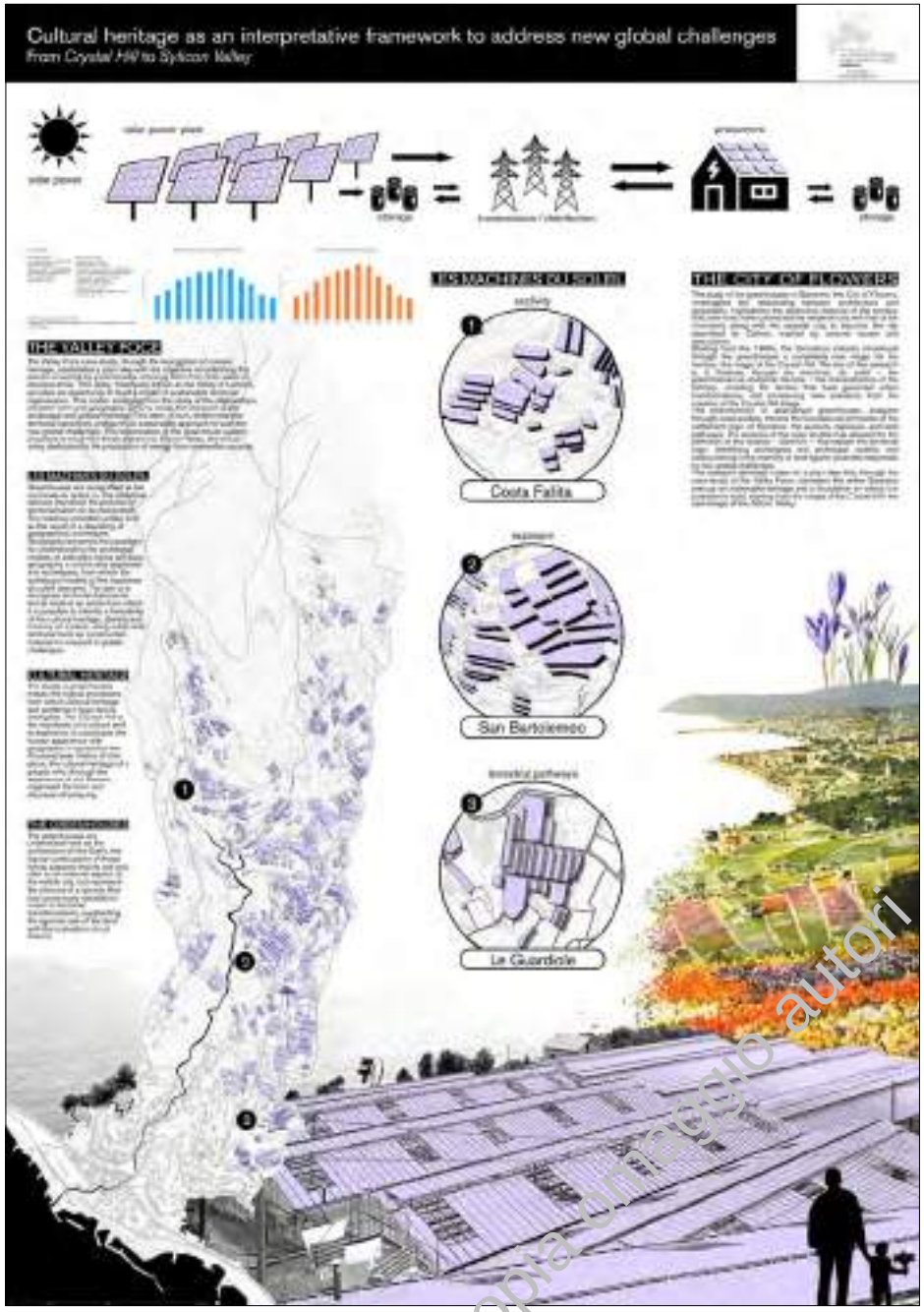
Fig. 1.
Fig. 1. Plan idea for the recovery of the Valle Foce in Sanremo.



classifies 37 case studies between greenhouses and archetypes, theorizes "the advent of the city", and produces the recognition of heritage. The promontory and slope *dashboards* construct an analytical reading of the territory by recognizing three foundational themes on which new scenarios may be developed: acclivity, exposure, and terrestrial pathways. The thematization outlines 111 drawings that classify archetypes and archetypal models. The greenhouses become "dwarves on the shoulders of giants" and allow to imagine new scenarios for fragile territories and their inhabitants. Recognizing in the image of the "Crystal Hill" the monumental figure of the geographical structure as landscape and cultural heritage from which the territorial character derives, generates new meanings for the architectural project of the greenhouse system, thus transforming these places into the Silicon Valley, that is, the silicon valley for energy production from renewable resources.

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Cultural Heritage and UN Agenda 2030 Territorialization through Innovative Inclusive Tourism Strategies

*Gabriella Pultrone**

According to the World Tourism Organization, when properly managed, tourism can play a crucial role in achieving all 17 SDGs, being able in promoting inclusive growth, environmental protection, and the development of resilient societies. At the same time, with reference to the EU *Green Deal* and the *Next Generation EU Programme*, the cultural lever has an increasing importance, also considering the essential elements of sustainability, such as cohesion, social integration and inclusion, innovation, and well-being. In this context, Cultural Heritage (CH) has a significant role to territorialize UN 2030 Agenda and its main goal of leaving "no one behind" through sustainable inclusive cultural tourism models and their planning with an integrated approach in harmony with the local environmental and social context. Furthermore, the valorization of CH can generate new forms of economy and re-generate cities and territories, including inner areas. In this regard, on the occasion of the European Year of Cultural Heritage (2018), the British Council published a report on the role of *CH for Inclusive Growth*, which requires an approach based on the following characteristics: 1) *Inclusive*, so people, by understanding more about their own CH, can value and appreciate it more, contributing to greater social and economic benefits; 2) *Participatory*, because with greater access, skills and opportunities, local communities participate in the planning, management and protection of their CH, to increase sustainable opportunities for economic growth; 3) *Sustainable*, since a bottom-up ethic aims to benefit people more directly, strengthening relationships within communities to promote shared responsibility, as well as investment in the local economy; 4) *Capacity Building*, to develop CH sector skills and networks, to support community engagement and ensure inclusive growth; 5) *Policy Development*, as increasing recognition of the wider potential of CH and understanding of community needs will lead to informed policies that benefit communities; 6) *wide-ranging*, if the actions facilitate access to CH in both urban and rural contexts, with increased dialogue and greater appreciation of cultural diversity; 7) *Locally driven*, if *Cultural heritage for inclusive growth* should come first benefit local communities and countries where CH is located; 8) *Mutual*, as shared learning, exchange and understanding develop skills on both sides and establishes relationships of trust and reciprocity. In essence, based on the findings of the report, CH, in its broadest sense, can contribute to inclusive and sustainable growth, if approached from a people-centred perspective. In this way it can particularly benefit emerging economies, which otherwise risk excluding individuals and communities from society and the economy. Through new and innovative ways to encourage people to engage, share and manage their CH, it is possible to improve the quality of life, create value for communities and distribute economic growth more equitably across society. Inseparably linked to the issues of *inclusiveness*, are those linked to *accessibility*, since it is necessary to guarantee the usability of the CH to all, considering the challenge of connecting policies and practices, challenges and opportunities for disability and aging through the best governance, social innovation, supporting the transition towards inclusive tourism for sustainable, smart, and inclusive growth (Fig. 1-2). As a matter of fact, accessibility does not only mean being a barrier-free destination, but also includes services available digitally to all travelers or visitors, regardless of age, cultural background, or any physical disability, as demonstrated by the recent report prepared for the European Commission titled *Leading Examples of Smart Tourism practices in Europe from the 2023 European Capital of Smart Tourism competition*. The initiative aims to strengthen the innovative development generated by tourism in and around European cities, increase their attractiveness and promote economic growth and job creation. The exemplary practices are divided into four categories: sustainability, digitalisation, cultural heritage and creativity, accessibility. The challenges related to the latter concern the resources a city must have to be physically and psychologically accessible to travelers with special access needs, regardless of their age, their social or economic situation and whether they have disabilities or not. The recognition by public authorities of the shared nature of urban places and of the extent and variety of disabling conditions linked to the emergence of social exclusion phenomena and a progressive aging of the population makes it necessary to create new legislation and strategic tools under the aegis of inclusive design and accessibility for all. A significant example is the new interactive accessibility tool Porto's *System of Accessible Itineraries* (SIA), developed in the Portuguese city, which can help decision-makers, municipal services and citizens to develop pedestrian networks in their cities, starting from an analysis of the main characteristics, weaknesses and potential of public spaces within a selected area of investigation, with the aim of improving the inclusiveness of public spaces and for a change of the existing paradigm, thanks to an interactive framework that presents a considerable potential for adaptive replication in many urban centres, reducing physical barriers, in a more integrative territorial strategy, worthy of further insights and research.

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Fig. 1.
Structure of a Smart Tourism Platform responding to the challenges of the destinations in an integrated manner (source: United 4 Smart Sustainable Cities, Smart tourism: A path to more secure and resilient destinations, 2022, p. 13).

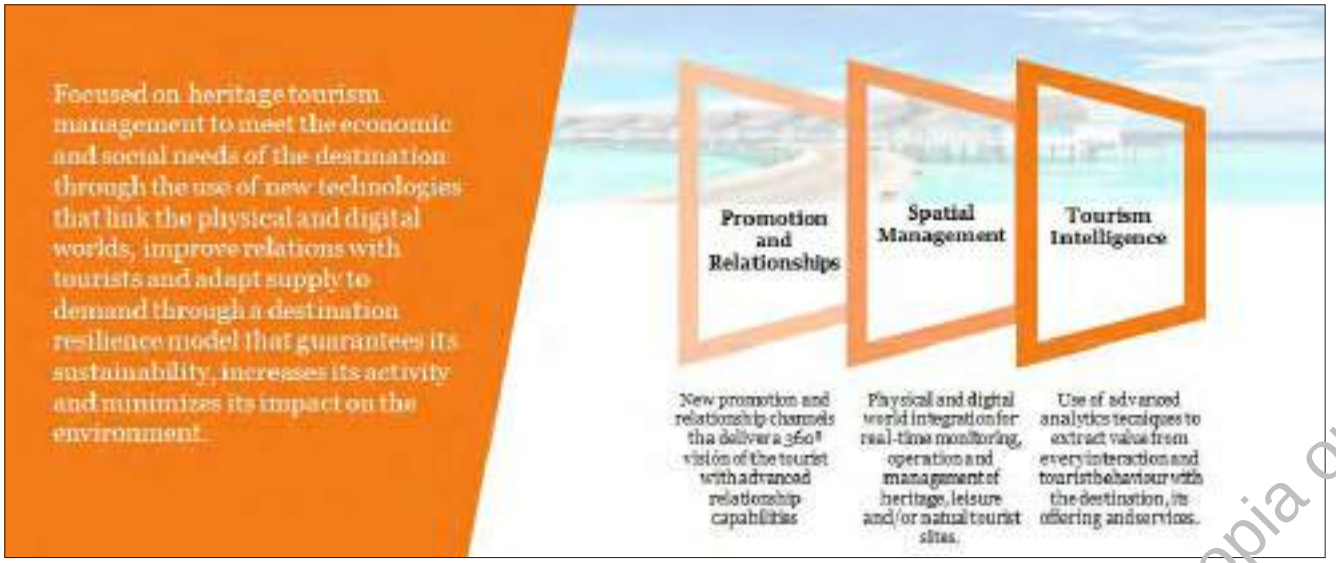

Fig. 2.
Pillars of Smart Tourist Destination, elaborated by the Working Group 4 on Tourism, Health and Resilience Management from the perspective of a Smart City Platform of the U4SSC Thematic Group on City Platforms (source: United 4 Smart Sustainable Cities, Smart tourism: A path to more secure and resilient destinations, 2022, p. 16).

The Cultural Heritage of Cordoba and Naples boost Climate and Social sustainability actions

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Every year, the European Commission and Europa Nostra award projects that promote best practice in heritage conservation and enhancement. In 2022, the winners include *PAX - Patios de la Axerquía* in the city of Cordoba for "Citizens Engagement & Awareness-raising" and *La Cooperativa La Paranza* in the city of Naples for "Heritage Champions"[1]. Both worked on the "empty/abandoned" urban fabric of "outstanding universal value"[2]: the system of *los patios* of *the casas de vecinos* of Axerquia in Spain, and the system of religious buildings in Italy. The common vision of the two projects is the rehabilitation of the dismissed spaces within the dense and intricate urban fabric, enhancing their cultural values. The two cases are examined as follows, highlighting their innovative capacity in social cohesion, economic development and climate adaptation. Naples is an important city in southern Italy, its first foundation dates back to the 9th century BC, and the second, as *Neapolis*, in 470 BC[3]. The historic centre of Naples was inscribed on the Unesco World Heritage List in 1995, later extended in 2011, as "it is one of the oldest cities in Europe, whose contemporary urban fabric preserves the elements of its long and important history"[4]. The neighbourhood is located in the city heart that is currently one of the most visited places in Naples. Historically, its isolation is attributed to the bridge *della Sanità* built by the French in 1807. Its rebirth is linked to the cooperative *la Paranza* founded in 2006 supported by the priest of the basilica of *S. Maria della Sanità*[5]. The priest and a few enlightened citizens have worked on the care of religious buildings together with the local community. These properties are mainly located along the road axis of the *Miglio Sacro* that crosses the entire neighbourhood[6]. The *Sanità* neighbourhood has an irregular orography and is often affected by alluvial phenomena as outcome of riverbeds formation during heavy rainfall, and the catacombs have been repeatedly buried by debris flowing down from the hill *dei Vergini*[7]. Already in the 18th century, architect Sanfelice dealt with the inhalation of the *lava dei Vergini*[8] without solving the problem. Sanfelice's work of containment and drainage can still be seen along *vico del Serbatoio allo Scudillo*, which runs up the countryside that has survived the expansion. It is a vertical green system typical of Naples and currently provides potential for the climatic adaptation of the historic city. This operation -of reopening and reconnecting the open spaces of the Church estate- affects the neighbourhood liveability both in terms of recovering the cultural heritage and in terms of greenery and permeable soils increasing along this path by offering an adaptation to extreme temperatures and rainfalls. Cordoba is one of the oldest cities in Europe, founded in the mid 2nd century BC, and represents an extraordinary synthesis of East and West culture[9]. The city is an enclave between the mountains and the valley of the Guadalquivir River[10], it has developed by adapting over time the Roman and Islamic public space but preserving the residential patio typology. The annual *fiesta de los Patios* renews the convivial style of this type of dwelling, which since 2012 is also an Intangible Cultural Heritage of Humanity[11]: with the *Mezquita*, the historic centre and *Madinat al Zahara* Cordoba has four inscriptions on the UNESCO's W.H. L.. As a response to property speculation and gentrification the association *PAX - Patios de la Axerquía*[12] promotes a new urban model that aims to enhance the rehabilitation perspective. It is a system of building property co-management that provides the basis for the cooperative acquisition and use of dismissed patio houses. This perspective offers a model for urban regeneration through social innovation. The process is carried out together with citizens that updates

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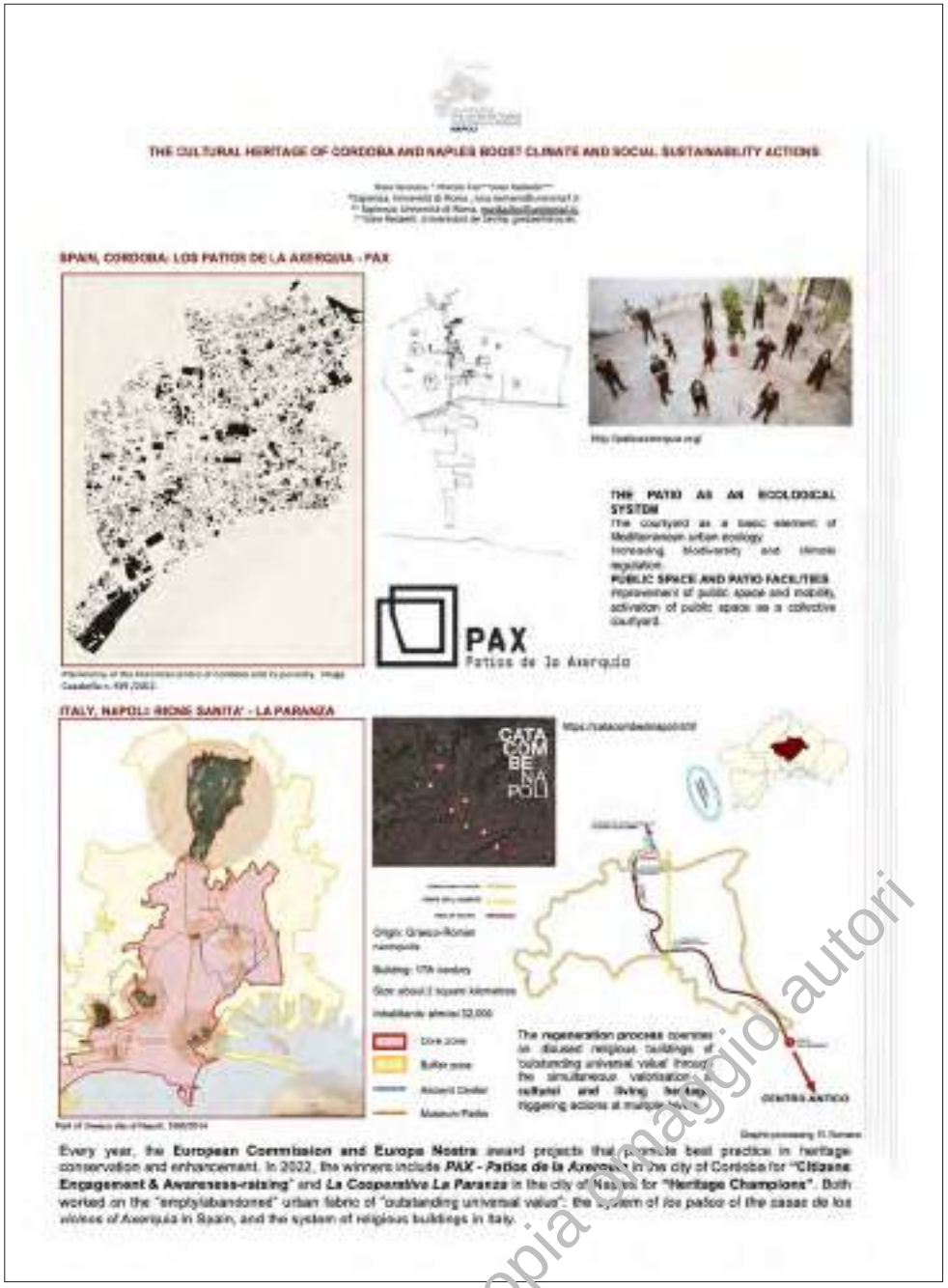
the environmental, social, economic and cultural values of the traditional Mediterranean city (the patio), and presents it as a tool for the future development of a sustainable and inclusive city[13]. The recovery of the patio houses is a possible innovative/adaptive strategy, traditionally it was the place to cool off from the summer heat, and now reused as a place of social aggregation and environmental improvement[14], it becomes a basic element to reconstruct the Mediterranean urban ecology, to improve biodiversity and to regulate the climate[15]. In Naples and Cordoba, the valorisation of dismissed historic spaces has contributed to improving well-being and environmental quality, by re-establishing the original conditions of wind circulation, lighting and therefore ventilation and sunshine, as well as increasing social spaces. In 2023, the two cities met in Cordoba during the *Faro en un patio* conference aimed at exchanging practices and regeneration actions trough the cultural heritage. During the conference, the multilevel character of these operations clearly emerged, which, through the simultaneous valorisation[16], cultural heritage and living heritage, triggered a process of innovation translated into employment, economic development, social inclusion and environmental quality of the historic city.



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Cultural heritage as a tool of resilience and adaptation in minor historic centers planning strategies

Fiammetta Fanizza, Francesco Rotondo***

Introduction

The aim of this paper is to discuss how much the cultural heritage valorization can contribute both to the urban regeneration and the empowerment of local communities. The latter can be understood as social innovation. Especially for inland areas and small town, the cultural heritage acts the civic empowerment because it turns the function of lifestyle policies in addressing social innovation goals. Since in the Italian scenario the National Recovery and Resilience Plan (PNRR) has a strong impact on local governments, the opportunities to evaluate cultural heritage in planning activities can be considered as concrete possibilities for improving levels of sustainability and resilience. Furthermore, cultural heritage means the revitalization of local identities as useful drivers for economic growth. What the paper argues is the importance of mixed methods approaches in planning, placing the role of the historical stratification of settlements at the centre of attention as evidence of the relationship between populations, activities and places and the acquisition of awareness of the population of the role of cultural heritage in development policies. The case study of the new general master plan of the Municipality of Sarnano, a minor historic center within the inner areas of central Italy, is used to demonstrate the theses presented.

The welfare space

The welfare space is a new concept, closely connected to the political agenda, and as such it can be considered a tool capable of improving the quality of lifestyles. Using the interpretative key of welfare space invites reflections on the role that space plays in civic engagement and, by extension, to social rights. The application of this concept to urban regeneration is innovative from the point of view of the analysis tools used and the expected results. Since its specific characteristic concerns widespread generative well-being, which concerns all territories but also people, the case studies focus on the methodological directions and highlight the impacts on local communities. Both are necessary to realize the importance of cultural heritage and reformulate the concept of space in a civic and participatory views. In fact, this reformulation concerns two effectively interconnected perspectives: on the one hand, space as a tangible product as the expected outcome of urban planning interventions; on the other, space as an effect of the interaction between subjects and, nevertheless, between subjects and the environment. A naturally co-determined interaction, which, in full coherence with the tradition of the Chicago School, is influenced by the physical characteristics of the environment in which it is placed.

Objectives

The main question regards the importance of the relationship between planning and welfare, i.e. the learning role of cultural heritage in giving new meaning to the space. In the new General Town Plan (PRG) of Sarnano, the historical evolution and the signs that this has given to future generations have been interpreted as a cultural territorial system on which to base the future development of municipal territory. The Census of rural buildings and artefacts of historical-architectural value, that of the Historic Nuclei and the subsequent drafting of guidelines for the recovery of rural architecture, were developed together with some associations of local amateurs who acted as local agents of a new development model based on the historical stratification of settlements. The census and the Guidelines are presented as elements of reunification between the population and places following the seismic events of 2016 and the relative degree of damage and loss of the territorial historical heritage, becoming a potential tool for transmitting the elements of history to future generations civic and local, a fundamental process to maintain and support the heritage identity at the center of the definition of self-sustainable local development, promoted by Alberto Magnaghi (2005), or from the perspective of a place based development hoped for by Fabrizio Barca (2012), which the plan aims to pursue. The collaborative and shared construction of these documents, verified in the observation phase, has become a space of urban welfare within which identities can be reconstructed and possible futures identified.

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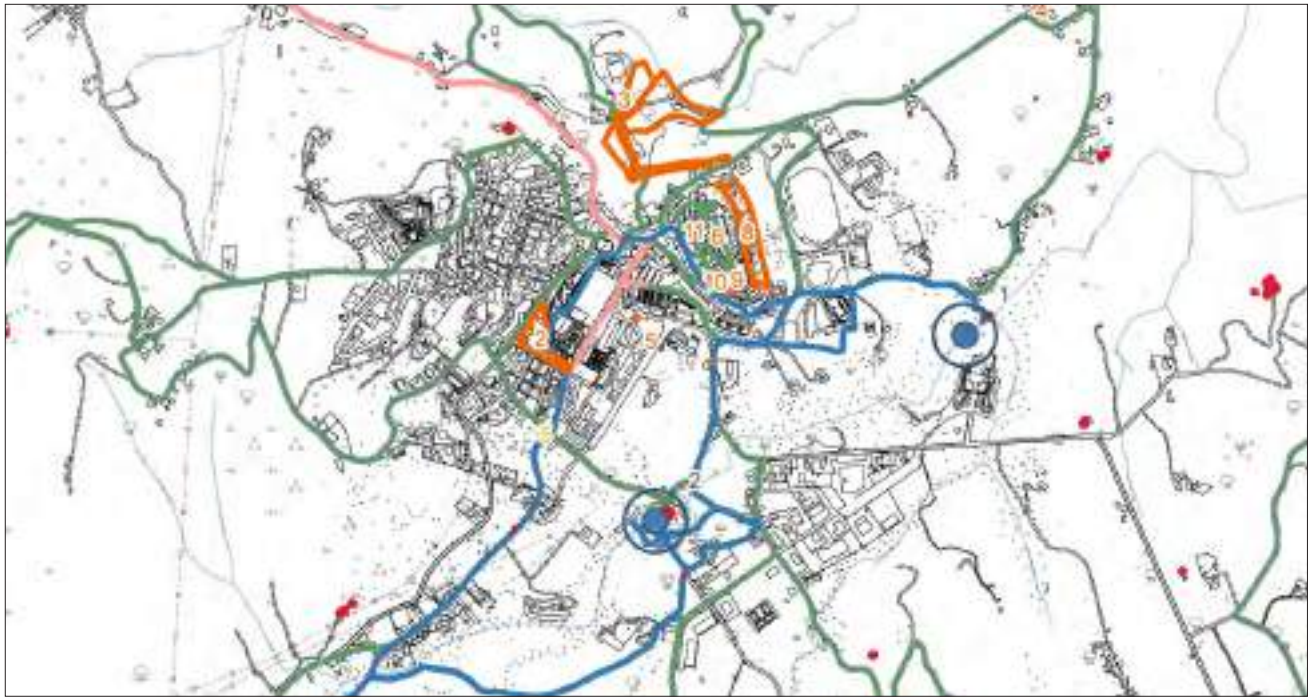

Fig. 1.
Territorial Cultural System and civic routes for the use of heritage with soft mobility systems.

Fig. 2.
Outreach session to recognize and share the elements of Sarnano's cultural territorial system.

Sicani: where marginality meets cultural heritage through the place-based approach

*Desiree Saladino**

The policies of enhancement of the cultural heritage as an engine of territorial economic growth represent the framework of the research project. In accordance with the 11th goal of the 2030 Agenda Target 11.4 "Strengthening commitments to protect and safeguard the cultural heritage", the cultural heritage can play a fertile role in overcoming the different types of marginalities, as in the case of national inner territories, the large part of Italian territory subject to marginality and depopulation. French, Spain, Italy, and Germany declined, in different policies, the war against the depopulation of marginal territory. They are niche areas, distant from big economic flows and frenetic rhythms of life but incubators of treasures and heritage, privileged places of conservation sustainable enhancement of cultural heritage. In Italy, in particular, there are two policies of territorial and social cohesion: Strategy National Inner Areas (SNAI) and Support Fund for Marginal Municipalities and these policies see this territory as privileged territories, also if they are small and fragile, where to investigate the spatialization of scientific research that attempts to answer the following research questions: "How, if, and in what way the community cooperatives, as tools of place-based approaches to local development, which translate into social innovation, produce measurable spatial impacts to the systemic enhancement of cultural heritage in marginal areas?". The research fits into the large academic discussion on the territorialization of social innovation and place-based approaches that consider cultural heritage as a driving force for systemic local development. In agree with the Faro Convention in 2005 defined Cultural Heritage as the set of all inherited resources from the past where identities, traditions, and values result from continuous interactions between communities and places (Council of Europe, 2005[1]). In agree with Magnaghi who in 2010 defined territories as relationships in which there are dense local identities rooted in time and history (Magnaghi, 2010[2]). In these definitions, the community plays a key role in enhancement processes, where it's itself the protagonist, implementer, and beneficiary. The first objective of the research is to supply indications and guidelines to drive the community cooperative, as a spatial form of social innovation, to enhance the cultural heritage in marginal territories. This objective will be achieved through a detailed analysis of two case studies, one international and one national, to identify efficient and effective strategies for the enhancement of cultural heritage within marginal territories. This marginality is analyzed in its multidisciplinary, characterized by spatial dimensions – identified by the classification of inner areas – socio-economic – identified by the marginal municipalities L. 178/2023 – and compositive – identified by ISTAT from the Index of municipal fragility. Despite their marginality, these areas have strong social cohesion and deep local identity. After a review of the scientific literature, the research uses quantitative methods to quantify the marginality in Italian territory and with a critical approach, it selects an experimental case study (The Sicani). After, the research uses a place-based approach, such as Community Map to evaluate the local awareness of cultural heritage. Following the drafting of Community Map, the research aims to investigate the analysis in more detail through a methodology that includes qualitative methods, such as interviews, and quantitative methods, such as on-desk mapping and data processing. In particular, the research examines two case studies of community cooperatives operating in marginal territory. The first will be a French case study. The second will be focused on the Italian experimental area. In addition, the research aims to compile a database for an initial survey of cooperatives active in the Italian context. The enhancement of inner territory thought tools and processes place-based is a central issue in the studies on local development and in the enhancement of cultural heritage. The community cooperatives are important place-based processes in fragile and marginal territories. These cooperatives, embodying forms of social innovation, produce measurable spatial impacts that contribute to the enhancement of cultural heritage. The analysis of the relationship between community cooperation and territorial context highlights how this initiative encourages the creation of social networks, the development of local service, and the promotion of practices, which can positively affect the preservation and enhancement of local cultural heritage. Therefore, the examination of processes and impacts generated by community cooperatives offers a perspective to understand how social innovation can contribute to the enhancement of inner territories and the preservation of cultural heritage. The projections of this research aim to enhance the local and cultural identity of marginal territories through place-based narratives, beginning with cultural heritage to counteract the decline of these areas and promote a more effective utilization of their cultural heritage.

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Fig. 1.
Conceptual map. Elaboration by the author.

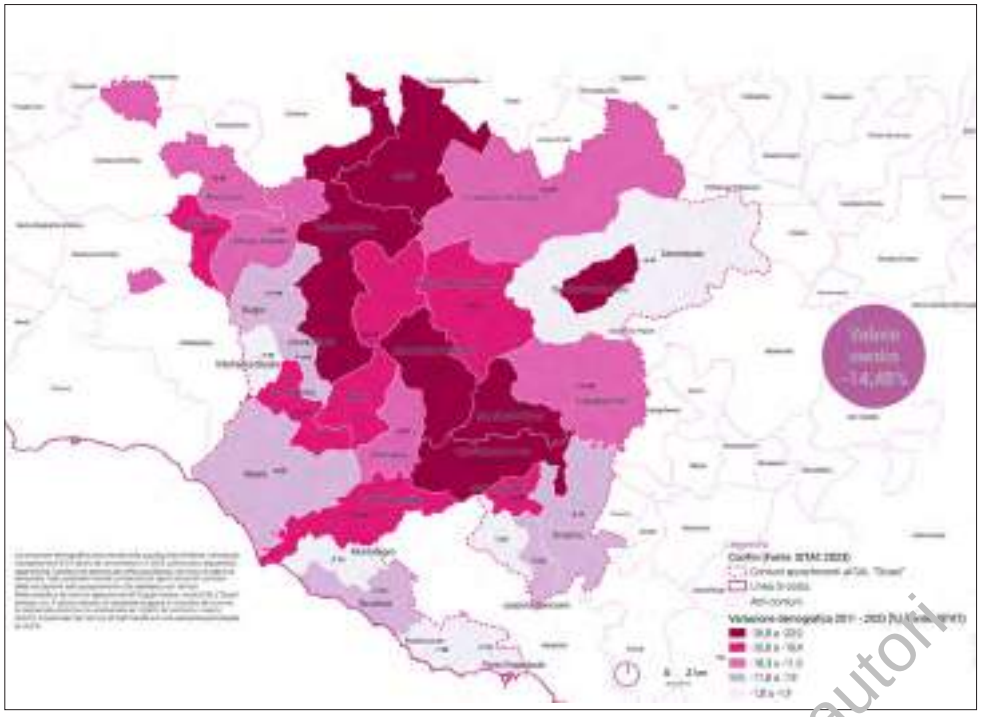

Fig. 2.
Demographic decline in Local Action Group (GAL) Sicani. Data source: National Statistical Institute (ISTAT). Elaboration by the author

Policy and regeneration of Italian historic villages

*Camilla Salve, Alessandra Tosone and Donato di Ludovico**

Inner small towns and villages depopulation and marginalization are increasing phenomena across Europe. These territories suffer from economic stagnation, unemployment, lack of many important services, adequate infrastructures and transport systems, long distances from the major urban poles, a decline in birth rate and aging of the remaining population[1]. But they are also depositaries of a territorial heritage[2], cultural and natural, material and immaterial, capable of expressing a potential, today not fully enhanced, that needs to be rediscovered because it could establish itself as a possible driver for addressing their socio-economic challenges towards sustainable regeneration processes. Regeneration was introduced in the 1980's in the UK and the USA as an intervention on dismissed industrial areas[3]. The 2010 Toledo Declaration of European Union broadens its perimeter by adding urban heritage[4]. Compared to the urban context, the issue of the regeneration of historic inner villages is still hardly discussed in the literature[5], even though recent initiatives like the Strategy for Inner Areas (SNAI), active in Italy since 2014, have raised awareness of the problem. With these considerations, the research carried out with an interdisciplinary and multi-scalar approach, was funded by the Territorial Cohesion Agency within the framework of the SNAI for the Abruzzo inner area Valle del Giovenco-Valle Roveto. It aims to identify resilience parameters that are congruent and compatible with the characterisation and peculiarities of the operational context of inner areas, to construct a user-friendly tool for the analysis and the evaluation of the "disturbing" elements and the residual potential, concerning which to define strategies, lines of intervention and operational guidelines able to start sustainable regeneration processes of the built environment. The assessment tool is intended to support the planning and policy decisions of local authorities to initiate controlled, adaptive and sustainable regenerative processes capable of combining the strategy of preserving the heritage with that of cultural enhancement, economic development, social cohesion and natural resources protection. The research is divided into three steps. The first regards the state-of-the-art analysis through the study of national policy documents, regulatory references and ongoing programmes. The second is about the collection of resilience parameters for the construction of the tool. The third one concerns the validation of the tool through the application to the case study (Fig.1). The results regarding the state of the art of historic villages regeneration are presented in this paper. At first, an attempt was made to reconstruct the national and regional regulatory framework. There is no national law that defines regeneration, and the existing regional regulations have quite diverse definitions. Subsequently, from the literature review a definition of regeneration has been proposed. Regeneration is a process that requires a multi-scalar and integrated approach, interventions that include economic, social, environmental, and cultural dimensions[6] and the involvement of a variety of actors. In the end, the results of three active urban programmes in the Italian contest that promote regeneration projects in villages and small towns were analysed based on some parameters: the call for the regeneration of small towns established by Law n. 158/2017[7]; the interventions promoted by the National Recovery and Resilience Plan (PNRR) with the strategy "Historic villages attractiveness" and the interventions financed through the Complementary National Plan for municipalities affected by the 2009-2016 earthquakes (PNC). The evaluation of these initiatives has demonstrated that the lack of guidelines leads to punctual actions without a long-term and integrated vision. In addition, social, economic, environmental and cultural issues are often ignored and local authorities are generally unprepared to deal with the complexity of the various elements that characterize inner areas. This demonstrates the need to define an operational tool for controlling the regenerative process that is sustainable and respectful of the peculiarities of the investigated heritage.

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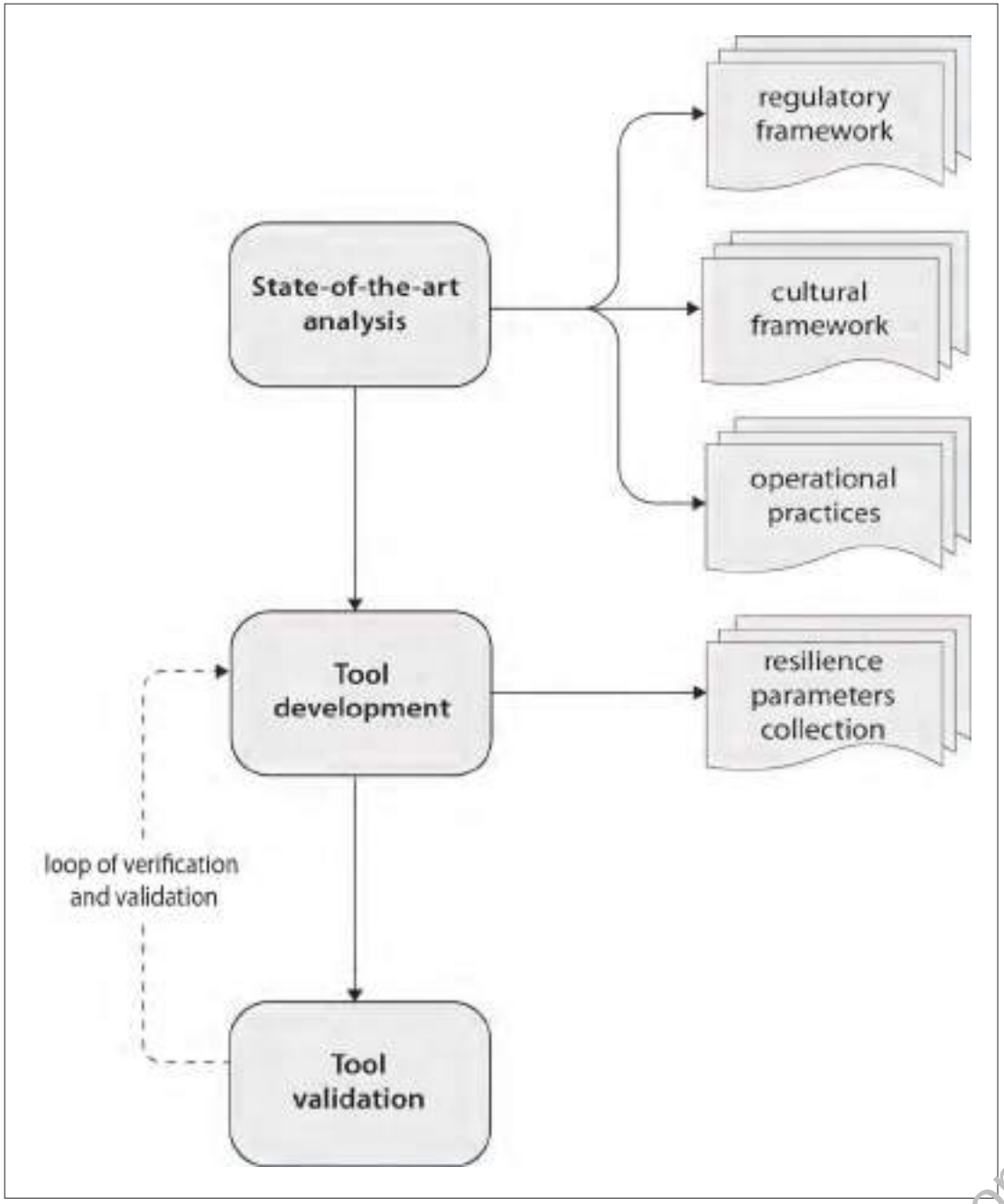
Methodology diagram



The new archaeological park of Liternum as a booster for urban regeneration

Francesco Stefano Sammarco, Anna Terracciano***

This contribution[1] focuses on the archaeological park of Liternum[2], in Giugliano in Campania (a municipality in the far north of the Metropolitan City of Naples), located along the shores of Lake Patria, a few steps from the Domitio-Flegreo coastline. In this park it is possible to visit, when usable, the remains of the ancient city of Roman foundations that guard an important archaeological and cultural heritage, which today are in a semi-abandoned condition and are completely isolated from the surrounding urban context. These places, in turn, are characterised by the critical issues arising from heavy unplanned urbanisation and the scarcity of services for its inhabitants. The constant and recurring element, however, is that of the 'enclosure', which takes on different forms and meanings along this part of the coastline, becoming the characterising element of the coastal landscape. The aim of this contribution is to propose some interpretations, aimed not only at defining new readings of this area, but above all a framework of strategies, with the constitution of the new archaeological park of Liternum at the centre, capable of initiating a process of urban and environmental regeneration. This process is intended to promote mobility along the coast, mitigate risks and foster the idea of a polycentric network of services for greater social inclusion and interaction. The proposed multi-scalar approach has made it possible to build an up-to-date picture of the knowledge of the urban and territorial structure, fostering an understanding of the city also through the administration of an online questionnaire to the inhabitants, with the aim of soliciting prospects for the regeneration of new uses also with a based-placed and participatory approach. The more general objective is to build a framework of integrated strategies aimed at the regeneration of Liternum in order to make it a centrality of territorial value that can also be a driving force for the relaunch of this territory. The process of getting to know the territory was characterised by several stages, in addition to that of the aforementioned questionnaire, in particular: through various inspections and photographic campaigns, which made it possible to deepen not only the physical knowledge of the territory but also its consolidated uses and practices; through analytical-interpretive maps capable of narrating this territory through multiple points of view. In this way, four "city figures" were constructed in the Giugliano coastal strip, capable of rendering the main characteristics of this territory in a clear and synthetic manner. Beginning with this condition of fragmentation and interclusion typical of a settlement principle that is built by 'enclosures' and is represented through these four 'city figures', a number of urban and environmental regeneration perspectives have been outlined with the aim of trying to hold them together, defining actions to stitch together pieces of territory, promoting public mobility along the coast and risk mitigation with the aim of fostering a polycentric network of services for greater social inclusion and interaction. The design proposals in this contribution thus attempt to construct a new narrative of the landscape in which Liternum is located, overturning the image of the 'enclosed city'. On the whole, an attempt is made to reflect on processes capable of producing a new awareness of the values and potential of places and to promote actions of re-appropriation and recovery by communities. The project for the new archaeological park of Liternum in fact constitutes an opportunity not only to enhance an archaeological heritage, but also to activate a series of processes of regeneration of the entire urban context, towards new forms of liveability and inclusion. It was a matter of proposing

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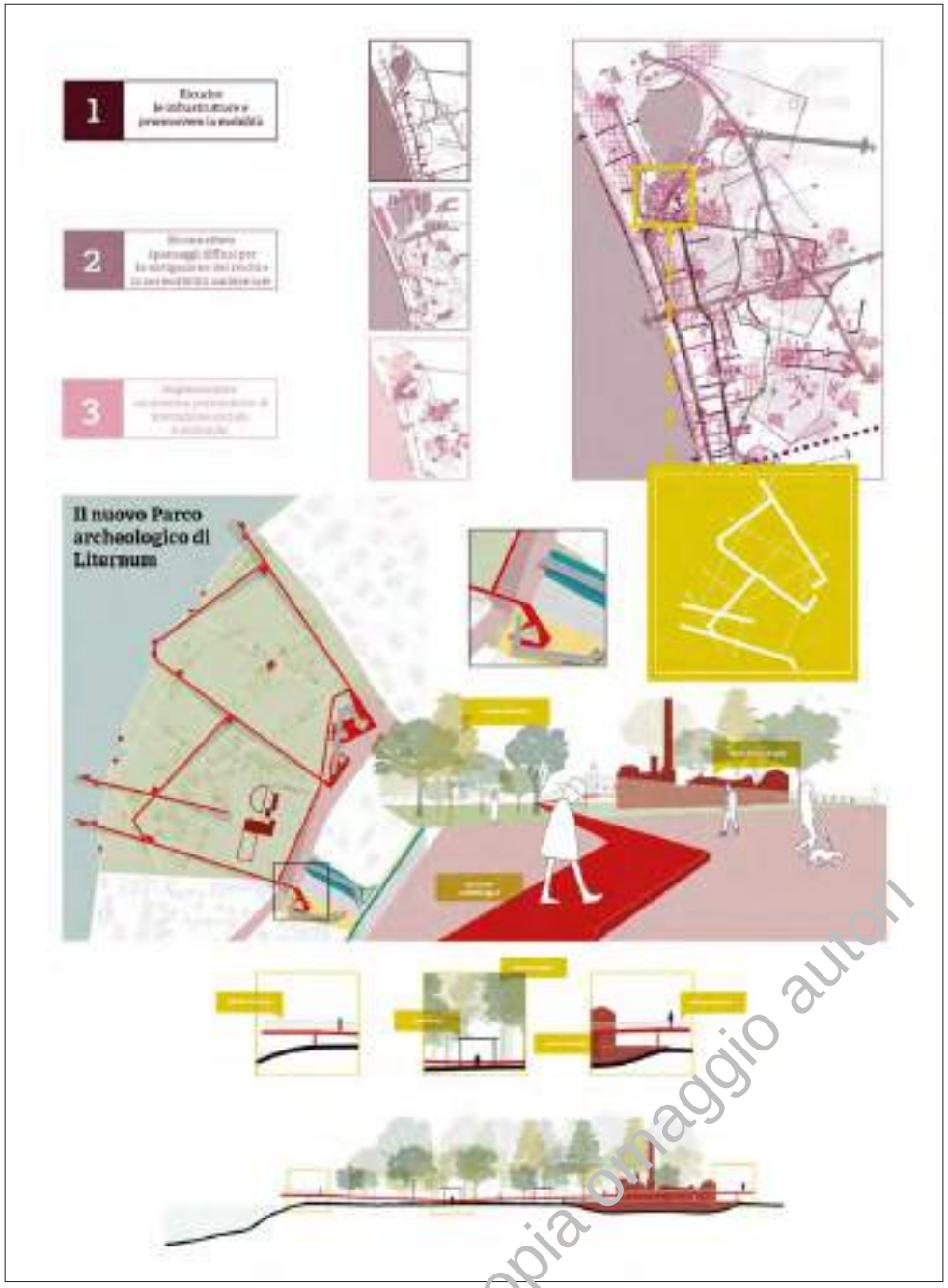
[1] The proposed contribution was developed as part of the Master's Thesis of Caterina D'Alterio and Davide Giannini entitled: "Oltre la città recinto della Fascia Costiera Domitia. Il caso studio di Giugliano in Campania", University of Naples Federico II, Department of Architecture, MAPA Master's Degree in Architecture Architectural Design, Supervisor: Prof. Anna Terracciano, Tutor: PhD. Stud. Francesco Stefano Sammarco.

[2] Today, Liternum is part of a complex - managed by the Mibact - namely the 'Archaeological Park of the Phlegraean Fields', which includes many other sites such as the Amphitheatre of Cuma (Bacoli, Na) or the Flavian Amphitheatre of Puteoli (Pozzuoli, NA). Liternum has thus been set up as an archaeological park: its surface area is co-owned by the State, the Province of Naples and the Municipality of Giugliano in Campania. https://www.beniculturali.it/luogo/parco-archeologico-dei-campi-flegrei-parco-archeologico-di-liternum.

Fig. 1.
The system of rules (of Strategic Objectives and Project Actions) that outlines the perspective of the new 'city figure', together with the masterplan of the New Archaeological Park of Liternum. Source: elaboration of Master's Thesis by Caterina D'Alterio and Davide Giannini



new design images and new territorial figures to "subtract some archaeological areas from their condition of places separated from the city in order to restore a broader urban use" (Manacorda[3], 2009), making the spaces of the Archaeological Park of Liternum a public place for the city, with new uses and functions, also with the aim of returning some spaces to the associations operating in the context, overturning the idea of places of culture and, in this case, of archaeological sites, as specialised and monofunctional enclosures removed from urban dynamics, but rather opening them up to the city and establishing fertile relations with the context's cultural, social and entrepreneurial actors, and above all pursuing urban and territorial goals.

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From the International Documents for the Protection of Cultural Heritage to the project lines of *Integrated Restoration* of historical settlements

*Caterina Sergi**

From the theoretical principles and methodological criteria of the *International Documents for the Protection of Cultural Heritage,* from dialogues undertaken with esteemed scholars of the disciplines related to the restoration of the European architectural and environmental heritage, proponents of the *Venice Charter*, members of ICOMOS and speakers at the round table "*The founding principles of architectural restoration*" of the *Krakow Charter* In 2000, from the research carried out on the Legislation of Cultural Heritage and on the Theory of Restoration, as well as on the construction systems of historical architectures that have resisted earthquakes, some personal reflections on the concept of *monument,* on the *time factor* and on *sustainable enhancement* as a *dynamic expression* of the restoration project are inspired. The aim is to trace the design lines of *Integrated Restoration* of historic settlements operating according to a *scientific, thoughtful and dynamic conservation and enhancement* to envisage a rebirth not only of the historic village but also of the surrounding area. Considering that the *monument* is almost always a *structural palimpsest*, the result of overlapping styles and construction techniques from different historical periods, all equally important, personal reflections focus on the concept of *monument* in relation to the *time factor*, considered the creator of the antiquity of the monument. From the compendium on the historical evolution of the concept of *monument* emerges the importance that the monument, from the Latin *monumentum*, as "*memory",* from *monēre* to be called to mind, has had in the extension of *time*, that is, historicized by time, the latter understood as the creator of the *duration* and *antiquity* of the monument. But what is *time*? Defined as an unlimited succession of instants in which the becoming of all things takes place and various facts take place, in relation to human events and natural events, it can be considered as the condition in which things are continuously transformed, have a beginning and an end, as opposed to eternity, according to a straight line. Or it is a repetitive cycle of past, present and future without end, as in a circle. The monument is subjected to this unlimited succession of instants during which it changes in matter and consequently in form, but also as the complex and stratified result of the events to which it has been subjected throughout its history, demonstrating that it is not a fixed and immutable entity over the years. In this new millennium, the topic of *time* is an even more difficult topic to deal with in relation to the conservation of Cultural Heritage. In reality, marked by very fast flows of information and communication systems, the life and work that takes place in the historic center of the city clashes with the protection of its monuments. Beyond the *dichotomy* between old and new architecture, it therefore seems that another important problem is the *synchrony* of the rhythms of life, seen *statically* for cultural heritage and *dynamic* for everyday life processes. This leads to another dichotomy between *Restoration and Progress*, a misconception of seeing restoration as different or even opposed to progress. I believe that the two terms are not antithetical, on the contrary, by logic and on the basis of their definitions, they have several elements in common: progress, from the Latin *progressus-us*, from *progrĕdi*, to progress, is evolution, the act of progressing something that already exists in the past and in the present; restoration is the set of operations, measures and interventions aimed at bringing back a historical testimony in conditions of correct legibility, function and to ensure its preservation. The idea that there is no conflict between Restoration and Progress but, on the contrary, they are complementary themes in the development planning of a territory, and that therefore they are terms in perfect symbiosis, is well defined in the European Directives. There can be no restoration of a historic village and its centuries-old culture if its enhancement is not *integrated* with technological progress, which allows, for example, with new ICT technologies, to trigger an economic process of good use of resources and goods; in turn, technological progress cannot be defined as such if it does not succeed in the objective of evolving the quality of life by satisfying the fundamental needs of man: cultural, material, moral and social. This is the idea of *Integrated Restoration* proposed in the *Historic Smart Village,* a term coined

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Fig. 1.
The Amendolea Valley in the province of Reggio Calabria with the medieval villages of Roghudi and Roccaforte del Greco.

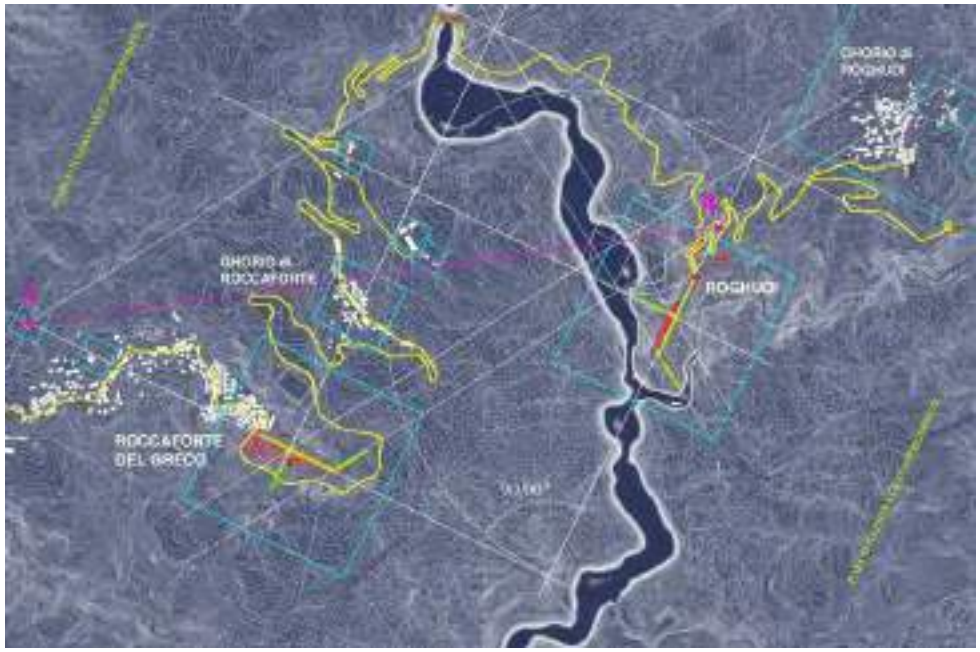
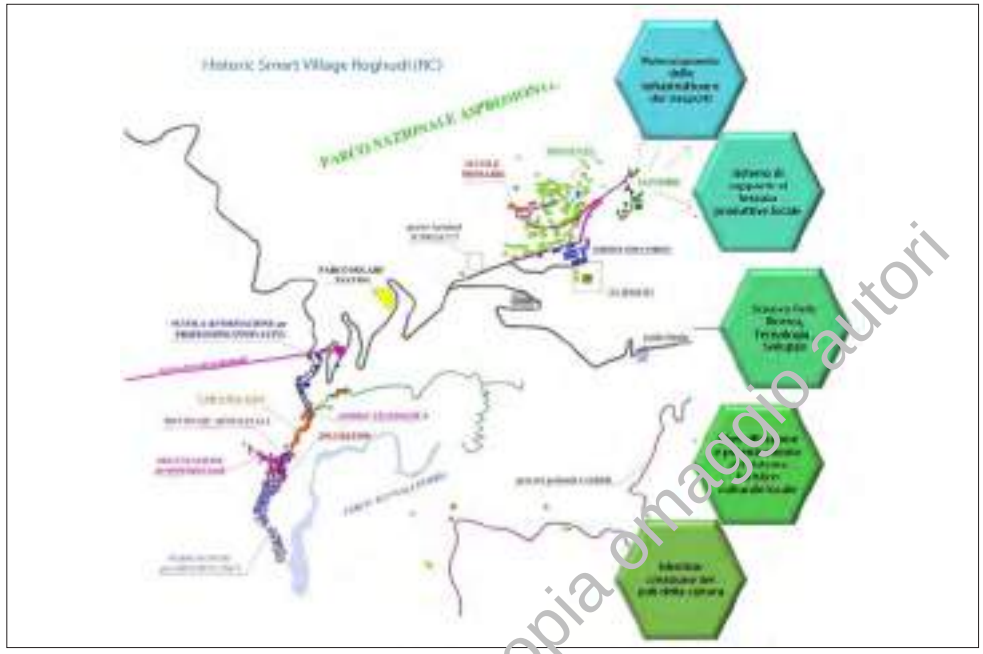


Fig. 2.
Action Plan for the dynamic enhancement of the Integrated Restoration of the Historic Smart Village Roghudi (RC).



to indicate an *intelligent,* autonomous, eco-sustainable historic village, which marries both the principles of conservation of the Restoration Charters and the principles of the *Smart City* or "*intelligent city*", interweaving the application of new ICT technologies in the field of architectural heritage conservation, where the idea of *dynamic enhancement* of architectural heritage is oriented first of all to the conservation of the cultural heritage itself, for the maintenance over time of the *identities* of the places and their *authenticity*, so that the inhabitants of that historic place can *operate* according to a *dynamic and no longer static conception of cultural values*: to live one's own traditions for oneself and to share them with other civilizations, in a cross-fertilization of cultural experiences. Part of this idea is a new conception of *time* that is no longer *linear* or *circular*, but in this new millennium it has changed again becoming *iterative*: it is the time, or instant, in which an object manages to be "experienced" repeatedly and in the same way in unlimited *virtual-real spaces*, thanks to the worldwide telematic network.

Parallel Workshop

6. Resilience and adaptation

Coordinator:
Claudia Cassatella
Co-cordinator
Emanuela Coppola

Discussant
Domenico Passarelli
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Massimo Sargolini

Magna Græcia 2049
An example of Ecological Transition process to build a spatial, social and economic resilient inclusion

*William Marco Aiello**

The Green Transition towards a more Resilient and Sustainable world represents the greatest challenge of our time. (EU Commission 2019) The increasing accumulation of CO2 in the atmosphere, produced by anthropogenic activities, raises the global average temperature to the point where we can already speak of a 'Global Boiling Era,' calling the most fragile territories to prepare for the effects of climate change that ensue, with bold and unprecedented actions. (Guterres 2023) For these reasons, the proposed project aims to make the vast area of Crotone, a territory in central-eastern Calabria strongly marked by fragility, to be more Resilient and Sustainable. This area presents numerous alerts in all aspects: climatic (+1 °C Tmean compared to the pre-industrial period; prolonged drought, tropical storms); environmental (poor permeability, erosion, hydrogeological instability, and desertification of 75% soil; risk of biodiversity loss); infrastructural (obsolescence and undersizing of internal roadways; 67% of municipalities classified as 'inland areas'; 2+ hours away from the Scan-Med corridor – TEN-T network); social (population -7,5% from 2016-2021, territorial inequalities, migration and abandonment phenomena; high incidence of polarized and seasonal tourist population); economic (vulnerability of flagship crops; deindustrialization; GDP at 55% of the national average; youth unemployment 47%, 'NEET' phenomena 51%). The project intends to address these criticalities by initiating a Transition process, with a holistic and multiscale approach and actions that, on one hand, make this territory a true 'entropy absorber,' capable of slowing the chain of effects triggered by climate stresses and shocks (resilience), and on the other hand, reduce its ecological footprint, initiating a deep economic decarbonization and habit modification through actions of social, economic, and spatial inclusion (sustainability) oriented towards the vision of a Neoanthropocene. (Carta 2020) In order to achieve this objective, in a just and fair manner, the Project has been organized according to a strategic plan of ecological Transition, identifying 37 integrated strategic actions to be implemented in the 27 communities settled in this vast area through the tools of urban and territorial Regeneration. The territory is conceived as a single large complex system; from this perspective, the actions planned by the Project are aimed at enhancing, integrating, or transforming specific pivotal areas of the system, strengthening it overall while acting in a localized manner. These areas, identified in coherence with the objectives of the national ecological Transition plan (MiTE 2022), constitute the Transition Matrix of the territorial system; through the implementation of actions on the areas of this Matrix, it is possible to achieve the adaptation and mitigation of Climate Change in the vast area of Crotone in an economic and effective manner. The 37 actions include, among other things: the care of environmental fragilities and the protection of terrestrial and aquatic biodiversity, through the strengthening of the provincial ecological network and the establishment of ecomuseums; the circular and smart management of water, through the diffusion of low-water crops and the construction of a desalinator; the rebalancing and digitization of the transportation system, through the enhancement of local roads and the implementation of smart, robotic, and green systems for civilian transport by road and goods transport by sea and air; the safety and enhancement of energy production, through a mix of renewable and nuclear sources, allowing for very low-emission hydrogen production; the circular transformation of the local economy, through the construction of hubs for the valorisation and reuse of waste; the strengthening and integration of education and the labour market, through the construction of a large technological, scientific, and cultural hub for Innovation, inspired by the Pythagorean genius loci. The actions of the Plan have then been subjected to coherence and feasibility verification, through two procedures: the first, of consistency with Agenda 2030, which, with a qualitative approach, highlighted the strong contribution of the 37 actions in achieving all 17 SDGs, and in particular SDG 13 – 'Climate Action'; the second, of technical-economic feasibility, through which, with a quali-quantitative approach, it was possible: a) to trace possible funding lines currently available for the concrete implementation of actions, and b) to

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assess the local enterprise's capacity to carry out the actions, resulting in the complete feasibility of all 37 actions of the Plan. In conclusion, the Project Plan 'Magna Græcia 2049' makes possible – even in the theoretical-methodological path provided for master's theses in Architecture by the Department of Architecture and Territory (DArTe) of the Mediterranea University of Reggio Calabria – the Transition of the vast area of Crotone towards a new territorial arrangement, made resilient and sustainable by the full spatial, social, and economic inclusion of its 27 communities through the planned actions.

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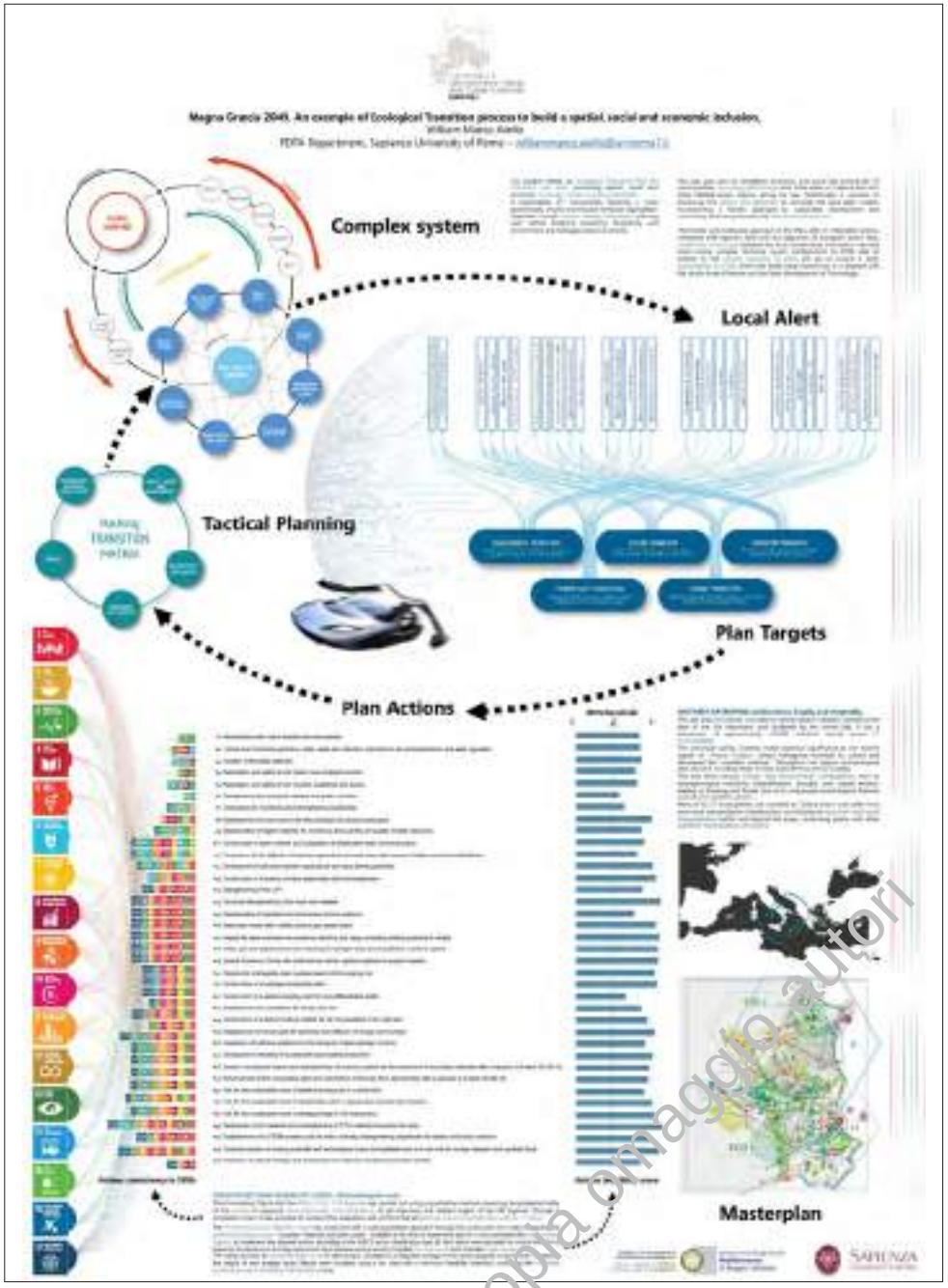

#Manilva Plan n'2030
towards a Local Urban Agenda

n'UNDO.org

At the current time, cities play a crucial role in achieving SDG with a specific objective – SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable – in the United Nations 2030 Agenda. The purpose of this technical assistance is to provide Manilva (Málaga, Spain) with:
1. a technical and objective analysis of the current situation of its urban planning,

2. a list of specific proposals and an action strategy, to prepare its Local Urban Agenda and its Action Plan, especially in the areas of: Sustainable use of land and resources // Renaturation // Decarbonization // Resilience to climate change // Access to quality housing // Mobility and accessibility. This study is a **tool for the improvement and regeneration of the urban and territorial environment** of Manilva, with the criteria established by the national and international Urban Agendas, seeking a way to improve their standards and get closer to the recommended ranges in each of the different aspects. that define urban environments.

The methodology used (Plan n'UNDO) is a specific tool from this technical office, based on **n'UNDO criteria of minimum intervention and maximum impact, through Do Not Do, Undo and Redo strategies**, and the analysis of pre-existences as main sources to detect urban and territorial problems and opportunities and propose sustainable and effective solutions. This methodology allows for a progressive analysis to be carried out at different scales in order to make visible and connect the different realities that coexist in the territorial and urban complexity and include all the agents involved in the process. Its development allows different points of view to be included in the process, ranging from subjective perceptions of the environment to the most technical approach. The process is based on a first contrasted analysis of the starting point, the development of a diagnosis and the subsequent development of an appropriate intervention strategy, where specific proposals are presented with a specific action plan.

The study is an inclusive and multidisciplinary process with public institutions, civil society and private sector. After elaboration, a defined image of the intervention area and the problems and opportunities it offers is obtained, as well as a list of specific proposals to carry out in order to improve its environment in the short, medium and long term, the purpose of which is to achieve the predefined objectives in each. The result leads and facilitates decision making, allowing flexible execution over time, with the capacity for feedback and adaptation to changes. The main values and characteristics of the applied methodology are:

- To be the result of a holistic process, adapted case by case.
- To be a participatory process, with continuous dialogue in all phases.
- To work with flexible and adapted times, both in the development of proposals and in their implementation.
- Accessible and practical format with digital support to facilitate the management and monitoring of the different phases.

Likewise, it establishes a critical review of territorial sustainability, urban dispersion, diversity, mountain-coast connection, tourism in its double aspect of economic engine and territorial predator, and cultural, heritage and ecological landscapes. The goal is a smooth but constant transition of Manilva towards a model defined by the New Urban Agenda:

- Connected: with powerful connection networks, based on the use of public transport, avoiding territorial barriers.
- Diverse: with mixed land uses, reducing dependence on transportation and mitigate territorial mono-functionality
- Compact: with high and minimum densities, prioritizing pedestrian routes as basic urban structure.
- Sustainable: where, systemically, the environmental and social take precedence over the exclusively economic.

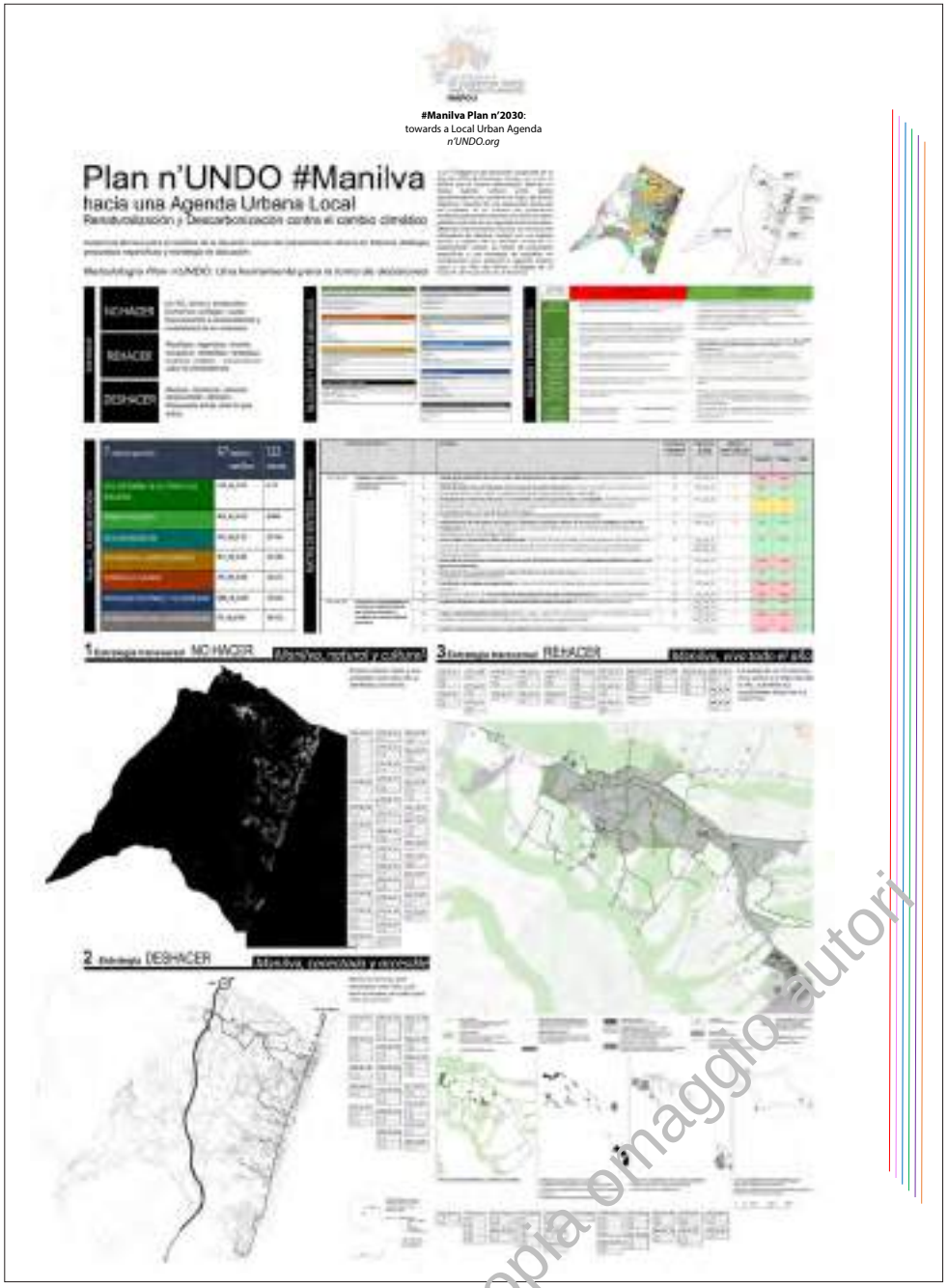

Fig. 1.
Summary poster of the proposal methodology, from n'UNDO criteria: Do Not Do, Redo and Undo

The result in Manilva is a total of 212 specific and independent actions, ranked according to Time (Short<1 year / Medium 1-3 years / Long>3 years), Cost, Priority and Impact. These actions can be modulated according to Manilva needs, resources and possibilities of implementation, but always aiming at achieving the general objectives. Those actions that meet high priority, high impact, short implementation time and low execution cost are favoured. The fact that proposals can be executed independently, and even without specifying a pre-established order, enables constant feedback and allows evaluating and calibration of the effectiveness and efficiency, guaranteeing greater quality, control and readjustment, resulting in optimisation and adaptation to new possible realities. The n'Plan is an instrument for immediate and adaptable implementation dealing with uncertainty.

This work is part of the research that n'UNDO is developing since 2011; "n'Plan: Theoretical basis, Methodology and Practical application for the improvement of territorial and urban environments from Do Not Do, Redo and Undo", and collects the knowledge acquired in previous plans: n'Plan #Kalmar (Sweden); n'Plan Accessibility #Guadalupe; n'Plan voids #Málaga… Plan n'UNDO #Manilva has received the 2022 national urban planning award, granted by the Spanish architects association which represents a recognition as a tool for change in intervention approaches in the city and territory, and its value as a generator of more resilient and sustainable cities.

A new methodology for multi-sector and harmonized urban and energy planning in small and medium-sized cities

*Alice Borsari, Adriano Bisello**

With the global population expected to reach 9.3 billion in 2050 and the increasing trend of the urban population in this time frame, cities, and urban areas, currently responsible for around 70% of total CO2 emissions, will play an even more crucial role in achieving the targets set by the Climate deal at COP26 to become carbon neutral and keep pace with the 1.5 degrees target. The Climate Deal calls on all Nations to integrate climate change mitigation and adaptation measures into national, regional, and local planning to implement by 2030/2050. Moreover, the EU's ambition to become the first climate-neutral block by 2050 is challenging Member States to effectively integrate it into local planning instruments.
The present research shows how cities across Europe are struggling to find new capabilities in integrating urban and energy planning that would enable them to prepare and monitor long-term sustainable energy strategies tailored to their specific local conditions.

This study is part of the PLENTY Life Project[1] which supports EU small and medium-sized municipalities in establishing institutionalized cross-sectoral planning processes but also in building local capacities energy planning aligned with the urban planning process. It investigates how a proper methodology, designed on specific needs and human resources within municipalities aimed at integrating different public sectors and disciplines, brings awareness to understand and locate evident misalignments or to fill gaps between urban/territorial planning tools and local clean energy transition strategies.

The methodology will be applied in 7 demonstration cases, ranging from 3,000 to 30,000 inhabitants, spread across four European countries: Italy (Dolo and Castelfranco Veneto), Portugal (Fundão), Austria (Eggenburg and Horn) and Romania (Lugoj and Sânnicolau Mare), to highlight fully integrated innovative planning processes. The pilots have been selected to represent municipalities and regions that are ambitious but are still lagging behind in preparing their clean energy transition strategies. Through a shared co-creation process, by considering the role of urban governance and the conditions of regulatory frameworks, the project will also provide guidelines for systematic planning and implementation of the energy transition. These guidelines aim to be replicable in other European contexts, preparing cities for the adoption of new governance models.

In particular, this methodology will help the local Public Authorities to perform better in reconnecting local energy strategies and urban planning tools, contributing to their alignment not only from a formal point of view but also in institutionalizing an integrated sustainable planning approach. This process breaks down silos between different technical departments in small and medium-sized cities by allowing them to effectively cooperate within a multi-sector perspective. Key elements of the methodology are a systematic training programme for capacity building in integrated planning for the clean energy transition (targeting policymakers, civil servants and spatial planners from local and regional authorities) and dedicated workshops within municipalities. Moreover, to tackle the multifaceted challenges at the local level, citizen and stakeholder engagement should facilitate the progression of innovative initiatives through a process of collaborative co-creation by fostering an environment for shared ideation and evaluation of their impacts return. Through the organization of a series of local workshops and activities, the project will define for each pilot the identification of current challenges and visioning to develop future scenarios and guidelines to facilitate systematic planning and implementation of the energy transition strategy.

This work was conducted as part of the PLENTY-Life project and has received funding from the European Union's LIFE programme, under grant agreement no. 101081061.

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[1] https://plenty-life.eu/

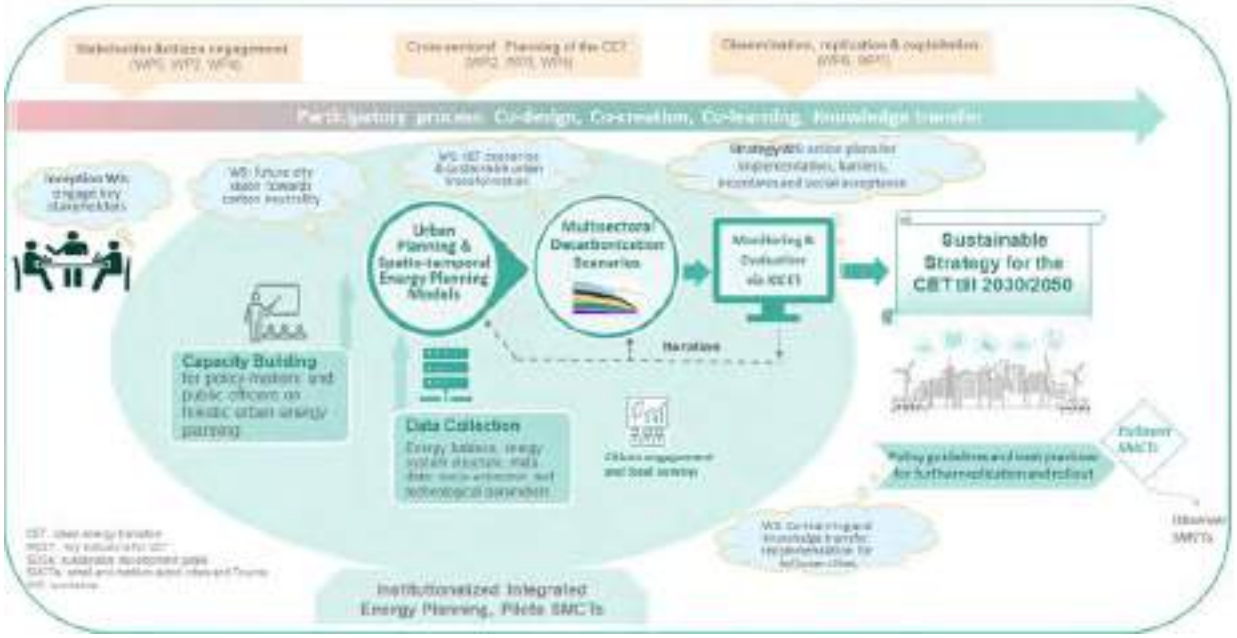

Fig. 1.
Methodological approach of PLENTY-LIFE project.

Fig. 2.
Example of Module 1 "Smart and Sustainable Urban Planning" developed by Eurac Research within the Capacity Building Program.

Climate Justice and Spatial Planning

*Richard Blyth**

Governments and municipalities across Europe have adopted Net Zero commitments as part of the UN COP process. These are having implications for spatial planning. However to varying degrees there has been a backlash against Net Zero from populist politicians on the grounds that the impact of climate policy has been greatest on the poorest in society. How can we make sure that as we undertake spatial planning for net zero, we take all our communities along with us. Yet many international foundational texts for spatial planning such as the ECTP Charter for Spatial Planning (2013) New Urban Agenda (UN, 2016) and Restart Europe (2021) make no reference specifically to *climate* justice. Climate justice focuses on four areas of inequity and justice related to planning for climate change: Inequities in responsibility for carbon emissions ; inequities in the social impacts of climate change (consequences); inequities in how the costs and benefits of responses are shared (responses); and procedural injustice (governance). In this paper I will focus on issues around how the costs and benefits can be measured, and hopefully, shared.

Evidence from Prague suggests that the climate transition risks disadvantaging certain groups. For example there is a concentration of certified green buildings in the city centre. Energy efficiency certificates are issued mainly to large developments in prime areas to ease project financing and to meet client requirements. This highlights the lack of energy efficiency investments in peripheral areas of the city. In the residential sector again, access to grants to retrofit buildings is concentrated in the owner-occupied sector: the 30% of residents in rental housing have limited access and are in the greatest need of reductions in fuel costs.

The first issue is to understand the impacts. Birmingham City Council is the largest municipality in Europe with 1.1 million residents; and it is the first municipality in the UK to develop a measure for environmental justice. This measure draws upon concepts of environmental justice in other parts of the world such as Berlin and Virginia. It uses predominantly open-source data to measure: access to green space, flood risk, overheating, and excess years of life lost. For each indicator, a score is calculated and ArcGis is used to analyse the data. The higher the score, the worse the Environmental Justice Index is for that area. During the first year of the "City of Nature Plan" a pilot project was planned to be delivered in Bordesley and Highgate before work is scaled up to another 5 wards in the 5 years following. Targeting these areas will reduce the risks of climate change for the most vulnerable and work toward building a more resilient and greener city.

Some of the greatest advances in climate justice at city level have been advanced in the United States. Diezmartinez & Short-Gianotti (2022) demonstrate that "large cities across the US are increasingly incorporating justice into their climate action plans and developing the p0licy tools to intregrate justice and equity concerns into their climate mitigation policies". This is proving more common in energy efficiency and land use and transport. But less common in policies related to waste water or air quality.

For example the Office of Sustainability and Climate Justice of the City of Cleveland leverages the city's wealth of assets by collaborating with the community to improve its economic, environmental and social well-being of citizens. The OSCJ was created with the vision of transforming Cleveland into a green city on a blue lake. OSCJ works to do this by reducing Cleveland's carbon footprint and creating healthy, resilient neighbourhoods through sustainable and equitable actions, community advocacy and public policy. The city of Minneapolis draft Climate Equity Action Plan seeks to address the climate inequalities that many residents face. The plan's goals include creating more safe walking distance access to shops, schools and greenspace, reducing the number of people who spend a large percentage of their incomes on utilities and reducing carbon emissions by 65% by 2030.

However, whilst we have seen city led initiatives embrace climate action, we have not

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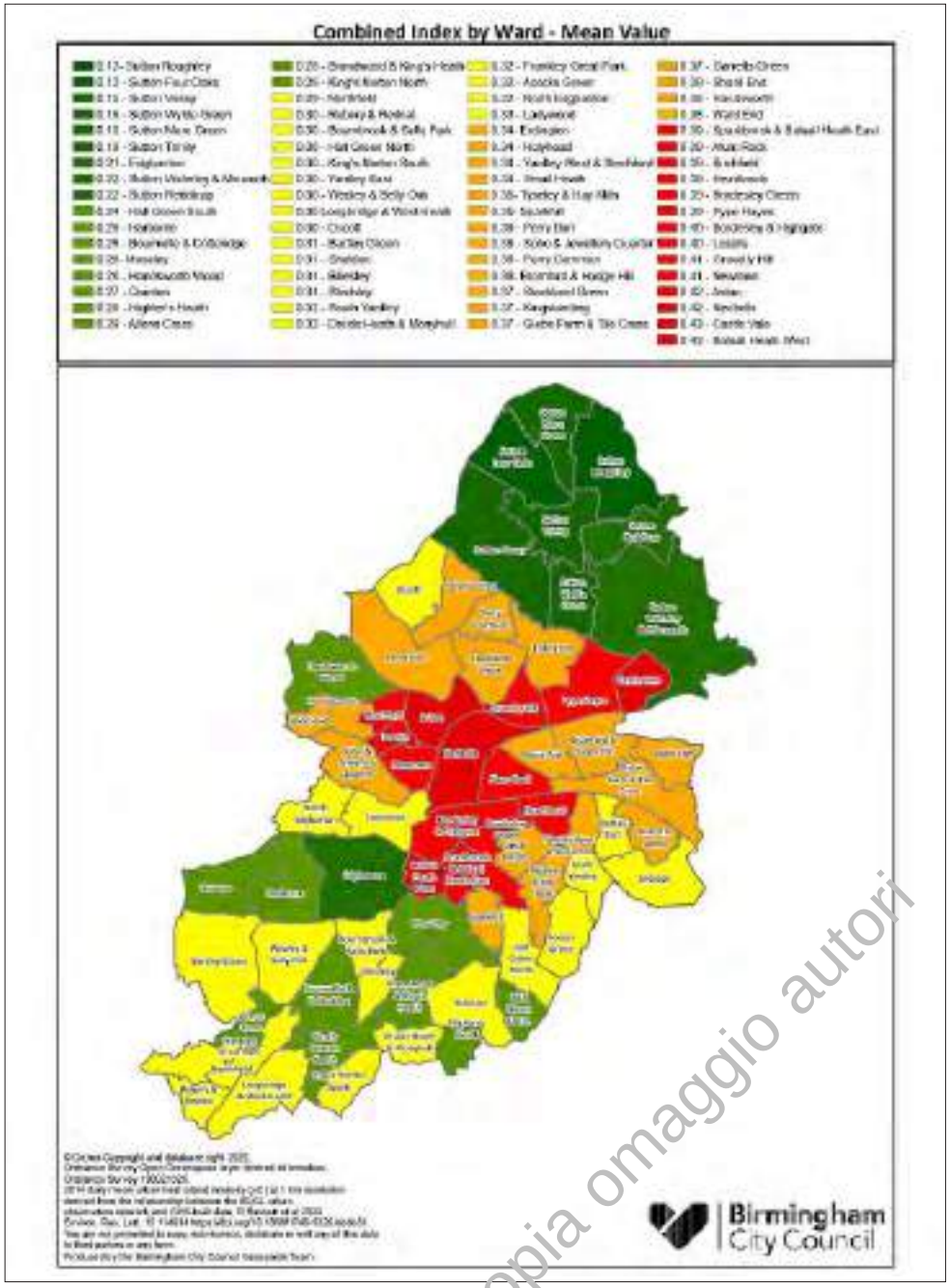
Fig. 1.
Birmingham City Environmental Justice Map



seen so much mainstreaming of climate justice into decisions taken by municipalities into private sector projects. A study by the Royal Town Planning Institute examined housing developments in England granted permission from 2015 to 2019. Less than 10% of new developments are within 15 minutes of secondary schools, town centres or hospitals by walking or public transport. And only 10% of them are within 15 minutes of primary schools by walking. This is a climate justice issue because the individuals in poorer families are much less likely to have access to private transport.

To shift spatial planning towards climate justice requires action which is akin to best practice in other areas of spatial planning such as planning for older people or planning to tackle disadvantage.

A contribution to assess urban open spaces under the point of view of urban heat islands

*Marzia Lai, Alessandra Casu**

This study focuses on the implementation of a methodological and operational process to support the urban and landscape planning and design, in order to reconsider the relationships between urban morphologies and adaptation strategies to be implemented at the local level. The rising temperatures due to Global Warming increase some thermal effects that occur in cities, such as heat waves and urban heat islands (UHI).
The work presents a system for evaluating the thermal response of urban open regenerated spaces in the city of Lisbon. The assessment system uses the Land Surface Temperature (LST) as a synthetic indicator, to provide a rapid response of the city's thermal performance, which allows measuring the effectiveness of interventions. This is complemented by a set of point indicators used in a combined manner that, through reading at an appropriate downscaling, assist in measuring variations in climate response. One category of point indicators is morpho-typological, and the other is related to the urban 'construction' and greenery.

Among the morpho-typological indicators, many were analysed in literature and SkyView factor (SVF), Historical Building Ratio (HBR), and Industrial Building Ratio were selected as the most representative for the assessment of open spaces. Among the constructive factors, Non-Permeable Open Space Rate (NPOSR), Solar reflectance Index (SRI), Normalized Difference Vegetation Index (NDVI), and Number and Plant Species (NPS) appear as those that most influence the thermal response of open spaces.

SVF indicates the portion of the visible sky that can be observed in the analyzed area and is used to describe the geometry of urban canyons and evaluate the extent of radiative exchange during the day and, therefore, the possibility of dissipating the re-emitted radiation towards during the night. As SVF is closer to zero, heat remains 'trapped' and becomes the major cause of rising temperatures and UHI. HBR guarantees higher thermal inertia and higher albedo, requiring lower energy for cooling. IBR determines a higher consumption of energy to heat, cool, light buildings, offer goods and services and allow the movement of people and goods, with high waterproofing ratios which significantly affect surface temperature.

NPOSR The rate of impervious surfaces, in addition to leading to rainwater runoff, has implications on a thermal level since the low albedo coefficients can cause a higher quantity of solar radiation absorbed during the day and its transfer to the atmosphere. Moreover, by reducing the humidity in the soil for evapotranspiration, causes a stronger increase in temperature and contributes to the onset of the UHI phenomenon. SRI measures the reflection of heat on a surface, decreasing or increasing the effect of UHI. NDVI is linked to the absorption of solar energy by chlorophyll. NPS is important for adaptation and mitigation objectives, due to the intrinsic potential for CO_2 capture, shading, evapo-transpiration.

Comparing the values of LST before and after the implementation of the Lisbon rehabilitation program called *Uma Praça em Cada Bairro* (a Square in each District), consisting of re-paving and greenery for 15 squares, 1/3 gave almost the same thermal performances; in the remaining ten, two (Largo de Alcântara and Largo do Calvário) were better cooled in August, two had a few higher (1°C) maximum temperature, only one had a few higher (1°C) minimum temperature, while two worsened maximum and temperature, with the worst performance in Rossio de Palma.

The use of the point indicators confirmed that, as the morpho-typological indicators were almost the same, the variation in thermal performances was due to some choices in pavements and in greenery: in the worst case, NPOSR was 40% before and 60% after the works, NDVI was 80% before and 20% after the works, and NPS had decreased from 42 to 41. The combination of NDVI and NPS explains some qualitative assessment of the greenery, as it has not the same thermal performance. Moreover, NPOSR also approximates the resilience to floodings that, in a context like Lisbon, can be the most risky impact of climate.

This validating application suggests that the scope of this indicators system could also be extended to the *ex ante* phase, as a quickly endo-formative guide to design more resilient-to-climate open spaces.

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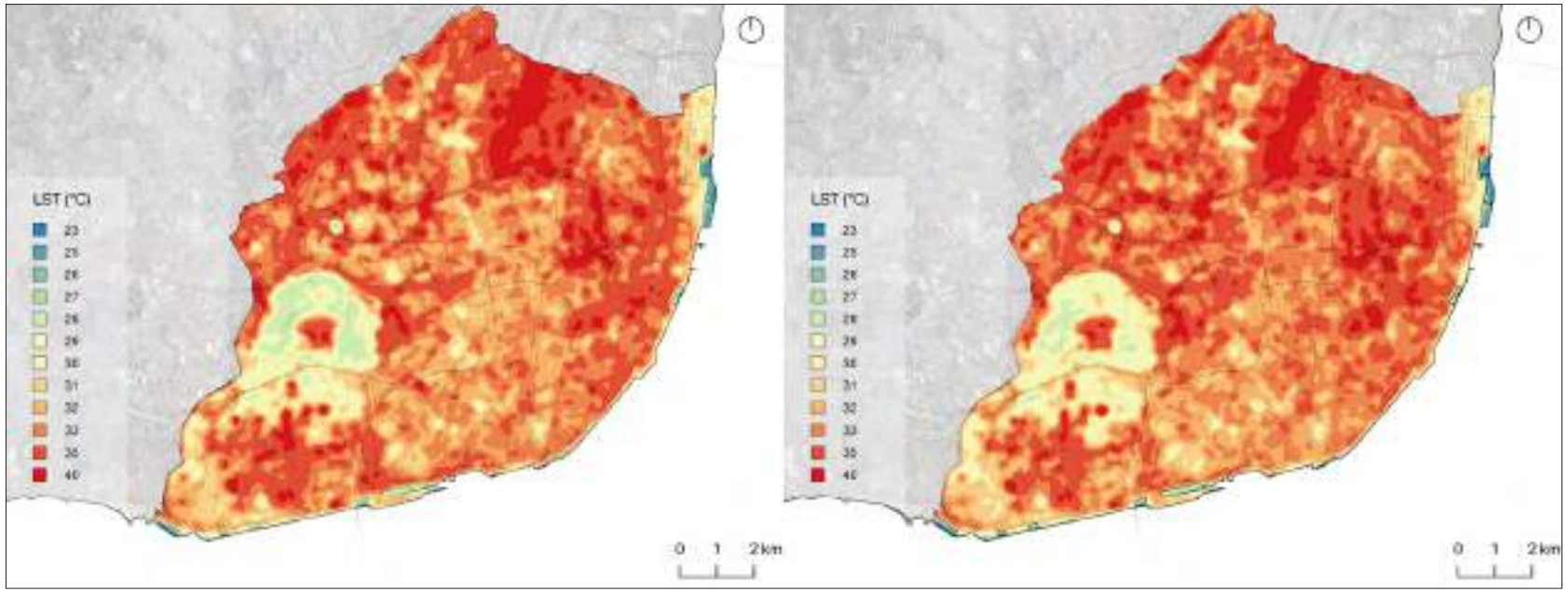

Fig. 1.
Comparison between the LST in Lisbon on August 29th, 2015 and August 24th, 2019
Source: own processing of LandSat8 remote sensing data

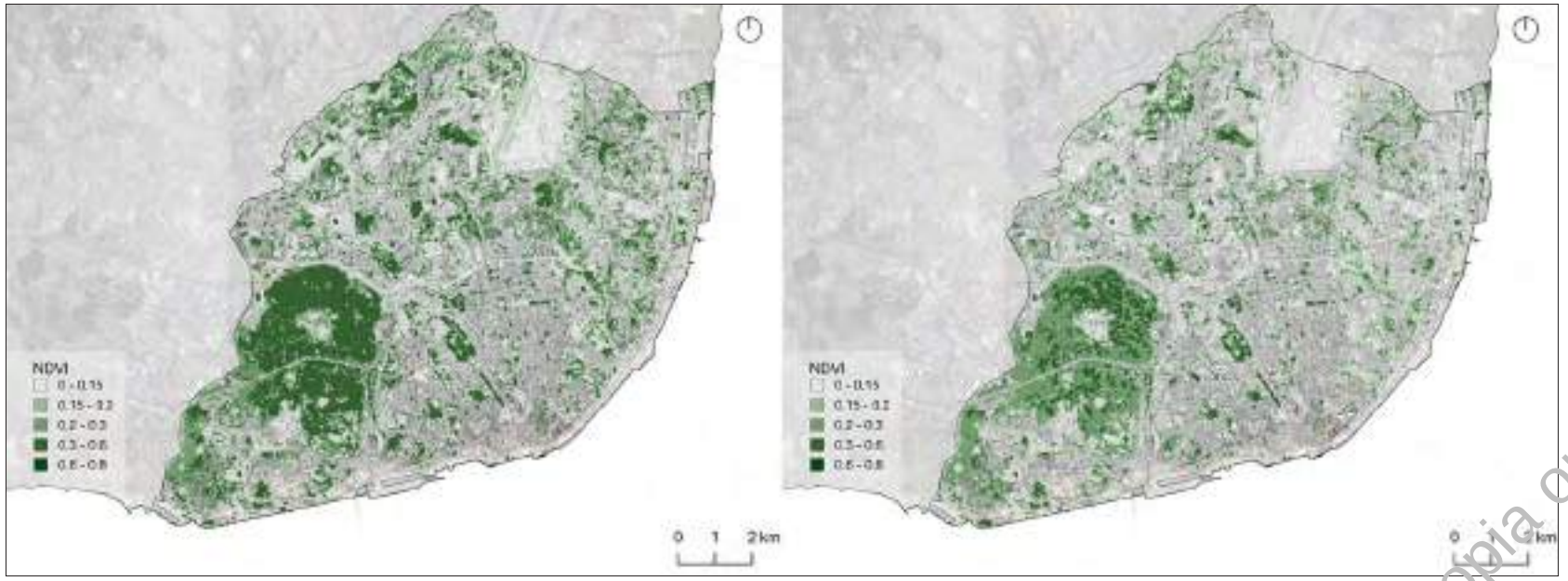

Fig. 2.
Comparison between the NDVI in Lisbon on July 28th, 2015 and July 23rd, 2019
Source: own processing of LandSat8 remote sensing data

Urban strategic projects towards resilient climateproof towns: some proposals for Lisbon waterfront

Alessandra Casu, Guglielmo Ricciardi**, Ilenia Zaccagna**

The work proposes an adaptation process to the effects of climate change in some waterfront areas of Lisbon, by adopting strategies, urban scenario projects and economic assessment models. In the last years the effects of the climate change have led reduction of safety and liveability, especially in some 'sensible' territories, such as water urban landscapes, that rely on projects and plans the task to put the 'emergency approach' at the end. Lisbon would probably be affected by Climate Change effects because of run-off and, mainly, due to the forecasted rising sea-level. The study case deals with some parts of the *Frente Ribeirinha*, setting the objectives for the adaptation to flooding risks: 'from above' (rainfalls and consequent run-off) and 'from below' (sea-level rise), proposing a set of actions which can be combined according to different strategies. Rethinking and redesigning its relationship with water, trying to make this urban area more resilient, asks to study the criticalities of the riverbank and the areas behind, the run-off and sea-level rise forecasted for 2100 and for intermediate steps (Figure 1).
After defining the priority intervention areas, the proposed process seeks to innovate the usual practice in mitigating risk, using scenarios as a tool of design in the inherent uncertainty for predicting future climate change. The adopted research-by-design approach allows to interpret the urban landscape as an interdisciplinary and multiscale research object, to acquire theoretical knowledge, flexibly useful for working in situations of unpredictability. Working with the uncertainty of future forecasts related to the effects of climate change and coastal city transformations, having an ecological approach that takes into consideration the different environmental dynamics with a holistic vision, constructing and evaluating future adaptation scenarios make research-by-design an appropriate working tool to cope with the issues that climate change requires to tackle in urban planning and design. The evolutionary scenarios focus the relationship with the environmental structure, identifying design alternatives and sequences that can develop an adaptive and more resilient *forma urbis*, able to limit risks, keeping the economic activities.

The different scenarios of how the whole area could be adapted depend on choices, such as those related to the elements exposed to risk (population, historical monuments, museums, hospitals, traffic management, productive activities), that imply a new design of the shore. They propose to transform the waterfront according to different principles: either working only with nature-based solutions, or changing radically the coastline, designing islands or bays (one could be consequent to the other) that establish priorities, 'securing' some urban nodal areas and 'sacrificing' some others. The first, the safest and most flexible, is a scenario of re-naturalization, to 'absorb' different qualities and quantities of water, 'from below' and 'from above', in a more resilient and flexible configuration that allows different tidal intervals, either in relation with runoff or not. While the sea level of reference is the same per each scenario, for water 'from above' the runoff depends on the proposed land use. The other scenarios are more related to design and infrastructural choices, can even be one consequent to the other and imply a flexible and evolutive response to the flooding risk, which suggests to choose the alternatives only depending on real level of sea rise and environmental change, that could justify each choice as a sort of second chance for the previous one. So, the interventions chosen for the scenarios can not only define different responses to the trend of climate effects, but also verify the adequateness of forecasts and any changes in the long term.

To furthermore support the decision, each scenario has an economic evaluation with a cost-benefit model based on land use measures, buildings to demolish or re-locate, interventions on accessibility, mobility, and transport infrastructures. As can easily be seen in Figure 2, the most preferable and flexible scenario of re-naturalization implies hard policies of re-localisation and demolition, which could compromise the feasibility and the political and financial sustainability of the proposal. Nevertheless, the economic evaluation model confirms that urban policies of adaptation and re-design produce more advantages than the current situation with no adaptation measures.

A future prospect of application should include a system of indicators to monitor advances and reformulate the policies to be adopted in the different areas.

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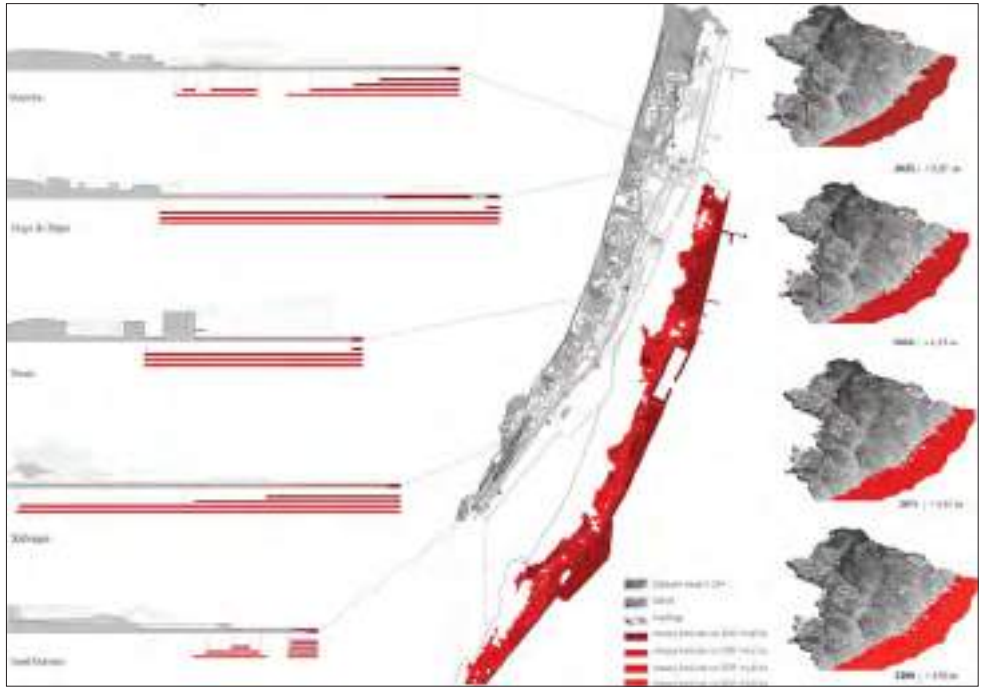

Fig. 1.
NMap of the sea-level rise along the East bank of Lisbon waterfront per each 25-years period.

Fig. 2.
Comparison between impacts of the different scenarios and strategic urban projects for some waterfront areas.

Increasing climate resilience through participatory adaptive planning

Lucia Chieffallo, Annunziata Palermo***

The severity and the heterogeneity of the impacts induced by climate change are internationally recognized. In this context, planners are called to increase the resilience of cities and territories with respect to the progressive climatic variability. Specifically, the concept of "climate resilience" alludes to the ability of the urban system to stabilize rapidly, from the social, economic, and environmental point of view, following the different physical processes linked to climate change. Therefore, this capacity can be defined in terms of the "adaptability" of the urban reference system.
For the European Union (EU), the definition of strategies and tools for adapting to climate change is a priority, as demonstrated by numerous regulations, strategies and initiatives, including the launch of the European Climate Change Programme (ECCP) in 2000, the "Mayors Adapt" initiative in 2008, the definition of the Climate-Adapt Platform by a partnership between the European Commission and the European Environment Agency in 2012, the adoption of the EU Climate Change Adaptation Strategy in 2013 and the subsequent update in 2021, the adoption of the Green Deal in 2019, the EU Regulation 852/2020 called "Taxonomy", which includes climate adaptation as one of the six reference environmental objectives and enshrines the principle of no significant harm to the environment (called DNSH), and the European Climate Pact in 2020.

Implementing these guidelines, in January 2024, Italy approved its National Climate Change Adaptation Plan (called PNACC) which guides the planning of adaptation policies at the national and, above all, regional and local levels in the short and long term. The Plan identifies several areas of action, including water management, coastal protection, biodiversity conservation, urban adaptation, sustainable agriculture, forests, energy production and industrial production, risk management of extreme events. However, the Plan does not provide precise operational guidance in relation to its implementation at regional and local level, especially as regards participatory processes, as well as integration and coordination with existing planning tools, in fact taking the form of a "strategy" rather than a "plan".

Within this broad thematic and regulatory framework, this document presents some of the results of a research project aimed at defining a Plan for adaptation to the climate of a medium-sized Italian city located in Calabria Region. Specifically, for the identified pilot case, the Plan should contain the abacus of the most appropriate adaptation measures aimed at minimising the risks arising from climate change, to be defined also through the involvement of the local community.

In fact, according to the literature on the topic, the activation of participatory planning processes can facilitate adaptation to the expected climate by containing the conditions of vulnerability of the territory that is a function of sensitivity and adaptability of the system of interest, contributing to the realization of "climate justice". Recognising that climate change affects a large part of natural systems, humans, and socio-economic sectors, the PNACC also points out that the planning and implementation of appropriate adaptation actions presupposes multi-level governance, calling for the active and conscious participation of civil society and stakeholders. However, although the potential of such processes is clear, the implementation methods are still poorly explored. Therefore, this document presents the results of a comparative study on the techniques and strategies of participatory adaptive planning already tested in some national contexts, highlighting their weakness and strengths.

In order to launch this activity, the authors conducted a preliminary study on the state of implementation of the climate adaptation plans adopted in 127 medium-sized Italian cities, with a resident population of between 50,000 and 250,000 inhabitants (Fig. 1). For these cities, the final plan documents were analysed, or the preparatory ones where they exist, with a focus on participatory aspects. Specifically, considering the techniques of participation adopted, the following four categories were distinguished: "interviews", "structured questionnaires", "focus group" and "other". In addition, three categories have been distinguished relating to strategies for using the outcomes of the participatory path, that are "collection of needs and indications of priorities", "development of guidelines, guidelines or recommendations", "project and management proposals".

From a theoretical point of view, the presented results confirm the centrality of participatory adaptive planning as a useful tool to increase climate resilience. From an operational point of view, the comparative analysis of the selected experiences makes it possible to identify elements useful for defining the participatory planning process to be adopted for the pilot case.

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Fig. 1.
Mapping of Italian medium-sized cities and localization of the pilot case

Aniene. The other river. From climate adaptation actions to urban regeneration: the making of an Environmental Centrality

*Laura Di Fiandra, Marika Fior, Paolo Galuzzi**

The research focuses on urban regeneration (CNAPP, 2012) involving adaptation actions to address climate change (EU, 2021), and aims to implement the "structural projects" that are a strategy of Rome local plan (Garano, 2001). The case study is the Aniene, the *other* river of Rome besides Tevere. The Aniene reaches Rome in the *Tiburtina Valley*, an industrial area next to the ring highway. Then it passes by the outskirts to historical neighborhoods and is crossed by high-impact roads and railways. The river is known for its poor water and environmental quality (Regione Lazio e ARPA, 2018), but also for the building pressure that forces its runoff into narrow spaces resulting in flooding during cloudbursts (ABFT, 2010).

To protect the river from the urban impact, in 1997 the *Riserva Naturale Valle dell'Aniene* was established. What could have been an opportunity – to ensure ecological continuity and naturalness to the river and provide attractive green areas within the urban fabric – turned into a threat. The greenery of the Reserve became source of pollution from the periphery to the historical neighborhoods and is now in a state of uninterrupted degradation. The riverbanks are unstable and unusable; often it serving as dumping ground for waste; slums and other high environmental-impactful activities (junkyards, cultivations, landfills, industrial area next to water) have conquered most of the open spaces. This precariousness leads the city to distance itself from the Reserve and the river, causing them to be rejected and avoided instead of being integrated with the urban fabrics. The Aniene becomes a physical barrier, exacerbating the distance between potentially close neighborhoods, thus interrupting the dialogue between the green spaces and the city. The issue extends to the climatic and hydrogeological risk context. Improper land use and the lack of river expansion areas increase the flooding hazard, posing a threat to numerous people, buildings, and cultural heritage sites. Finally, the heat island effect is pronounced despite the proximity to greenery, primary due to the deforestation and the soil cementation.

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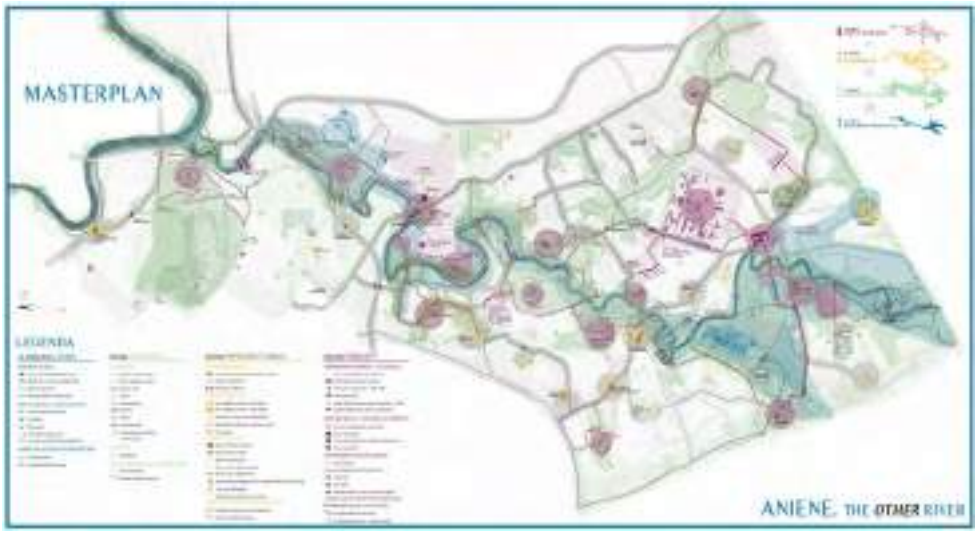
Consistent with the national urban regeneration strategy to work on improving the quality and re-use of urban open spaces, and wishing to support an environmental-climatic rebalancing, the research supports the creation of a new type of "metropolitan and urban centrality". The proposal is to enlarge the set of those places that host facilities relevant to the metropolitan-capital and provide rare services to a vast catchment area. According to the investigations, the Aniene Reserve can assume this role if the regeneration process is coordinated and implemented over time. Therefore, the project results in a Masterplan for the Reserve urban area, focused on 4 strategies, described below using the slogan "*the river signifies*".

To address the complexity of the area, the strategy involves an overlapped system of frames, each providing a specific intervention. The overlapping of action does not occur randomly. The first step is to restore the *environmental balance* through climate actions, implementing water square, rain garden, expansion areas for the river, waste catcher barriers, all aimed at restoring naturalness to the greenery and the river. Then, "*the river signifies ecological continuity"* enhancing the quality of the Reserve, establishing new ecological corridors through the river, reactivating the forsaken green areas within the urban fabric. Moreover, "*the river signifies accessibility*" not only providing new entrance to the Reserve but also promoting the use of both private and public open spaces adjacent to the Reserve, reconnecting the neighborhoods and implementing the security of peripheries. Through the reuse of greenery and the reactivation of many abandoned buildings, it became possible to create new public spaces for citizens. Lastly, "*the river signifies sport and wellness*", related to the historical context, aims to enhance the archeological sites, cultural heritage and natural assets, to create a network of places for cultural and sporty enjoyment.

The masterplan proposal starts from the river and gradually addresses the strategies. Firstly, restoring the Aniene and its Reserve improved the urban fabric's quality, pro-

moting inclusivity and environmental well-being. The result is a complex framework of actions (i.e. enhancing, adapting, reactivating, renewing, transforming...) which enable the development of high-quality design interventions. It's crucial to emphasize that the actions and the sequence of their application are consistently adapted to the specific context. This is noticeable in four pilot-designs, each of them underpins the character of the area. The *Confluence Park* project aims to create a new public park where there is currently abandonment and inaccessibility; the *Water Station* project creates a new station on the Tiburtina-Tivoli railway, removes camps and illegal cultivations; *Sport and assets* project aims to open up the ancient roman quarriers to the city and create a new sport center within the Reserve; the *River promenade* project seeks to restore the river to its natural space.

The Masterplan outcome is the establishment of "a new centrality" based on the metropolitan open spaces, aligning with the principles already proposed by the Rome Plan. This gives rise to the **Environmental-territorial Centrality**, a new structural project that achieves urban regeneration and climate adaptation by placing the green-blue resource at the core of urban planning.



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Boosting the local energy transition
The Living Lab of León (Spain)

Alejandra Duarte Montes, Miguel Fernández-Maroto**, Juan Luis de las Rivas****

This article presents the results obtained thus far in the León Living Lab of the 2ISECAP project. The H2020 Project, Institutionalised Integrated Sustainable Energy and Climate Action Plans (2ISECAP), aims to bridge the gap between sustainable energy planning and implementation by enhancing the capacity of public authorities to manage sustainable development and engage civil society in the energy transition through the living lab concept.

In the current context of the growth of renewable energies and the fight against climate change, it is important to consider the economic, social, and legislative limitations. However, some exceptional cases, such as Freiburg, have successfully integrated renewable energy into urban planning and co-management of energy (Local Energy Coalition). In this context, SECAP emerges as one of the few instruments available for the advancement of local energy governance. In addition to measuring greenhouse gas emissions, the tool aims to define adaptation and mitigation actions for cities to increase their resilience to climate change.

Due to the complexity of urban processes, integrated action is often hindered. Therefore, this project aims to introduce a holistic approach to SECAP planning that supports participatory and integrated planning of sustainable energy and climate actions. The project identifies critical success and failure factors in relation to citizens and stakeholders to develop local plans and policies. With the aim of establishing a holistic approach to SECAP planning as an operational and institutionalised structure, this project seeks to design the necessary governance framework. It provides an environment for multi-level co-creation through the creation of local living labs. The methodology is applied in six European municipalities. Karditsa (GR), León (SP), Ljutomer (SL), Thun (SW), Tartu (EE) and Padua (IT) will test the scope of this methodology under different political, economic, social and cultural contexts.

Following four meetings of the León Living Lab, which consisted of 18 actors including public sector representatives, knowledge institutions, private actors and users, a comprehensive analysis of the Sustainable Energy Action Plan (SECAP) of León, approved in December 2022, has been conducted. The quadruple helix approach enables analysis from various perspectives, including long-term outlook and regulatory function, experience and scientific justification, expertise and resources, and target group behaviour.

This analysis has examined the potential of the SECAP in relation to other emerging tools and initiatives in the city, as well as its shortcomings, especially with regard to the possibility of the document not moving from paper to reality. The sectoral plans and projects with the greatest energy impact being developed include the new mobility plan. This plan seeks synergies with the SECAP and aims to reduce emissions from the sector that contributes most to the emissions inventory. Additionally, there is the heat district, which is supplied by a biomass network that provides energy to both public buildings and private individuals. The Sustainable and Integrated Urban Development Strategy (EDUSI) León Norte aims to reverse physical and social segregation through the comprehensive regeneration of the area, promoting energy efficiency and smart mobility. The strategy also includes initiatives to create zero-energy buildings, starting with council buildings, and to establish a Positive Energy District (PED) through the Making City project.

Therefore, the SECAP can serve as a strategic tool to coordinate sectoral actions and plans in the city space, generating synergies that can aid León in its transition towards becoming a carbon-neutral city.

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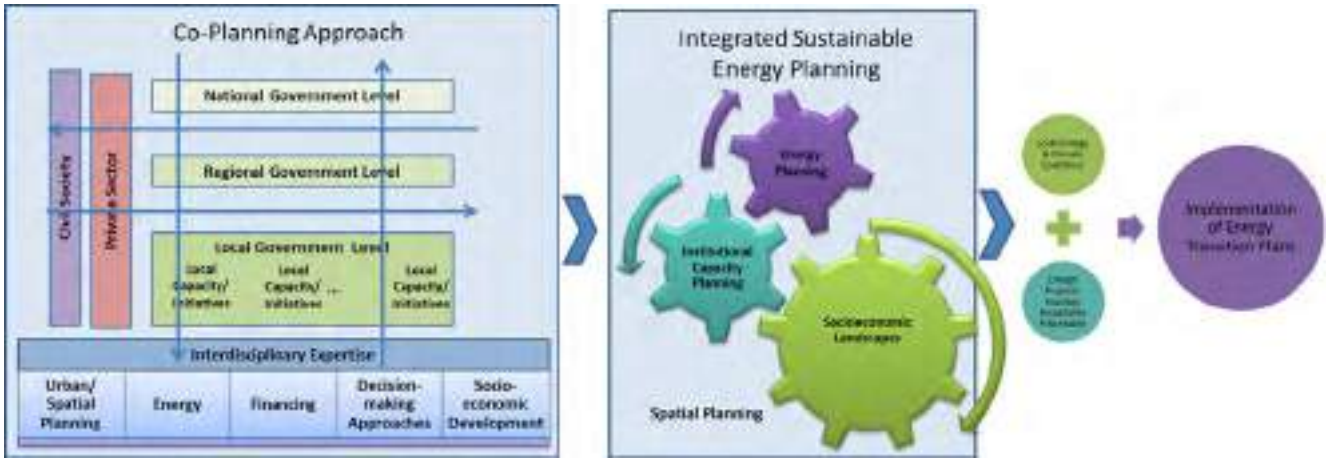

Fig. 1.
2ISECAP concept for planning

Fig. 2.
León Local Living Lab members

A simulation-based tool for environmentally hazard-conscious urban design

Federico Eugeni, Gennaro Zanfardino**, Donato Di Ludovico**

The research is part of the scientific and methodological framework concerning new support tools for urban planning oriented toward the prevention of risk due to natural disasters. In this context, the first results of the prototype of a digital (agent-based) simulation system of crowd movement based on configured risk scenarios are reported. In general, agent-based modelling (ABM) is a computational technique that can simulate systems by representing individual agents with specific behaviours and rules. It allows for the study of emergent phenomena in various spatial contexts, offering insights into complex systems' dynamics and interactions. From the point of view of pre-disaster planning, agent-based modelling can be a tool that helps simulate crowd behaviour in emergencies. It factors in individual actions and interactions to predict collective responses, aiding in crisis management and policy development. Experiments that use agent-based modelling to simulate situations such as those described, now, focus mainly on scenarios linked to the evacuation of single buildings. Few, however, have been carried out at the neighbourhood or urban scale. Of those encountered in the process of bibliographical investigation of the subject, none concern Italian territory. In this context given, the objectives of the research are multiple. On the one hand, there is, in fact, the understanding of the potential reaction of the crowd in a built environment in case of natural disasters, for now at a neighbourhood scale, based on predetermined boundary conditions that can also be changed during the simulation itself in real-time. On the other hand, there is, consequently, the implementation of urban design methodologies capable, based on simulation results, of optimizing the spatial organization of places and urban shapes. In this regard, a methodology composed of five blocks is proposed. The first one concerns knowledge: the construction of an information system capable of collecting and managing data of different types, formats, and origins is carried out. The logic lies in understanding, also through the representation of the data themselves, the current state of the area studied based on scientific evidence. The second step concerns, in fact, the choice of case studies at different scales of analysis and types of contexts. This aspect is emphasized because on the Italian territory and especially in regions affected by calamitous events such as earthquakes for the past 15 years, the orography of the territories plays a role of primary importance. The third block of the methodology concerns the implementation from the software perspective of an algorithmic simulation ecosystem to which the logic of agent-based modelling can be applied. Then (fourth step), based on the results of condition-driven simulations capable of realistically defining different crisis scenarios (depending on the level of depth and logical implementation of the components of the simulation itself such as, in this case, people trying to reach safe areas following the disaster event), we move on to the implementation of urban design techniques capable of collecting and translating the results themselves into design proposals. The final step is to define new models and forms of resilient urban spaces with resources available for each type of user. These updated models are then fed back into the simulation environment so that they can be validated and tested before their actual implementation using the same boundary conditions, thus moving away from the purely self-justifying logic of the project itself given their data-driven nature. Partial results of the research can be traced to an initial experimentation of agent-based simulation, carried out through a specially compiled script, in a pilot urban context. This allows testing potentials and limitations of the methodology from both computational and operational perspectives. From a purely practical point of view, the results consist of the development of a three-dimensional virtual simulation environment capable of generating georeferenced maps (aimed to optimize urban shapes towards safety), data and diagrams according to the set boundary conditions. Figure 1 and 2 show the first test carried out on the "Coppito Campus" of the University of L'Aquila. The model is compiled considering the actual maximum capacity of the four main buildings and the actual location of the gathering areas, to be used in case of an actual evacuation. The capacity of the latter is defined by calculating the actual available area considering an occupancy of 2.5 square meters per person. The accuracy of the model is ensured by the ability of the simulation environment itself to handle georeferenced data (on which classical analyses proper to urban planning practice are based). The next steps in the research, also thanks to an ongoing collaboration between the working group and the Civil Protection Corps, concern the scaling up of the simulation model to the urban level, to validate the actual potential that such a tool can have in real-life risk situations.

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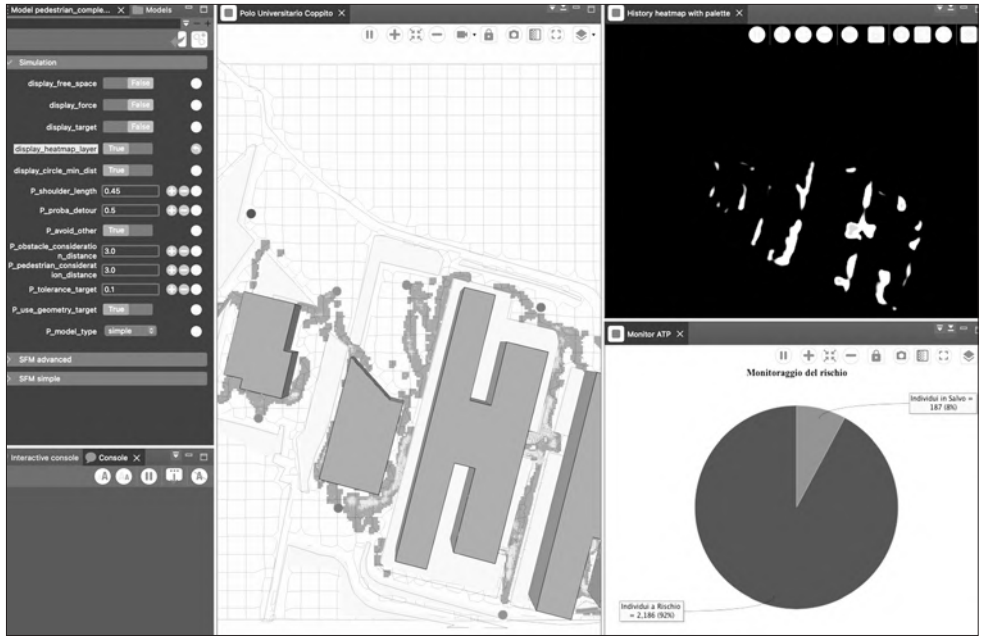

Fig. 1.
imulation environment in GAMA Platform (top view), https://gama-platform.org/

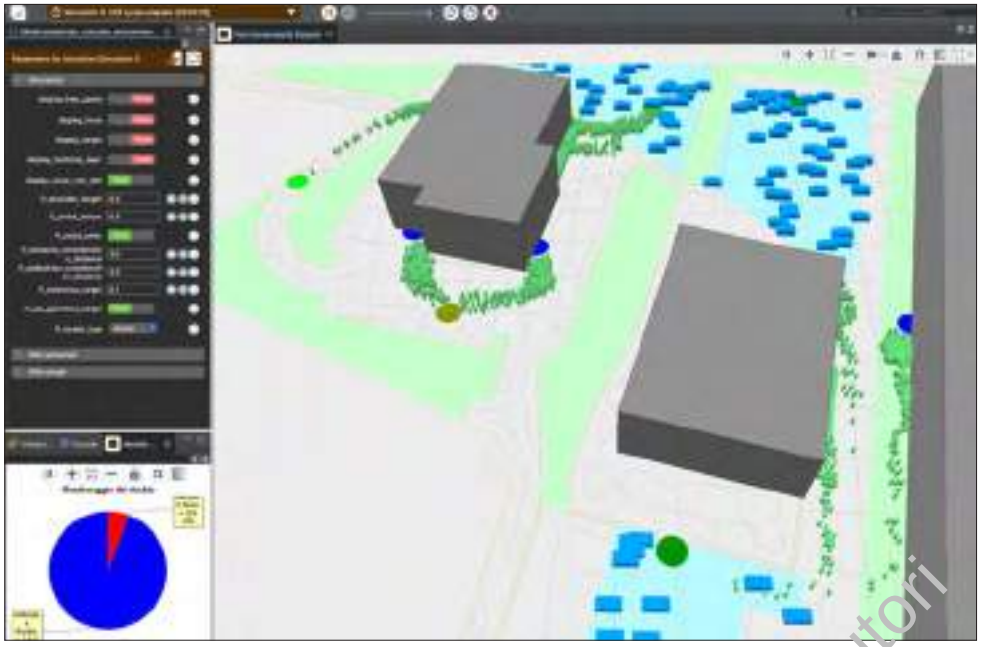

Fig. 2.
Simulation environment in GAMA Platform (3D view)

A new terraced waterfront on the Mar Piccolo within the framework of the Coordinated Plan for the improvement of the Tamburi district in the city of Taranto

Simona Sasso, Vincenzo Piccolo, Valentina Falcone*

The redesign of this area overlooking the Mar Piccolo, of great landscape value, is an opportunity to exploit the unexpressed potential of the area and contribute to providing the inhabitants of the neighbourhood with the opportunity to enjoy the surrounding environmental beauty. It is an urban area, which, although conditioned by the presence of large-scale industry, enjoys a unique view of the Mar Piccolo. Already in ancient times, Virgil and Horace praised the Galeso river and the sweetness of the places adjacent to it; it was a heavenly place, where the landscape and the purity of the waters prevailed. The objective of making citizens' habits more sustainable is combined with the need to enhance the environmental and landscape context of the seafront, in strict compliance with urban planning, environmental, architectural and landscape protection regulations. The area extends for approximately 20,000 sqm and is currently characterized by abandoned grounds and spaces, covered with weeds and waste which prevent its use. The project aims to be an element of connection between the city and the sea, through sustainable mobility, since today - due to the presence of railway tracks - this accessibility is denied. The interventions, mainly in favour of soft mobility, aim to offer citizens pedestrians, cyclists and runners alternatives which, in the specific case of the Lungomare (waterfront) in the Tamburi district, coincide with the possibility of having a cycle-pedestrian path on the sea, providing citizens and city users with a new panoramic road from which to enjoy the natural beauty of the area. In this way, people from Taranto and tourists will be able to experience the pleasure of an urban walk, along a boulevard overlooking the sea, which becomes a place for meeting, leisure and contemplation of the natural beauty in the wonderful landscape of the gulf on the Mar Piccolo. The project also took into account the historical vocation of the places, characterized by strong presences, such as the brick kilns and clay deposits, the arrangement of the vegetable gardens with their dry-stone walls and the fishponds on the banks of the Mar Piccolo. But there is also an urban planning element that strongly influenced the choices, namely the trace of the coastal road, which, starting from Porta Napoli, led without interruptions to the mouth of the Galeso. All these signs and elements were reinterpreted and characterized in the project. The old road on the seafront, now non-existent due to the presence of the railway, was repurposed with a cycle-pedestrian path in mind. This element was designed as a "Red Ribbon", a light and reticular structure that unites and leads; the element that connects the cycle paths of the Tamburi district and those on the Circumarpiccolo. It is a road that turns into an overhead bridge to cross the railway and descends towards the sea, pushing towards the Galeso river. But, again, the historical vocation of the places was also re-proposed in the project; the Belvedere terraces, in fact, will be characterized by open-air museum spaces, in which the tradition of the area will be told and illustrated (the kilns, the vegetable gardens and the fish ponds).

The most characterizing aspects of the project therefore include:

- the redevelopment of the current configuration of the roadway of via Mar Piccolo, with the creation of a cycle-pedestrian lane in synergy with the urban regeneration project of the Tamburi district and in connection with the provisions of the PUMS (Sustainable Urban Mobility Plan), but above all to create a connection between the soon-to-be-built BRT (Bus Rapid Transit) stops and the Lungomare;
- the first viewing terrace - Terrace of the Furnaces, organized with an open-air museum space, in which the history of the brick kilns will be told as a peculiar element of the history of these places, characterized by the presence of water tanks that recall the aqueduct and the "taburro"; the southernmost part will host the cycle/pedestrian path that will connect via Mar Piccolo to the Nastro Rosso (red ribbon);
- the second belvedere terrace – Terrace degli Orti, located in the central part which

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represents the heart of the seafront. At this point, the expansion of the roadway is planned through the creation of a terrace and the organization of a green square, set up with dry stone walls, all to echo the presence of the vegetable gardens;

- the third panoramic terrace – Peschiere terrace, which closes the seafront, another strategic and organized place with a green park equipped with a kiosk bar; an open-air museum space, in which the port history of the places is described and from which you can access the cycle-pedestrian path. This is the point from which you can observe the raising of the "Red Ribbon", necessary for crossing the railway;
- the cycle-pedestrian bridge - the "Red Ribbon", which originates from the initial idea that the cycle-pedestrian path could be represented architecturally as a ribbon with soft shapes, especially if observed from the sea, set between the greenery of the terraces and the urban park. The cycle/pedestrian belt, starting from the South Gate, will reach the North Gate, with jumps in height that lie on the embankment and Via Mar Piccolo, to then transform into a metal bridge that surmounts the railway and descends softly towards the sea, to connect to the entire cycle/pedestrian ring of the Circumarpiccolo.

Fig. 1.
Masterplan
Rendering: Arch. A. Gira

Fig. 2.
Rendering view
Rendering: Arch. A. Gira

Regeneration and redesign of public spaces within the framework of the Coordinated Plan for the improvement of the Tamburi district in the city of Taranto

Simona Sasso, Vincenzo Piccolo, Valentina Falcone*

The project for the urban regeneration of public space in the Tamburi district is particularly significant and characterized by an extremely complex context. Indeed, the serious pollution conditions of industrial origin in the Taranto area, which make the Tamburi district one of the four regional "sites of national interest", but certainly the first in terms of importance and impact at city level, have been compromising for decades the prospects of local socio-economic development, and hindered the neighbourhood's aspiration to regain high levels of quality of life, well-being, but also of attractiveness and competitiveness. These factors, and even more so the environmental ones, have long been at the centre of general reflection on the value of cities and urban systems as cornerstones of a different and sustainable development model. In this complex scenario, this intervention is part of the general masterplan to regenerate the Tamburi district, aimed at the recovery and upgrade of the built environment and of the urban fabric of the neighbourhood. This theme falls within the broader one of a new ecological vision of the city and its relationship with the environmental context, demonstrated by the renewed attention to the role of the neighbourhood not only in terms of the relationship with the industrial plants, but also with respect to the prospects of enhancement of the relationship with the vast maritime ecosystem with which it communicates directly. The recovery and redevelopment of public spaces, specific subject of this project, represents in fact only part of the system of actions necessary for the rehabilitation of the area.

The analysis of the context highlights that on an urban scale the neighbourhood presents characteristics of true isolation within a very rigid perimeter. The neighbourhood is densely inhabited but, thanks the original urban design, presents a notable quantity of public spaces, primary and secondary or ancillary to private properties. The urban fabric is in fact made up of a dense network of buildings, which corresponds to a branched and chaotic internal road system, typical of post-war public housing districts. The problems linked to the morphological quality of urban spaces highlight a major problem of identifying the relevance of spaces, frequently poised between a private vocation and a public reality, over which the major problem of maintenance looms. On a design level, however, the same spaces also demonstrate great transformative potential, in particular in terms of possible "internal" connections to the places of the neighbourhood and external connections between the neighbourhood and the city and between the neighbourhood and the sea on which Tamburi opens with one of the most fascinating views of the city, but with poorly exploited and practicable access.

In general, on a qualitative level, very modest pedestrian conditions and quality of public pedestrian surfaces are noted, characterized by dimensional inadequacy, degradation, wear of the walking surface, poor shading conditions. The greenery system, itself considerably extensive and distributed, appears to be in mediocre conservation and maintenance conditions. The road sections are irregular and almost constantly present high-risk profiles. There is no specific identification of cycle routes or roads and there is a complete lack of cycle parking. Despite the persistence of a serious and complex environmental situation and the critical issues highlighted which, over time, have given residents a lack of confidence in the possibilities of improvement, they express a strong identity spirit with strong attachment and belonging to the neighbourhood.

The objectives of the intervention therefore concern the recovery and functional redevelopment of public spaces and collective use, with attention to improving environmental comfort and conditions of accessibility and mobility, through the rationalization of roads and the increase in sustainable mobility, resulting in improved road safety. These objectives

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Fig. 1.
Top view of the Curci Gardens

Fig. 2.
View of the Gardens of Volta st.

refer to the need to improve the physical conditions of the places and public spaces of the neighbourhood, introducing the necessary elements of aesthetic and functional quality.

The project involves the general reorganization and redevelopment of the road system and of the adjacent surfaces, in order to determine the overall renewal of these spaces from a functional, environmental, perceptive and architectural point of view. The proposed solutions seek first of all to determine the continuity of public spaces, through the welding of spatial areas, especially of a pedestrian nature, and the recovery and redesign of a dense network of paths. Secondly, also with reference to the creation of a public spatial continuum, respecting the characteristics and needs of the individual areas, the project identifies simple and effective technical choices, capable of giving the context characteristics of quality and unity, such as the use of flooring in self-locking blocks, or those in architectural concrete or stabilized earth, accompanied by the design of new green areas and the refurbishment of the pre-existing ones and the design of energy-saving public lighting compliant with current legislation on the matter.

Regi Lagni and hydraulic mitigation works
Adaptation and new uses in the regeneration project for the S. Sossio basin in Marigliano (NA)

Anna Terracciano, Giovanna Ferramosca***

The reflections proposed[1] with this contribution investigate some conditions of hydraulic and environmental fragility, with repercussions also of an ecological and landscape type, affecting the territory of the municipality of Marigliano, located in the Metropolitan City of Naples. Specifically, the area under research concerns the S. Sossio reservoir, built during the Bourbon era and located in a highly anthropised territorial context, given the presence of urban centres, industrial and logistical areas and large infrastructure networks (in use and disused), and which is strongly affected by a condition of hydrogeological risk and a scarcity of services and equipped spaces. The reservoir has a barycentric position in the Regi Lagni hydrographical system, which extends from the slopes of Somma-Vesuvio in the Piana Nolana towards the Domitian coast, more precisely between the northern sector, represented by the Gaudo, Avella, Fellino and Quindici river basins, and the southern sector, represented by the Vesuvian beds such as Santa Maria del pozzo and the Fossa dei leoni riverbed. All of these have their final discharge in the main Regi Lagni canal, which in turn flows just south of the mouth of the Volturno river. By consulting several national databases[2], it was also possible to reconstruct the incidence, concentration and intensity of calamitous events in this territorial context, characterised by peculiar climatic features, which, together with the strong anthropic tampering, amplify the hydraulic risk problems. The analyses and reflections developed are part of that broader line of research in which risk mitigation measures are not only a technical solution but also an opportunity for landscape design and the return of spaces and services to communities. Another relevant element is the attempt to hinge within two ongoing planning and programming processes: the PUC Municipal Urban Plan (approved in 2022)[3] and the 2014-2020 Development and Cohesion funding line (funds of the then Agency for Territorial Cohesion, now suppressed) within the CIS "Terra dei fuochi" programme and the proposal of the General Land Reclamation Consortium of the Lower Volturno Basin[4].

Mainly the following objectives were developed as priorities:

- mitigating environmental risks and pluvial flooding problems, through the introduction of devices for improving the water cycle, soil qualification, implementation of vegetation endowments also in order to increase the provision of ecosystem services;
- rethink the space of the basin as an open, flexible and multifunctional space, available to accommodate compatible uses aimed at making it a usable space for the community, in which functions can be carried out, for example, for leisure time, open-air sports, cultural events, also by promoting forms of co-planning and co-management that foster social dynamism.

The recovery of the S. Sossio basin represents an opportunity to improve the hydraulic risk mitigation processes in these areas but also, and above all, to transform what is now an environmental detractor into a node of social and ecological regeneration. Its functional recovery and partial reconversion for compatible and sustainable activities is part of a broader strategy of landscape enhancement of its territorial context. In this strategy, the basin represents a fundamental part of a network of green and blue infrastructures deputed to the mitigation of hydrogeological risks, to ecological reconnections and to the implementation of the provision of ecosystem services between the urban and peri-urban areas it crosses.

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[1] The proposed contribution was developed as part of Miriam Perretta's Master's Thesis entitled: "WATER-WALK. From the S. Sossio basin to the Regi Lagni linear park", University of Naples Federico II, Department of Architecture, CdL PTUPA Territorial, Urban and Environmental Planning, Supervisor: Prof. Anna Terracciano, Tutor: Ph.D. Student Giovanna Ferramosca

[2] For more information on the AVI database, please consult the following link: https://avi.gndci.cnr.it/.

[3] To view the PUC documents, please consult the following link: https://www.comunemarigliano.it/news/25/piano-urbanistico-comunale---elaborati-aggior

[4] For more details on the progress of the project, please consult the following link: https://opencoesione.gov.it/it/dati/progetti/1miseg67h21029740001/#.

Fig. 1.
The S. Sossio basin in a drone view (Photographs by Francesco Sammarco, www.urbsetcivitas.com)

From the "Intelligent Buildings" program to the new "Intelligent Cities" urban design methodology

G. Tiziana Gallo

My work starts collaborating with CNA Constructions on a principle: there are many European funds to implement plans and projects to respond to the climate crisis and generate jobs. On this assumption I created the "Intelligent Buildings" program.
It is a strategic urban regeneration plan for adaptation and mitigation to climate change with 0 land consumption, based on the use of the European reference legislation.

What does the "Intelligent Buildings" program do?

1. Identifies all public and private buildings, all the public and private areas of the city that are most critical from an environmental point of view, in terms of energy consumption, pollution, mobility and hydrogeological instability which are also the interventions most financed by the EU through direct tenders and indirect, from 2022 PNRR, from 2024 also by European banking institutions;

2. Identify all the technical and technological design responses to respond to the tenders, referring to the identified areas, to maximize the possibility of public and private bodies winning those tenders;

3. Identify all the funding sources available, European and Italian, direct and indirect, public and private, to finance those interventions without using your own "cash" funds. [1]

The "Intelligent Buildings" program was designed by the undersigned and delivered to the Municipality of Fano in 2018 and furthermore, it has just been included among the best practices in terms of strategic plans for adaptation and mitigation to climate change together with Copenhagen, Padua and Bologna in the position paper "Urban settlements in the national plan for adaptation to climate change", year 2023, developed by the group of experts ASVIS Goal 11.[2]

But how much money is a plan like the "Intelligent Buildings" program capable of attracting in a city like Fano, 60,852 inhabitants, if applied systematically. A downward estimate, around 250 million euros extra budget, over the next 7 years to carry out projects of:

- Energy requalification of public and private buildings of all types; Smart and eco-sustainable redevelopment of public spaces and networks; Sustainable mobility; Hydro-geological and environmental redevelopment; Re-forestation and NBS

The "Intelligent Buildings" program subsequently became the methodological basis for all my subsequent work:

- 2018: member of the technical-scientific office that drew up the strategic plan "Taranto futuro prossimo" on behalf of the Puglia Region, which appointed me precisely as the technical creator of the "Intelligent Buildings" program for Fano.
- 2020 I was selected by the Ardadis Italia Company as Project Environment Manager and, together with the urban planner Andrea Boschetti and the architect Andrea Caputo, we coordinated the winning project of the C40 Reinventing City, Milan for Loc.[3] Also in this case in the documents presented there was explicit reference to my work on the "Intelligent Buildings" Program for Fano.
- 2020 I drew up the technical-economic feasibility plan for the variant project of the PRG of via Canellina, Municipality of Gradara, awarded as best practice in October 2023 during the States General of Smart Cities, held in Padua. Here is the link to the project: https://www.greencitynetwork.it/portfolio_page/gradara-sviluppo-area-a-ridotta-carbon-footprint/ Here is the link to the award ceremony: https://www.youtube.com/watch? v=BECJnHr3Bro

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[1] For further information on what the "Intelligent Buildings" program is and how it was developed by me: below is the link to my report at the VII RUN of Urban Planning in Riva del Garda, 2019: https://www.youtube.com/watch?v=LMIANJ-XbXQ

[2] https://asvis.it/public/asvis2/files/Pubblicazioni/PositionPaper_2023/PositionPaperASviSGoal11_Pnacc_Insediamenti_Urbani_nov2023.pdf

[3] https://www.comune.milano.it/-/reinventing-cities-piazzale-loreto.

I am currently in charge of drafting a PUG on the model of the "Intelligent Buildings" program at the Municipality of Crispiano, with the aim of attracting citizens and investors to a southern village that aims for a sustainable future, guaranteeing on the one hand respect and the valorisation of the cultural, historical and environmental heritage, as a driving force for green tourism, and, the maximum feasibility of the interventions, creating passive houses, companies with low environmental impact and a high rate of technological innovation. The entire PUG, designed in compliance with the ESG 2030 agenda, was designed as a CER (Renewable Energy Community). Here is the link for further information:https://www.econopoly.ilsole24ore.com/2022/05/31/rinnovabili-urbanistica-crispiano/

It is precisely the application of this methodology on a planning and design scale, in small, medium and large cities with results that are always positive and recognized by specialized bodies and organizations in the sector, which allow me today to talk about the "smart cities"planning and design method which brings together the themes of sustainable urban regeneration, zero land consumption, climate crisis and systematic use of European funds which, when applied, develops a new driving force for economic recovery on a local scale. [4]

It should be highlighted that the current financing structure is a major support for the actions envisaged by the "Smart Cities" methodology.

But given the pollution rates that afflict enormous parts of the world, in particular in Italy the Po Valley, to reduce the impact on people's health of the very high pollution, what I propose here must be carried out as soon as possible, even if the 'Europe did not provide even one euro of financing. Simply because it is right for us and for the next generations.[5]

[4] https://www.econopoly.ilsole24ore.com/2023/12/18/sviluppo-sostenibile-edifici-intelligenti/

[5] https://www.econopoly.ilsole24ore.com/2024/02/26/inquinamento-pianura-padana-milano-2/?fbclid=IwAR0iJQ5Y_SdryM0CCtHrbIjL1BJ6oYdRWYXfmYp7jMlCYJp-To4_X4ExwBk&refresh_ce=1

Evaluating Urban Walkability
A Thermal Comfort Based Approach

Alessandro Pedrazzoli, Simone Grasso*, Giulia Ceccarelli**, Marianna Zuretti*, Dante Presicce* and Rawad Choubassi**

Walkability measures the extent to which the built environment encourages people to walk (Wang & Yang, 2019)[1]. The level of walkability in cities is vital for the balanced development of urban areas, as it is linked to citizens' physical and mental health (Yue et al., 2022)[2].

Understanding the criteria behind pedestrians' options and preferences for certain routes over others is essential for creating urban spaces that promote walkability while also enhancing sustainable and healthy mobility (Sevtsuk, 2021)[3]. This paper aims to analyze climatic factors as an influencing element of walkability, with the intent of supporting cities in adapting to climate change and the consequent rising temperatures.

Pedestrian thermal comfort is a measure of how comfortable the average pedestrian feels when walking, sitting, or standing in an outdoors environment. Steady-state models represent thermal comfort as a function of environmental and physiological parameters, assuming consistent responses to thermal conditions.

This research evaluates how the different factors determining climate comfort can influence pedestrian route selection in urban environments, specifically in the context of Milan, Italy, on a typical summer day (25/13/2019). It does so by using the Physiological Equivalent Temperature (PET) index, a measure derived from the human heat balance model which merges weather with thermo-physiological factors to assess comfort by comparing physiological responses to a reference environment (Höppe, 1999)[4].

This research is composed of two methodological steps: (1) finding the routes with lower PET index at different hours of the day, and (2) comparing PET-based routes with shortest distance-based routes.

The main tool used at the base of this research is the Urban Multi-scale Environmental Predictor (UMEP), an open-source QGIS plugin designed for city climate simulations (Lindberg et al., 2018)[5]. UMEP employs the SOLWEIG model to calculate the PET, using multiple levels of data, from spatial details to meteorological information and environmental parameters. PET values were evaluated for each hour of the day within a 5x5-meter grid, using the finest Digital Terrain Model available on the Lombardy Region geoportal covering the area of Milan.

Second, a pedestrian graph was constructed using OpenStreetMap's open-source data within a selected area in Milan of 3 km by 4 km, filtering routes relevant to pedestrian mobility (pedestrian, crosswalks, residential, service and step). The network was then enriched with missing pedestrian connections and made routable using Geographic Information Systems. PET data were then matched to the graph, associating each arc with an average perceived temperature based on overlapping PET value of the 5x5-meter cell.

Third, the pedestrian paths analysis was done based on a computational framework developed in Python. NetworkX library was used to model the pedestrian network from the graph, and optimize the implementation of the Dijkstra's algorithm (for more information about this algorithm see Makariye, 2017[6]) to compute the shortest paths. Shortest paths were calculated using two distinct models: (1) distance and (2) PET based. The starting points of the routes were identified at the boundary of the clipped network, serving as critical pedestrian access points. The potential paths through the entire network were identified to evaluate the network performance and enabling a comparative study which revealed the trade-offs pedestrians might face between convenience (distance) and thermal comfort (PET).

Finally, the routing system was used to assess connectivity between selected key points in the network, and compare shortest distance and PET-based paths at different hours.

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1 Wang, H., & Yang, Y. (2019). Neighbourhood walkability: A review and bibliometric analysis. Cities, 93, 43, 61.

2 Yue, X., Antonietti, A., Alirezaei, M., Tasdizen, T., Li, D., Nguyen, L., Mane, H., Sun, A., Hu, M., Whitaker, R. T., & Nguyen, Q. C. (2022). Using Convolutional Neural Networks to Derive Neighborhood Built Environments from Google Street View Images and Examine Their Associations with Health Outcomes. International Journal of Environmental Research and Public Health, 19(19).

3 Sevtsuk, A., Basu, R., Li, X., & Kalvo, R. (2021). A big data approach to understanding pedestrian route choice preferences: Evidence from San Francisco. Travel Behaviour and Society, 64, 41-51.

4 Höppe, P. (1999). The physiological equivalent temperature—A universal index for the biometeorological assessment of the thermal environment. International Journal of Biometeorology, 43(2), 71–75.

5 Lindberg, F., Grimmond, C.S.B., Gabey, A., Huang, B., Kent, C.W., Sun, T., Theeuwes, N., Järvi, L., Ward, H., Capel-Timms, I., Chang, Y.Y., Jonsson, P., Krave, N., Liu, D., Meyer, D., Olofson, F., Tan, J.G., Wästberg, D., Xue, L., Zhang, Z. (2018) Urban Multi-scale Environmental Predictor (UMEP) - An integrated tool for city-based climate services. Environmental Modelling and Software.99, 70-87

6 Makariye, N. (2017, May). Towards shortest path computation using Dijkstra algorithm. In 2017 International Conference on IoT and Application (ICIOT) (pp. 1-3). IEEE.

This allowed to investigate route variations in terms of distance and average perceived temperature. Significantly, thanks to the small granularity of the dataset used in the proposed methodology, it was possible to identify specific pedestrian behaviour, such as choosing one sidewalk over another based on the change in temperature over the hours.

The analysis of pedestrian route outputs showed interesting and unexpected insights, highlighting the importance and potential of incorporating thermal comfort considerations into urban route planning.

For instance, while it was expected for PET-based paths to cross parks, many connections actually occurred in the immediate proximity to parks, where the combined shadows of buildings and trees offer a significantly cooler environment. This observation underlines the complex influence of urban morphology and vegetation typologies on microclimate, demonstrating the need to integrate these considerations into mobility and street design principles.

Moreover, the analysis of the different paths throughout the day revealed that PET-based paths can reduce the average perceived temperature by up to 3 degrees, while modestly increasing the average path length by 830 meters over a 3980 m route (21% longer on average). This underscores the efficiency of PET-based routes in improving pedestrian comfort without significantly increasing travel distance, further stressing the need to integrate thermal comfort considerations into urban planning.

This research has the potential to lead to the development of navigation systems that account for the influence of microclimatic conditions. These findings are particularly crucial in assisting urban planning in contexts where there is a significant lack of data for evaluating comfort conditions in outdoor spaces (Nikolopoulou & Lykoudis, 2006)[7].

Fig. 1.
Pedestrian flow diagram of shortest paths (in red) and coolest paths built on the average PET value (in blue). In black are highlighted the portions of routes where the two Pedestrian flow diagrams overlap.

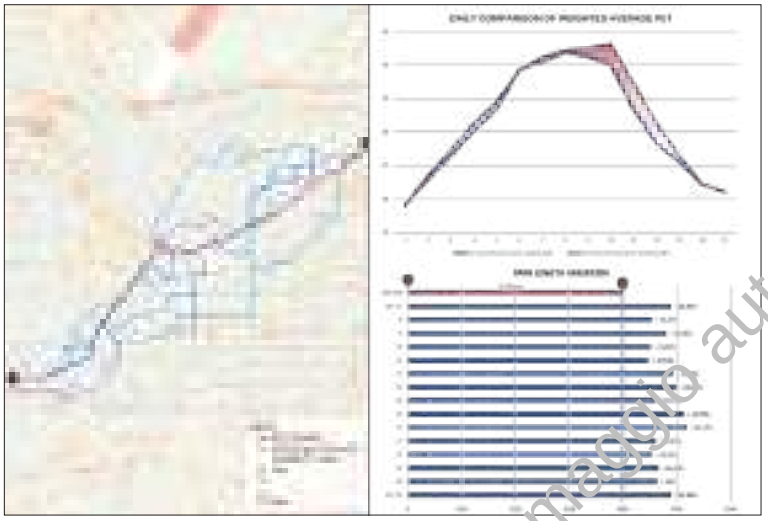

Fig. 2.
Comparison of shortest path and coolest path (at different hours) from Duomo to Piola Metro station. The perceived temperature on the shortest path is evaluated on the average PET throughout the day.

[7] Nikolopoulou, M., & Lykoudis, S. (2006). Thermal comfort in outdoor urban spaces: Analysis across different European countries. Building and Environment, 41(11), 1455-1470.Makariye, N. (2017, May). Towards shortest path computation using Dijkstra algorithm. In *2017 International Conference on IoT and Application (ICIOT)* (pp. 1-3). IEEE.

Digital Seascapes:
Can we use digital technologies for engaging coastal communities in building marine citizenship?

Ashita Gupta, Katharine Willis***

This paper explores pathways to marine citizenship for building coastal resilience using place-based digital technologies in context of the sea as a public space. Global strategic goals for creating sustainable and resilient cities and growing concern over the climate crisis, including human impacts upon coastal waters and degradation of marine environments, requires that coastal cities empower and inspire communities to cherish city seascapes by developing innovative solutions (Fletcher & Potts, 2008; McKinley & Fletcher, 2010; Pittman *et al.*, 2019). In view of the lack of community participation in marine civic governance in the UK, particularly involving deprived coastal neighbourhoods, the decline of city seascapes poses a serious burden on the local authorities in these areas with already limited resources (DEFRA, 2002; Graells *et al.*, 2021; Toomey *et al.*, 2023; Zsamboky *et al.*, 2011). Therefore, it is imperative to explore new ways of engaging coastal communities in building resilient and inclusive coastal cities and neighbourhoods. Current planning and management efforts in coastal areas globally have incorporated various approaches to address this decline, including coastal restoration, climate change adaptation, pollution mitigation, economic development, rezoning, and increased public access in waterfront areas (Shamsuddin *et al.*, 2012; Toomey *et al.*, 2023). Less explored, however, is how these processes can support and/or interrupt the existing "sense of place" that people hold in reference to these spaces, particularly in spaces considered to be degraded and/or are in marginalised communities (Toomey *et al.*, 2023; Zsamboky *et al.*, 2011). Deeper connections to place in the context of marine environments are related to higher likelihoods of pro-marine conservation behaviours and are prerequisites for building resilience and stewardship (Day *et al.*, 2022; Toomey *et al.*, 2023). Additionally, there is a gap in multidisciplinary research on defining and designing solutions associated with participatory approaches which is needed for urban sustainability in coastal cities (Graells *et al.*, 2021). Digital technologies offer a unique opportunity to address these challenges by enabling new modes of participation that can create pathways to community co-stewardship of city seascapes (Cigliano *et al.*, 2015; Toomey *et al.*, 2020). Tools such as mobile applications, augmented reality and virtual reality for immersive experiences, interactive maps for wayfinding etc can create new ways to engage with the marine environment and provide the resources for individuals to become active stewards who help foster conservation efforts (Chisik *et al.*, 2022; Nijholt, 2016). Previous studies have also demonstrated the value of citizen science projects in facilitating community engagement with natural spaces and environmental issues (Kelly, Fleming & Pecl T., 2019; Nursey-Bray, 2017; Willis & Gupta, 2023). Therefore, by building and nurturing relationships between people and marine environments, place-based digital technologies have the potential to create marine citizenship needed to care for the city seascape as a public space i.e. a blue urban common. Leveraging these new modes of participation created by digital tools can also democratise the decision-making processes by enabling more efficient and inclusive engagement with stakeholders in a collaborative decision-making process for marine civic governance (Day *et al.*, 2022; Toomey *et al.*, 2020; Willis & Gupta, 2023). This research aimed to explore new ways to engage with the sea and make coastal areas more accessible, especially for exclude communities living close to the sea, using place-based digital technologies a tool, and more broadly, explore pathways to marine citizenship for building resilient and inclusive coastal communities. We used a community co-design approach in Plymouth-UK's first national marine park, characterising the city seascape using the collaborative community-led concept of a 'city marine park' (Pittman *et al.*, 2019) which celebrates the city's connection to the marine environment and enables coastal communities to participate in activities that deepen understanding, value, care, and enjoyment of the city seascape. The study aimed to pilot this approach as a place-based intervention in Plymouth, given its leading role as the first National Marine Park in the UK, with the aim to generate learnings that can be shared to other coastal towns and cities. The study also explored the role of digital technologies within marine spatial planning practices for creating marine citizenship against the challenge of building coastal resilience. The research findings suggest that by facilitating access to temporal and biodiverse marine spaces such as rocky shores (inter-tidal rockpools), place-based digital technologies can create new ways for communities to access and engage with the sea and the marine environment; in turn establishing a sense of place. We argue this can contribute to coastal resilience by establishing stewardship of city seascapes as a 'blue commons'. Furthermore, an integrated approach using digital technologies for placemaking within marine spatial planning practices can help create quality places, build shared value and create the community capacity and the cross-sector collaboration necessary for addressing challenges around resilience and creating thriving coastal communities.

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Fig. 1.
Co-design workshops conducted with the Rockpool Project at Firestone Bay, Plymouth, UK

Fig. 2.
Low-fidelity prototypes developed during the co-design workshops.

Integrating Human-Centric Care and Accessibility: Designing Inclusive Residential Spaces for Special Children in Economically Underdeveloped Regions of China

*Zhouyan He**

Modern society's diverse development has made design products more accessible, providing convenience to a wider range of users. Human-centric design has improved living conditions for vulnerable groups, including special children. Despite the global emphasis on comprehensive support for these families, specialized indoor spatial arrangements for these children in residential settings are limited. Both domestic policies and international ICF frameworks stress the importance of holistic support for families with special children. However, due to their unique characteristics and developmental stages, tailored interior designs are crucial for their rehabilitation. This research aims to fill this gap by exploring interior designs specifically tailored to special children, integrating humanized care principles, and evolving barrier-free concepts. By considering their developmental space and applying relevant design concepts, the goal is to create family spaces that better suit their needs and enhance the overall quality of residential environments.

The research objectives encompass a comprehensive review of literature on special children, analyzing design research nationally and globally to grasp current trends and theoretical frameworks. This interdisciplinary investigation spans special education, psychology, environmental psychology, ergonomics, and design theory, incorporating theories like Erikson's stages of psychosocial development. Additionally, a crucial aspect involves understanding the correlation between developmental stages and spatial needs, comparing these with typically developing children to capture distinct trajectories and implications for spatial requirements. On-site investigations in Lanzhou, China, included institutions like the Chengguan District Disabled Children's Rehabilitation Center and interviews with parents, staff, and children. The assessment resulted in spatial requirements for communal, private, and additional living spaces, with design strategies focusing on humanization, emotional engagement, assistance, and sustainability. Implementation involves integrating IoT technology into smart home systems, addressing earlier concerns about special children's engagement within their living spaces.

Based on existing theories, the "Accommodating Adaptable and Intimate design" (AAI) design concept is proposed, actively applying these six design principles including barrier-free design, universal design, safety design, inclusive design, accommodating adaptable and intimate design, and growth design in design research. Extensive discussions with families and children inform the design, aiming to overcome challenges within residential settings and improve family life quality. It proposes tailored approaches for different living space sections dedicated to special children. The goal is to enhance living environments, aid recovery, and offer innovative insights into designing spaces meeting their unique needs, laying a foundation for future studies in this area. Additionally, data from 400 questionnaires and interviews with 30 families contribute to understanding living circumstances and challenges faced by special children, highlighting issues impacting their residential activities, and informing design decisions to improve their quality of life.

The research findings underscore the significance of addressing the needs of special children in contemporary society. Enhancing their living environments through design not only enhances overall family life quality but also empowers these children to regain confidence and achieve semi-self-care and semi-independence. By analyzing their physiological and psychological development, outlining specific spatial requirements, and formulating human-centered design strategies grounded in principles of barrier-free, universal, safety, inclusivity, and growth-oriented design, the research aims to create adaptive and nurturing spaces tailored to the diverse developmental stages of special children. Additionally, innovative approaches integrating smart home systems and intelligent spatial cognition draw insights from environmental psychology and the psychology of special needs children to create therapeutic environments. While acknowledging limitations in scope, the study calls for further exploration of spatial design strategies and

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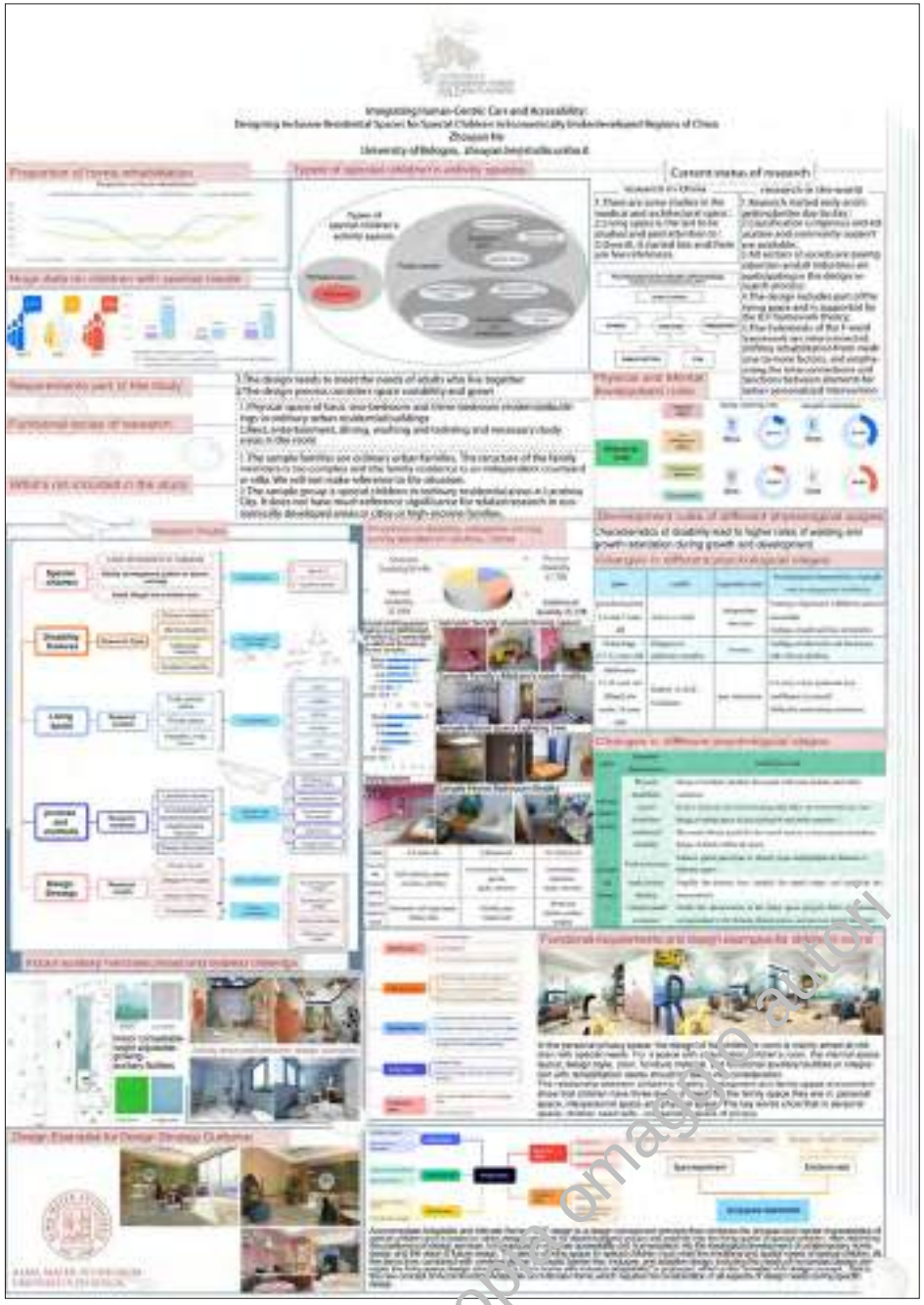
emphasizes the need for societal, economic, and technological support to foster inclusivity and equality for special children. Given urban adjustments, technological advancements, and growing social care, prioritizing the living environments of special children is crucial for fostering a harmonious and equitable society.



Sustainable reconstruction of the Ahr valley in Rhineland-Palatinate, Germany

*Svenja Knuffke, Lutz Kraemer-Heid**

In 2021, the flood disaster in the Ahr valley, Germany, caused immense damage and destruction, particularly in the municipality of Altenahr. It will take several years to fully restore the Ahr Valley's infrastructure, a major political and urban planning challenge. Planning in the Ahr valley is caught between the need for climate-adapted reconstruction (including the associated flood protection measures), on the one hand, and the "1:1 reconstruction" currently practised in many places because of the inhabitants` great longing for normality, on the other. The German company AS+P Albert Speer + Partner GmbH, is one of the private planning offices which has supported the affected region since January 2022, planning the reconstruction in a respectful way, focusing on resilience and adaptation, and encouraging the damaged communities to create a future worth living. The work of AS+P originally started in the municipality of Altenahr. On behalf of the state of Rhineland-Palatinate, the company today works as a "local municipal coordinator" supporting several flood-damaged villages individually.

The Ahr Valley is a rural area characterized by low density and an attractive and ecologically valuable landscape. For this reason, urban development must be designed to scale and in harmony with the characteristic landscape. Immediately after the flooding disaster, a committed but uncoordinated reconstruction took place, and the Ahr valley is now very heterogeneous. To date, small-scale, solitary developments have taken place. In places, new buildings have already been erected, in other places the picture is characterized by fallow land and so-called "flood ruins" – an initial planning situation with great uncertainties.

The flooding is clearly a consequence of climate change. Adaptation and dealing with climatic requirements and effects have long been an integral part of urban planning. Nowadays, it is the green-blue rather than the grey infrastructure that provides orientation. Resilience and adaptation are guard rails for future planning, from the overall perspective to the local or specific detail.

Against the backdrop of high public expectations on the one hand and compliance with legal framework conditions on the other, the challenge was to find pragmatic solutions and the requirement to plan with care, all with the intention to prevent a second flood disaster. Resilience and adaptation have become important components of planning considerations in an agile planning system, in which multiple processes run simultaneously on different spatial planning levels, involving many different institutions. For example, the water restoration concept for the river Ahr must be harmonized with local development measures and also with bridge and road planning. Continuous mutual feedback and constant harmonization is essential. A flexibilization of planning thinking was and is the logical consequence.

The Altenahr municipality decided to align their urban development with a strategic masterplan. The guiding concept developed by AS+P in 2022 covers everything from future housing, living, mobility and working in the Ahr valley to the sustainable use of landscape and environment and the question of how flood-adapted construction methods can be harmonized with the typical regional building culture. Key objectives, measures and priorities are formulated. Goals and measures in the fields of tourism, settlement development, public services, economy, and mobility are also described and proposals for implementation are made. Thinking of a resilient and adapted reconstruction on a high spatial level, the main priorities were to develop a spatial vision for the Altenahr municipality and to define positive goals and connecting synergies.

In addition to the supra-local strategic masterplan, local development concepts were designed for the flood-damaged villages by private local planning offices. They have been mapped back to the strategic framework of the masterplan and form the basis for current decisions regarding sustainable urban development. Even at this level of spatial

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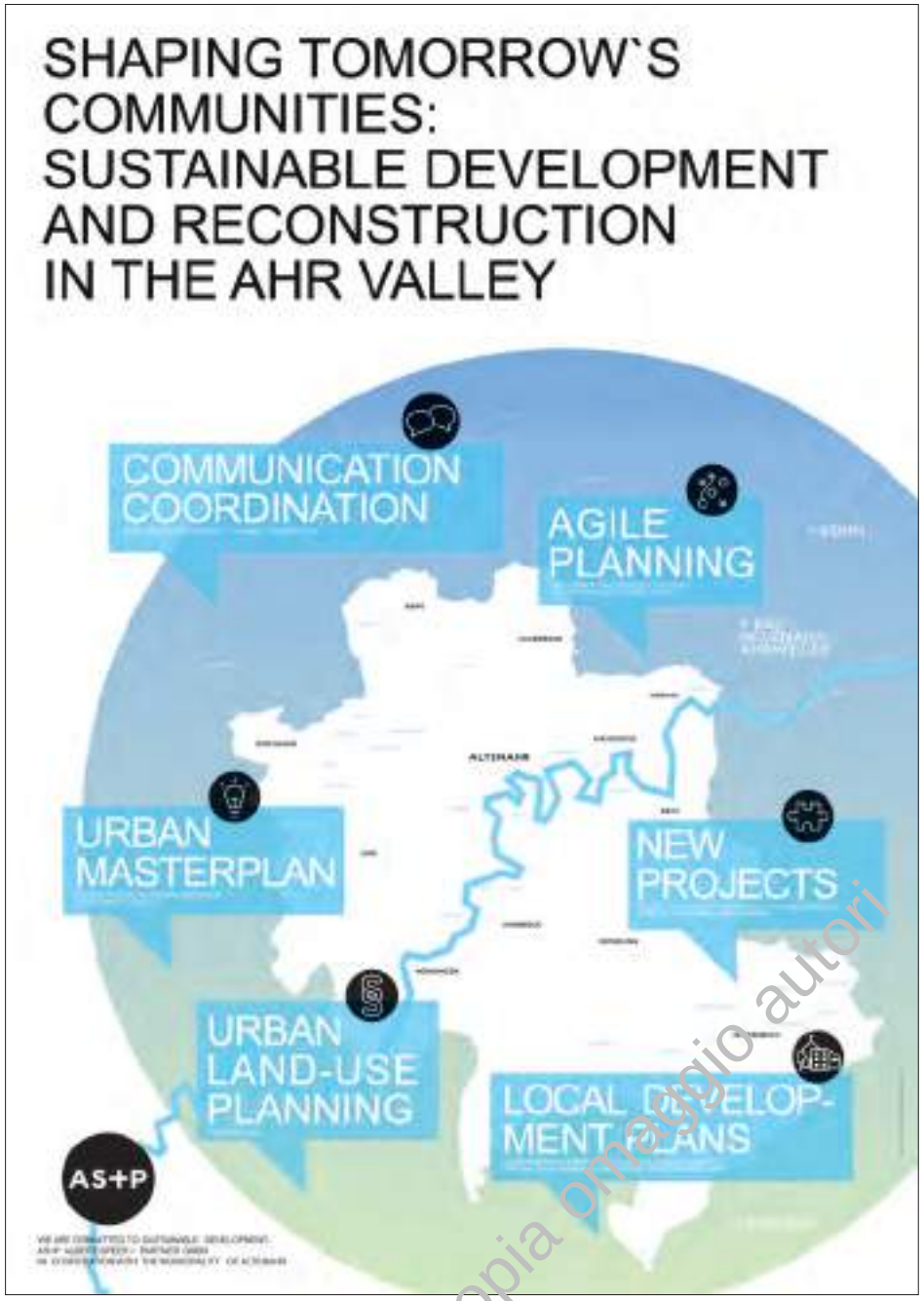
planning, resilience and adaptation have been key objectives when planning projects in a targeted manner. The local development concepts also provide an important basis for the urgently required municipal urban land-use planning.

Professional support, both financially and personally, is still essential for the coming years. The fundamental questions are how the concepts and projects can be implemented in existing structures in a resilient and future-oriented way. The local municipal coordinator will start processes and exchanges, with the intention to establish a self-sustaining planning culture. One of the key issues is an effective management of the distribution of funds. Resilience and adaptation will continue to play a significant role as guiding principles when implementing future projects.



Mapping deficit areas for adaptation planning

Insights from flood protection ecosystem service in an Italian case study

Alessandra Longo, Linda Zardo, Davide Longato*

Floods are the costliest natural disaster in Europe, both in terms of human and economic losses (Dottori et al., 2020). Climate change and increasing land take will worsen their effects, leading to cumulative impacts such as climate migration, health risks, and habitat destruction. Institutions should adopt integrated long-term climate mitigation and adaptation policies to overcome these challenges. One promising approach is to use ecosystem services (ES) to rethink, rebuild and ensure equitable access to the resilience of cities and territories. It represents an inclusive and interdisciplinary approach since it considers various values, perspectives, objectives, and knowledge domains. However, some barriers hinder the integration of ES into spatial plans for climate adaptation, both in the scientific and political domains. In the first case, knowledge is often produced exclusively for academic purposes (Bitoun et al., 2022) and is thus very specific on certain aspects, sectoral and unrelated to the real-world complexity. This is the case, for instance, of a greater focus on the supply side rather than the demand side of ES, which is essential to define where priorities are (Dworczyk & Burkhard, 2023). In the second, there is a general lack of understanding of the concept among policymakers, which further complicates its application (Ronchi, 2021). It is therefore necessary to promote the use of systemic and interdisciplinary approaches that foster communication and the effectiveness of planning actions for the just and sustainable management of natural resources. To these ends, in this study we aim to guide the construction of ES-based adaptation policies, with the final objective of sustainably managing the complexity of cities and territories against turbulence. We provide a user-friendly, multi-scalar GIS-based methodology to support decision-makers in identifying areas with a deficit of ES in response to flooding, i.e. where ES supply does not meet the demand. We defined the supply according to the capacity of land covers to provide ES (Longo et al., 2024), specifically flood protection ES (Haines-Young & Potschin, 2013). Demand is derived from the territorial need to counteract the impacts of pluvial, river and coastal flooding caused by climate change recognised in local studies (ARPA FVG, 2018). These impacts are organised into 16 socio-economic and natural sectors (e.g., water resources, tourism, agriculture). We applied our three-steps methodology to the coastal strip in the south of the Friuli Venezia Giulia Region, Italy, characterised by lagoon landscape that is among the most fragile environments in the entire region due to the exposure to natural and anthropic pressures, such as erosion, subsidence, storm surges, hydraulic risk, saline wedge intrusion, water pollution, sea level rise. The research questions that guided the construction of the methodology are the following: (i) how can ES demand be defined? (ii) how can the relationship between ES supply and demand be evaluated? (iii) how can ES knowledge be effectively conveyed to aid decision-makers? First, we made the demand area of each sector spatially explicit by using regional land cover data and other local datasets. Second, we identified deficit areas by overlapping each demand area with the ES supply area. In the comparison, performed in GIS environment using the erase command, we assumed that providing area and benefiting area coincide. Of the 16 sectors analysed, in 3 the demand is fully met while in the remaining 13 there is a deficit in ES provision. The area occupied by the deficit exceeds 74% of the extent of the demand area in nine sector (70%), of which four (31%) with 100%. From results observation, similar geometries emerged, which led to the question of what land cover types the deficits areas of the different sectors had in common. Thus, in the third and final step, we grouped the deficit into clusters by considering the two criteria of 'deficit level', i.e. the percentage of land involved, and 'similarity'. For the former, we defined two levels, namely medium-low (<50%) and medium-high (>50%). For the latter, we overlapped the deficit areas with the regional land cover and found only two responsible ecosystem types, i.e. urban and agricultural, which appeared either alone or together. This resulted in 4 clusters with the following characteristics: cluster A, B and D register medium-high deficit level caused by agricultural land, both ecosystem types and urban areas, respectively; cluster C presents

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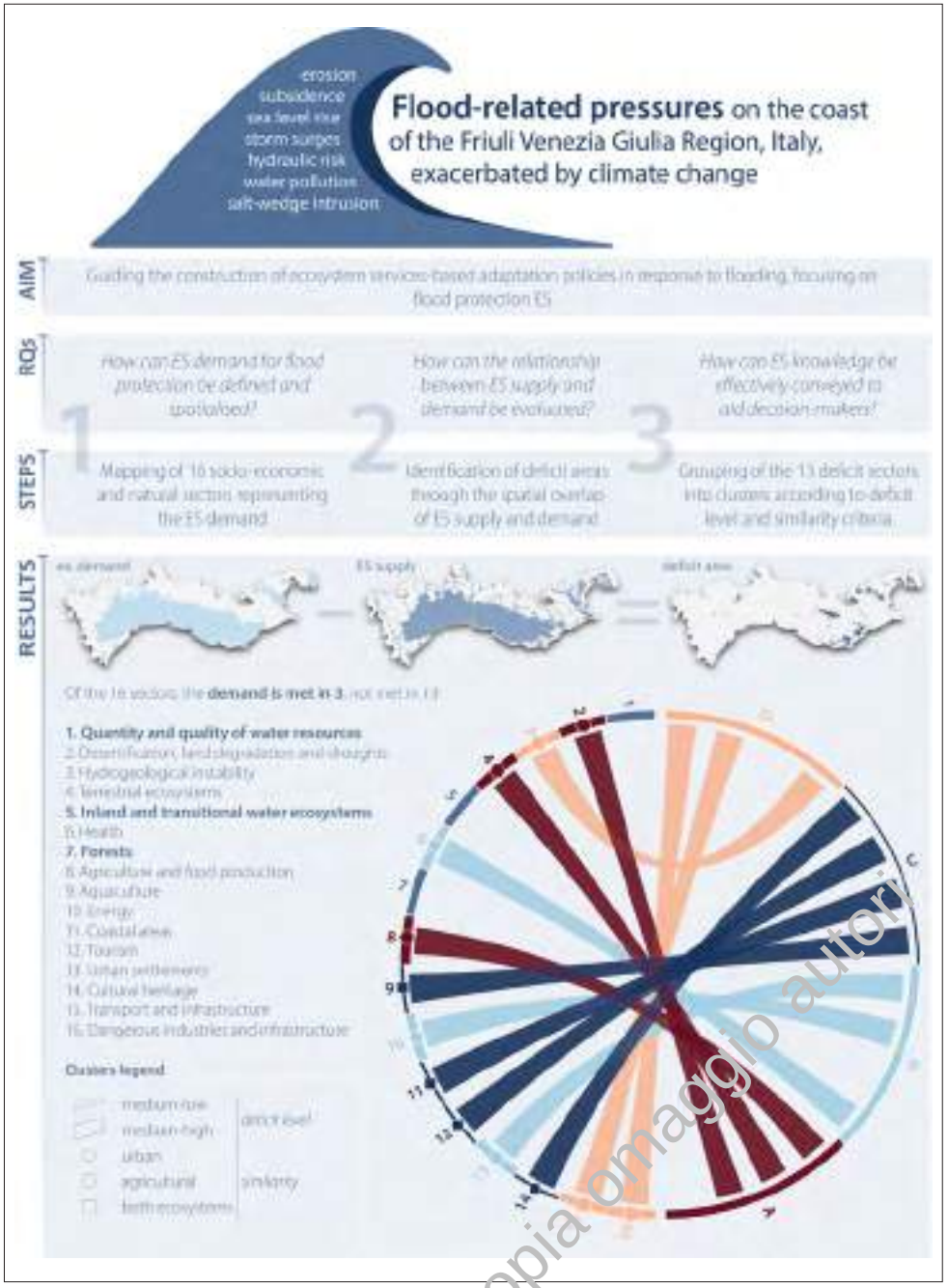
Fig. 1.
Structure of the methodological approach applied to the case study of the Friuli Venezia Giulia coastline and presentation of the results obtained.



a medium-low deficit level due to both ecosystems. Providing decision-makers with this information could led to an easier understanding (in theoretical and practical terms) of the potential risk situations deriving from the absence of essential ES such as the flood protection in the coastal case study analysed. Moreover, the use of sectors to build the demand side is functional to span the boundaries and ensure that planning decisions are not taken in disconnected silos, as this generally result in ineffective actions. Our study presents an approach that can be replicated in other contexts and at different scales of intervention thanks to a simple methodological process and the use of terminology that can be easily adapted, such as sectors and land cover. The insights we provide from its application on an Italian case study show its potential to start considering the usefulness of ES perspective for adaptation planning.

Policies, Strategies, and Projects for Sustainable Urban Regeneration
A comparative analysis of France and Germany

*Laura Ricci, Carmela Mariano, Marsia Marino**

The profound changes in the contemporary city, resulting from processes of urbanization, have recently led to a profound difference between the crisis of today's city compared to that which originated from the second half of the last century. Indeed, the emergence of environmental issues related to the climate crisis has added to the already structural socio-economic ones (Marino, 2023), emphasizing the urgency of activating policies, strategies, procedures, and tools capable of providing integrated responses to environmental regeneration, social revitalization, cultural and economic valorisation of the city, prioritizing the realization of a new urban welfare to ensure local communities' rights to health, education, public mobility, housing, environment, and more broadly to the city (Ricci, 2021).
The integrative nature of urban regeneration, as defined by the European Community and underlying the *European Urban Agenda* (EC, 2016), finds broad convergence in community policies for promoting the sustainability and efficiency of cities from a Smart perspective (Giffinger, Gudrun, 2010), and finds operational references in the *Green New Deal* (EC, 2019), the *Just Transition Fund* (European Parliament, 2021), and the *Horizon Europe 2021/2027 Program* (EU, 2021). Furthermore, the *New Leipzig Charter* (European Parliament, 2020) – adopted during informal ministerial meetings organized on November 30, 2020, under the German presidency of the Council – inaugurates a new phase of implementation of the Urban Agenda for the EU. The revision of the Charter provides a key tool for sustainable urban development in Europe and emphasizes that cities must establish strategies for integrated and sustainable urban development and ensure their implementation for the city, from its functional areas to its neighbourhoods, according to a triple level of actions, aggregated under the following headings/goals: "just", "green", and "productive".

With "just city", the transformative power of cities capable of offering equal opportunities and environmental justice for all is emphasized; with "green city", reference is made to the need to transform cities through actions aimed at combating global warming and ensuring high environmental quality through the sustainable use of air, water, soil; with "productive city", the urgency of implementing, through the transformation of cities, a model of diversified economy that provides jobs, while ensuring a solid financial basis for sustainable urban development, is emphasized.

The theme, in the Italian national context, also constitutes a transversal objective of the *National Recovery and Resilience Plan* (PNRR, 2021), which, in Mission 5 "Inclusion and cohesion", component "Urban regeneration and social housing", pursues the objective of regenerating degraded areas primarily focusing on green innovation and sustainability. In this regard, the contribution is part of the thematic contextualization activities of the research "New rules, parameters, indicators, operational references of the urban plan for an eco-sustainable approach to urban regeneration" (Principal Investigator Prof. Laura Ricci), funded within the framework of the PNRR, and aims to build an interpretative framework of policies, guidelines, procedures, strategies, and projects on urban regeneration in the European context, adopting an ecological-integrated approach.

Therefore, considering the aforementioned community guidelines on sustainable urban development and the principles of integration, multilevel governance, participation, and shared creation, sanctioned by the renewal of the Leipzig Charter, the contribution proposes an analysis of the French and German contexts in order to:

- investigate the different national interpretations of European guidelines and highlight the interrelations between community policies and national urban regeneration strategies;
- understand the project implications of national strategies at the local level through the analysis of some best practices and verify their alignment with the three objectives of the new Leipzig Charter.

Regarding the French case, the analysis of the urban regeneration intervention in the Val d'Aran (Toulouse) (Fig. 1) is proposed, within the framework of the *Nouveau Programme National de Renouvellement Urbain* (ANRU, 2019), which – following the *Programme National de Rénovation Urbaine* (ANRU, 2004) – envisages a profound transformation of 450 "fragile" neighborhoods in terms of environmental and socioeconomic challenges, identified as "priority" intervention areas.

As for the German case, the analysis of the Pioneer Park project (Hanau) (Fig. 2) is proposed, within the framework of the program *Wachstum und nachhaltige Erneuerung* (Growth and sustainable renewal) aimed at designing more livable neighborhoods (Bundesministerium des Innern, für Bau und Heimat, 2021).

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Fig. 1.
A detailed view of the urban regeneration project in Val d'Aran (Toulouse)

Fig. 2.
An aerial view of Pioneer Park urban regeneration project (Hanau)

A participatory approach to increase urban resilience while addressing seismic vulnerability in six Adriatic-Ionian countries

*Giulia Marzani, Angela Santangelo, Simona Tondelli**

European Countries in the Adriatic-Ionian area have been strongly undermined by earthquakes, and consequently they have already developed laws and norms for tackling earthquake risks and for reducing seismic vulnerability of the built environment. Nevertheless, seismic vulnerability of urban areas and particularly of historical centres remains high. In this framework, identifying and engaging all the relevant stakeholders is fundamental to support the operationalisation of the knowledge on seismic vulnerability, the capitalisation of current good experiences and influence decision-making process[1]. To support the transfer from research to practice, a four-phases methodology hinged into participation has been applied in the framework of ADRISEISMIC, a three-year project funded by the Interreg ADRION programme and concluded in February 2023. Its overall aim has been to collect, systematize and exchange knowledge and practices to address seismic vulnerability of the built environment in the six project partners' Countries (i.e., Albania, Croatia, Greece, Italy, Serbia and Slovenia), to harmonize planning and management of emergencies by providing tools and procedures to be integrated into the existing policies and practices. At first, a review of the state of the art is conducted, through a collection of existing seismic norms, urban planning regulation and laws, seismic incentives, post-earthquake planning and insurances policies targeting seismic risk in each project partners' Countries. The second phase focused on the identification of good practices extracted from the review, intended as virtuous initiatives to increase resilience of historic areas towards seismic risk, that might be of inspiration for other partners and beyond. In the third phase, project partners have been asked to rate the potential of replicability and scalability of the foreign good practices in their country. Lastly, in the last phase specific recommendations are set and tailored to local contexts through a roadmap, which establishes key actions and responsibilities for improving the current policy instruments towards the reduction of seismic risk. Each phase foresees a workshop involving the key stakeholders, aiming both at enriching and validating the project results. The application of the methodology led to the organization of 24 workshops, with a total of 224 stakeholders involved (Fig. 1). They range from public authorities to private entities such Small Medium Enterprises (SMEs) and practitioners, encompassing also NGOs, academia and training centres. The workshops were originally conceived to be run in presence, but Covid-19 pandemic strongly affected the possibility to meet in person and therefore 16 workshops have been organized online, 3 in a hybrid modality and 5 in presence. The first round of local workshops was held in December 2020, and stakeholders have been asked to enrich and validate the collection of the documents gathered by the project. The second round of local workshops occurred between June 2021 and February 2022 and focused on the validation of the good practices collected. During the third round of workshops held between January and March 2022, stakeholders were asked to identify which opportunities and threats might occur to replicate the foreign good practices in their Country, establishing priorities for the improvement of the policy and regulative system[2]. Finally, the roadmap has been presented to the key stakeholders as an instrument aiming at increasing resilience of urban areas against seismic risk, and has been validated with them in the last round of workshops, organised in November 2022. In terms of the adopted approach, the events have been structured in an introduction focusing on the general aim of the project and the results achieved at that time, followed by a presentation of the activity of the workshops and the expected outcomes. When appropriate, preparatory materials have been shared with participants in advance, to allow stakeholders tailoring their intervention to support the real needs of the project and make their role as clear as possible. Moreover, after each workshop an evaluation questionnaire was shared to gather stakeholders' feedback. According to the survey results, stakeholders appreciated the addresses themes, the possibility of discussion on concrete issues and the workshop dynamics. Concluding, the methodology was proven to be replicable in six different Countries and resulted in the co-creation of knowledge and strong local networks able to tailor the project's solutions to the specificities of the local contexts, by strengthening the transferability of the project results, the knowledge transfer between Countries and the transnational cooperation. It also constituted a way for local and regional authorities to engage a multi-disciplinary team to effectively implement actions.

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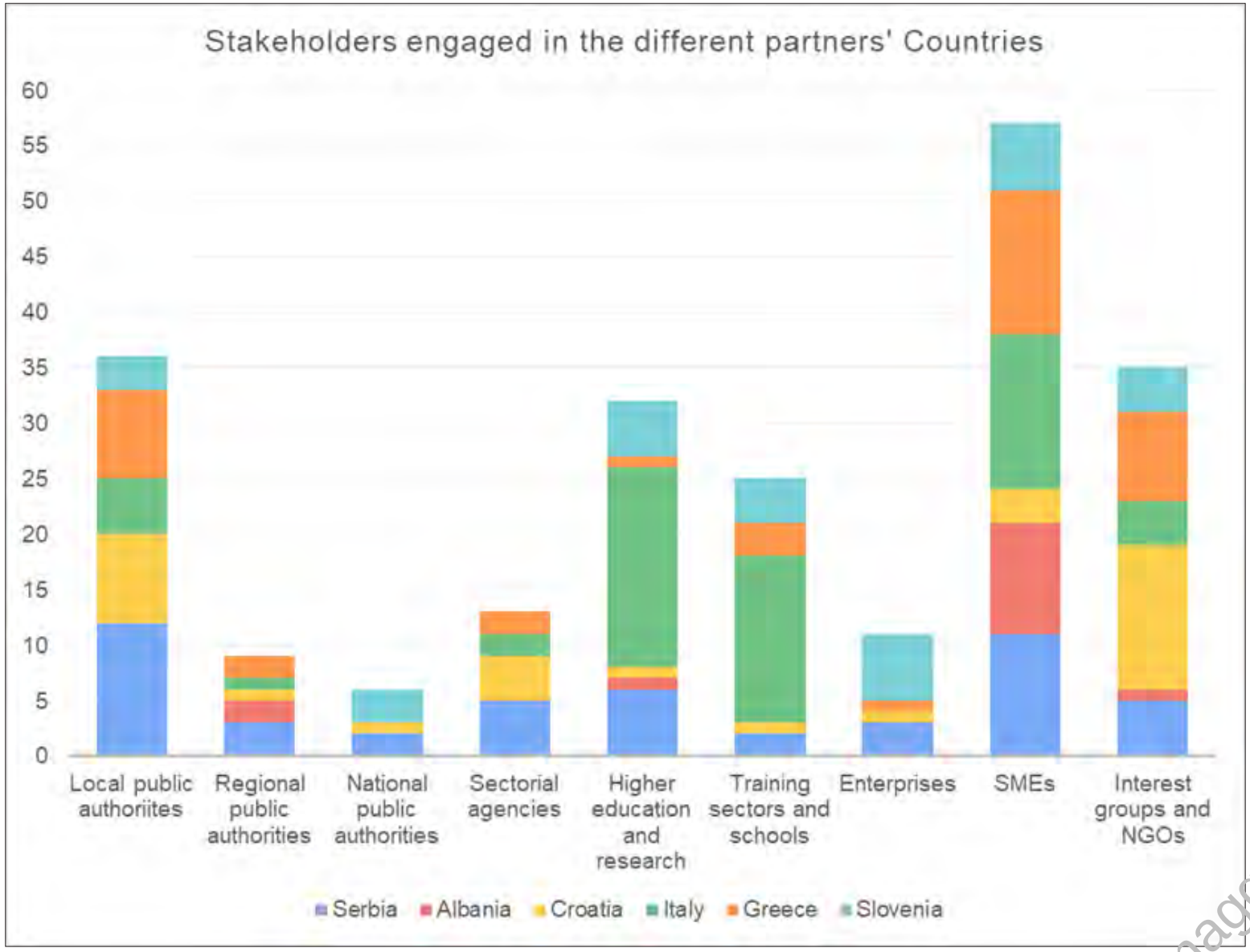

Fig. 1.
Stakeholders grouped according to the target they represent and divided per country.

Renewable Energy Communities: a strategy for energy transition
The Municipality of Rome's experience

Fabiana Cambiaso, Giuseppe Milano***

The latest Cop28, which concluded with a "historic agreement" which requires the definitive transition from fossil fuels for energy systems "in a fair, orderly and equitable way", established that by 2030 the capacity of renewables must triple and the efficiency energy will have to double. Each country, through its Nationally Determined Contributions (NDC) and in accordance with the 2015 Paris Agreement, must promote a strategy aimed at the overall decarbonisation of its economy by 2050. In addition to the law for urban adaptation to climate change, Italy is committed to defining the new Pniec and the Fer 2 decree, after having launched the provisions for renewable energy communities and agrivoltaics, with the ambitious intention of producing at least 75-80 Gw of clean energy through an advanced energy mix by 2030. The latest European directives on the internal energy market and on renewables (with the new Red III not yet implemented by Italy), in the design of the democratization of energy and in the aim of decarbonisation, introduce and strengthen the institutions of widespread self-consumption and of energy communities. Through local polycentric and decentralized models, as well as with the ambition of achieving high standards of social, environmental and economic sustainability (Art.2, Red II directive), the protagonists of the transition become the prosumers (i.e. those who produce and self-consume energy) who they will be able to enhance the tested models by integrating sustainable technologies such as storage systems and digital technologies such as blockchain, the metaverse and artificial intelligence. Specifically, the research describes the protagonism of the Municipalities, called to support the creation and diffusion of energy communities.

The aim of the research is to demonstrate the effectiveness, through the case study of Roma Capitale, of these innovative and generative, scalable and replicable models, inspired by alternative and complementary visions of governance of urban communities. The Capitoline Council, on 15 December 2022, approved Resolution 402 which defines the methods with which the Municipality intends to support the creation of energy communities and collective self-consumption projects promoted by citizens, small and medium-sized enterprises, foundations, third sector organizations , ecclesiastical bodies. Some issues are highlighted. The first concerns the primary cabins to which the energy communities will have to connect: in Rome there are 70 of them and each designs an operational geographical area. Also in anticipation of new forms of intelligent management of the systems, the Municipality of Rome has therefore defined. a collaboration with ARETI, the ACEA Group company that manages the distribution network, to optimize the outcomes of the processes that will arise. The second concerns the simplification of the procedures for installing solar panels on the roofs of Rome. The third explores the institution of making public roof assets available for projects promoted by families and third sector associations through collaboration agreements and community educational agreements. These are 1200 school buildings of all levels, as well as hundreds of office buildings, social housing, libraries, museums, markets, through which the Municipality will be able to benefit from the electricity produced by reducing bills through self-consumption and distributing an economic benefit to participating members taken directly from the incentives defined by the share of clean energy consumed. In detail, in the 2023 budget the design of the tender to create 15 energy communities on school buildings was financed, one for each municipality. In August 2023, the project for a large photovoltaic solar system in Tor Bella Monaca was presented, promoted through a project financing initiative, for which Municipality VI and the Municipality will publish the tender. Once built, it will be one of the most important solidarity energy communities in the city because it will help implement environmental and social projects in one of the most difficult suburbs of Rome. Another pioneering project, in Municipality VIII, directly involves the Roma Tre University which intends to solarize all the university buildings by redistributing the economic benefits to local associations through a generative collaboration agreement, with the aim of also mitigating the phenomenon of poverty energy. Finally, the Municipality of Rome has provided resources both to support the Municipalities in their information and awareness campaigns and to train technicians internal and external to the administration.

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Fig. 1.
The Le Torri solar park, Tor Bella Monaca, Rome

Fig. 2.
The Le Torri solar park, Tor Bella Monaca, Rome

Taranto Green Belt

Building a resilient city through the re-naturalization of public areas and the enhancement of local environmental assets

*Simona Sasso, Federica Mitrangolo, Alessandro Sangermano and Simone Marchesi**

Since January 2020, The City of Taranto has been working on the "Taranto Green Belt" initiative, an extremely ambitious project aiming to make Taranto a "green city" and a model for environmental regeneration processes carried out at the urban scale.

The initiative was presented for financing by the municipal authority in the framework of Taranto's CIS (Institutional Development Contract) in march 2020. Since then, funding to support the implementation of the Green Belt is being pursued in the context of Taranto's Just Transition Fund Territorial Plan, that has a specific line of financing for the development of green infrastructure.

The new Green Belt of Taranto is conceived as a widespread operation spanning across the entire municipal area. Structured as a systematic plan for the environmental enhancement, the re-naturalization of public areas and the implementation of new or improved green spaces, it will concern all the neighbourhoods of Taranto, creating an almost continuous belt, or crown, around the central core of the city (hence the name).

Indeed, the initiative aims at the development of a sustainable and cohesive green infrastructure, capable of providing integrated ecosystem services to the entire urban region of Taranto, mitigating the negative effects of climate change and increasing urban resiliency.

The Green Belt is structured into three main segments:

- Northern Green Belt, including the Tamburi – Paolo VI neighbourhoods and a good part of the perimeter of Mar Piccolo's second basin;
- Eastern Green Belt, including the Solito, Salinella and Taranto 2 districts;
- Southern Green Belt, mainly concerning the coastal areas south of the central part of the city and new green spaces along the axis connecting the San Vito, Lama and Talsano districts.

The Green Belt project represents an extensive effort to safeguard and revitalize the local ecosystems, through the remediation of soil, water, and air quality, as well as the restoration of vast portions of the municipal territory heavily degraded by the effects of industrial production over the last hundred years.

The creation of a Green Belt that enhances and increases green areas in percentage terms and acts as a system for mitigating pollutants in the various sensitive neighbourhoods of the city is an objective clearly spelled out in all the local strategic programming documents , from the Preliminary Programmatic Document to the new General Urban Plan (PUG), to the Economic, Ecological, Energy Transition Plan of the municipality of Taranto called "*Ecosistema Taranto*", up to the Regional Strategic Plan "*Taranto Futuro Prossimo*".

The implementation of the Green Belt initiative has already been started with two pilot projects, funded in the framework of CIS:

- the "Urban Forest – Phitoremediation" project in the Tamburi district, already under construction, which involves the creation of a vast urban forest featuring tree species capable of purifying the polluted soil and groundwater (CIS projects 2.14 and 2.21.1a);
- the Tamburi terraced waterfront project (CIS project 2.21.3), which is part of a systemic action to enhance and safeguard the environmental system that surrounds the two basins of the Mar Piccolo.

Furthermore, Taranto has already planned restoration and renovation actions in other exiting urban areas and parks, not included in the Green Belt, such as "Eco Palude La Vela", the Villa Peripato park, and the Viale del Tramonto area.

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In strictly environmental terms, the Taranto Green Belt initiative will pursue the following objectives:

- environmental recovery of vast "marginal areas", currently undeveloped and considered in some cases even at environmental risk, through the protection of the naturalistic assets characterizing the local ecosystem;
- creation and increase of new green areas at the urban scale, through reforestation projects, creation of urban, suburban and extra-urban parks that act as an interconnected environmental buffer between city and countryside, reorganization of peri-urban vegetable gardens and agricultural areas, enhancement and re-naturalization of areas of natural interest such as wetlands, coastal areas, salt marshes, natural and artificial waterways;
- quantitative and qualitative implementation of the urban green surface, currently undersized compared to urban planning requirements, through the planting of approximately one million trees (including shrubs, Mediterranean scrub, etc.), equipping the numerous green areas and open spaces owned by the municipality;
- creation of green/soft mobility infrastructure, including pedestrian, naturalistic and cycle routes.

The Green Belt introduces a new model of urban development for Taranto, focused on the creation of a multifunctional green infrastructure capable of reconnecting and revitalizing – through the enhancement of the natural environment – the polycentric urban expansion of the city.

Fig. 1.
Green Belt: atlas of urban transformations

The Barrow Blueway A Spatial Plan for Sustainable Tourism Development

Helen Mulhall

A Blueway is a network of approved and branded multi-activity recreational trails and sites, based on, and closely linked with the water, together with providers facilitating access to activities and experiences. The focus of this plan is the Barrow Line, a canal line spur off the Irish Grand Canal which stretches some 46kms from Lowtown/Robertstown in north County Kildare, Ireland, through the towns of Rathangan, Monasterevin and Vicarstown to Athy. The Barrow Blueway is located close to the Bog of Allen – a large, raised peatland area where local economy has been impacted by the cessation of peat harvesting. While the Blueway promises economic development, there was a need for all stakeholders to work in alignment with the Sustainable Development Goals. The plan was delivered in two phases, with the aims of participation, collaboration and evidence-based planning continuing throughout its development. Phase one was to develop an economic plan containing a shared vision and plan for a positive visitor experience grounded in sustainable economic development. The plan is aimed at potential local entrepreneurs, partners, agencies, and communities alike. A plan led approach with first hand input from those wanting to develop ideas along the route was adopted to ensure harmony with the area's distinctive sense of place. The plan contains detailed spatial analysis of the surrounding Special Areas of Conservation and proposed Natural Heritage Areas. It also clearly identifies the public transport nodes and identifies the hierarchy of nodes along the route to allow for a consolidated approach, rather than competition between localities. Slow tourism opportunities are identified and detailed for walkers, cyclists, and paddlers along with the service infrastructure needed to support this such as public transport and luggage transfers. The economic plan serves as a business plan for any proposed Blueway enterprise in the region. It sets out in clear detail the scope and size of the market opportunity including anticipated visitor numbers and annual expenditure. It details, location by location the destination response based on current assets (what's here?), pipeline projects (what's coming?) and opportunities to maximise the destination response and economic impact (what else could we do?). This approach allows for strategic collective benefit to local economies to maximise the economic potential along the entire route whilst also allowing people to "zoom in" to their local area and see how it fits as part of the larger vision. The second phase was to detail a tangible 'shopping list' of programmed and (indicatively) costed actions to meet the Blueway development accreditation criteria. It considers mobility and infrastructure, focusing on specific user groups including pedestrians, cyclistspaddlers and barge/boat users. The route traverses open countryside with a unique environment and heritage, as well as settlements of different sizes and characteristics across two counties, and several municipal districts, some of which are part of the Just Transition region in Ireland. Local communities participated to shape the plan and follow on actions. The placemaking plan has provided a balanced set of actions which can deliver benefits to all Barrow Blueway user groups without forgetting that the Barrow Blueway is first and foremost a local community asset. The placemaking plan sets out short, medium, and long-term actions over a ten-year period that cover the essential, appropriate, and exceptional measures to implement the Barrow Blueway vision incrementally. The Blueway is due to open in 2024 and is fully prepared to achieve accreditation in line with the requirements. The placemaking plan has provided the project management team with a full set of actions to follow, which are timed, prioritised, and costed, along with options for the local community to become actors in realising the common vision and giving them the capacity to access Just Transition funding in a way that impacts the community as widely and equitably as possible. The final reports, presentations and recordings are reader friendly and publicly available to support spin off projects. An interdisciplinary steering group oversaw the development, publication, and dissemination of the plan. The steering group was comprised of Waterways Ireland marketing team, Local Authority engineering and urban renewal, and County Kildare LEADER Partnership CLG, planning & rural development. It was delivered by Louise Browne Associates and Meinhardt UK Ltd. The enduring work is to support sustainable development by implementing the vision at every opportunity, keeping the plan and its vision alive and relevant through the stages of Blueway development and management. Collaboration with local stakeholders and communities to ensure meaningful participation in the plan process and sharing in its outcomes has made it a living plan.
Project webpage http://www.countykildarelp.ie/bbep

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The evolving spatial practices, in physical and virtual public spaces, among Arab Druze women in Israel: increased risk and reflexivity amidst the COVID-19 crisis

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Introduction: This study focuses on Arab Druze women in Israel, who, akin to the broader Arab society, are undergoing significant social and structural transformations. Despite these changes, their society remains characterized by collectivism, tradition, and patriarchy, resulting in women facing oppression, discrimination, and inferior status compared to men. While there is a growing body of literature addressing the challenges encountered by Druze women, their exclusion and experiences within public spaces have been relatively understudied. Additionally, this study capitalizes on the global impact of the COVID-19 pandemic, which has led to increased reliance on the Internet and social media platforms. It examines how Druze women navigate and engage with public virtual spaces, which have become central during 'stay-at-home' orders.

Theoretical background: This study builds on four theoretical pillars to explore how marginalized women that are denied free access to public spaces experience these spaces and seek to change their conditions: The reflexive modernization theory of Beck, Giddens, and Lash; the theory of recognition, mainly of Fraser; the bargaining theory, and the real and virtual public spaces. Drawing on these theoretical pillars, this study proposes that due to their unjust conditions regarding access and use of public spaces, Arab Druze women relentlessly reflect on their conditions, seek to change them, and acquire recognition as a whole social partner.

Methodology: The study applies qualitative methods. Data collection was based on in-depth semi-structured interviews with Druze women from Druze towns in Israel to understand their experiences, behaviours, motivations, and perceptions regarding public real and virtual spaces. The primary aim of this research was to analyze the social and spatial strategies developed by Druze women to enhance their accessibility and achieve a more satisfactory position in both physical and virtual everyday environments.

Conclusions: This study considers issues of injustice in the physical and virtual public spaces, and the emerging spaces amidst the COVID-19 crisis. The study focuses on the experience of Arab Druze women in Israel, as a disadvantaged group that suffers from exclusion from the public space, and examines how they struggle to improve their access, experience, and presence in these spaces. Theoretically, this study contributes to scholarly knowledge about the coping practices of Druze women with exclusion from public spaces in Druze towns in Israel. Its main contribution is related to several aspects: The study shows that deprived women seek to change their status in real and virtual public spaces through the reflexivity processes. Women produce a variety of social and spatial practices to get full recognition and just access to public spaces. The nature of strategies is primarily a result of the bargaining process. As already emphasized, modern society is characterized by risks that are the responsibility of the individual and society and by "greater individualization, understood as increasing social and cultural 'release'." According to the reflexive modernization theory, these characteristics lead society to develop new forms of reflexivity (Rasborg, 2022:28). These practices are positioned along a broad spectrum of affirmation-transformation strategies. Affirmation strategies result from bargaining with the patriarch, where women change their behavior and movement within public spaces by affirming their structure and social-cultural codes. Transformation strategies are radical in relation to the patriarch and aim to alter spaces through significant changes or the creation of new spaces. This type represents almost no compromise with the patriarch. In-between strategies are many practices reflecting different levels of compromise with the patriarch. Some strategies entail changing the space design by adding, modifying, or replacing different elements and components in the physical structure. The unique focus on the spatial dimension allowed us to see how social bargaining with the patriarch led to the production of spatial tactics. Thus, expanding the knowledge in which we understand women's practice that redresses exclusion from and misrecognition in public space. Since space can be abiding, and once it is changed, it generates new ways of doing and thinking, women's spatial practice may transform not only public space but also social power relations. Thus, this study analyzes women's interventions in space at different levels and their possible impact on the status of women in public spaces.

The current study looks at the COVID-19 crisis as an epistemic point in time, with reflexivity as a tool to go deeper with it, and claims that new affinities and structures have emerged between the traditional social structure and public space.

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Land use transformations and the new ecological values: from conflict to innovation

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The land use transformations have always played a decisive role in the relationship between natural and man-made landscapes, and they can provoke settlement, environmental, landscape, and socioeconomic conflicts. Conflicts associated with land use transformations has two major implications. On the one hand, they reflect the inherent confrontation of interests, both particular and collective, of the communities involved; on the other, they may depend on the evolution of cultural, value and technical positions underlying new regulatory systems and planning tools[1]. Planning and governance tools for climate change adaptation, risk management, landscape protection, as well as nature restoration, "clash" with localization choices from preexisting policies and plans, as well as with the economic and employment development visions they outlined. And yet, it is precisely within the clash of goals and new values and in the presence of conflicting visions and strategies that new spatial practices and processes emerge. Adopting this standpoint, the paper focuses on three case studies from the last two decades of the 1900s and up to the early 2000s. We choose "old" great project to evaluate the effectiveness of the transformation processes and/or the effects thereof, while critically assessing such historical period in which the technical-scientific and value-based advances in environmental protection were becoming increasingly implemented. These three case studies had, of course, different transformative needs, but also shared a certain number of similarities, such as the problems caused by the land use choices of planning in relation to environmental risks, the conflicts between the actors involved, the complex decision-making processes preceding and following the transformations of places, and, lastly, the effects of the afore-mentioned transformations, which often produce unexpected consequences in terms of new ecosystems.

The case study of the Llobregat River Delta (Barcelona) is the result of the much-discussed 1984 Spanish government plan to expand the existing port and airport at the expense of the ecosystemic equilibrium of the floodplain, as well as the agricultural interests over the area. While the realization of such plan in the early 2000s led to the channelization and deviation of the watercourse, conflicts between institutional actors, farmers, and environmental associations have resulted in a large program of environmental mitigation to restore wetlands, to create new public parks, to build facilities for the reuse of purified wastewater for irrigation and for the reduction of saline contamination of the underground aquifer.

The industrial site of the Thompson Factories (Guyancourt - Île-de-France), built in 1990 in implementation of municipal planning, is a paradigmatic example of integrated design between landscape, industry, and urban drainage. After its disposal, it has left a remarkable architectural and natural heritage for the local community. The current metropolitan transportation plan provides for the construction of an intermodal hub and residential complex in the area. For this reason, the local administration has promoted a participatory process with the residents for the identification of invariants and transformation rules of the site.

Among the transformation plans for Expo 2008 in Zaragoza, the Water Park project – designed as an enhancement of long-lasting landscape characters – was part of an overall process of adaptation of the existing water infrastructure and the recovery of the vegetation of the Ebro River. Notwithstanding the conflicts related to the reuse of the Expo pavilions, the park has become a community asset, as well as a virtuous example of the potential integration of public space with water self-purification and hydraulic-risk adaptation devices.

The analysis of these case studies let us analyze the following aspects: the type and objectives of both planning tools and government policies; the hydrogeomorphological structure of the territories; the environmental pressures and risks; the effects of trans-

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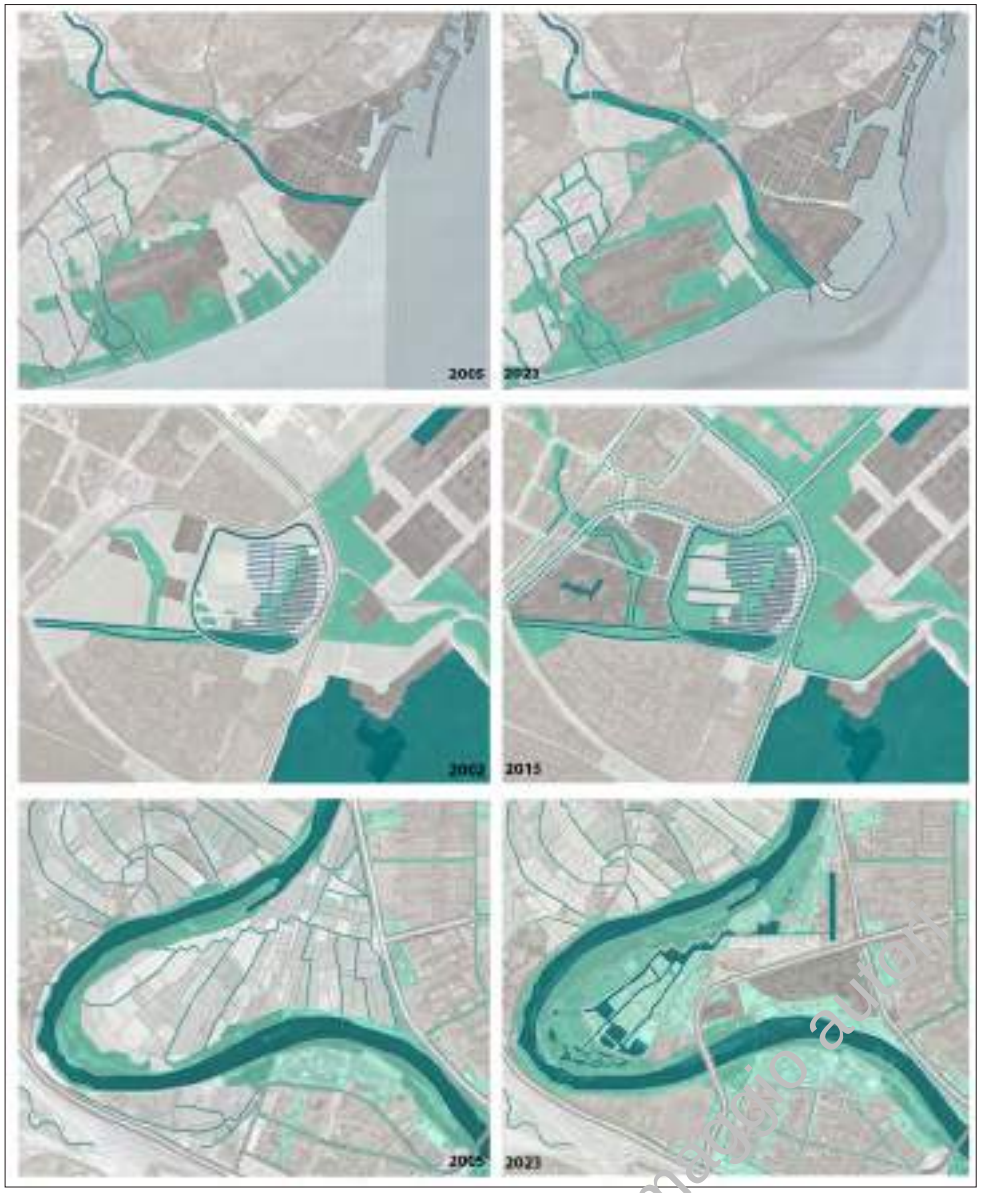

Fig. 1.
Transformations and new ecosystems. River Llobregat deviation (Barcelona, top); Thompson factory drainage system (Île-de-France, centre); hydraulic risk adaptation of the Water Park (Zaragoza, bottom).

formations on land use management; the framework and the actors involved in the policy-making process (government authorities, economic stakeholders, grassroot associations and other groups); the different decision-making processes; plan implementation tools; the measures of compensation, restoration or creation of ecosystems; and any possible conflicts and pending issues. Using a comparative framework, based on both a technical and processual-focused approach, we explore the connection between the spatial innovations of transformations and a) the actors involved and b) the environmental and cultural values they adopt. The results show that, in all the case studies, major transformations plans led to new ecological-settlement balances based on climate change adaptation and nature restoration through different approaches, which can be categorized as follows: mitigation-compensation approach, renaturation as a precondition to transformations, and the improvement of long-lasting spatial structures.

Heat waves and Urban Adaptation: the potential of public amenities as climate shelters

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The year 2023 has been confirmed as the warmest on record, driven by human-caused climate change. The phenomenon is prominent in urban areas where the heat island effect led to local microclimates characterized by higher temperatures and increased frequency and duration of heat waves.

Extreme temperatures disproportionately affect individuals. Vulnerable groups such as the elderly, children, and individuals with disabilities or chronic diseases are the most exposed, but also intersecting social positions or housing inadequacy and energy poverty can exacerbate vulnerability to climate change.

Local political agendas are increasingly prioritizing actions to address heat islands mostly acting on the expansion of green spaces, awnings, cool roofs or pavements or including heat-alert systems, real-time data, and surveillance of vulnerable populations. However, due to the urgency of the topic, there is a growing interest in providing rapid and systemic solutions that can contribute in the short term to adaptation. Cities like Barcelona and Paris have created networks of climate shelters: outdoor (e.g. gardens, parks, schoolyards) and indoor (e.g. schools, libraries, civic centres, and museums) spaces with optimal thermal comfort conditions[1]. This is a relatively low-cost strategy that can utilize existing infrastructure and be relatively easily implemented by a variety of stakeholders.

Climate shelters have traditionally been conceived as pop-up shelters for exceptional events provided by the emergency management authorities, but these places are now being reconsidered in light of the increasing frequency of heat waves. Alert periods are extended and relying on current emergency planning procedures is unlikely to be a sufficient adaptation to this changing scenario[2]. Improved resilience in spatial planning and building codes is therefore necessary to reduce the need for emergency response. For this reason, climate shelters are increasingly integrated into public amenities combining the provision of public services and the emergency response. In many respects, the stresses induced by climate change present a unique opportunity to redefine how public spaces and urban amenities are conceptualized.

The paper reflects upon the rethink of public spaces and urban amenities amidst climate crises in Italy, specifically focusing on the potential role of libraries. After a long period of defunding and privatization, libraries are under renewed attention due to their importance as a social infrastructure[3]. The growing range of social services that many of them offer, in addition to consulting and lending books, makes them potential points of aggregation and community hubs. In the same way, libraries can also play a leading role in adaptation: they are freely accessible public spaces widespread across the city, offer seating areas and free wi-fi, and, in a few cases, are already air-conditioned. For all these reasons, they are considered to be among the most suitable places to be climate shelters. Looking at the Italian context, the process of transformation of the library services lags. However, the National Recovery and Resilience Plan could have a positive impact on the topic. Some calls fund the removal of physical barriers and the energy retrofitting of the buildings. In addition, some cities have been awarded funding for projects related to the transformation of their libraries (e.g. Rome, Milan and Turin).

The paper verifies this potential of libraries as climate shelters in the city of Turin whe-

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re the future projections indicate an increase in heat waves and the libraries are going through a phase of rethinking as a social infrastructure thanks to the Integrated Urban Plan, founded by PNRR. The plan intends to transform the city's libraries as nodes of urban regeneration through the energy efficiency of the buildings, the redesigning of neighboring urban spaces, and the enhancement of services offered to neighborhoods. The original goals of the plan were not related to the climate issue, but thermal comfort is an integral part of the projects subject to funding, thus offering the opportunity to make them potential climate shelters. The city has 19 public libraries across its 8 Districts, many of which are located in marginalized neighborhoods.

The present work identifies which parts of the city are/are not served by libraries, the exposure and vulnerability conditions (e.g. heat islands effect, presence of vulnerable groups such as elderly, children, and individuals with chronic diseases or intersecting vulnerabilities) and the evolving scenario due to the implementation of the Integrated Urban Plan.

Data-driven planning research methodologies to guide the trajectories of urban and territorial transitions, fostering heightened resilience and sustainability

Francesca Moraci, Carmelina Bevilacqua**, Pasquale Pizzimenti**

This contribution underscores the relevance of adopting a multidisciplinary, data-driven research approach, charting a course toward the future of urban and territorial planning through integrating biodiversity, key enabling technologies, and inclusive economies into an integrated perspective. Developed within the framework of three PNRR-funded projects (1-Tech4You Innovation Ecosystem Goal 4.6 - P.P. 4.6.1; 2-ECO-SET PRIN-PNRR; 3-PLANET-Young Researchers), this perspective offers innovative research pathways, unveiling intriguing planning implications for both territories and cities transition. These projects, each with distinct objectives, collectively contribute to a better understanding of AI-driven urban planning for advancing ecosystem services in urban transition. The Pilot Project 4.6.1 of the Tech4You (M4C2 – Inv.1.5) Innovation Ecosystem focuses on the formulation of innovative approaches in tackling urban and territorial fragmentation with the intent to carry out transformative interventions more consistent with the dynamic demand for sustainable, effective, and site-based changes. In this direction, it aims at promoting green and blue infrastructures as mitigation and offset ecosystem services as the basis of ecological and territorial complexity connections in "fragile" contexts characterized by depopulation and decentralization of the Basilicata and Calabria regions and to inform urban-rural links towards green and digital transition by building regional and wide-area frameworks of scenarios and predictive models with scalar digital interface (from the wide-area to the site of cultural and naturalistic interest) for monitoring the impact of transformations. This holistic perspective aims to provide planners and policymakers with an understanding of the intricate interplay between environmental factors, technological advancements, and societal needs. The ECO-SET (A Multidisciplinary approach to plan ECOsystem SErvices for cities in Transition - M4C2 – Inv.1.1) aims to combine transition with resilience for the evolutionary development of different territorial contexts. The implications of ESs data-driven analytical approaches for cities and urban planning in fighting the side effects of climate change claim for a revised growth approach centred on the green, digital, and just transition envisaged by the EU. By capturing complexities inherent in urban environments, these initiatives seek to unravel patterns and relationships that can inform more effective and responsive urban planning strategies. The Planet project (M4C2 – Inv.1.2) focuses on the triggering mechanisms for urban regeneration stimulated by socio-ecological-technological dynamics. In the light of an alignment between digital and ecological transitions, which by nature follow different dynamics and time trajectories, a new urban regeneration perspective is emerging, with particular attention on reducing the pressures on natural ecosystems. Such a perspective is characterized by new strategic drivers for urban regeneration: ecosystem services in urban contexts, key enabling technologies for boosting ecological transition, and social inclusion for ensuring equity in the transition. In this direction, urban governance and planning (process and tools) are crucial in defining urban transformations to improve urban ecosystem services through urban regeneration. This transformative approach to urban regeneration aims to revitalize urban spaces and the economic fabric while ensuring alignment with sustainability goals and accessibility to diverse communities. The emphasis on inclusiveness underscores the commitment to creating cities that cater to the needs of all citizens, fostering social cohesion and equitable development. Collectively, these projects contribute to identifying promising research trajectories that can provide the basis to create the conditions for an evolution of urban planning practices toward sustainability and resilience. The multidisciplinary nature of the research draws on expertise from diverse fields, including urban ecology, technology, urban planning, economics, and social sciences. This integration of knowledge and methodologies is crucial for comprehensively addressing the multifaceted challenges of urban and territorial transitions from the planning perspective. Moreover, the projects emphasize the role of collaboration and knowledge exchange, fostering a community of researchers,

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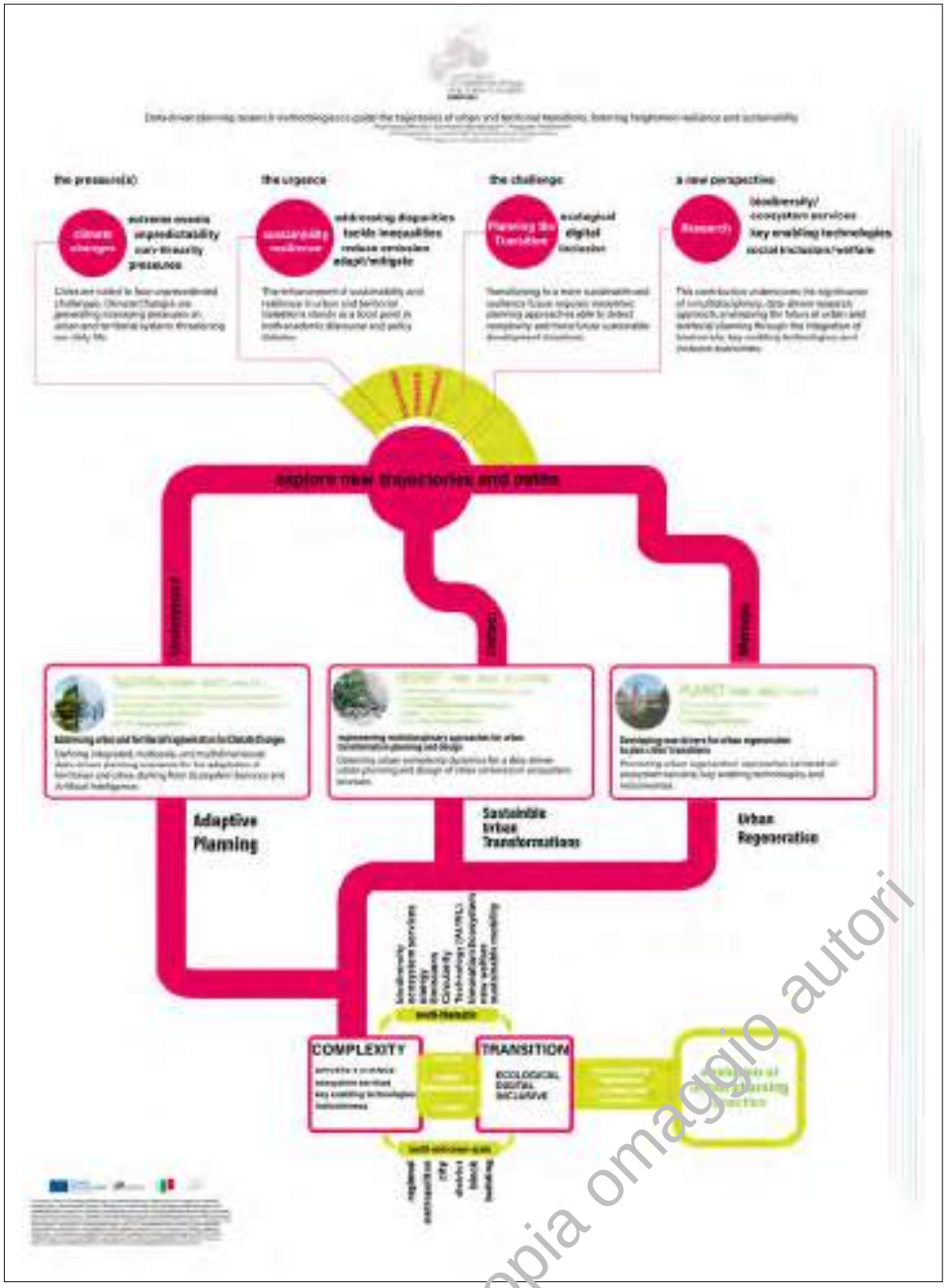

Fig. 1.
Data-driven planning research methodologies to guide the trajectories of urban and territorial transitions, fostering heightened resilience and sustainability. Source: Authors' elaboration

policymakers, and practitioners dedicated to advancing sustainable and resilient urban development. In conclusion, the presented research initiatives represent an innovative effort to advance urban and territorial planning discourse and practice in facing climate change. By integrating biodiversity, key enabling technologies, and inclusive economies, these projects offer a holistic and forward-looking approach essential for navigating the complexities of contemporary urban challenges. The outcomes of these endeavours are poised to influence academic research, policy formulation, and urban planning practices under the overall aim of creating cities and territories that are sustainable, resilient, inclusive, and responsive to the evolving needs of diverse communities.

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The Community Engaged-Research for the Transitions to Inclusive and Just Cities

Reflections from an experience in Canada

*Elisa Privitera**

The challenge of rapidly accelerating low-carbon transitions in cities and preventing this widespread transformation from exacerbating urban inequalities is the core of the urban just transitions debate both in academia (see van Steenbergen & Schipper, 2017) and the political realm (see the discussion around Green New Deal in the US and Europe). Albeit techno-driven solutions for transition have been widely explored, the democratic dynamics underpinning them are less scrutinized. According to Hughes and Hoffmann (2019, p. 7-8), the co-production of knowledge with urban communities and networks within a community-based research framework can play a significant role in developing more concrete indicators and strategies for pursuing, recognizing, and measuring just urban transitions.

The Listening Project (LP) carried out by the Urban Just Transitions cluster at the University of Toronto Scarborough in collaboration with a steering committee comprised of local groups represents an emblematic experimentation in this direction. Inspired by a participatory action research approach, the LP intends to overcome the "sharp separation between the academic world and the world of practice" (Whyte, 1989, p. 384) and to "improve reality while 'knowing' it" (Saija, 2017, p. 13). More in detail, the LP aims to understand how climate actions towards "net-zero" futures intersect with people's everyday concerns and hopes in Scarborough. Situated in the East of Toronto, Scarborough has been a popular destination for new immigrants and nowadays is considered one of the most diverse and multicultural areas in Toronto, but also one having the highest levels of poverty and food insecurity. Several organizations are active and advocate for improving the life quality and social services for the residents. In partnership with some of them, the LP supports a series of listening activities, including neighbourhood walks, art workshops, and community mapping. The conversations in each listening session intend to build a deeper understanding of participants' visions of just transition, while strengthening communities' capacity for collective action.

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This presentation focuses on the first reflections from one of the listening sessions: the one carried out in partnership with the Malvern Family Resource Centre (MFRC), a thirty-four-year-old social multiservice agency providing a variety of multicultural and multigenerational programs and services to residents in Scarborough. The MFRC has given increasing attention to food justice programs. One of its pilot projects to reduce food insecurity is a 2-acre urban farm where 16 resident families access and cultivate fresh and culturally appropriate foods. The surplus of vegetable production creates opportunities for residents to generate supplemental income and has stimulated the organization of a summer farmers' market during which the urban farmers sell Km-Zero organic vegetables. The listening sessions have conceived the market as a meeting and aggregation space for residents, wherein creating convivial conversations around the intersections between climate change and daily life. From June to October 2023, a group of researchers together with the MFRC has organized 9 initiatives of 3 hours each including passing-by interactive activities (e.g. post-it, two itinerant-raffle-based conversations, art-based moments, posters), 2 workshops, and a final event. The entire process has emphasized participants' feedback through a sort of circular and community-based peer review process on the produced knowledge. The two workshops are an example of this process. The first has been a community mapping workshop which involved residents in identifying on a map some emblematic places of their neighbourhood, namely strengths/assets, issues/concerns, what people used to like but is not there anymore, and how these strengths/weaknesses are interconnected with climate change/climate impacts. For each stub located on the big map, each mapper was asked to grab a matching-colored sticky note, write down the number of the stub and comment, and then stick the note to a big board called "Legend," divided into four sections. While the identification of strengths and weaknesses was relativity easy, much more complicated has been connecting them with climate change. More in general, the interpretation of climate change in terms of a daily issue has been difficult as well as we met scepticism from a few people about climate change itself. The second was a Future Scenario Workshop aimed to connect the strengths, priorities, and climate change problems identified during the previous community mapping workshop with the capability to envision and multiply the possible futures and organize to realize them. The workshop centered on asking participants to envision the desirable futures for Scarborough 2043 and then to reasonate around how to attain such desirable futures. The collected results are post-its, posters, interviews, summary reports, maps, and visuals and have been codified and organized according to thematic groups. The written texts have been analyzed through Nvivo.

In light of this community-engaged research experience, the presentation offers both a theoretical and empirical contribution to the potential and limitation of collaborative research to formulate policy indications from the bottom aimed at facilitating the transitions to inclusive and just cities.

Fig. 1.
Community Mapping Workshop, 30 August 2023. Source: Urban Just Transitions cluster.

Fig. 2.
Future Scenario Workshop, 27 September 2023. Source: Urban Just Transitions cluster.

The scales of territory

*reversAs**

The relationship between rural and urban environments requires a new social agreement, a pact that involves the entire society. It's a way of looking at ourselves, not in the superiority of the city, as traditionally perceived, but in equality. While the city is often attributed with possession of scientific knowledge, productive economy, or cultural industry, the territory is indispensable for city livability and has a life of its own. It produces knowledge based on verified experience, the food industry, energy, raw materials, oxygen, etc. In essence, it has all the ecosystemic resources for life care.

In the current moment, amidst a declared climate emergency, there is a need to break free from the traditional imbalanced rural/urban binary association and embrace a more complex system of relationships and interactions. A matrix model that allows diagnosis and proposing solutions with an alternative approach.

Transforming the current hierarchical relationship into a balanced exchange requires new models of territorial governance. Broadly speaking, it can be defined as interdependence and complementarity: while the city produces, the rural area cares, and vice versa.

Classic urban planning remains an essential but outdated tool in the face of a new sociocultural and environmental reality. New urban planning tools and territorial management strategies, along with political strategies, are needed to dissolve this parallel division. Decentralizing the analytical focus and taking a broad view outside the urban or rural dichotomy: the territorial perspective.

Conciliation with the ecosystem:

1. **Territorial Net**. Abandoning purely extractive stances between rural and urban. There is only one territory, and cities are neither autonomous nor independent. The world is one and global; the territory is a mesh of interconnected cities and towns that, when working together, don't just add up but multiply.
2. **Holistic Vision**. Adopting a holistic vision prioritizing strategic perspectives of the territory analyzed from various viewpoints, methodologies, and instruments. Shifting from being part of the current problem to becoming part of the solution.
3. **Food Geographies for an Intelligent Territory.** Becoming aware of the resources we need and turning food management into a key element of planning. Organizing the territory based on its loading capacity. Understanding the territory as the stage for a transformation toward more efficient, inclusive, resilient, sustainable, and local agri-food systems.
4. **Territorial Solidarity.** Understanding the rural not only as a support for the city system but also as a re-signification: a harmonious development in terms of economic growth, social equity, and environmental sustainability. Revitalizing cooperation, solidarity, and reciprocity relationships, understanding the realities of the territory and its links, at all

Conciliation between different scales

5. **Plurality, different perspectives.** Recovering the mix and juxtaposition of uses where the activities of daily life for all types of people are located. The territory is inhabited by a diverse, plural collective. The challenge of the 21st-century territory is to place people's lives at the center.
6. **Relocalize, reduce consumption.** Breaking the narrative of a productive model based on endless consumption. Stop promoting cities as consumption centers, planned separately from extraction and production centers. Abandon the citizen-consumer equation and quality of life based on expenditure.

* **reversAs** are: Sonia Puente Landázuri, Teresa Táboas Veleiro, Matxalen Acasuso Atutxa, Natalia Brener Maceiras, Elvira Carregado Pazos, Mariángeles López Amado and Aurea Soto Vázquez

Human scale

7. **Pride of Belonging.** Right to Dignity. Working on the pride of belonging and the right to dignity in the territory: a new rurality within the 21st-century territory. Because globalization has undervalued all forms of rural life, destroying their natural and social ecosystems. Directing investment to create value in the primary sector and establish new market rules that produce results benefiting all stakeholders and social sectors without environmental costs.

8. **Intergenerational Perspective.** Valuing the intergenerational approach through the participation and contribution of all individuals throughout their life cycle. Co-creation, co-production, and co-responsibility are characteristics of the quality of sustainable communities, cities, and territories.

9. **Knowledge Transmission and Information Quality**. Paying attention to knowledge and communication with sense and with the senses, so as not to forget what speed leaves behind. Constant learning, unlearning, and relearning.

10. **Care and People at the Center.** Visualizing meeting places, democratic, friendly, and respectful to all individuals, regardless of their life cycle, capabilities, and gender, integrating all beings and vulnerable groups from an alternative economic, social, and psychosocial perspective. And it does so by recovering ancestral care, the human perspective, group protection, for collective health and respect for differences. Contributing to individual and collective well-being, acting from a healthy territory.

In summary, it is about SUSTAINING the ecosystem where we live and need to live from a feminist perspective that is equal, inclusive, and diverse, of environmental sustainability, of sustaining connections, of sustaining interaction processes in the territory, but also of sustaining identity and peculiarities, integrating them into a whole, like a living organism in need of care and protection.

The new Urban Forest in Tamburi: a Phytoremediation project at the core of Coordinated Plan for the regeneration of the district

*Simona Sasso, Mariana Recchia**

The urban forestation project in the Tamburi district is a virtuous initiative aimed at the restoration and enhancement of the landscape and the environment in a site strongly compromised by the activities of the adjacent ILVA steel plant, employing innovative phytosanitary techniques and methodologies for the recovery and restoration of polluted soils. Moreover, the project is strategic because of its potential symbolic role in what constitutes a real challenge for the city of Taranto: the search for a new model for the conversion of its industrial landscape that is sustainable in ecological and socio-economic terms. It is an ambitious goal towards sustainable and green urban development, that can only be achieved through the recovery of degraded ecosystems and the enhancement of local environmental assets, by protecting, linking and upgrading them.
The total area involved is about 90,000 square meters (excluding existing roads) and is largely free, in disused conditions and covered with spontaneous vegetation. Works for the realization of the project are currently under way.

The main objective of improving the quality of life for the inhabitants of the district will be achieved through the redevelopment and rehabilitation of the site, the creation of an urban park rich in trees, shrubs and upholstered essences, the creation of accessible, comfortable and safe open spaces that can produce significant positive effects for the local community.

The design solutions adopted aim at creating a strong connection with the context: the harmonious integration of the new green facility will trigger a process of appropriation and positive identification by its users, and by the local community in general.

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The area of Taranto is characterised by climatic conditions typical of the Mediterranean region, there are many arid areas featuring large clearings with scattered and discontinuous vegetation. This is exactly the case for the project area, which is in the Tamburi district, a densely built neighbourhood characterise by its extreme proximity to the industrial area.

The design of open spaces plays a fundamental role in achieving the objective of urban quality, both in environmental and urban planning terms. The peculiar position of the area requires to rethink the relations of the park with the entire urban system. The design choices have focused on the strengthening of the "pact between man and nature", and on an urban re-naturalization process capable of mitigating and adapting to the effects of climate change, inclusive towards all, also by reconnecting the site with the whole district. The project aims at an improvement in the quality and fertility of soils, the maintenance and increase of the permeable surface of the site and the increase of biodiversity. The new green areas will feature specific functional destinations, and while being usable by people for recreational purposes, they will contribute to the reduction of the "heat island" effect thanks to shading plant components and flooring with low absorption. The creation of hillocks through soil elevations and vegetation will act as physical barriers to mitigate air pollution. The well-being of the citizens has been the main concern behind the design choices related to the creation of protected paths for pedestrians and cyclists and the provision of services and spaces to support the adjacent cemetery, the largest in the city.

The project features six (eco)systems distinguished by characteristics and conformation: the tree-lined filter that protects the monumentality of the cemetery, the phyto-depuration belt with trees and shrubs for land reclamation, the flowering meadows for the phyto-removal of pollutants, the ornamental woods for the walk, the structures raised above the ground level for the florists and the clearings as spaces for aggregation and outdoor activities of all kinds. The Tamburi Urban Forest is part of the broader Taranto

Fig. 1.
Top view of the project

Fig. 2.
View of the path adjacent to the filter band

Designer: LAND Italia S.r.l., arch. Michele Sgobba, arch. Cosima Lorusso , geol. Mario Alfino

Green Belt initiative and constitutes the first step toward the creation of an urban green infrastructure capable to support to the rehabilitation and enhancement of biodiversity, with beneficial effects for the protection of the urban ecosystems. At the same time, the park will help to create a welcoming and varied environment, that is an opportunity for the inhabitants of the district to enjoy an immersive experience in the nature, with all the benefits associated with it. The project will contribute to the search for a new identity for the industrial landscape, combining the environment and socio-economic progress in view of a sustainable urban development model characterised by the enhancement of the local environmental values.

By pursuing this green challenge, Taranto can be counted among the most important Italian and European industrial sites that have started post-industrial regeneration processes, contributing to the wide current international debate on this subject.

The transformation of Taranto into a city projected towards innovation, sustainability and quality of life is the ultimate goal that we set ourselves in the development of this project, together with the construction and consolidation of a green vision for the future of the city, as a response to the social and environmental emergency.

Enhancing Climate Resilience
The Metropolitan Perspective in Italian spatial planning system

Vittoria Ridolfi, Filippo Magni***

Introduction

Anthropogenic climate change poses escalating challenges, impacting lives and territorial resilience (IPCC, 2021). Recognizing this, spatial planning has emerged as a critical tool in adapting to these changes (Kumar & Geneletti, 2015). In Italy, many urban areas are incorporating climate change into their policies through voluntary planning instruments, proposing complex adaptation programs integrated with mitigation actions (Musco and Fregolent, 2014). It is increasingly necessary to revise foundational knowledge and innovate planning systems to achieve mitigation and adaptation goals. This article contributes to the discourse by examining the adoption of climate planning processes across different administrative scales in Italy, highlighting the significance of supra-municipal planning in fostering local resilience and adaptive capacity.

Mapping Climate Governance: A Multilevel Approach to Analysing Adaptation Strategies

The research methodology encompassed five levels: European, national, regional, and metropolitan. Each level underwent a comprehensive review of existing climate change adaptation planning initiatives. Data collection involved researching events and key documents from 2005 to 2022. The process included identifying both voluntary and mandatory climate adaptation plans at the regional level, distinguishing between strategic plans, such as Regional Climate Change Strategies (SRACC) or Regional Adaptation Plans (PRACC) and regulatory frameworks mandating climate adaptation considerations in spatial planning. For metropolitan areas, the approach involved examining both strategic metropolitan plans (PSM) and territorial plans (PTM) to identify explicit climate adaptation strategies and objectives. This systematic data collection facilitated an in-depth analysis of the reception and implementation of climate adaptation measures across various administrative scales, providing valuable insights into the evolving landscape of climate governance.

The multiscale analysis reveals several trends and challenges in the evolution of climate adaptation policies in Italy. The European Union's (EU) directives on climate adaptation, delineated in its Adaptation Strategies, serve as fundamental guidelines for member states. This overarching framework sets the stage for member states to enhance their climate adaptation efforts, providing funding and guidance for comprehensive strategies. Italy, in line with EU mandates, introduced its National Strategy for Adaptation to Climate Change (SNACC) in 2015. The PNACC underwent extensive development, culminating in its initial draft release in 2018 and subsequent full publication in 2022. These strategic documents provide a comprehensive analytical framework aimed at elucidating territorial dynamics to inform the development of tailored adaptation strategies. They serve as guiding principles rather than prescriptive mandates, empowering individual territories to identify and implement context-specific adaptation measures.

Regional laws and policies play a crucial role in bridging national strategies with local contexts, but disparities in resources and capacities pose challenges to uniform implementation. From the conducted research, the Metropolitan areas emerge as key actors in climate adaptation, given their concentration of population, infrastructure, and economic activities. Many metropolitan cities have developed climate plans and strategies tailored to their specific vulnerabilities and opportunities, striving to ensure inclusivity in their approach to adaptation. However, the voluntary nature of these initiatives sometimes limits their effectiveness, highlighting the need for stronger regulatory mechanisms and incentives. Despite progress at various governance levels, several challenges persist in mainstreaming climate adaptation into planning processes. These include limited financial resources, lack of coordination among stakeholders, and insufficient considera-

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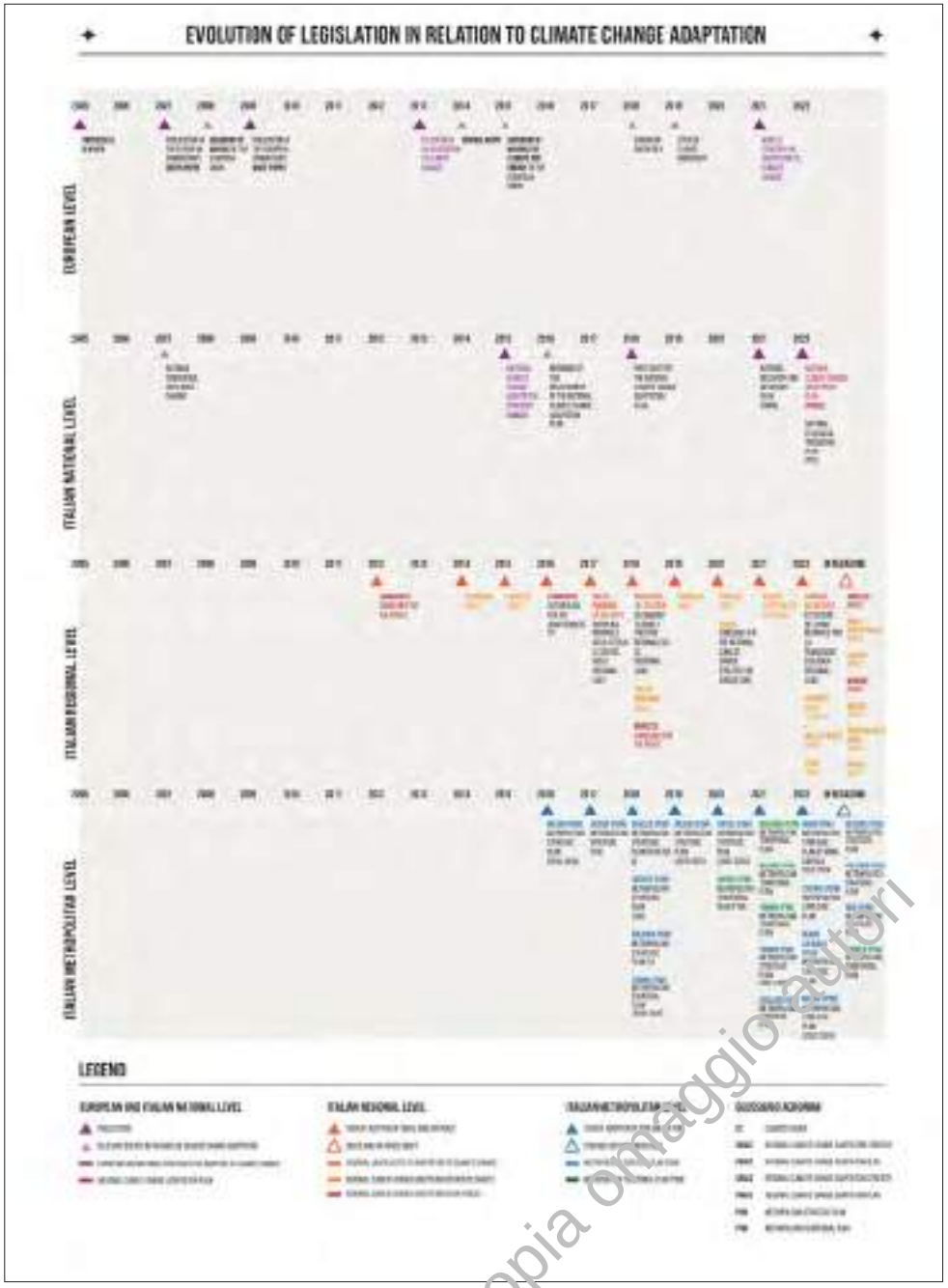
Fig. 1.
Evolution of Legislation in Relation to Climate Change Adaptation in Italy



tion of long-term climate impacts. Addressing these challenges requires a holistic approach that integrates climate adaptation into broader development agendas and fosters collaboration across sectors and scales, emphasizing the importance of inclusivity to ensure that marginalized communities are not left behind.

Inclusive Climate Futures: Italy's Path Forward

The evolution of climate adaptation policies in Italy reflects a growing recognition of the urgent need to address climate adaptation across all levels of governance. From European directives to local plans, efforts are underway to build resilience and reduce vulnerability to climate change impacts. Promoting structured metropolitan planning offers a more impactful approach due to its broader scope and ability to transcend municipal boundaries, fostering inclusivity. The ultimate aim is to transcend the binary of obligatory versus voluntary approaches to climate adaptation at the local level. This entails enhancing decision-making processes at the metropolitan level and infusing local governance structures with thematic and technological innovations to ensure inclusivity. Such measures are pivotal for maximizing outcomes and expediting implementation timelines, thereby moving beyond the paradigm of locally driven innovation constrained by political mandates. While assessing effectiveness remains complex, analysing Italy's regulatory framework highlights new opportunities for innovative governance capable of promoting climate resilience across various levels of territorial management.

Voluntary planning as a key approach for climate responsive measures

Luigi Santopietro,**, Filomena Pietrapertosa**, Monica Salvia** and Francesco Scorza**

Introduction

Increasing climate resilience and reducing greenhouse gases emissions from current energy systems are amongst the main challenges facing all levels of governance, from the global to national to sub-national levels. In this joint effort, the need to develop innovative spatial and urban planning tools, methods and approaches is increasingly evident. These challenges have, in fact, highlighted a gap in the traditional planning framework in tackling energy and climate issues and, therefore, the need to adopt renewed spatial planning practices. Among the approaches to support urban and territorial planning and the development of climate-responsive measures, this research specifically focuses on voluntary planning (VP).

A systematic review on voluntary planning

In this perspective, the authors conducted a review of English-language scientific articles that included the words "voluntary planning" in their title, abstract and/or keywords. The bibliometric analysis was conducted on Scopus and was limited to subject areas directly linked to urban planning issues. Data-analysis and data-visualization were performed using the open-source software Bibliometrix (Aria et al., 2020; Aria & Cuccurullo, 2017).

Results from the bibliometric analysis report 1208 publications covering a timespan of more than 80 years, with an increasing growth trend, in terms of article publication. Looking at the scientific production of the countries within the dataset investigated (Fig.1), it can be observed a prevalence of Anglo-Saxon countries (e.g., USA 62%, UK 31%, Australia 14%), which provides an insight on the planning approaches tackled in these countries (Orton, 1936; Osborn, 1948).

The role of transnational city networks for VP

In VP a key role is played by city networks that are becoming increasingly important in engaging cities and supporting them in the pursuit of environmental and climate goals (Acuto & Rayner, 2016; Reckien et al., 2018). They also represent an opportunity for cities to achieve sustainable development objectives and climate targets. This voluntary approach to planning has strongly characterized the last two decades, becoming a distinctive label of city networks such as the Covenant of Mayors for Climate and Energy, and has overcome institutional urban planning processes.

Conclusions

Since the 1990s, VP has emerged in several European programmes (such as URBACT or INTERREG), as a suitable tool to address specific urban governance issues and to provide a means for taking action in situations where it is too costly or difficult to implement direct regulatory interventions (Darnall & Carmin, 2005). Through an in-depth literature review, it was investigated how the VP has been approached to increase the awareness and commitment of local communities. Moreover, the important climate and energy goals that cities are achieving represent the outcome of the interaction among the actors (public or private) involved and are an expression of the degree of climate responsiveness rather than of regulatory or institutional constraints.

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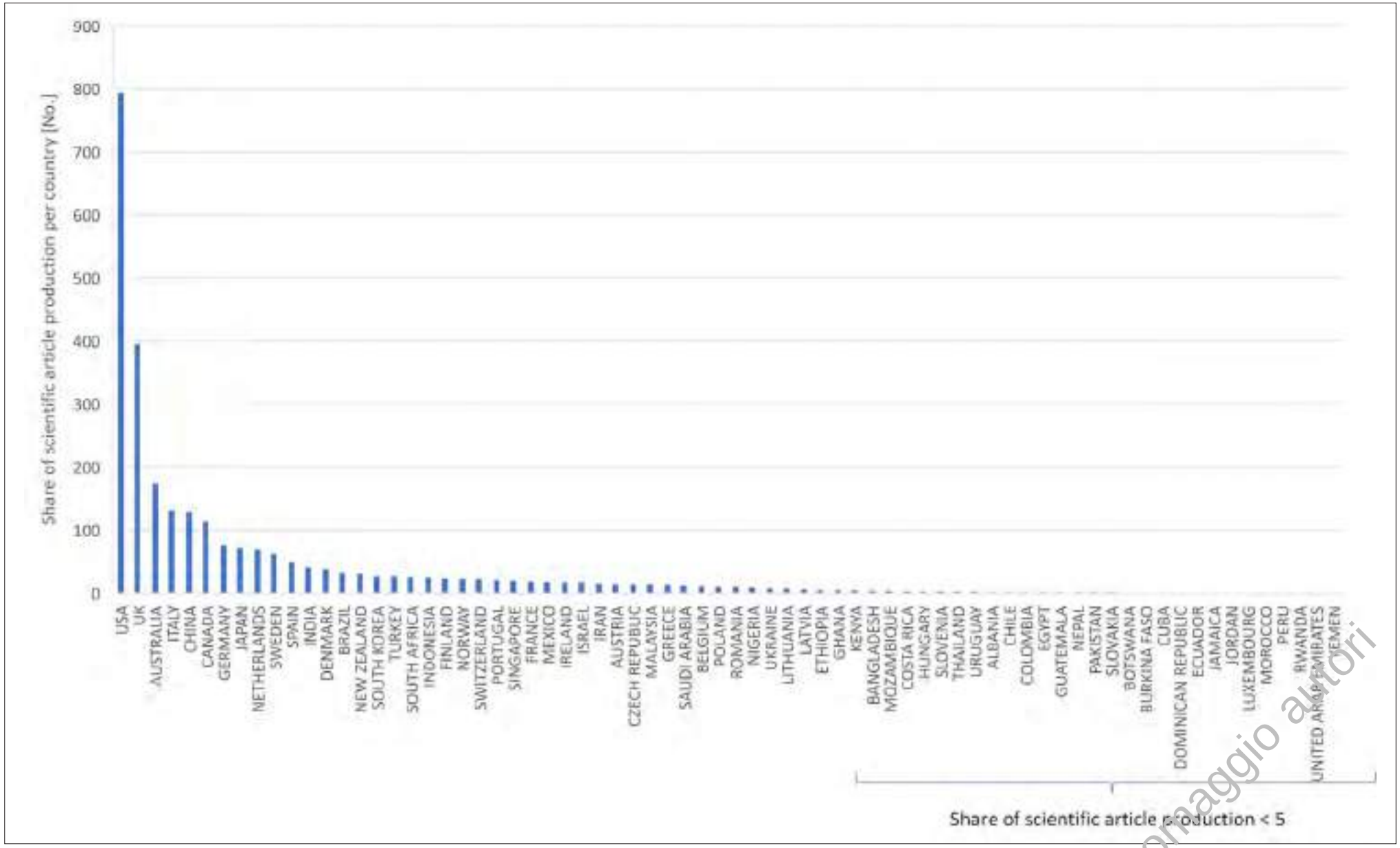

Fig. 1.
Countries' scientific production

Resilience processes in mountain areas: the innovative experience in the Ligurian Alps

Federica Corrado, Gemma Santoro***

Recent studies (Carrer M., Dibona A R., Brunetti M., Prendin A.L., 2023) show that due to climate change, snow cover in the Alps will continue to decline in the near future. The small mid-altitude winter tourism destinations and their communities are and will be the most affected by this phenomenon and must face the socio-economic consequences of this change, as well as with the ecological impacts.
For this reason, the debate on mountain tourism is increasingly focusing on the need to convert and diversify the territorial systems strongly linked to the snow resource, characterised by an economy of predominant tourist declination (Romeo R., Russo L., Parisi F., Notarianni M., Manuelli S., Carvao S., 2021).

This contribution deals with the capability of the local community to build a process of regeneration, starting from the acceptance of the situation and the recognition of the local heritage and its resources in order to implement sustainable and alternative forms of territorial activation. It describes aims and results in progress of BeyondSnow Alpine Space Project, conducted by the working group of the Polytechnic of Turin, in collaboration with ten international partners of the Alpine Arc. In this Project, the central focus is to collect traces of resilience in the alpine communities and give them the tools to support processes of regeneration.

The specific pilot area analysed by Polytechnic of Turin regards the territory of Monesi, located in Liguria Region (Province of Imperia), in the high part of the Arroscia Valley. Once Monesi was famous for being the only ski resort in his region, today it is a "place suspended" between depopulation and abandonment and new forms of avant-garde design. The Arroscia Valley has long suffered and is still suffering the consequences of this tourist and economic depression, trying in some cases to chase a lucky past, but no longer replicable. However, Monesi is located within a widespread context with high environmental value, rich in biodiversity and territorial and morphological peculiarities.

The local community is fragmented, hybrid and composed in increasing numbers of "new inhabitants", that means subjects who become carriers of a different way of living in the mountains, but also by temporary residents, entrepreneurs, keepers of know-how, old and new mountaineers (Corrado, De Matteis, Di Gioia, 2014). This results in an encounter, and sometimes clash, between relationships and habits consolidated and new looks, between rigid actors and resilient actors.

After a first analysis, in which is emerged the local heritage, milieu and very weak networks, the research-action has experimented a methodological approach of co-design laboratorial activities in this area in order to re-define local community, the role of the actors, the condition for local and supra-local networks. Different but very interesting informal experiences have emerged, which aim to find new and more current values, more compatible with the territory. Tourism operators are looking for new resources, new connections and new networks: the Park, outdoor activities, paths that connect the Ligurian mountains to the sea, Piedmont and France.

So, Monesi results as part of these single-functional mountain tourist realities, which have shown the fragility in terms of social and economic sustainability as well as environmental (Bausch, Gartner, 2020) and that need to reverse the gaze and triggering development processes.

Five axes of intervention have been recognized:
1. Forms of living
2. Monesi eco-cultural destination
3. Connection system green-blue
4. Territorial transcalar networks

The community and the governance

Currently, the research-action works on:
- Axe 2 in relation to strengthening the attractiveness of the area with open air activities; biodiversity hub: pole of an eco-cultural system; innovative practices centred on well-being; creativity and immersion in nature
- Axe 3 in relation to connection of territorial values in an integrated coast-internal area system; sharing of projects for the territorial promotion of the coast-inland area
- Axe 4 in relation to definition of the recognizability of the internal area through a network organisation of the territory; implementation of cross-border and transregional project connections

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The research-action developed so far permits some considerations regarding this specific context of regeneration. The abandonment and depopulation of the inland areas are an ever-increasing and unresolved problem in the Alpine landscape, and there are many places that are now marginalised by an economy and a society based on dynamics linked to a past that can no longer be replicated.

The action of recreating a community, an economy and a territoriality in a place in a process of abandonment is not to be considered trivial.

For this reason, the project has its foundations on the natural and cultural resources already existing in the area, with a current approach that looks directly at the problems that climate change generates and that strongly affect the High Arroscia Valley, as well as the entire Alps.

The development based on the localization of the territorial heritage makes local values become the main driving force needed to activate as sustainable development models as possible.

The purpose is therefore to exploit these real components, inserting the project in a territory where there are already examples of resilience, which are difficult to survive without the presence of an economic network, community and services.

The creation of transcalar territorial networks allows new power, autonomy and development possibilities to these mountain realities.

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Fig. 1.
Monesi in Fifties and Sixties - Building (Source: postcard of the time) vs Monesi in 2023 - Building (Source: Working Group photo)

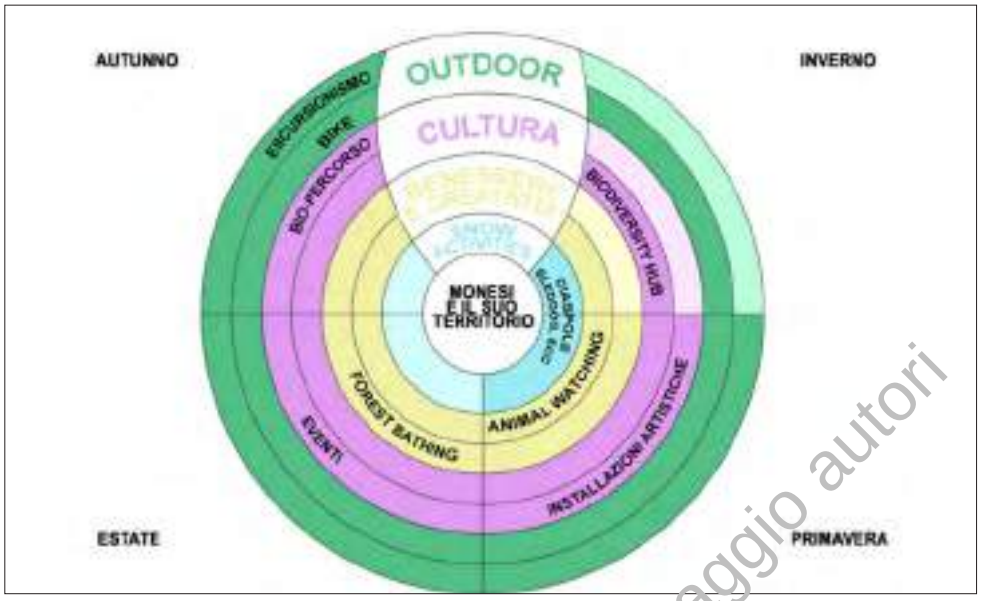

Fig. 2.
Monesi and its context: diversification and seasonal adjustment of activities on the territory (Source: Working Group elaboration)

Restoration of the Aragonian walls and Seafront promenade: projects between past and future in Taranto

Simona Sasso, Vincenzo Piccolo, Cristina Giannico*

Within the framework of Taranto's CIS (a nationally sponsored programme for the environmental and economic regeneration of the Taranto area, launched in 2015), Taranto's municipality has developed an Action plan (Piano interventi) for the renovation and enhancement of the Old town, also known as Isola Madre, which includes the restoration of the historic coastal fortification that characterises the southern edge of the island: the Mura Aragonesi (or Aragonian walls). The Action plan itself was funded in 2018 by the Ministry of Culture through the Operational Plan 'Culture and Tourism', using resources of the 2014-2020 national Development and Cohesion Fund (FSC).
The urban walls characterize the city historical and artistic heritage. Due to their original nature as fortification, people often think of them as structures that can last forever, but unfortunately their conservation is often compromised due to different reasons such as inadequate water management, climatic conditions, weeds, collapses, structural changes and soil subsidence. The old town of Taranto is located on a jump in altitude that raises from the overlooking the *Mar Grande* and that physically protect it from the sea. The walls were built along this perimeter, which corresponds to the ancient *polis*, using mostly local stone. The ancient city walls extend for about 700 meters, with an average height of 8.2 meters and are crowned by the seafront promenade. Traffic gathers on this route, which encircles the Old Town, to enter the city center.

Although the current configuration is marked by interventions made after the Spanish occupation, the walls reveal different archaeological stratifications that are tangible references to the various eras in which the city of Taranto has been significant for Italy and the Mediterranean. As perimeter of the ancient *Acropolis*, they represent an element of remarkable monumentality and an element of identity for the city of Taranto. The Aragonian Walls of Taranto have been the object of many invasive interventions that have compromised the original material characteristics. With time, the calcarenite that makes up the curtain wall has shown signs of vulnerability, resulting in necessary maintenance work, replacing and indenting stone and integration of extensive portions of masonry with technical-operational modes and extremely diverse materials. From this derives the visual inhomogeneity that has compromised the aesthetic value of the work. Moreover, the interaction between the artefact and the surrounding environment, the action of atmospheric agents and the very close proximity to the sea have determined the diffusion of important deterioration phenomena and a complex morphology of degradation.

The project for the restoration of the Walls and the Seafront promenade was developed on the basis of surveys and a *"Pilot Project"* or *"Sample Intervention"*, which was carried out using techniques and operating procedures aimed at recovering the stratified historical integrity, the original materials and construction, while respecting the principles of compatibility, recognizability and reversibility of the work.

To eliminate the forms of degradation, the project, which was developed based on what was learned from the sample intervention, will consolidate the existing structures and restore the entire wall facing.

The seafront promenade will also be the object of major maintenance works, that will concern the roadways and the rebuilding of the pedestrian path, including the renewal and optimization of the assembly system of the railing. To allow visitors standing or walking on the pedestrian path to see the Walls below, structural glass will be used in some parts of the Seafront promenade that overhang the sea. The Aragonian Walls will also be enhanced through different lighting systems. The walk will be illuminated by led marks step. Spotlights will be installed on the crowning of the masonry to create a lighting sys-

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tem from above that will follow the entire length of the walls facade. The arches will be enhanced through the installation of point lighting elements.

The project is part of a more articulated framework of actions that will gradually modify the road system of the city and that will support slow and sustainable mobility. The Old Town's catering, commercial, and cultural activities will benefit from the development of the route, and also the connections between Borgo, Tamburi district and Railway Station will be enhanced.

The regeneration of the Walls will also create a renewed setting for sports like sailing, swimming, and rowing, which will flourish in the water near the City Walls thanks to the installation of new equipment. The image of the Aragonian Walls and the Seafront promenade will be renovated to support their symbolic value while varying their functional connotations in relation to the new development objectives that will see the rebirth of Isola Madre. The project is therefore a symbol for the future vision of the city of Taranto.

Identification of suitable sites for Green Hydrogen Production from petroleum wastewater

Rossella Scorzelli, Shiva Rahmani*, Michela Delfino*, Francesco Scorza* and Beniamino Murgante**

Climate change represents an emergency for today's society. People, communities, and systems are called upon to adapt to this crisis's effects and respond with effective actions and strategies to increase their resilience. Awareness of the limitations of fossil fuel-based energy sources has facilitated the transition to a society with low greenhouse gas emissions. In this scenario, green hydrogen emerges as a promising alternative. Its production mainly occurs through electrolysis. The electrolysis process requires electrical energy to power the electrolyzer, which is a device that separates water molecules into its components, namely hydrogen and gaseous oxygen. The necessary electrical energy is produced from Renewable Energy Sources (RES), making the process entirely sustainable. The collection of facilities for producing, storing, and distributing green hydrogen constitutes the Green Hydrogen Infrastructure. This study aims to examine the criteria contributing to identifying the most suitable sites for the placement of GHI. The identified criteria vary based on the use of the produced hydrogen. Green hydrogen can be used in various sectors and for different purposes, such as an energy carrier in the decarbonization processes of "hard to abate" industries, as fuel, or as a transportation fuel. The chosen case study involves identifying the land suitability map for the placement of GHI serving the industrial area of Viggiano (Basilicata, Italy). This area is among the largest centers of oil extraction in Continental Europe. The produced hydrogen could be used as an alternative fuel for tankers serving the industry itself. The water necessary for the electrolysis process could also be recovered from liquid waste from oil extraction. The ultimate goal is to arrive at the land suitability map by integrating the Analytic Hierarchy Process (AHP) and the Geographic Information System (GIS).

The first step was identifying the study area covering 1045 km^2, as shown in Figure 1. Subsequently, areas deemed unsuitable for location, such as legally protected, constrained, and urban centers, were excluded. The identification phase of the criteria and related sub-criteria is crucial for the final result. The main criteria are divided into technical, economic, and environmental criteria. Technical sub-criteria include slope and solar radiation. Economic sub-criteria include road accessibility, accessibility to the Viggiano industrial area, and distance from the national electricity transmission network. Finally, the environmental sub-criterion concerns ecosystem services. Evaluating the impact caused by a possible location of the facilities on ecosystem services is fundamental for protecting natural resources and the benefits they offer. The application of AHP made it possible to identify the weight vector of the individual sub-criteria through a pairwise comparison matrix.

The weight vector identifies the importance of each sub-criterion in identifying soil suitability. The raster representation of sub criteria provided the basis for spatial analysis in the GIS environment. Map Algebra operations allowed for the insertion of weights attributed through AHP and obtaining the final result, the land suitability map shown in Figure 2. Suitability is represented on the scale shown in the legend. The map shows that the area is mostly moderately suitable, and particularly near the industrial area identified as Centro Oli Val d'Agri (COVA), there is a highly suitable area. This representation facilitates the selection of the optimal location for the Green Hydrogen Infrastructure (GHI). The illustrated approach provides decision-makers with a practical tool to examine and compare different options using both quantitative and qualitative criteria. Moreover, it emphasizes the versatility of green hydrogen, which can be used as an alternative fuel and significantly reduce greenhouse gas emissions. Therefore, research and implementation of solutions based on green hydrogen become essential to urgently address the challenge of climate change and facilitate the transition to a low-emission economy.

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Fig. 1.
Study area map.

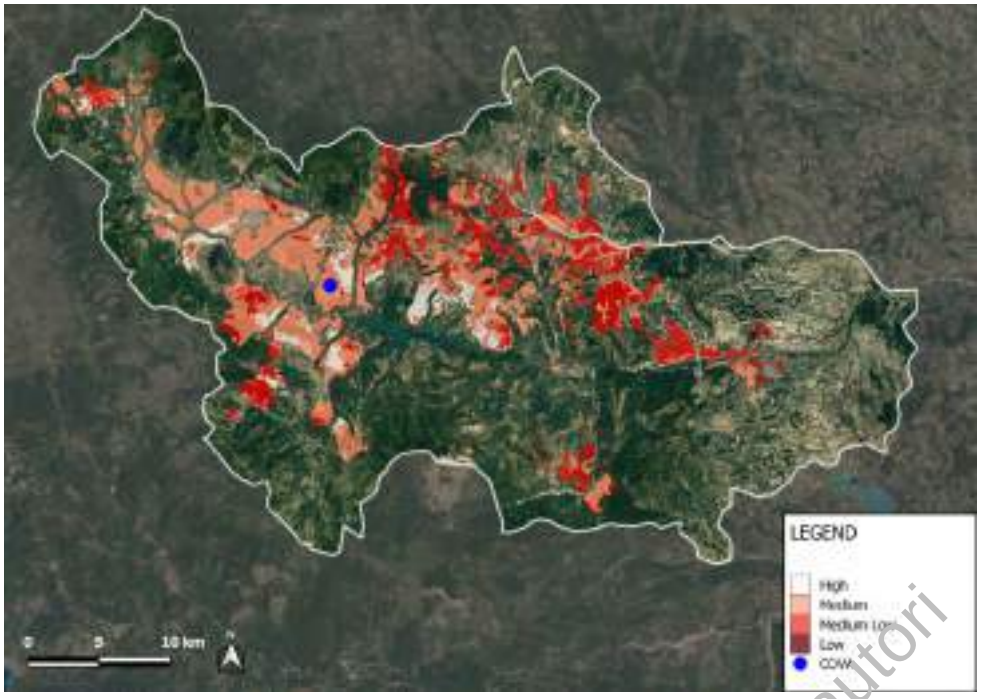

Fig. 2.
Land suitability map.

Risk-oriented knowledge of urban settlements towards climate adaptation

Antonio Sferratore, Sara Verde*, Maria Fabrizia Clemente*, Mario Losasso**

The increase of climate-related impacts on urban contexts requires an enhancement of the adaptation capacity of settlements against climate change stresses and shocks. While considerable attention has been paid to comprehensively understanding and managing risks that impact assets, resources, and/or people in the scientific field, awareness among decision-makers and public administrations needs improvement. In this scenario, the contribution of national adaptation strategies and plans – such as the National Climate Change Adaptation Plan is essential to cope with the risks caused by climate change and to support adaptation in a systemic and integrated way.
In this scenario, a risk-oriented knowledge approach represents a key issue to support decision-making and inform the prioritization of planning and design countermeasures to improve climate-resilient design in urban settlements to reduce vulnerabilities and to tackle impacts, as well as to offer joint benefits related to increasing environmental quality, livability of urban areas and socioeconomic opportunities for local communities.

The contribution discusses the implications of a risk-oriented knowledge approach to support climate adaptation design in urban settlements. As a specific objective, the presented study intends to analyze how typo-morphological, functional, spatial and environmental analysis can be linked to strategies and actions for urban settlements at the local scale. The adopted methodological approach required a conceptual review and an analytical-comparative phase to link quantitative and qualitative metrics related to risk assessment and certain features of urban settlements; accordingly, a risk-oriented knowledge process of the application case through sectoral domains has been performed.

As a first step, the conceptual review has been carried out to identify knowledge models and tools supporting climate adaptation design at the local scale. The review showed that classified maps, single or multi-risk indexes, and probabilistic analysis could provide reliable data and therefore support decision-making. However, , few contributions focused on the account of typo-morphological, functional, and environmental aspects into the knowledge phase to guide design proposal[1].

To understand the dynamic and complex interactions between the elements of urban settlements the development of a knowledge framework that considers the relationships between different systems and a set of typo-morphological, environmental, and spatial features of each system can be crucial[2].

Even though the analysis of the formal structure of urban settlements may result complex depending on a combination of endogenous and exogenous factors related to its built fabric, it is possible to identify formal recurrences that refer to geomorphological issues underlying geometries , density , and building typologiesThe recognition of settlement models through such analysis could clarify the link between geometric settlement schemes and densities to geomorphological features and subsequently to specific risk conditions, enhancing the awareness of such processes as a risk-oriented knowledge system.

The study has developed a comparison among different indicators and indices used for the evaluation of vulnerabilities and exposure to the most relevant climate hazard in the Italian context[3], heatwave and pluvial flooding, with different kind of analysis.The goal of the comparison was to underline the correlation among different quantitative and

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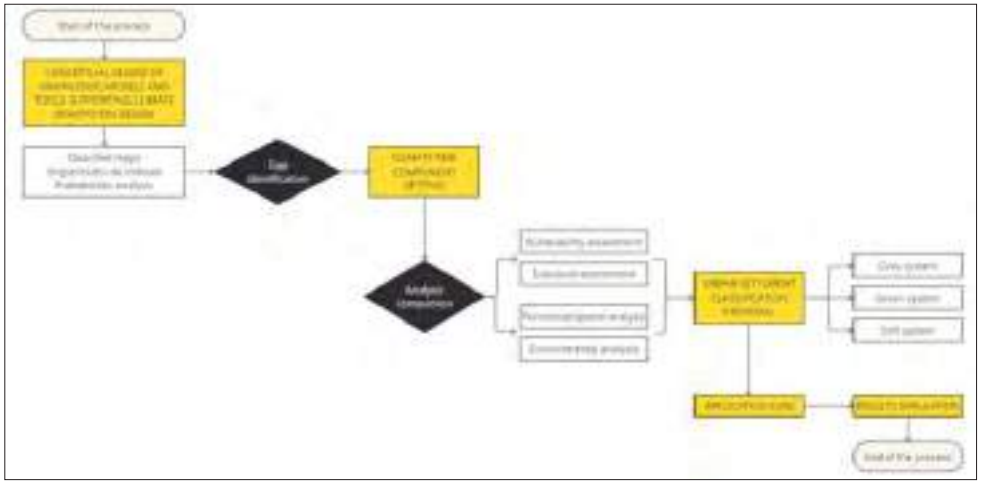

Fig. 1.
Structure of the risk-oriented knowledge approach.

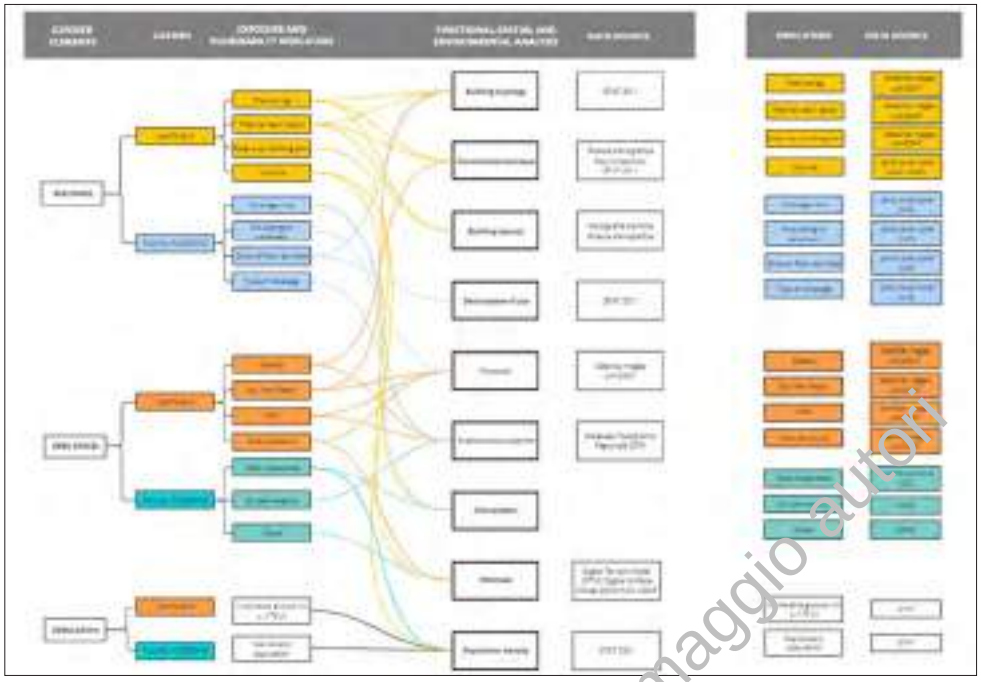

Fig. 2.
Comparison of indicators and indices used for the evaluation of vulnerabilities and exposure to heatwave and pluvial flooding, with typo-morphological, functional and environmental analysis.

qualitative metrics related to risk assessment and specific features of urban settlements.

To integrate those factors into a knowledge model, a risk-oriented taxonomy of urban settlements has been developed starting from technical policy and strategic planning, such as the NCCAPP..

To test the proposed methodological approach, the urban settlements of the Naples Metropolitan Area are analyzed and identified as a critical area due both to its geomorphological and urban fabric features.

The testing phase showed that there is a correlation between functional, spatial, and environmental critical features mapped through such analysis and the exposure and vulnerability assessment related to heatwave and pluvial flooding., addressing the complex relationships between urban assets and key environmental factors, the proposed risk-oriented knowledge model allowed the integration of relevant spatial elements exposed to risk, to broaden and support climate adaptation design.

The contribution is developed within the research Partenariato Esteso PE3, RETURN project (multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate) (MUR Project Number: PE00000005), in the framework of the Spoke TS1 - Urban and metropolitan settlements activities.

Overcoming contamination in urban context

Phytoremediation in the Metropolitan area of Milan

Maria Chiara Pastore, Claudia Parenti*, Lucia Ludovici**, Laura Sibani**

Urban development and anthropic activity left a contaminated heritage in the urban system, challenging the regeneration of leftover polluted areas today. These spaces are usually characterized by abandoned and perennial degradation mainly because of the high cost and bureaucratic complexity of their recovery. The case study selected to analyze the relationship between soil contamination and remediation processes is the metropolitan area of Milan. Due to the past industrial activity of Milan, the remediation proceedings within its Metropolitan area are today 5607 (the data is from the AGISCO database created by the Regional Agency for Environmental Protection in 1999 and updated to 2023). Among these, around 1.500 are still ongoing, as the sites are carrying on remediation intervention or conducting analysis, implying inaccessibility to the areas for citizens and the spreading of soil degradation. Through the analysis of the AGISCO Database, it emerges that the remediation period typically lasts about 3,4 years; however, 40% of the active proceedings have been running for more than 11 years, demonstrating the difficulty of reclaiming some areas. This condition results from several factors, such as site extension, typology and gravity of contamination, costs of traditional remediation techniques, low real estate interest, and even the complex bureaucratic system.
Because of the long duration of these processes, the uncertainty and the cost of the process itself, and due to the normative availability to use greenfields for new constructions, urban developers mainly prefer to remediate sites with high real estate value and moderate contamination conditions. The phytoremediation technique reveals an interesting perspective to remediate those sites with less economic interest, whose reclamation could have a longer time implementation and an integrated approach (both traditional and biotechniques).

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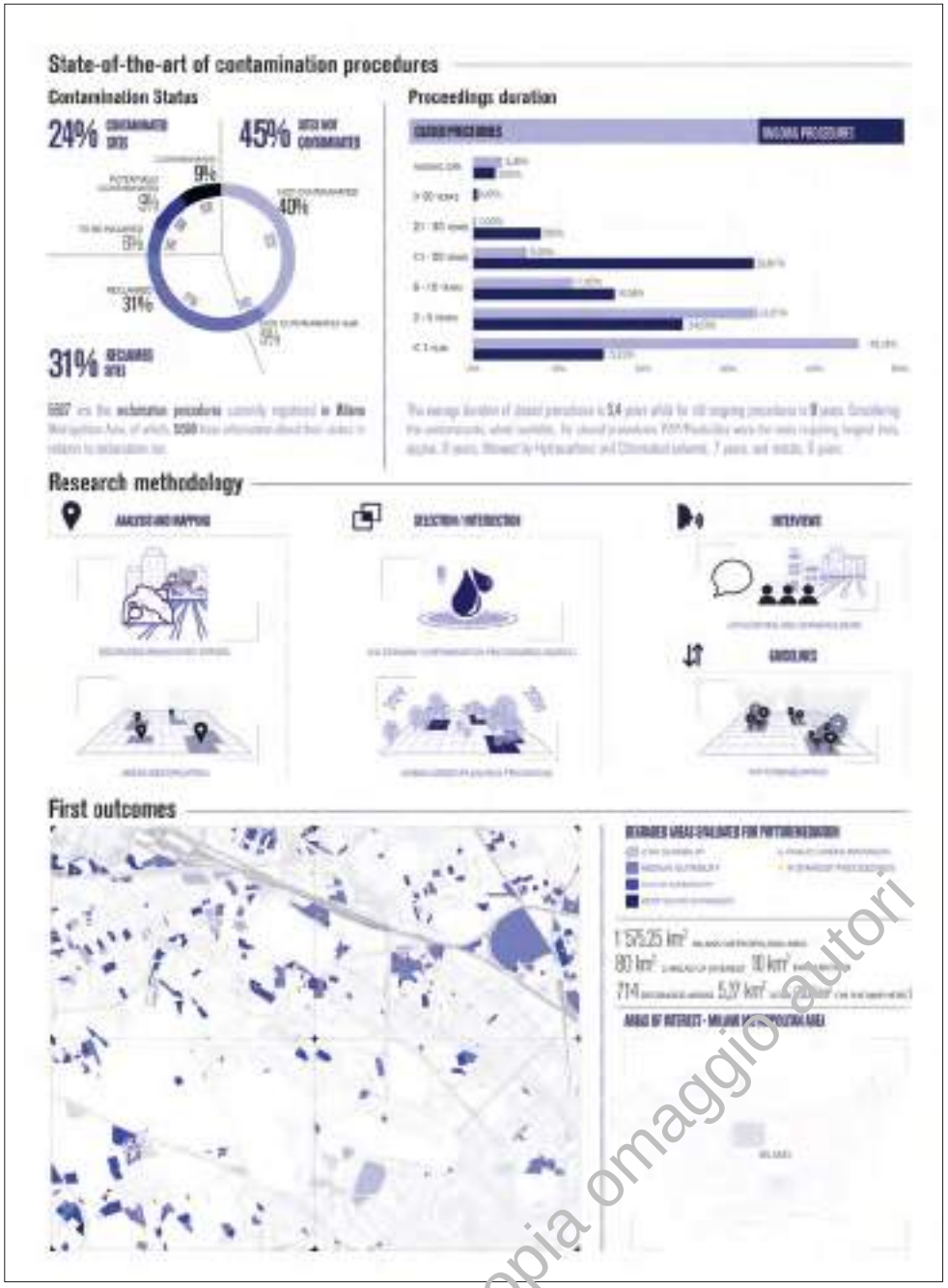
Considering these premises, this paper aims to discuss which areas are most suitable for the technique's application, mapping where the anthropic activity results in soil degradation and where the remediation procedure is ongoing but stalled for long periods. The methodology involves a territorial analysis to review the state-of-the-art contamination procedures, their characteristics, and the reasons behind their long deployment times.

Through this approach, the research conducts an examination of the administrative iter, identifying bottlenecks in the regeneration process by discussing with experts and involved stakeholders. From the analysis and the discussions with professionals, it emerged that the extended timeframe to show results is one of the main issues preventing phytoremediation from being effectively applied. Therefore, public areas that are not targeted for immediate development and are planned to become public green spaces are the best-case scenario for its implementation. In addition, other challenges that should be faced include the normative bias favouring conventional remediation, the heavy influence of the real estate market on deciding which areas should be cleaned up and how, the public resistance and lack of willingness to allocate green spaces for long-term remediation projects, and the scarcity of professionals, in the green management sector, qualified to work on polluted sites.

The work uncovers the potential for phytoremediation within urban settings and highlights municipal interest in streamlining the remediation process. The first results show potential for systematizing the feasibility assessment for phytoremediation projects and automating the implementation of phytoremediation strategies, resulting in practical guidelines to facilitate its integration into urban planning and environmental management frameworks. Applying this tool within urban planning could enhance the sustainability and resilience of urban ecosystems by promoting a new good practice of regeneration and restoration. Given the situation, the high environmental impact, and the costs of traditional remediation techniques, there is an actual demand for a new, accessible,

Fig. 1.
State-of-the-art, research methodology and first outcomes



sustainable regeneration process to face the extent of contamination in urban and peri-urban contexts.

Acknowledgements
This paper is based on ongoing research, financed by Fondazione Alia Falck, that involves interdisciplinary academic teams and authorities applying phytoremediation in the area of interest and investigating its environmental and socio-economic benefits. The project involves the Department of Architecture and Urban Studies of Politecnico di Milano University and the Department of Biotechnology and Bioscience of the University of Milan Bicocca. The team includes experts in the urban planning field, botanists, and agronomists specialized in phytoremediation, an emerging technique that uses plants to absorb, extract and stabilize contaminants. Compared with traditional methods, its costs are lower, but it requires more time to be implemented due to the natural plants' growth time and additional factors influencing vegetational activity, such as droughts, storms, and diseases.

Urban networks and environmental resilience. The role of fractal urban aggregates

*Ferdinando Verardi**

In the course of history, planning has tackled problems related to the territory and the city using tools by means of which, in accordance with certain objectives, an attempt has been made to ensure coherence in space and time. This means that, in each phase of the life of a given Society, a territorial (both physical and functional) coherence is guaranteed to the transformations that happen in that phase.
We can therefore consider planning as a continuous and systematic process in which the canonical phases (analysis, choices, implementation, monitoring and verification, etc.) cyclically follow one another. In this framework, it becomes possible to distinguish, in planning choices, those to which is necessary to attribute a longer duration from those to which it is necessary to attribute a shorter one. A longer duration must be attributed to invariants, conditions to transformation and strategic choices, while the shorter must be attributed to programmatic choices; thus defining the relationship between planning and time in a completely new way.

New urban planning issues focused on environmental sustainability open up new challenges for planning support techniques. Numerous studies show that the city is highly differentiated since it does not present a single climate but many microclimates (Balena, Leone and Longo, 2020) just as differentiated by zone is the hydraulic hazard (Pelorosso, Gobattoni and Leone, 2028). The technologies available today, from spatial information systems to environmental modelling, make it possible to better interpret these needs.

This requires scientific rigour in the definition of space, and the fractal logic that we will discuss in this research paper is intended as a contribution in this sense, in the conviction of the importance of the interdisciplinary approach. For example, urban planning influences many fundamental processes: air pollution and its serious health consequences; biodiversity linked to the ecological network; the adaptation of the city to climate change, with the related mitigation of hydraulic and heat waves risks. Since the development of green areas is the most effective solution in both cases, its design cannot be left to chance, which, moreover, often leads to façade operations (green washing). The technologies available today, from GIS to environmental modelling, make it possible to better interpret these needs and thus contribute to innovative "precision town planning".
The concept of a fractal urban aggregate according to Richard Register (Downton, 2009) is that of *a <<fraction of the whole city with all essential components present and arranged for good interrelation with each other and with the natural world and its biology and resources for human activity>>*. This definition, much of which we agree with, certainly fits into the framework of the entire fractal geometric corpus provided by Benoit Mandelbrot from the mid-1970s onwards.

Such ensembles are characterised by a non-integer (fractional) scale invariant dimension and endowed with certain isometric and internal similarity properties true to Hausdorff's measures (Mandelbrot, 1982) defined as self-similarity or self-affinity. Such measures, in the urban sense, are essentially characterised by planimetric invariances of urban portions that repeat themselves as the scale of observation or resolution increases (Downton, 2009).

In any case, it is necessary to better define what represents the scale interval with respect to which the fractal urban aggregate is scale invariants. This aspect, of crucial urban-planning importance, is part of the so-called 'physical' issue in which fractals 'live' in nature and thus also in the urban and urban-planning sphere. This remarkable aspect essentially relates to the concept of scaling, i.e. the physical process, or power law, characterised by a scaling exponent, usually a function of the fractal dimension, which represents the parameter or descriptor proper to said scaling interval in terms of invariant measures. The scaling exponent is evaluated, and consequently said interval, according to a least-squares best-fit criterion and defined within the so-called "physical cut-off limits", beyond which, our measure diverges from the limit resolution, minimum or maximum (De Barto-

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lo et al. 2000). All these definitions are fundamental for a correct fractal characterisation of urban developments in the sense of direct scaling and especially for the minimum and maximum identification of fractal urban aggregate representation. In this context, and in an exhaustive manner, Paul Downton (2009) establishes 'physilogical' criteria that are proper to the so-called Ecopolis, i.e. *fractal sustainable urban city*. These criteria for fractal urban aggregation include: relations with the processes of the biosphere and the assumptions of human sustainability, the creation of ecological habitats integrated into urban eco-systems, the creation of optimal nodes and urban centres, the creation of connectivity patterns that define organised urban structures, and the creation of networks that have the essential characteristics of large cities. The premises outlined so far offer a clear picture of the urban landscape in the scaling of fractal representation of the urban development of territory. Planning criteria for defining the processes of organic development of urban aggregates must therefore be supported by minimum 'physiographic' units related both to the ecosystems present, or to be developed, and to more or less extensive regions, in which urban ensembles (sets) of aggregation are functional multiples of the larger scale. Such organic developments may have radial forms of self-similar urban expansion, or preferential longitudinal developments in self-affine terms. In the latter context, for example, the presence of natural ecological corridors (see Roriguez-Iturbe and Rinaldo, 1998) may provide a basis for a connective network to be extended to several urban aggregates to several urban aggregates in line, through the superimposition on these corridors of tree-lined avenues and cycleable green ways that connect, with continuity, to ecological and river parks. We should also remember that Downton (2009) himself indicates what are the minimum impact and sustainability criteria that must be met in a fractal urban aggregate.

Beyond the conflict
Planning a logistics area with an OOO approach

*Mattia Bertin, Eugenia Vincenti**

The paper highlights the tension between humans and non-humans spaces in contemporary cities. These conflicts intensify in specific areas, particularly industrial and logistics zones, where the interplay of human activities, environmental considerations (green-blue ecosystem), and the growth of technology (machine ecosystem) converges and collides. At the same time, ongoing climate change is increasing the number and intensity of extreme events, is considered how the current urban form is often unsuitable to accommodate them. Additionally, property and building forms became two invariants that strongly limit urban form evolutions, making large unitary transformations difficult. In relation to this, the paper use Object Oriented Ontology as interpretative tool for overcome a conservative approach and embrace conflicts, fostering a non-violent dialectic between ecosystems. The urban project advocates for a return to political discourse, responding dynamically to pressures on cities and influencing design choices at various scales. To investigate the possibility of a non-anthropocentric urban design for a logistic area, was put forward the hypothesis of separating three cities – the human city, the green-blue city and the machine city – realising independent functional spaces, which do not resolve the conflict by regulation, but by autonomy of elements. This *cities of things* are independent of the anthropocentric use, evolving and transforming by their own processes not necessarily oriented towards human utility. Beyond human will and organisation, the city is an extremely wildlife-rich sphere. Similarly, there is a city of the unforeseen and resisted plant kingdom, which emerges from the breaks in the asphalt and colonises roofs and walls. Also waters inhabit urban spaces in an unexpected and often conflicting way with the human city project, flooding them. This cities of things, regardless of human will and a conservative approach to spaces and volumes, proceed in a continuous evolution, accelerated by climate change and sustained by geological and lithological processes. This interpretation leads us to ask ourselves to what extent is the city a human thing, and how else can it be understood and designed? The research described in the article attempts to answer this, proposing the redefinition of the settlement scheme as a tool, pursuing a conflictual approach, trying to take several sides in order to design an interpretable and adaptable city. The proposed approach takes as its test area the industrial zone of Padua, a pivotal hub for logistics and production in north-eastern Italy . The research delves into a meticulous analysis of the existing urban fabric, the structural composition of the area, and the intricate network of both human and non-human activities. The outcome defines a settlement scheme based on the aggregation of existing lots that operates on three different fronts. Firstly, there is an emphasis on maximizing logistical space to meet the escalating demands for expansive covered areas dedicated to logistics activities, a key driver of the region's economic growth. This approach positions the industrial zone to cope with the evolving needs of the territory; Secondly, the proposed scheme seeks to enhance the environmental system of the area by allocating more green space. Despite maintaining the same surface area, this allocation serves to consolidate a well-defined vegetation system adept at addressing environmental vulnerabilities. Lastly, a crucial aspect is the design of human-scale spaces within the industrial zone. By creating specific zones and network tailored to the human activities, the study aim to significantly improve the quality of life for those workplaces. As a result, it emerges that the current urban model shifts towards adaptable and flexible built environments. Embracing this paradigm, the urban landscape evolves into a dynamic entities, where transformative evolution positions buildings as integral components within an interconnected system that seamlessly integrates productive, environmental, and social functionalities.

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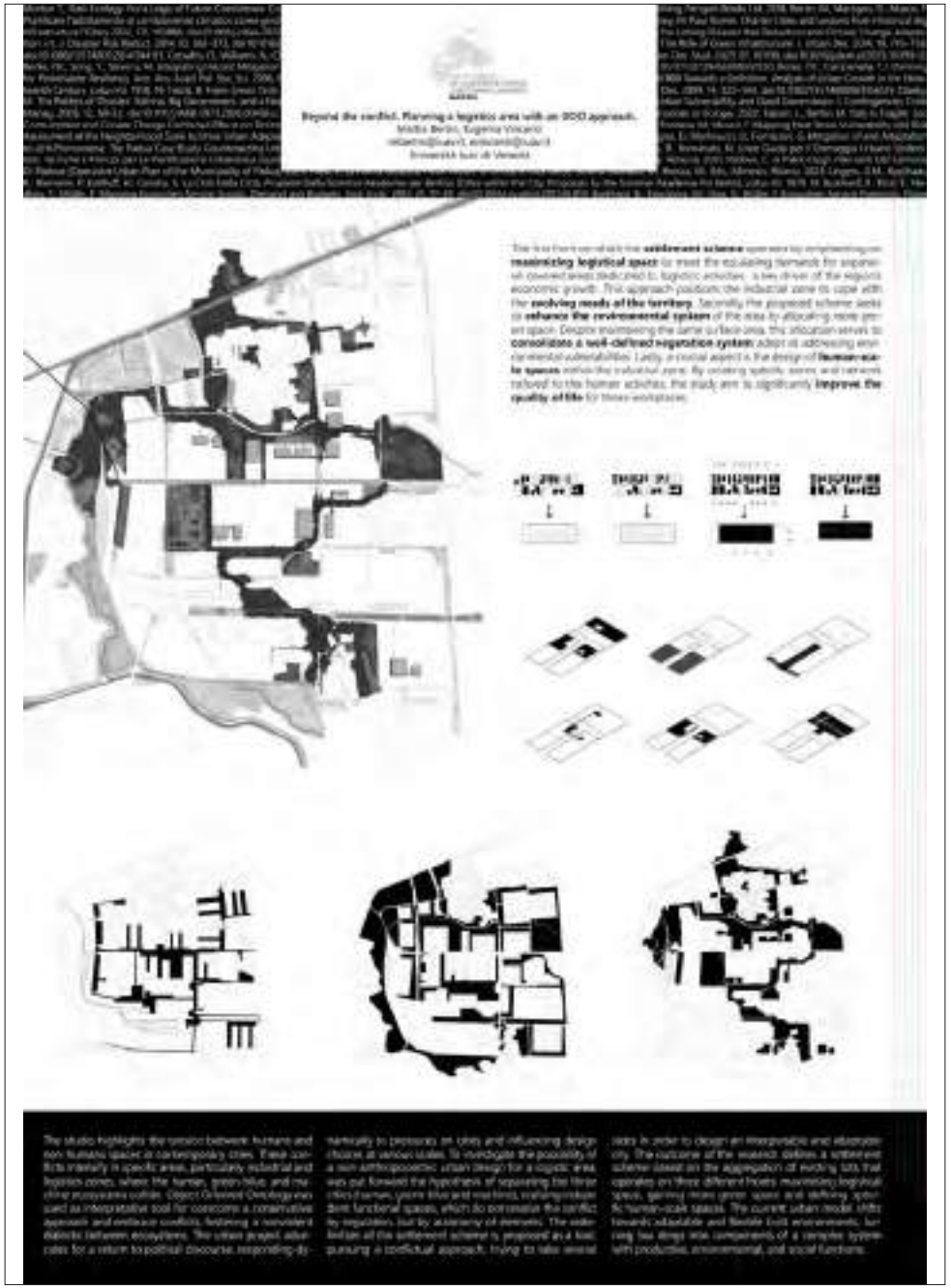

Urban Climate Change Mitigation, Adaptation, and Disaster Risk Reduction – a Review on their joint use for Spatial Resilience

Silvio Cristiano, Carlo Pisano***

An increasing number of catastrophic events was recorded in 2000-2020 compared to 1980-2000. The climate crisis suggests more disasters will happen, while other existing crises (ecological, energy, resources, socio-economic, geo-political, etc.) cannot be disregarded while trying to anticipate and handle them. Disaster Risk Reduction (DRR) and Climate Mitigation and Adaptation (CMA) represent two major categories aimed at inspiring urban and regional strategies, planning, and design options to pursue (climate-related) spatial resilience.

The ultimate goal of the present article is to support risk-informed decision-making for long-term resilience at the urban and metropolitan level, by finding out possible common approaches and detecting possible margins for further studies. With a focus on the two aspects of resilience that are currently present in the United Nations agenda and that can be addressed spatially, as per another globally recognised issue such as the increasing urbanisation, this will be done by building a comprehensive and up-to-date literature review on urban CMA and on urban DRR, jointly addressed from a spatial perspective. Such a review is meant at offering the most recent state of the art on those topics, whether and when addressed altogether in terms of urban and regional planning, governance, and design, while critically understanding whether research gaps and margins for improvement exist.

Our search terms for the collection of results (titles, abstracts, and keywords, through Scopus) are: climate AND mitigation AND adaptation AND "disaster risk reduction" AND urban OR spatial OR regional OR city OR cities OR town AND planning OR governance OR design. Discussed information include: publication authorships; time, geographical, and disciplinary distribution; editorial collocation; keywords, contents, and highlights.

A relatively limited number of publications (26) has been found, against the urgent topics at hand a galloping increasing urbanisation; this suggest some margin exists for further scientific work on CMA and DRR, jointly addressed in terms of spatial planning, governance, and design. Among other results are the predominance of Global Northern contributions, of authors and editorial collocations from scientific sectors such as physical sciences and engineering, with an overall prevalence of techno-centred approach and an almost absolute absence of urban political ecology.

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Human approach for the third millennium

*Maria Lodovica Delendi**

In this beginning of the third millennium we face transformation given by processes of digitalization, artificial intelligence for managing complex systems, dematerialization in virtual worlds that can alter the delicate physical psychic and spiritual balance of human beings. Large migration flows bring the problem of social inclusiveness and climate change the problem of sustainability and resilience of our housing systems. what solutions can be proposed for greater social inclusiveness by acting at the three economic environmental and social levels keeping in mind the need to foreground the preservation of the human being as a bio-psycho-spiritual whole?
New strategies of social environmental and economic living can as virtuous examples of territorial regeneration along the lines of biophilic design and biourbanism[1]. Reading the city and the territory as paths that guide the flow of people's movements, historically legible in the formation of urban settlements and still legible and present in the hamlets and settlements that dot our territory . Settlments that still rely on a presence of communities that can be open to integration but only if they are already capable of self-supporting and self-generating a strong cohesive sociality capable of opening up without creating dangerous imbalances. A constellation of self-sustaining communities can be and organized by keeping the regional level as "external" reference point.

Building and neighborhoods aiming at sustainability have already been tested and implemented, the most famous in Freiburg the *new Vauban district,* the redevelopment of *Weingarten 2000*, the new *Dietenbach* Nord as an innovative ecological district for 15.000 people; in France in Paris the *ZAC* of Bonne district that wants to balance the necessary resources with economic activities to produce them on site with central heating system using geothermal energy, the project urban regeneration of *Clichy Batignolles*; in London in early 2000s the *Bedzed*; in Stockholm advanced technological solutions seek to combine smart cities and eco-neighborhoods. in Italy we have *the Albere* in Trento, Milan *Santa Giulia, Parco Plinio* in Roma, *the eco-village Montale* in Modena.

But the point solutions of various eco-neighborhoods o not meet a real solution, becoming limited solutions that fail to impact widely. Japanese architect Ken Yeang who has devoted his life to these issues by integrating ecosystems into architecture, nature base architecture, a pioneer of ecological design since 1971 has opened the field: not only buildings and neighborhoods that integrate ecosystems but also infrastructures must devote itself to sustainability. Energy, water management, wetlands transportation system that some neighborhoods have applied must be extended to large urban systems. important is to study ecosystems, they are not technologically replicable so we need to increase the natural space dedicated to them that offer them to us for free.

Also the food system must be naturally built organically, limiting meat consumption and intensive growing. While this is onerous for large urban systems, it is more sustainable at the level of small organizing , where we have a greater ability to control the materials used. Think about how the incentives to save energy (110% ecobonus in Italy) promoted on national scale have promoted the use of artificial materials that increase the petrochemical spiral and cover building with non-recyclable materials; as well the campaign for the electrification of means of transportation results in an environmental disaster for the procurement of raw materials for electric batteries and their disposals. Vicious circles that take us far from a reconciliation with natural recycling and thus environmental sustainability. All this can be sought and perhaps achieved, however, if in addition to the above elements we set out to build intentional communities that are as autonomous as possible. Communities organized in autonomous systems in fact allow for a greater capacity for integration by offering work and control regarding the capacity of accomodation. But we need to make a step forward to ensure that the solutions we find have respect for the human being as a physical, psychic and spiritual being, to increase our consciusness. This means valuing our belonging to the ecosystem of living beings and not just using the ecosystem services that nature offer us. This attention to the perceptive sensitivity that can be trained leads us to respect the shaping forces that created our territory from the micro to the macro scale. The perceptive sensitivity and the awareness of being intimately connected with the forces of nature leads us to a different architecture, to an architectural language that stimulates by acting directly on the sensitive etheric and perceptive part closely connected with the cognitive part, and to a different order of priorities in forms of planning keeping in mind the studies that indicate well-being and discomfort in different places, and their therapeutic capabilities for the man and the environment.

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Urban forestry project in L'Aquila: urban regeneration and green reconnection

*Chiara Di Dato**

As highlighted by many studies, greening and re-naturing interventions in cities show to improve both ecological functions of soil and public uses of spaces. Especially, greening projects consistently enhance the water management and reduce the urban heat island effect. The increased availability of green and recreational places should therefore result in improved health and quality of life. In particular, restoring permeability of urban soils through de-sealing techniques is one of the many Nature Based Solutions (NBS) that may be used to improve the management of cities. Although each intervention is meaningful in and of itself, assessing the wider context may be required to fully understand the potential of a single local greening initiative.
Similar considerations can be seen in the north-west urban fringe of L'Aquila (Italy) where one of the city's main university campuses is located. The approximately 2,50 square km wide area is 3 km away from historical town. The university campus area is particularly relevant for the city since it includes the city hospital and many types of local services. Also, the area is mainly composed of buildings and sealed areas without any relevant green spaces for aggregation and outdoor activities.

At the same time, the urban periphery where the university campus stands has the same quality. It is mainly a dense residential area of around 15000 inhabitants that lacks both recreational public places and significant green areas. The city of L'Aquila is peculiar because it is in a narrow valley between mountain ranges of high ecological interest (Italian central Apennines in Abruzzo region). In this scenario, the analysed urban fringe is between the mountain range and a river.

As a result, a de-sealing project on the university campus is proposed as design response to local issues. The urban forestry project should be effective if situated in a 1 square km parking space. Then, the implemented forestation can positively impact on carbon storage and microclimate regulation, whereas street furniture, playgrounds and other facilities can implement usage of the space by both students and inhabitants.

Although it is a small intervention, such a case study could potentially improve land management and inclusiveness of the entire urban area. Furthermore, it might be the first step through a broader environmental reconnection with the high-quality external setting represented by the mountain and river systems.

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Supporting Critical Entities Resilience to natural risks through urban planning

*Veronica Gazzola**

Over the past decades, the dimension of negative impacts produced by extreme natural events has grown up exacerbating the vulnerability of Critical Infrastructures (CIs) in Europe. Considering the increasingly interconnected and cross-border nature of CIs and operators providing essential services (Critical Entities), the European directive on the Protection of European Critical Infrastructures (2008/114) has recently been replaced in favour of the new directive on Critical Entities Resilience (CER) (2022/2557) adopting a systemic approach in the assessment of all the risks to which Critical Entities could be exposed (considering both the potential impacts of Climate Change and cascading events) and their resilience to hazardous phenomena. In the coming years, CER Directive will pose many challenges to Member States and their authorities in the implementation of a common strategy setting out strategic objectives and policy measures for enhancing the Resilience of Critical Entities at European level. Among all the recommendations recently provided on the topic, EU Commission defined five goals to strengthen disaster resilience and to tackle risk management by the implementation of actions aimed to 1) anticipate, 2) prepare, 3) alert, 4) respond and 5) secure in case of event of disasters impacting critical sectors (2023/C56/01). In all the defined action phases, urban and spatial planners belonging to the different Member States will be encouraged to take the necessary actions and strategies to be implemented to achieve the "Union disaster resilience goals". Looking at the CER directive in territorial perspective, the research draws up the main key issues working on the role of urban planning in the definition of strategies and measures to be implemented in all the action phases defined by European Commission. With regard to goal 1 (Anticipe) aimed at improving risk assessment, anticipation and disaster risk management planning, urban planners should be involved in risk conditions management by strengthening the capability to identify and assess the risks of catastrophes (particularly those with potential transboundary and cross-sectoral impacts), and to build continuously updated and expanded transboundary cross-sectoral scenarios covering 16 main hazards to which the Union is currently exposed. Then, urban planners must be involved in the mapping of CIs and operators providing essential services for the 11 critical sectors defined in CER Directive. The defined knowledge framework will be the basis for the implementation of effective disaster prevention and response actions. With regard to goal 2 (Prepare), urban and spatial planners should take actions to increase risk awareness and preparedness of the population on how to prevent, prepare for and respond to disasters, reducing their negative impacts. To anticipate and prepare for disasters, effective early warning and monitoring systems are critical. So, with regard to goal 3 (Alert), urban planners should be encouraged to enhance – mainly in emergency planning – the effectiveness and interoperability of early warning systems to allow a timely and effective response to disasters and avoid or reduce their adverse impacts. In coordination with civil protection system, they should proactively support authorities involved in the emergency management providing rapid impact assessments for detected or predicted events, and strengthening key functions of early warning systems, such as forecasting, detection, monitoring of hazards and their impact, and the timely and easily understandable warning of the population including of vulnerable groups. In this sense, enhancing the Union Civil Protection Mechanism's response capacity becomes crucial. So, goal 4 (Respond) is aimed to defined and regularly review the appropriate type and number of resources to continue to effectively respond to disasters that overwhelm national Civil Protection capacities in specific areas of interest such as temporary shelter, emergency energy supplies and transport. Civil protection authorities should continue to reinforce their business continuity planning capability as defined in goal 5 (Secure). Plans and procedures should be based and regularly revised on the basis of scenarios and impact analysis. Moreover, cross-border cooperation and interoperability of procedures, systems and tools to allow efficient and effective information exchange, facilitate operational decision-support should be enhanced. Urban planners should be involved not only in the improvement of disaster risk communication and information management capability, but also in the post-disaster evaluation, supporting the conduct of stress tests to test business continuity of emergency operations centers and working on the follow-up of lessons learnt. Current approaches to strength disaster resilience of CIs should be in fact comprehensive by covering the full disaster management cycle (prevention, preparedness, response and recovery), taking into considerations interdependencies between multiple risks, ensuring coherence amongst relevant policy sectors and encouraging cooperation between Member States sharing common risks. In this regards, it's evident that nowadays urban planning should be involved not only in the management of natural risks that certain hazards may have on the functioning of critical services and on their integrity, but also in the definition of collaborative approaches among different subjects and authorities interested in enhancing Critical Entities Resilience to natural risks.

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Parallel Workshop

7. New economic approaches, such as the circular economy

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PROPELing a Social Cooperative into a Positive Energy District

*Nicolas Caballero, Irene Bertolami, Elisa Vasiliu, Giovanni Dalle Nogare, Adriano Bisello**

Padova is among the selected 100 EU climate-neutral cities by 20230 and is developing many activities to achieve this ambitious goal. The PROPEL project[1] (Positive RObust PEd Localities) fits into this framework, suggesting new approaches for the implementation of innovative solutions in energy and urban planning. The three-year project focuses on the development of Positive Energy Districts (PEDs), involving case studies in Italy, Sweden, and Turkey. The Padova case study focuses on the Giotto Social Cooperative, whose primary activities involve the maintenance of green spaces, mostly public ones. The cooperative has a strong social commitment, providing employment opportunities for ex-offenders and people with disabilities. The project aims to achieve climate neutrality through various initiatives, including recovery of energy from green spaces management and agro-food waste. It enables resilient energy supply to the system of urban systems, including urban-rural relationships and transports within this system, by developing ethic business models based on circularly of resources and social innovation. In Giotto's case study, this energy can be used to power vehicles (biomethane or green electricity), in synergy with already ongoing investments in the energy efficiency of buildings already being implemented (replacement of old oil heating systems with heat pumps powered by photovoltaic panels, insulation of walls, etc.)

At the start of the project, a questionnaire was carried-out to key decision-makers of the cooperative to understand the current stage of the PED process, and identify areas for future development of the area. This questionnaire informed a preliminary SWOT analysis. Key considerations related to Giotto are summarised below:

- PED efficiency and energy needs: Energy efficiency of building stock was deemed high, largely thanks to the recent retrofitting. Nonetheless, the need for improved systems for reducing energy consumption in the summer was highlighted, considering the important role of air conditioning.
- Renewable generation: PV panel installation on Giotto's buildings led to a substantial amount of self-consumed energy throughout the day, as well as injected back into the grid during periods of over-production. However, the current lack of energy storage solutions does not currently allow the cooperative to be fully energy independent.
- Mobility: While a few e-charging stations were recently installed in the Giotto premises, most vehicles under the cooperative's management have yet to shift to net-zero. Assessing the economic and environmental sustainability for a transition of the vehicle fleet is a key priority.
- Interaction with stakeholders: Giotto is embedded in the Padova industrial zone, and its premises shared by two municipalities (Padova and the municipality of Noventa Padovana). It was identified that there is a sizeable potential to create mutually beneficial arrangements with neighboring economic activities that could improve the energy balance of the PED area, and potentially enable innovative energy production avenues. For example, the nearby agro-market green waste could be used in producing bio-fuels, and neighboring businesses could benefit from energy-sharing schemes.

Based on the SWOT and follow-up discussions with the cooperative, the following directions for further analysis were identified:

- Spatial analysis: A spatial analysis will be performed on Giotto and the surrounding area. This analysis will take two levels (i) Spatial SWOT analysis to visually depict the various elements of the surrounding area that may impact SWOT development, and (ii) energy mapping of the surrounding area to identify optimal resource use and potential for energy sharing schemes.
- Mobility assessment: precise data collection will be done on the current mobility stock and needs of the Giotto cooperative. Data are gathered using questionnaires

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[1] https://jpi-urbaneurope.eu/project/propel/

with employees, to map thoroughly the mobility requirements of Giotto following a System-of-Systems approach. Finally, guidelines are provided on how Giotto can transition into more environmentally sustainable forms of mobility, including technological interventions complemented with behavioural ones.

- Participatory methods: The potential for collaboration with local stakeholders is recognized as deeply important in the PED process of Giotto. Accordingly, a list of local stakeholders is compiled to identify who can be affected or may act as drivers of the Giotto PED transition. This includes but is not limited to agro-food market, waste incinerator, neighboring residential areas, local businesses, and municipal policy-makers (both Padova and Noventa Padovana).

This work was conducted as part of the PROPEL project n°43786223 and has received funding from European Union's JPI Urban Europe PED programme.

Fig. 1.
Poster of the Giotto Area and PROPEL Project Concept

Exploring transition to Circular Economy: a collaborative design approach for innovative urban hubs for waste management

Chiara Castellano, Federica Paragliola*, Maria Fabrizia Clemente*, Ermina Attaianese* and Marina Rigillo**

The need to implement initiatives based on Circular Economy (CE) principles to reduce emission and natural resources consumption has a central role in European Union policies and programs. Indeed, CE emerges as a vector of innovation to address environmental, social, economic and technical challenges, offering a transformative way to adapt unsustainable processes to the new requirements of sustainability and resilience of urban settlements. Specifically, a compelling area of action lies in the application of circularity principles to the fields of architecture and industrial design; however, this field encounters significant obstacles, both in potential technical constraints and in socio-cultural legacies associated with limited consumer information, awareness and willingness to cooperate[1]. Therefore, there is an urgent need to trigger a radical and timely shift in societal habits and practices, through circular design processes based on transversal and transdisciplinary approaches to generate value chains to the set of anthropogenic resources that are still considered as waste. In this perspective, Ecological Thinking the research field that can combine emerging social needs with the goal of reducing the environmental impact of human action, overcoming business-as-usual models through solutions that respond to technical-economic, social and cultural criteria[2].

Within this scenario, the research objective is to propose an innovative process strategy to generate new value chains of waste in a multi-scalar perspective according to CE principles. The idea is to overcome the NIMBY concept – Not In My Back Yard – and make places used to discard goods that are still potentially usable as an integral part of urban space and social life. The contribution focuses on a hub design proposal for reuse, re-design and redistribution of waste wood furniture, identifying wood as an indispensable "multitasker against climate change" tool and thus recognizing the transformative potential of this material in the perspective of sustainable development of the construction sector and in urban planning[3].

The furniture sector is still not well supplied with efficient supply chains aimed at CE: in the mapping of best practice (BPs) on the Italian territory evidence that just about 10% are attributable to the furniture sector, most of the BPs concern the Production phase through the use of secondary raw materials, in fact the 97% of the recycled wood becomes chipboard[4]; less are the practices that focus on product life cycle, in relation to the final waste management phase. This data, in addition to the survey of Italian Consumers' choices mentioned in the report, shows the lack of solutions close to the final consumer, which can contribute to the extension of the useful life of furniture complements. Focusing on Southern Italy[5] is estimated that only 16% of wood is sorted, significantly less than the national average - 5 (kg/inhab*year) compared to 15 (kg/inhab*year) on national level in 2020, 3.4 (kg/inhab*year) in Campania. Such a shortage of recovered material is evidently reflected in a lack of CE processes concerning all life cycle phases. Moreover, the multi-materiality of products in the furniture sector makes the recycling process of wooden components extremely onerous, making up-cycling a much more suiting approach. Therefore, the choice of focusing on the wooden furniture

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Fig. 1.
Co-design project with Metellia srl _ prototype visualization

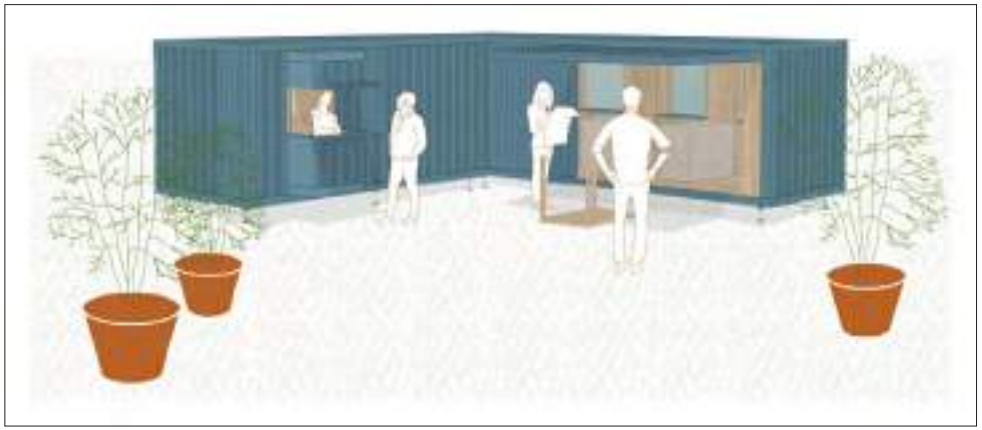
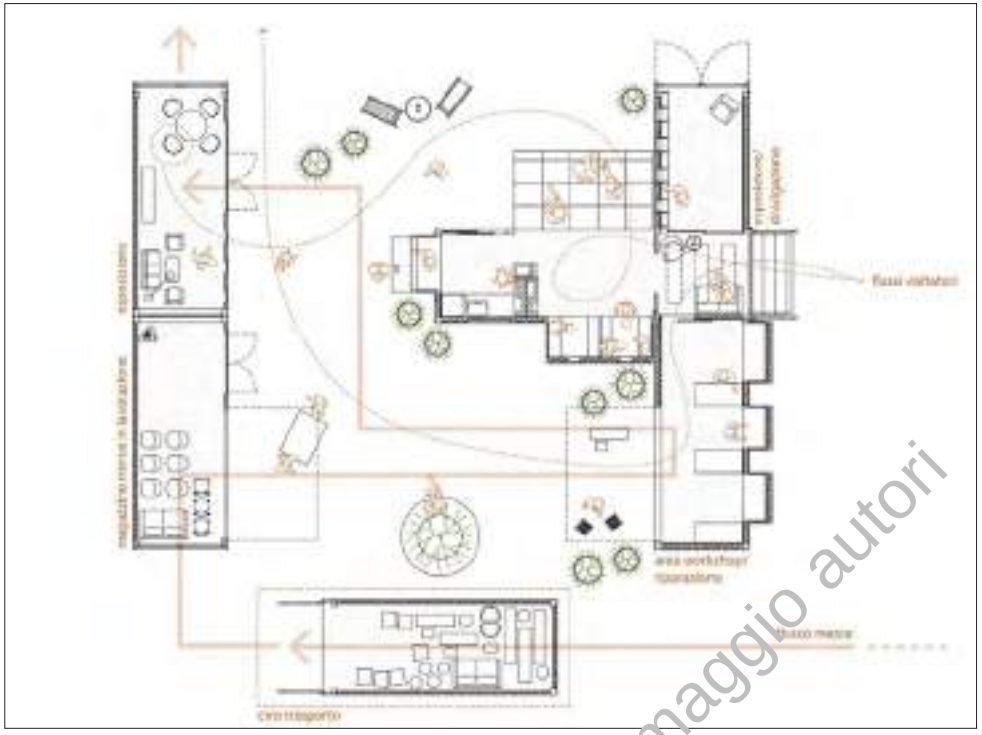


Fig. 2.
Co-design project with Metellia srl _ prototype functional layout and flows



sector allows to count the dichotomy high/low-tech, developing solutions that can be applied quickly, on a large scale, with a high social innovation impact, configuring themselves as eco-technologically innovative.

In this scenario was carried out a co-design experience with Metellia company to define a project for a network of "Urban Hubs", designed to engage the community and establish good practices to implement circular processes at the territorial level, maximizing re-use and up-cycling processes of the local furniture waste chains. The hub proposal, outcome of this experience, consists in an eco-socio-technical facility designed to be able to complement existing functions, supplementing an area characterized by deficits in infrastructure and access to innovation. In design terms, the choice was to use disused shipping containers adapting them to their new uses, making the project idea both technical and economic feasible[6]. Urban hubs can operate as "devices" of new forms of circular economies, while becoming engines for the production of services and spaces for everyday life. The function of the hub is therefore multifaceted: that of improving the process of collection, reuse and up-cycling of dismissed wooden furniture, establishing a circular economy chain on a local scale, but also being a virtuous example, establishing a positive association in users, and offering itself as a space for further educational outreach and gathering activities within the urban area.

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Circular Economy strategies for Adaptive Reuse of Borgo San Leonardo in Carlentini

*Carla Di Giorgio, Maria Rita Pinto, Pasquale De Toro**

Circular economy approaches in construction and urban systems enable the renovation and reuse of underused or abandoned buildings and contribute to the regeneration of the built environment, especially for heritage buildings.[1] The reuse of heritage buildings is a strategy to enhance the architectural heritage, aiming to trigger virtuous development processes with positive impacts on the landscape. Reuse design is a key approach in circular economy practices to extend the life cycle of buildings, prolonging their use and delaying their end. As a result, the reuse of abandoned buildings can enhance the surroundings, resulting in ecological benefits and promoting socially responsible economic growth.[2] Extending building lifetime reduces the use of raw materials. An additional benefit in terms of embedded energy savings and carbon emissions can be achieved through the use of re-used or recycled materials in the renovation of buildings.[3] The life cycle of an adaptive reuse intervention includes planning, design, construction, operation, and maintenance phases.[4] Involving stakeholders and local communities in the decision-making process is crucial to ensure alignment with their preferences and needs.[5] In reuse interventions, a decision-making method based on repeated information/decisions can predict possible building transformations in accordance with their identity and socio-economic development goals.[6] Involving stakeholders in decision-making processes and promoting shared choices ensures that the decisions made allow for a more inclusive and sustainable approach to problem solving. Furthermore, stakeholder involvement improves the quality of decisions and their long-term impact, as it allows for the identification and consideration of different points of view.

Borgo San Leonardo in Carlentini, which has been selected as a case study, is an example of disused rural heritage in an area of high landscape value and development potential. The village consists of a housing typology typically from the rural area of Syracuse.

The area has been declared of outstanding public interest and still retains its perceptual-cultural, morphological-dimensional, and material-constructive values. Rural heritage is an underutilized resource today but could be able to develop the economic processes related to existing local productive activities. In this case, the productive system depends on agricultural production. The rural manufacts originally served as facilities for production or storage. The Borgo is set in a progressive depopulation context and the possibility to reactivate a new cycle of use could generate significant benefits in terms of economic development on its context but also in a wider scale. The case study describes the decision-making process related to the definition of new uses, through a multi-criteria and participatory approach.

The methodology employed consist of four mains steps: acquiring knowledge of the existing heritage, analysis of settlement needs, evaluation of adaptive reuse compatibility and finding a potential compatible intended use. The outcomes have been new compatible uses for old buildings, able to activate circular development processes.

The proposed process of adaptive reuse for Borgo San Leonardo aims to establish a new form of use that relates its various aspects. it is not employed as a mere container but rather as a catalyst for ideas and economic, social and cultural processes. The choices are new use scenarios capable of enhancing developmental dynamics. A particular focus on

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accessibility and user behaviour constitutes one of the strategies implemented in this research to ensure accessibility to rural heritage.

This will be achieved through a Multi-Criteria Decision Analysis (MCDA)[7], in order to compare adaptive reuse alternatives, considering the impacts on the environmental, cultural, social and economic systems. This decision-making method applied to the case study allows to show how that approach facilitates the development of news scenarios and the enhancement of existing values. Adaptive reuse interventions on old buildings make cities and their contexts safer and more resilient, fostering social cohesion, well-being, and promoting environmental sustainability.

[7] Saaty, R.W. (1987) 'The analytic hierarchy process-what it is and how it is used', Mathematical Modelling, 9(3–5), pp. 161 – 176.

Inclusive approaches for circular soil management and territorial restoration in marginalized areas

*Elena Ferraioli**

In the current global context, characterized by growing inequalities, spatial and social segregation, scarcity of natural resources, and climate and environmental crises, a radical change in land use and land consumption practices is necessary. From the late XIXth century, the impacts of linear progress in contemporary cities have been evident, including the gradual degradation of fertile soils and the abandonment of specific urban contexts. During this timeframe, cities began to blur their boundaries, presenting themselves as fluid, chaotic entities without a clear and defined form. As a result of this type of growth, contemporary cities now appear as a "confused mix of heterogeneous fragments" (Secchi, 2000) that are difficult to understand.
The recognized limits of unlimited urban growth dynamics and the increasing scarcity of environmental resources in ecological systems, both globally and locally, together with the culture of human domination over the natural environment, have gradually led to the disruption of relationships of co-evolution and the possible synergistic and "circular" balances between urban centers, suburban and rural areas. This mode of growth is causing losses and demonstrating that the presence or absence of spatial resources can strongly influence the structure (and typology) of urban landscapes in contemporary cities. These landscapes are closely related to the types of available soils, whether they are virgin and fertile, polluted, or associated with disused, underutilized, or inaccessible buildings, resulting in the creation of suspended contexts, attributable to "middle grounds" (Russo, 2012). They represent different types of landscapes defined as "waste landscapes", abandoned territories characterized by conditions of marginality, spatial inequality, contamination, separation, and exclusion.

According to demographic growth, densification, and intensive urbanization of developed areas, and the perpetuation of linear metabolisms and economies, there is a growing need to initiate more circular, sustainable, and inclusive structured (and structural) processes of territorial regeneration. A complete rethinking of the traditional linear urban development model, historically predominant in city expansion, is essential, as it currently shows clear limitations in terms of urban sustainability and resilience (Glaeser, 2011). In response to this need for change, the concept of adaptive reuse of urban and peri-urban spaces emerges as a territorial paradigm strongly linked to circularity. Adaptive reuse presents itself as a key proposal to overcome the limitations and inertia inherited from the past. This innovative approach extends beyond a single scale, with site-specific perspectives and projects, aiming to tackle urban challenges at various levels from local to regional (Ravetz, 2020). Through this multi-scale perspective, adaptive reuse is not just about occupying existing spaces, but incorporates the idea of a "circularity" of land use, promoted through the development of regenerative design approaches and the recovery of marginal areas.

Therefore, it is essential to move beyond the traditional concept of recycling, which is more easily associated with material waste categories, and consider residual spaces in contemporary territories as a specific type of waste requiring a different process, not just recycling but authentic reuse. The approach of adaptive reuse for waste landscapes, considered as new expressions of urban waste, emerges as a powerful model to restore their lost identity, contributing to returning new (public and private) places to communities. Despite the importance of this approach in the contemporary planning landscape, there is still no widely accepted definition of such spaces in scientific literature. Currently, the concept is experimental and not yet based on uniform definitions. Identifying these landscapes as resources for adaptive reuse in urbanized areas still requires a prior understanding of their intrinsic values. It is also essential to recognize the possible implications of their reuse and/or recycling for urban and territorial planning activities and processes. While the debate on territorial regeneration has long been neglected, there is now a growing interest for experimentation and research in this field. This interest particularly focuses on unused spaces, often characterized by

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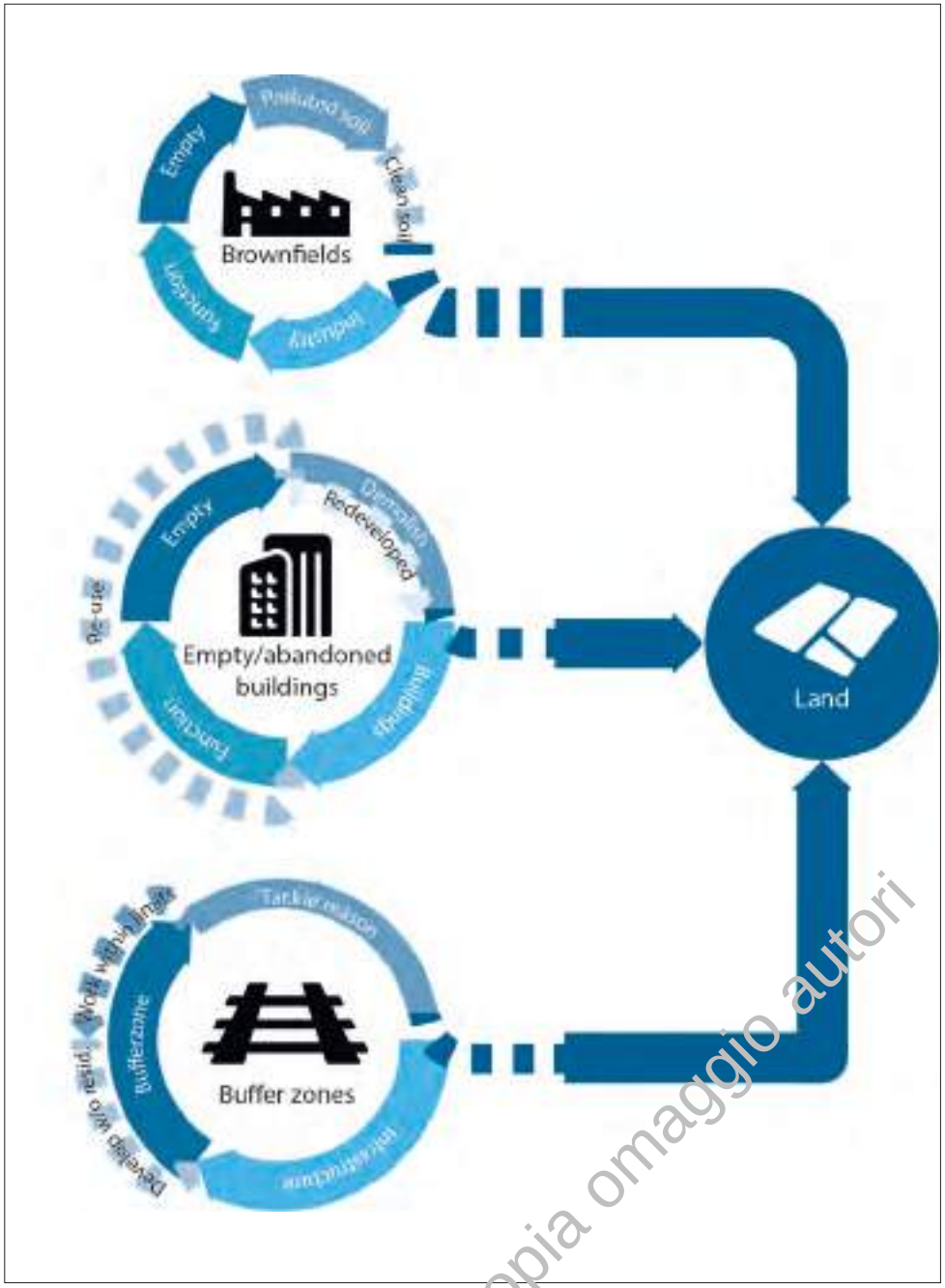
Fig. 1.
Making Land Circular (Amenta, van Timmeren, 2018)



closure, interstitiality, or abandonment, which attract urban planners for their potential transformability within the territorial context (Formato and Russo, 2014).

From the outlined context, it emerges how the challenges related to resource scarcity, environmental issues, and socioeconomic dilemmas are closely intertwined in contemporary urban contexts. Spatial arrangements, infrastructures, and territorial connections in these territories can present complexities that are difficult to address in an era where resources (especially economic resources) are limited. It should be emphasized that current environmental issues reflect a historical problematic relationship between communities and natural systems. The inadequate management of limits and biodiversity in our ecosystems is another element to consider, as it has generated and continues to cause a global environmental crisis. Therefore, similarly to how material and resource flows, including waste, are conceived and managed, the land, in a circular management perspective, can become an enabling factor for inclusive and ecological territorial restoration interventions in wasted territories.

Governance and management of European rural development policies: new perspectives for the circular economy in Sardinia

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The National Recovery and Resilience Plan, embedded in the Next Generation EU program, recognises the urgency of a radical ecological transition towards full climate neutrality and advocates sustainable environmental development to mitigate threats to natural and human systems. This principle guided the development of the National Strategic Plan (NSP) of the Common Agricultural Policy (CAP) for the 2023-2027 cycle, which outlined an action strategy based on the ecological transition of the agri-food and forestry sectors and the enhancement of rural areas. The planned interventions are in continuity with the previous 2014-2022 programming and promote the strengthening of actions directed at the environmental sustainability of agricultural and livestock activities, the qualitative enhancement of agri-food production, the improvement of the competitiveness of the agricultural system, supporting local development strategies and the transfer of knowledge and innovation through information, digitalisation, research, and experimentation. In this context, there is a need to address several critical operational issues, including the study and identification of areas characterized by widespread historical-cultural values and little-known conditions of naturalistic-environmental specificity, especially in inland and marginal areas. Sardinia falls within such specificity. The methodological approach adopted envisages the integrated management of the different measures of the individual rural development programs, through active involvement of local actors, in line with the Community Leader program. The Regions, on the other hand, are required to provide the contextual elements and to integrate at the regional level the strategic and operational indications regarding rural development, previously included in the Rural Development Programs (RDPs) and currently managed through the elaboration of the Regional Complement for Rural Development (CRD). In March 2023, the Sardinian Regional Council approved its CRD, which covers the programming period 2023-2027, addressing the interventions provided by the NDP and adapting them to the economic, social, and territorial specificities of the regional context. Specific regional objectives promote the strengthening of agricultural practices with a low environmental impact and the adoption of production models based on environmentally sustainable management of activities, in terms of protecting water and soil quality, safeguarding biodiversity and enhancing the agricultural and rural landscape. This perspective requires priority actions aimed at the preventing processes of alteration of ecosystem balances, environmental protection, and sustainable management of territorial resources, favouring their conservation and regeneration. To achieve these objectives effectively, it is necessary to refine the methods of analysis and evaluation, which are essential for the definition of criteria for allocating resources and implementing the programs.

The paper focuses on the topic of ecosystem services, from the perspective of spatial planning and governance, which represent the outcome of natural system processes and interactions with anthropogenic components to provide goods and services that meet some essential human needs, while ensuring the capacity to maintain and regenerate resources. The services closely related to natural capital, raw materials, and those related to territorial capital, can be traced back to the bioregionalist concept of "eco-territorial services", formulated by the territorialist school based on the study of the distinctive features of territorial heritage and the related rules of reproducibility of the same. However, the current regional planning framework manifests significant critical issues in the management strategies of territorial capital and the promotion of sustainable development practices to safeguard rural territories. Also in the Sardinian regional context, new challenges emerge from the increasing territorial vulnerability and the effects of climate change in relation to the management of water resources, soil protection and anthropogenic pressure on the coast. The need for an integrated approach to promote sustainable regional development makes it essential to pay special attention to the ecological and ecosystem component in policy and project design. The

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Fig. 1.
Closely interconnected natural systems within the Sardinian regional context, Olbia, Sardegna, Italy, 2019.

eco-territorial services model plays a key role in the definition of the settlement, hydro-geo-morphological and agro-environmental structure.

The bioregionalist approach can make an important contribution to the implementation of European rural development policies by activating new supply chains for the local management of food, water, energy, and waste cycles to ensure endogenous and self-sustainable development. The creation of an ecological network on a regional scale can be part of an extended territorial project, in a bioregional key, aimed at ensuring the ecosystemic continuity of territorial settlement networks through the valorisation of agricultural land as a minor ecological network and of urban areas as critical areas of a complex system of "multifunctional territorial eco-networks." The concluding reflections focus on the key role of these components in redefining the relationship between city and territory, preserving biodiversity, and fostering the connectivity of systems through the recovery of the original functions of hydrogeological protection, ecological balance, food security, landscape production, fruition, and hospitality.

Sustainable Urban Energy Communities
A model for eco-social regeneration of Mediterranean metropolis

*Alessandro Sgobbo**

Climate change has strongly influenced urban and territorial planning in the last decade. It increases the natural and anthropogenic hazards to which citizens are exposed. Since the direct link between the phenomenon and energy production is now evident, the energy transition programs become extremely relevant.
The best practices review regarding energy efficiency demonstrates that, when these actions are the consequence of top-down, elitist or pedagogical paths, the results are often disappointing, even more so in contexts of deprivation. In fact, the conflictual dimension prevails which leads these experiences to exhaust in themselves and the products/processes that should have characterized their success become catalysts of degradation. Consequently, studies on the topic have recently focused attention on Renewable Energy Communities (RECs) which are an energy-effective response[1] that also appear to achieve a greater compliance with the citizens who live in Public Housing (PH) districts. However, in the literature, the study of RECs is often limited to examining their energy efficiency results, neglecting the potential of these solutions to achieve and maintain regenerative objectives also in the social and environmental fields.

This article illustrates the results, for the PH district San Gaetano of Naples, of a Research Project, developed at the University of Naples Federico II, aimed at promoting RECs first and foremost as opportunities for socio-ecological regeneration of metropolitan suburbs. The Research is financed by an agreement with the Campania Region and the Campania Agency for Public Housing and is inspired by the renewed approach of the "National Innovative Program for the Quality of Housing" (PINQuA).

The Research methodology is based on the comparison between alternative design solutions, with indicators of social and ecosystemic quality. With an in-depth review of the literature and best practices about Renewable Energy Communities are selected the technical alternatives and the implementation and management processes which appear to be compatible with Mediterranean contexts of social hardship, on the basis of an urban-scale sustainability assessment, with indicators inspired by LEED for Cities and Communities indicators. The comparison take place by measuring the social impacts of each project, with the Social Impact Assessment methodology proposed by Dietz[2] and according to the theory of the capabilities approach as proposed by Nussbaum[3]. At the same time the ecosystemic impacts changes are measured in terms of per capita soil permeability, absolute hydraulic resilience and per capita greening.

The evaluation of the indicators for the experiment conducted for the San Gaetano district of Naples as part of the PINQuA Project confirms the thesis of the research. In fact, it demonstrates the effectiveness of the Renewable Energy Community model for achieving the established ecological-environmental, social and ecosystemic objectives[4]. The positive elements are relevant and support the interest aroused by RECs in the urban planning practices. Compared to other types of exchange communities, which have also recently been added to territorial governance practices (i.e. the Sustainable WAter Communities - SWAC), RECs profit from high value of the shared resource. This corresponds to substantial long term economic benefits in these implementations which, capitalized and discounted at current value, allow the recovery of additional financial resource that are useful for increasing the general quality of the intervention also with reference to aspects not strictly linked to energy efficency and the environment. In fact, they verify the indispensable need for trans-scalarity and multifunctionality of investments, even more necessary when, once the PNRR phase has been overcome, we will return to public budgets austerity.

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Fig. 1.
Masterplan of the pilot project. Image by Paola Scala, Maria Fierro, Grazia Pota and Francesca Talevi.

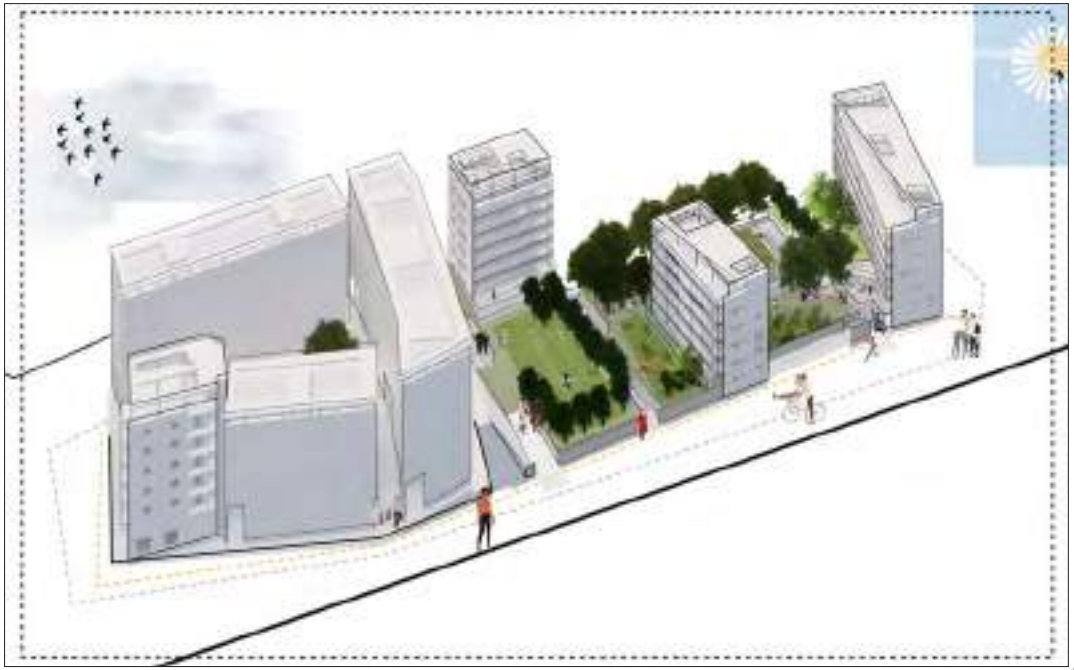

Fig. 2.
A view of the Renewable Energy Park. Image by Paola Scala, Maria Fierro, Grazia Pota and Francesca Talevi.

Parallel Workshop

8. IT and the use of artificial intelligence in planning

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Generative Urban Design (GUD): Towards the Post-Urban Project

Fabio Andreassi, Fabio Naselli** and Cinzia Barbara Bellone****

Parametric design, aided by advanced algorithms and specific software, has experimented with finding the best alternative for data, objectives, and constraints in architecture and urban design. However, issues arising from complex multi-scalar processes with opposing interests make the urban project a cyclical and interactive process, leading to low efficiency in drawing up high-performance solutions, especially in conservation practices. Generative design has been present since the 1960s. It involves generating rules and compositional elements of architecture and spatial models for urban design. Parametric design has become more complex with simulation tools and evolutionary algorithms, paving the way for Generative Urban Design (GUD). Generative Artificial Intelligence (GenAI) is transforming global relationships at a rapid pace, leading to both opportunities and risks. The democratisation of GenAI has implications for the urban project as it becomes increasingly responsive to digital processing. We are moving from an artificial intelligence that provides services to one that generates them, thanks to the rapid evolution of GenAI. GenAI can cause disciplinary trauma by moving from a tool to a generator of responses using chosen authorial language, widening the gap between human and AI-generated content. The rush to regulate the GenAI market has led to a few companies dominating the production and sale, creating oligopolies. Lack of transparent access to technology hinders the validation of data and results. This can limit designer skills and benefit only a few companies. The need for explainability in the generative phases and results of the GUD is important to implement decision-makers awareness of urban transformations. However, it's difficult to make this operational principle due to the slow times of human design thinking compared to GenAI. This can create problems in the formation of urban transformative rules that don't fully respond to new practices of reduced explainability, leading to possible private abuses of the urban project. The transfer of tasks from the designer to GenAI changes the role of actors in urban transformations. Validating a GenAI-generated project requires distinguishing it from a human-generated one. This change parallels the secularization process enabled by the invention of the press in the 15th century. GenAI's mass production of designs using incorrect or incomplete data needs to be controlled to prevent the generation of falsehoods. This affects public management and puts decision-makers at risk of evaluating urban projects based on manipulated data. There is a reliability problem with GUD due to the absence of public validation procedures. Changes in processes and decision-making roles caused by innovation can lead to an epistemological crisis, as validating protocols may be absent. In the past, validating responses involved witness signatures or trust in the designer's knowledge. The issue is ensuring the accuracy and reliability of GenAI data without proper public validation protocols. This poses a risk of undermining the importance of scientific evidence, as data is left in the hands of private companies and networks. GenAI can help share good practices in rapidly changing technological landscapes and make local authority data available for generative solutions. This can help homogenize generative times, increase knowledge sharing, and streamline processes. GenAI's concept of truth impacts urban planning instruments and promotes conscious participation. It facilitates faster processing and sharing of knowledge, reducing time, and enhancing cognitive capacity during urban transformations. The accumulation of behavioural data by a few companies can influence urban planning thinking. Co-creativity between man and machine can enable interesting dialogues. GenAI enables collective knowledge, even if the archive of digital information substantially orients the creative process. The role of data extraction from digital archives is important to consider, especially since it can be controlled or restricted by corporate oligopolies through search, social media, and e-commerce. The use of AI in projects raises legal questions about authorship and co-creativity. The designer should broaden their critical thinking and ethical awareness to include collective thinking through dialogue and discussion for

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urban transformations. The use of GenAI in urban design challenges traditional practices and the authorial monopoly of humans. However, there is a struggle to use instrumental innovation for critical reflection due to oscillating practices between formal juxtaposition and homogenization. This weakens the efficiency of GenAI. GenAI's environmental unsustainability due to its private approach and inattention to computational and natural consumption is a growing concern with negative impacts on the environment. GenAI can impact the leisure sector by replicating events and reactivating history, creating new tourism offers and changing the city's functional organization. It can transform extraordinary events into ordinary ones due to its replicability and lack of specific rules and expand the development possibilities of urban areas. GenAI proposes a project where humans and computers collaborate through organoid intelligence, a three-dimensional neural structure grown from human stem cells and connected to hardware, leading to a post-urban world where authorship is shared. One solution to issues with GenAI is to introduce universal rules and a new algorithm that calculates moral values. Another option is regulation through public action or companies taking responsibility for the use of their products.

Inclusiveness and participation: artificial intelligence as a planning tool

*Monica Buonocore**

Climate change and the resulting issues such as migration and inclusion are topics that have characterized much of the scientific and professional debate in recent years. The strategic response to change climate change is the planned ecological transition, which today necessarily consists of broadening the perspective and assessment criteria, framing economic progress indicators with environmental and social ones. In this regard, the concept of smart city as "a place where traditional networks and services are made more efficient with the use of digital solutions for the benefit of its inhabitants and businesses" (Fig. 1) has been declined in the theme of a sustainable, inclusive, safe, sustainable city, which must pay attention to waste management and air control, protect and enhance the landscape and cultural heritage, ensure safe and quality housing and, at the same time, guarantee citizens' access to planning decisions and improvement of cities. The ecological transition towards smart and sustainable city involves the adoption of innovative technologies, including artificial intelligence (AI), to improve efficiency and sustainability of urban areas. AI can play a key role in this process, contributing to urban planning and to achieving environmental sustainability goals in terms of energy efficiency, enabling more efficient management of energy distribution, forecasting energy demand and promoting the use of renewable energy; sustainable mobility, optimising public transport routes and promoting the adoption of electric vehicles, reducing pollutant emissions and improving air quality; waste management, by analysing data is possible to optimize the waste collection services, identifying critical accumulation points and planning efficient routes for collection vehicles, thus reducing consumption of resources and environmental impacts; environmental monitoring, by monitoring air, water and soil quality in real time, allowing timely intervention when safety limits are exceeded and promoting environment protection policies. Someone Italian cities have taken action to ensure equality and the citizen involvement in planning decision-making processes. We examine some cases as examples of using technology to enable active citizen participation and to improve quality of life. The " Pact for Administration Shared " is an initiative promoted by the Municipality of Bologna, in Italy, to foster active participation of the citizens in co – planning and management of public services at local level. It is based on principles such as transparency, collaboration and shared responsibility, with the aim of actively involving citizens in decisions that affect the city. Through this initiative, which envisages the creation of a digital platform called "Bologna Open Community", the Municipality of Bologna promotes the use of digital tools and participatory process to allow citizens to contribute to the definition of public policies: public meetings, workshops, laboratories and collaborations with associations and stakeholders are organised to citizens' needs and proposals. The Municipality of Arezzo has introduced the political figure of the Information and participation Guarantor, who takes all necessary initiatives to ensure the information and participation of citizens and all stakeholders in the various procedural phases of the formation of town planning instruments. The Guarantor ensures that the documentation relating to the acts of territorial government is adeguate to the needs of information and participation; he implements the program of activities; he adapts the methods of participation to the different territorial scale of planning, as well as to the size and type of interests involved; he draws up the report on the activity carried out between the start of the procedure and the adoption of the plan, specifying the initiatives taken to implement the program of activities and the results achieved by the information and participation activities with reference to the acts of territorial government. The Municipality of Cagliari, in collaboration with a network operator, in March 2022 started the implementation of an infrastructure that will contribute to make the city increasingly digital, safe and environmentally friendly. Thanks for REACT-EU funds for territorial cohesion and development, the Municipality of Cagliari will implement an intelligent digital platform that will collect all the data and image streams coming from the territory in a single centralised Cloud system comprising all the access points for the wifi, cameras and IoT sensors for monitoring the urban microclimate with the aim of collecting increasingly detailed information in order to study new solutions for the city. Through the installation of smart sensors capable of detecting variations in temperature, humidity, atmospheric pressure and air quality, it will be possible to collect useful data to study the phenomenon of the so-called "heat islands ", those areas of city where the temperature is higher than in the rural surroundings due to human activities and of the density of the urban buildings, thus creating consequences on the health and general quality of the life of citizens. In the digital age, AI plays a increasingly central role in our lives, influencing various aspects of society, with potentials and features that, if properly utilised, can actually help a proper all-around planning.

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Fig. 1.
Smart City concept

App for an inclusive P.E.B.A. Crowdmapping architectural barriers with an IT tool

Francesco Carbone, Maria Venditti***

Disability is recognized as a condition related to the existence of physical or social barriers that hinder the full participation of people with physical, mental, or sensory diversities. That is why the focus is no longer on the individual's deficits, but on the lack of response in interacting with the built environment. The European Commission's strategy for the rights of persons with disabilities 2021-2030 (1) includes accessibility among its priorities: the ability to move freely and live freely, but also to participate in the democratic process. The P.E.B.A., Plans for the Elimination of Architectural Barriers, have become an useful guiding tool to increase the level of accessibility of an urban system. They were introduced in the Italian legislative landscape in 1986 with Law n. 41, and integrated with Law 104 of 1992, able to monitor, design, and plan interventions aimed at managing and overcoming architectural barriers (BA) present in urban contexts. Over the years, a modus operandi has been consolidated for the development of PEBAs (2-3) with several phases. The first is the planning phase: mapping accessible areas, paths, and services, and a census of existing BAs, both directly, through field surveys, and indirectly, through the participation of representative associations and users. The implementation phase begins with the drafting of a hierarchical framework of interventions to be carried out according to a schedule. In defining the priorities of needs, it is important to create a participatory process involving citizens and local associations on accessibility issues in order to identify the most pressing needs. One of the major challenges in the development of PEBAs (4) has been identified in the lack of participation by stakeholders in decision-making processes: in most cases, communication with the public, end-users, and associations and organizations present in the territory has not been as effective as anticipated because the necessary importance was not given to participation processes, which are perceived by administrations more as an unknown factor than as an opportunity for dialogue and community growth. The principle of participation has become a pillar of the Convention on the Rights of Persons with Disabilities, to the extent that the UN Committee has dedicated a General Comment to it (5).

These insights have led to the development of an App that does not replace the methodologies and tools of participatory design but complements them with a tool useful to the construction process of a Peba. Some Italian examples of smartphone applications that allow for crowdmapping were investigated before starting the development process (6). Other works, on the other hand, have sought to facilitate designers in the development of PEBAs. One of the most interesting works is that done by Sarretta et al. (7) with the Peba of Padova.

The "App for an inclusive P.E.B.A.", proposed here, is primarily a "simplified" project that facilitates the majority of people to report the BAs they encounter during their daily lives. In the second development phase, integration with GIS and Web Map systems is planned, allowing for constant monitoring of the data entered during inspections. For now, an ontology of keys and values (7) already defined and accepted in the OSM platform has been used. The main objective of the interface is to spend as little time as possible in "reporting" a BA with a few smartphone commands. The user-friendly approach allows for sending coordinates of the point, a photo, and a voice and/or text message in a few steps. Another goal of the application is to streamline the work of technicians in mapping BAs in the territory, obtaining a tabulated report of the verified points. This facilitates a good cataloging of the identified points with timely identification through GPS markers and less time in the analysis and dissemination of results, especially in relation to the use of GIS and Web Map. The computer classification used allows the integration of data with OpenStreetMap.

During the first weeks of 2024, meetings with some PWD in the territory of Telese Terme began. The southern Italian Samnite center has the peculiarity of having almost

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completely flat terrain, making it naturally accessible and particularly suitable for this experiment. In particular, in a meeting with the AMASI Telese Association (7), the App was introduced and then used near the municipal library, a space co-managed by the association itself. The testing phase of the App started outside the library and continued in the surrounding streets. The participatory walk was mostly carried out by people with motor difficulties, some with electric wheelchairs, and others with walkers. The users' interaction with the interface was friendly, and the ease of use was appreciated. The involvement of users in the PEBA design phase through the App has created a collaborative and trustful atmosphere with technicians. Having the opportunity to personally report barriers with a simple and intuitive tool has generated a climate of activism and empowerment among all. Users have better understood how a good design of accessibility in built spaces can impact their daily lives, and consequently, how important it is to create an alliance with design technicians. A better understanding of real problems through the descriptive inputs of users has facilitated technicians in identifying priorities in the process of inclusive urban regeneration.

App for an inclusive P.E.B.A.

Crowdmapping architectural barriers with an IT tool

Francesco Carbone*, Maria Venditti**

The development of app

The participatory walk

includesign

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Community validation in generative-AI mapping

The pilot project fAIr by OSM and Microsoft in Uganda, Tanzania, Kenya and Nigeria

Chiara Centanaro, Emanuele Sommariva***

The prevention of natural disasters linked with the contingency/recovery planning disciplines has been recognised as crucial for the future of Global South, especially in contexts where in-situ analysis or direct/indirect survey is highly difficult, due to lack of existing mappings, infrastructures, and availability of professionals. In this context, the introduction of Web 3.0 for map production has led to a new form of data sharing and VGI (Voluntereed Geographic Information) mapping[1], generating a partial overcoming of the lack of structured mapping systems[2]. Mappers live in the territory, share map information and represent it in open systems. The old idea of representation is now complemented by the capacity for combination and modification provided by new interscalar logics and instruments of recognition[3]. Platforms enable inhabitant-users to respond in real time to events and to share the data generated with the community by increasing autonomy and inclusion in technology management and data collection[4]. The physical marginalisation of communities is reflected in the lack of representational. The lack of data and maps has also excluded communities politically: without information on needs or existing services, there is no basis for urban planning, leading to political exclusion[5]. Open Street Map and the derivation HOSM (Humanitarian Open Street Map), is one of the actors in this self-quantification process, becoming an ecosystem of data, processes and people, thanks to the open-source mapping software JOSM and the crowdsourced map-sharing platform. With more than 8.8 million registered users, OSM contributing more than 7.8 billion data points as of 8 August 2022[6]. Maps are also built using GPS data collection tools (ODK, OSMAnd and StreetComplete). Within this ecosystem the first open source generative AI system uses community feedback as validation process. FAIr - Free and Open Source for AI for Resilience in humanitarian mapping – project[7] is realised by HOSM in cooperation with Microsoft and local communities: the generative maps support planning in Nakuru in Kenya and Nigeria. During an AI-assisted mapping pilot (2019-2020) 18 million building footprints were extracted from satellite imagery for all of Tanzania and Uganda. The goal is to develop high quality AI-generated and community-verified spatial data in new decision-making processes. According to HOT's Technology & Innovation unit, fAIr seek to solve three foreseen problems. AI-assisted mapping for humanitarian purposed feels like a black box, the models (code) are currently not open-sourced. Having model biases means predicting over satellite imagery would be biassed toward the training dataset used to teach the AI model and the nature and quality of imagery is very different across the globe. The lack of feedback in AI systems does not allow the accuracy of the models to be improved and this is due to the fact that they are closed source[8]. Manual mapping of small areas is initially done to train the system and avoid bias. The mappers validate the prediction through feedback, all the feedbacks submitted need to be approved/validated by the project manager then reapply on the newer version of the model, so the model will be getting better as long as is receiving the feedback[9]. The Satellite Imagery

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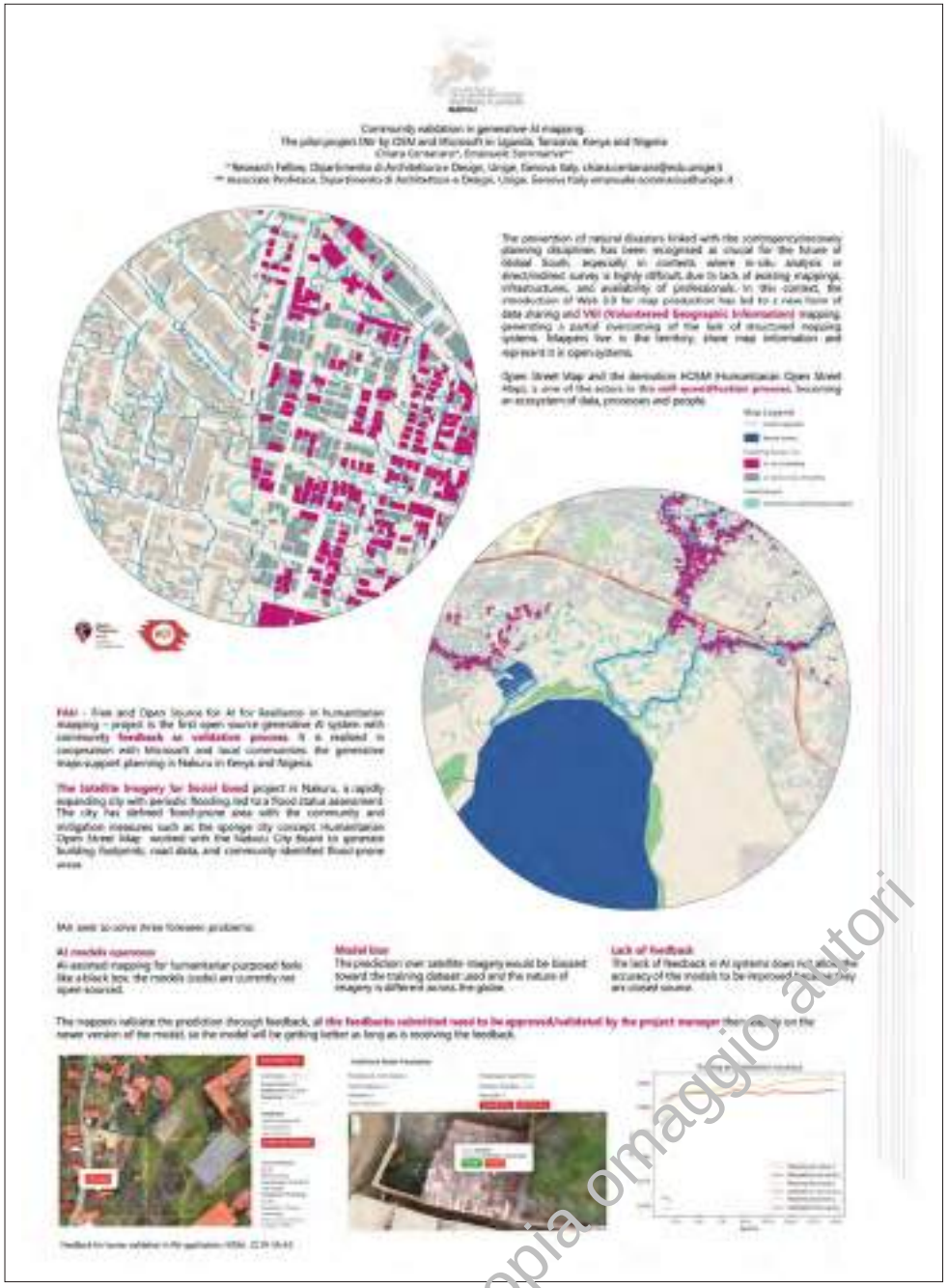
7 fAIr platform https://fair-dev.hotosm.org

8 Najjar, O. (2022) hot_tech_talk | fAIr: AI-assisted mapping https://www.hotosm.org/tech-blog/hot-tech-talks-fair

9 Raj Sharma, K., (2023) fAIr - Free and Open Source AI for Humanitarian Mapping, https://www.youtube.com/watch?v=j8qzxqkHTKc&t=626s

Fig. 1.
fAIr pilot project and application in Nakuru



for Social Good project in Nakuru, a rapidly expanding city with periodic flooding, led to a flood status assessment. The city has defined flood-prone area with the community and mitigation measures such as the sponge city concept. HOSM worked with the Nakuru City Board to generate building footprints, road data, and community-identified flood-prone areas. Over a period of ten months, the team trained OSM members and planning officials on open mapping tools. The land reading done afterwards is surprising for the detail achieved: in addition to mapping 14,748,685 buildings, individual water channels and flood levels were identified. According to the municipality, the sponge city has green areas designed to absorb rain and prevent flooding. Flash floods' often lead to the destruction of buildings located within watercourses. With the maps, probable risk scenarios are generated and the representations become the necessary tool to identify areas to implement mitigation measures. In the project in Nigeria, mapping data combined with existing health data are used to identify the population not served by facilities in Bauchi, Borno, and Gombe states. More than 35 stakeholders participated in the project and training activities. Deep learning in mappings becomes relevant in rural areas or informal settlements, where spatial complexity requires local learning processes. Involving local communities in mappings in generative-AI systems ensures social and spatial inclusion: the ai tools bring new spatial and technological knowledge to communities.

Beyond Boundaries: GeoAI for Informed Urban and Territorial Decision-Making

Simone Corrado, Francesco Scorza**

In the current data-centric world, the sheer volume of data available has the potential to obscure the underlying insights and essential information, emphasizing the importance of effective data management and analysis. Data, information, and knowledge are often used almost interchangeably, but according to Davenport and Prusak, they are not interchangeable concepts. These entities represent progressive gradations of delivering value and underscore the importance of discerning between them for effective utilization in informed decision-making. Data need to be processed to provide useful information, while knowledge goes beyond information through organization and interpretation, involving a deeper understanding and practical application of awareness. In urban and territorial planning processes, extracting territorial information through geospatial data is a core activity to analyze the physical environment and the dynamic interplay of social, economic, and environmental elements that shape the place. Therefore, the general instance is to conduct spatial analysis capable of identifying "local" values supporting the downscaling of theoretical principles of sustainable and inclusive development to their effective application in place. The decoding of territorial complexity could assist in directly assessing the impacts of "local" urban and territorial changes and the systemic effect that an intervention may have in the broader context. Conceptually, the territory is considered a complex system, a notion widely accepted in territorial planning. What is intended to be innovative in spatial analysis is directly oriented toward demonstrating advantages in discover hidden patterns into the geospatial data and extracting useful information. The goal is to explore unsupervised Machine Learning models, that are useful in reducing the complexity of the territorial system and guiding decision-making through a more effective understanding of the context. Even if tools, data availability, and computational power have increased significantly in recent years, the traditional planning questions are re-launched in the scope of the current New Green Deal policy framework. Additionally, the digital transition requires extensive innovation in territorial analysis for decision-making and more effective in monitoring current dynamics linked to the implementation of post-COVID recovery. Among the main tools identified in this framework, Geospatial Artificial Intelligence (GeoAI) is intended to be a key enabling technology to support twin transitions to a greener and smarter EU community. Addressing the question "Where things are located relative to other things" is crucial. Ideally, to model a system, the current state of local phenomena in the present time has to be described. In contrast, the time series has to be understood in the former dynamics, and the relationships between spatial phenomena have to be comprehended in order to explore sustainable planning scenarios. Firstly, the aim of this research is to understand the relationship between technological innovation and urban and territorial systems, secondly, to assess the impacts that the data-driven approach can bring to the urban planning discipline. Considering the complexity of territorial systems in which natural components, settlement structure and relational networks, both physical and intangible, interact, the planning process takes place under conditions of uncertainty. So, likewise, the decision-making process, which aims to establish the future layout of a physical and socio-economic context, operates in a context of conflict between different stakeholders. For this purpose, advanced AI-based model maximize benefits for Decision Support System (DSS), supported by a broad and multisectoral knowledge framework, adds value, enhances effectiveness, and tailors policymaker decisions to the specific context. Thus, in-depth assessment of the context enhances the policymakers' understanding of the territorial values and fragilities and provides a more informed base for formulating and implementing place-based policy. Therefore, the main result of this research is to demonstrate the contribution of GeoAI in supporting decision-making processes in discover hidden patterns into the geospatial data and extracting useful information. Furthermore, the research will provide an overview of useful unsupervised approach answers the complexity of systems and will identify the ongoing dynamics in order to better target strategic territorial development policy and refine planning action. The identification of smart territories capable of exchanging information with expert knowledge will enable the definition of new useful approaches to the discipline of urban planning and consolidate data-driven spatial theories concerning not only cities but also peri-urban areas and marginal territories. The analysis is conceived as an exercise in knowledge-building for planning and decision-making, providing a foundation for contextual knowledge that could effectively inform place-based policies respecting the principles of equity, sustainability, and resource allocation efficiency. Moreover, the paper debates how the AI-enhanced geospatial thinking approach could effectively decode territorial systems and support the decision-making process in orienting territorial cohesion programs and grants in rebalancing territorial disparities.

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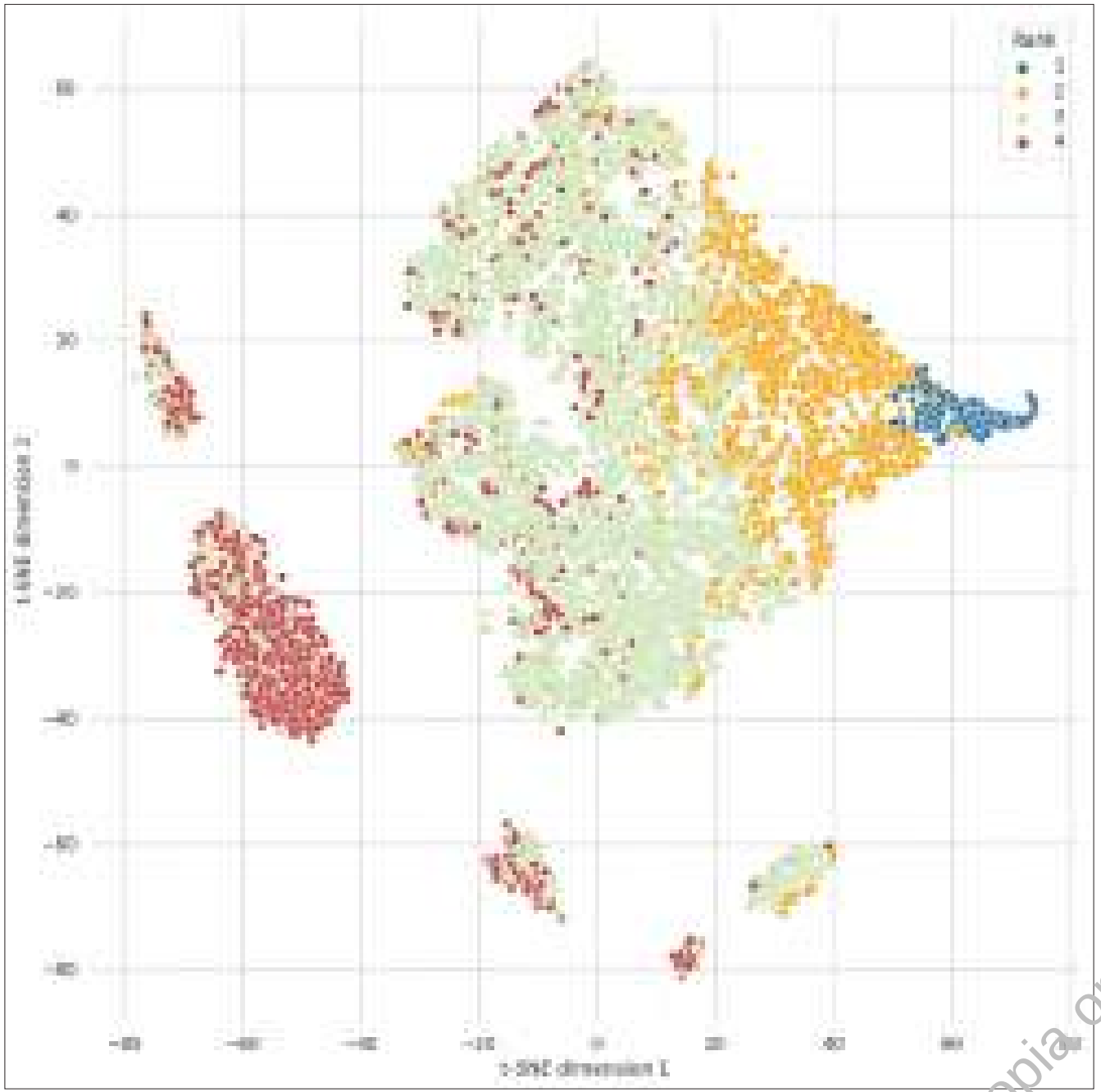

Fig. 1.
The t-SNE scatterplot depicts the structural relationships within complex datasets, revealing distinct clusters or groupings. Each point corresponds to an Italian municipality, with colors representing their territorial marginality rank. t-SNE preserves the local structure of the original data, ensuring that proximate observations in the original multidimensional space remain close in the reduced t-SNE space. Thus, municipalities grouped together exhibit similar characteristics, highlighting relevant patterns from the original dataset. Such unsupervised approaches facilitates the identification of meaningful clusters and enhances understanding of territorial complexity.

Alternative Public Space
A Community-Driven Future

*Mustapha El Moussaoui**

The traditional conceptualization of cities often evokes images of dense urban centers, dominated by concrete structures and crisscrossed by networks of vehicular routes. This perspective, however, is increasingly being challenged by the pressing need for more sustainable, inclusive, and community-oriented urban spaces. Moreover, in 2020, COVID-19 pandemic has globally exacerbated existing social and economic disparities. In this context, in South Tyrol, a research project working on the 2030 Agenda for Sustainable Development and the European Green Deal has outlined four plausible scenarios for the region's future by 2030, aiming to utilize sustainable development paths. Through extensive research, including trend analysis and expert consultations, the project offered a foresight tool to guide stakeholders towards a sustainable future. The project's multidisciplinary approach, emphasizing participatory processes, underscores the role of regional foresight in addressing global challenges and guiding societal change by emphasising on four different scenarios; Scenario 1: world of regional consciousness – 'Our strength lies in tradition', Scenario 2: world of neo-cosmopolitanism – 'Think global, act local', Scenario 3: world of individual freedom – 'I am the architect of my own happiness', Scenario 4: world of green innovation – 'There is a (technological) solution to everything' (Habicher et al., 2022).

The core themes of these scenarios range from integrating green spaces into urban areas, promoting pedestrian-friendly environments, enhancing public transport systems, to encourage community-driven development projects. In addition to these, our study introduces two new scenarios specifically made to address the unique challenges and opportunities presented by the urban context of Don Bosco-Bolzano. The first of these new scenarios envisions a future where concerted community and policy efforts have led to the resolution of pressing urban issues, such as housing affordability, green space accessibility, and public transportation efficiency, this scenario which we will call a human scenario, is achieved through a phenomenological approach made on the studied zone. Conversely, the other scenario serves as a cautionary tale, depicting a dystopian future characterized by exacerbated social inequalities, environmental degradation, and a marked decline in public health and quality of life, all stemming from a persistent lack of innovation and community engagement in urban planning processes.

To deepen the impact of these scenarios and directly involve the local population in the urban redevelopment process, a significant public event was organized in Bolzano. This event provided a platform for residents to engage with the six scenarios presented and express their preferences regarding the redevelopment of five key public spaces within the city. The methodology adopted for collecting and analyzing residents' feedback was meticulously designed to ensure the inclusivity and representativeness of the participatory process. This involved a combination of qualitative and quantitative research methods, which enabled a comprehensive understanding of the community's visions for their urban environment.

The findings from this participatory event underscore the critical role that community involvement plays in shaping urban spaces that reflect the needs, aspirations, and values of their inhabitants. Furthermore, this study highlights the potential of artificial intelligence as a tool for enhancing participatory urban planning processes. Its capability to process vast amounts of data and generate predictive models can provide valuable insights into the potential outcomes of different urban development scenarios, thereby informing more effective and responsive urban planning strategies. However, this study also highlights the impact of visuals on public selective process.

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Fig. 1.
One of the alternative public space scenarios created by AI.

Fig. 2.
Community participants choosing their favourite scenario.

Cities and New Science: Challenges and Opportunities of AI in Planning

Paolo Fusero, Maura Mantelli, Lorenzo Massimiano***

The major global challenges that the 21st century is facing involve combating climate change and the applications (as well as the implications) of artificial intelligence on cities. The integration of Generative Artificial Intelligence (AI) into urban planning processes opens up very interesting research horizons to address challenges such as adapting to climate change and promoting social inclusion. At the same time, this new frontier raises specific questions: are optimistic views towards the contribution of AI in urban planning processes justified? Or is it wiser to be cautious, emphasizing the indispensability of human action, especially considering an ethical implementation perspective of new technologies? It is necessary to consider these questions to maximize the benefits of using artificial intelligence, particularly when applied to urban and territorial planning processes, finding a balance between optimism for its potential and awareness of responsibilities. Ensuring equity and public involvement in decision-making becomes crucial for effective change. For this reason, the analysis of case studies in various application fields of AI becomes important. Consider, for example, the development of "Virtual Singapore", a project where AI and 3D modeling were employed to create a digital replica of the city, the first digital twin of a country, initiated in 2012 and completed in 2023, aimed at evaluating governance strategies. This digital platform, developed by the Singapore Land Authority (SLA), offers an interactive and detailed three-dimensional model of the city-state. One of the most significant aspects of Virtual Singapore is its ability to integrate and analyze vast amounts of data from a wide range of sources, including IoT sensors, surveillance cameras, and satellite data. This allows urban planners and decision-makers to obtain a comprehensive and real-time view of urban dynamics, enabling them to make more informed and timely decisions. One of the main applications of Virtual Singapore is the simulation and modeling of urban scenarios. By utilizing advanced machine learning algorithms and artificial intelligence, it's possible to predict people's behavior, vehicular traffic, energy distribution, and much more. This allows testing different planning strategies and assessing their impacts before they are implemented in reality. Moreover, Virtual Singapore provides a powerful tool for actively engaging citizens in urban planning. Through an online platform accessible to everyone, residents can explore the virtual model of the city, propose ideas, and provide feedback on urban development proposals. This process of public engagement helps ensure that decisions reflect the genuine needs and preferences of the local community. However, despite its numerous advantages, Virtual Singapore is not without criticisms and challenges. One of the main concerns relates to data privacy and security. With so much sensitive information collected and processed, it is essential to ensure that strict data protection measures are adopted to prevent abuses or privacy breaches. Additionally, there is a risk that excessive reliance on technology could limit creativity and innovation in the urban planning process. The "DeepMind for Climate" project by Google also uses AI to improve long-term climate forecasts and formulate adaptation strategies. From research, we expect confirmation that artificial intelligence is not only a powerful technological tool but also a gateway to a paradigm shift in our development model, one that is more attentive to environmental issues. DeepMind for Climate represents an ambitious effort to use artificial intelligence in the fight against climate change. Based in London, DeepMind, a Google artificial intelligence company, has initiated this project to apply its advanced computational capabilities to the complex challenge of understanding and mitigating climate change. One of the main applications of this project is the use of AI models to analyze vast amounts of environmental and meteorological data. These models can provide more accurate climate forecasts, thus helping researchers and policymakers make more informed decisions regarding mitigation and adaptation. DeepMind is working to optimize energy efficiency in various sectors, including data centers, power grids, and cooling systems. By using machine learning algorithms, DeepMind seeks to reduce energy consumption and carbon emissions associated with these operations,

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Fig. 1.
Singapore Land Authority (SLA) – One Maps Virtual Singapore

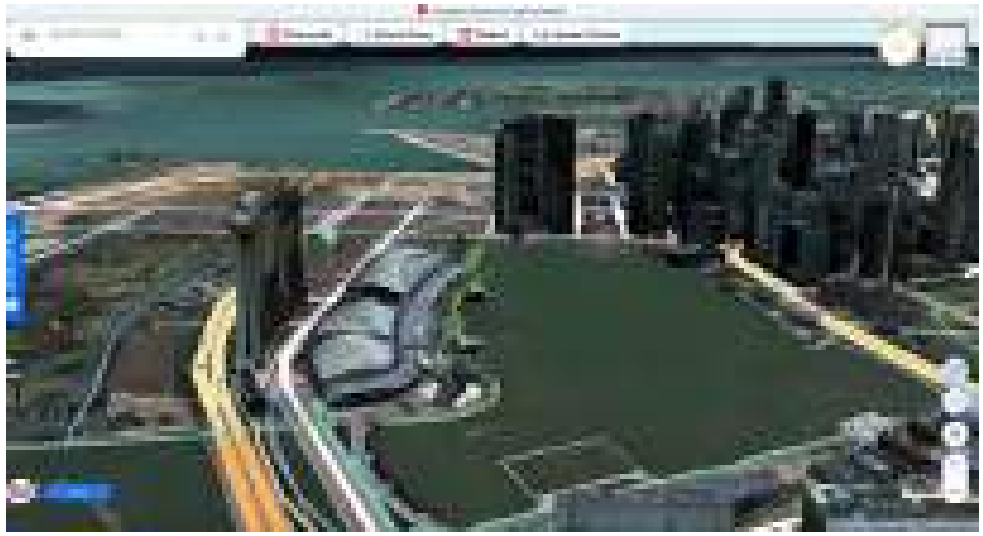
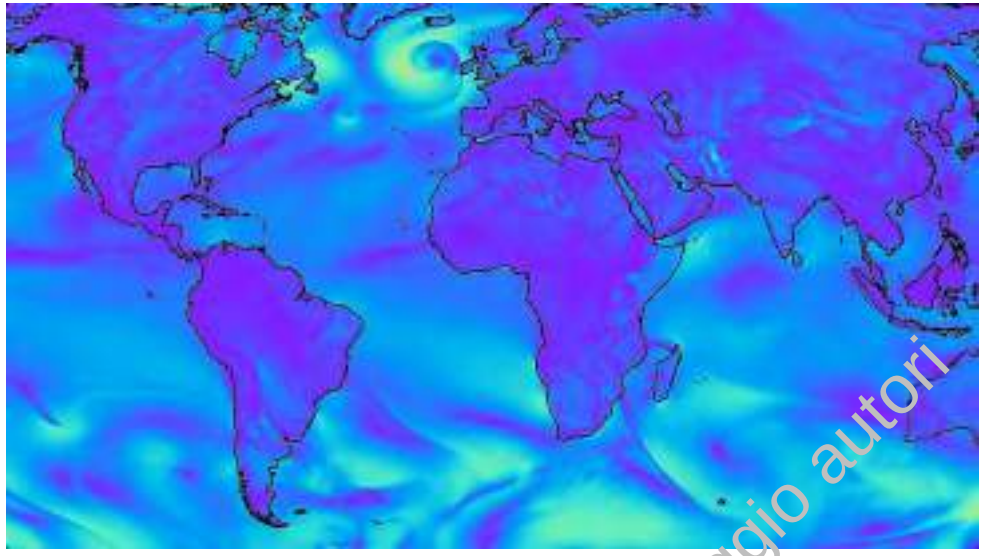


Fig. 2.
AI model for faster and more accurate global weather forecasting - Google DeepMind



thereby contributing to the overall reduction of the environmental impact of human activities. However, there are also challenges and questions associated with the use of artificial intelligence in the climate sector. Transparency of the models and algorithms used is crucial to ensure trust in the decision-making process. Additionally, it is important to consider the social and economic impact of the proposed solutions to avoid creating disparities or overlooking the needs of the most vulnerable communities.
The challenge for these models will be to rely on a "reliable" artificial intelligence, trained through intelligent systems themselves, that can support urban decision-making on environmental sustainability and climate adaptation. The responsible and strategic use of these technologies could revolutionize urban planning, enabling decision-makers and planners to adopt more computerized and targeted approaches, based on precise data and forecasts. However, to fully realize this potential, it is essential to ensure transparency, equity, and security in the proposed solutions, ensuring they meet the needs of communities and protect the environment for future generations. With collective commitment to research, development, and implementation of these technologies, we can hope to successfully address the challenges of climate change and build more sustainable and resilient cities. It is important to strike a balance between the use of digital technologies and the human approach to city design, taking into account the needs and aspirations of people. Proactively addressing challenges and criticisms is important to ensure that this technology continues to be a driver of innovation and sustainable development for the future of cities worldwide.

Digital platforms for urban issues and governance: dilemmas and challenges. An overview

*Vito Garramone**

The age of ICTs has introduced new tools for urban issues and needs that in some way interact with the governance of urban/territorial problems and often (can) have an impact on the actions for Smart Cities-SC. This has certainly led to the construction of some multi-stakeholder (platform-based) ecosystems, with positive benefits for government and decision-making. The methods of applying problems in computer vision have changed; the methods of interaction between public and private are varied and dynamic; new governance possibilities are emerging. Can urban platforms be a publicly led or coordinated mode of governance and a digital and green transition mode in the field of Smart Cities (and lands)?
Through an overview created starting from 7 articles and the connection between this collection and 51 documents (books, articles, and other publications), created thanks to the Research Rabbit digital platform[1] (Fig. 1), we have constructed a preliminary analysis of the phenomenon of platform urbanism (inside the macro-phenomenon or trend of the "platformisation") and its relationship with the topics of SC and Governance.

But what is the "Platform urbanism" (Fig. 2)? For (1), «Platform urbanism refers to a novel set of digitally-enabled socio-technological assemblages rooted in the urban, which enables the emergence of new social and material relationships including intermediations and transactions. [… it] is an evolution beyond the smart city, based on digitally-enabled assemblages that enable novel forms of intermediation. [It …] is typologically understood in relation to the assemblage of actors involved in each platform type, and the platform's connection to the urban» (p. 1). These considerations highlight at least 3 relevant aspects. It is a *i*) "urban phenomenon" (2), rooted in the urban dimension and lifestyle, *ii*) that connects to the practices of Smart cities and *iii*) allows new forms of intermediation (social, economic, and political) between urban actors.

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[1] https://www.researchrabbit.ai

But this is a new vision of platforms. In the past, platforms have been studied in the context of technology and business (3). (4) considers them "lean' capitalist digital on-demand platforms" and (1), a model of business of a new digital and knowledge-based economy. Indeed, some privately-owned platforms like Uber, Google, and Amazon are controlling interactions between people, capital, inside the urban life and inside the paradigm of the so-called "platform economy" (5) (6). Moreover, «Despite their deep integration into the urban fabric, platforms have thereby often presented themselves as aloof from local politics and immune to local regulation» (6). For (2), «Platform urbanism is a concept of substantial integration of platform ecosystem (powered by giant digital companies) into fundamental systems of urbanisation [… or] articulates, a twist on the notion of platform capitalism (5) applied to the emergent, irreducible, co-generative dynamics between platforms and the city» (p. 4).

Only recently the platforms have become collaborative and developed a strong interest in the public sector, governance, and Smart City actions (3). In this context the "platform urbanism" becomes both "City-as-a-Platform"-CaaP and "Government-as-a-Platform"-GaaP. The term GaaP is general, and it was coined by (7) to call for a different role for government, as facilitator and manager of its interactions with society, as well as provider of a platform, where citizens can be solicited to be co-producers of innovative solutions for public administration both in terms of services and policies. (8). Instead, the concept of CaaP is situated and presupposes a "new form of urban governance", more open and democratic, strongly related to «the possibility of obtaining better results in all aspects of urban planning in cities – transport, energy, security, health, economic development, education, and culture, among others» (8).

Moreover, in the literature this term refers to both the technological and political infrastructure, inside a model of public and inclusive governance for the creation of public value and for the promotion of collaboration and democratization of information and knowledge (8).

In general, "Urban platforms" generated localized arrangements and public-private partnership, related to urban development, local public services, innovation and/or citizen participation (1) (3); they acted as hybrid agencies to integrate actors (and interactions) within and across city systems, with the help of modern technologies; they were sometimes used, governed or sponsored by public sector organizations, for collective interests (3); they have not unified the narratives or overarching patterns to their data, but produced messy or disconnected results and sometimes inequalities between social actors, disadvantaged or not technologically skilled (2), often deliberately caused by actors with a 'datapower' (9) (1). They have also become part of "novel sociotechnical imaginaries" (10), with or without political objectives (11).

But platform urbanism showed a new way to analyse the urban dimension or the urban lifestyle, the temporal purposes, the urban spaces, and needs. Inside some models of public governance for the creation of public value, they can be a useful tool for the governance of the urban policies or/and for a new public-private action, a tool for a soft planning (12) (13).

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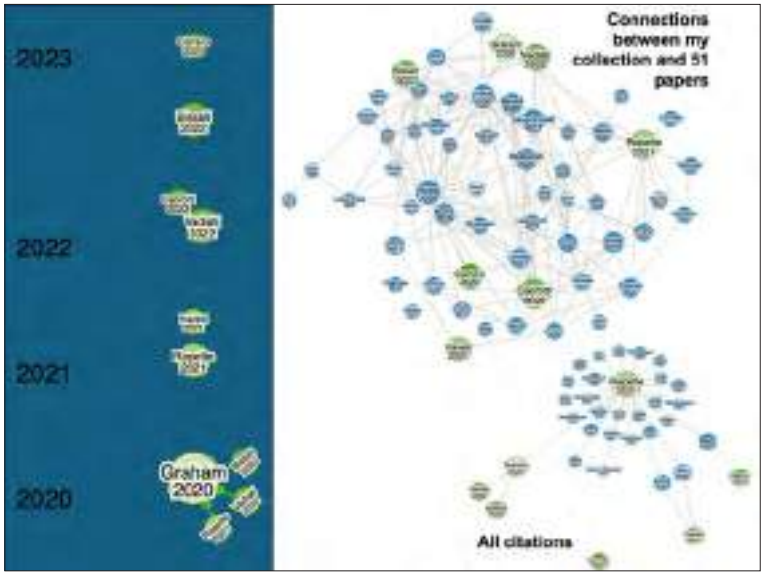

Fig. 1.
A Research Rabbit network of the papers on the topic "platform urbanism"

Fig. 2.
An overview of 7 selected papers on "platform urbanism"

Addressing urban retail in data models
Measuring change in a dynamic activity that impacts urban life

*Barros_Guerton, Javier**

Urban retail is a key element of urban life and social inclusion. It is a dynamic activity subject to rapid changes both from the offer and demand sides. As e-commerce and a tourism-oriented economy expand, retail expenditure can grow even if brick and mortar shops close, and traditional retail spaces can house other uses, in a process that is not always innocuous.
Directive (EU) 2019/1024 on open data and the reuse of public-sector information sets the legal framework for reuse of public-sector information. It is set to reinforce the Union's data economy, including the development of AI. In this text "public data models" refers to these open data formats.

Current public data models deal with urban retail either as an economic activity or an urban planning use. Both approaches operate on independent spheres, which complicates the planner's work on that matter. This research is an approach to the issues of public open data, as a tool for plan-making, plan-monitoring and public participation. Public data models should describe the diversity of business categories and provide a meaningful way to cross reference that information with other relevant datasets for urban planning.

Paris, Milano and Madrid publish open data regarding urban retail, whose characteristics, as described in their open data websites and verified through data download, are summarised in the following table.

	Paris	***Milano***	***Madrid***
Local government area producing urban economic activity datasets	**Urban Planning**	**Economy**	**Economy**
Methodology	Field survey	Administrative	Administrative
Updates	3 years	Varies by theme	Monthly
Latest published update	2023	June 2023	February 2024
Latest number of georeferenced individual locations in database	83.154	31.931	169.636
Latest number of open shops in database	60.846	31.931	116.351
Residents in municipality by open shop	34	42	28
Most detailed number of economic categories	220	65	448
Includes overall area in sq m	Yes	Yes	No
Includes specific sales area in sq m	No	Yes	No
Diversity of activities sharing location	No	Yes	Yes
Includes empty locations	Yes	Yes	Yes
Includes locations used as homes	No	No	Yes
Identifies tourism dwellings at street level	No	No	Yes

While Paris data is published by an Urban Planning body (Atelier Parisien d'Urbanisme) and is based on a field survey that allows to integrate to some degree the urban and economic dimension, both in Milano and Madrid the economy dimension is privileged. Despite the weight of economics in this field, none provides an estimate of revenues by location and activity.

Madrid provides monthly dumps of a database resulting from municipal regulations, which provide a longitudinal view for the last decade, with a geographic detail reaching the individual geographic coordinates of each venue. This paper focuses more on the changes in uses in venues than in the status for a given month; there is a certain fuzziness

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between some activities, so sometimes a space could have changed without any paper filed, but declared changes should provide a clearer view.

Between June 2014 and January 2024 the number of physical locations declared in Madrid has grown from 141.789 to 151.190 (+6,6%). The number of closed venues related to open ones has oscillated between 37% in 2014 and 28% in September 2021; lockdowns are not apparent in this database. On average monthly activity changes oscillated between 200 and 900, to then register an all time high of more than 3.500 in November 2021 (Omicron variant of COVID19 and relaxation of health restrictions), to thereafter reduce their intensity below previous averages. This coincides in time with a surge in the number of locations registered as homes, either "usual" appartments or tourism apartments, that grew by 30% in a few months to then stabilize.

Overall, along the 10 years and for the whole city, the most common change using the less detailed approach (sección, 21 categories) is from retail to other services, which is a broad category including services to the person and leisure, with 6% of overall changes. When looking at the 21 administrative districts of the city, this change has been historically prevalent in 14 of them, while in the one corresponding to the historic core it is the transformation from retail to tourism activities (restaurants, bars, hotels, lodges…). The original data source allows data links to cadastral information for building data, and to datasets related to employment, residents, and residents' revenue, which will be exploited as final research results.

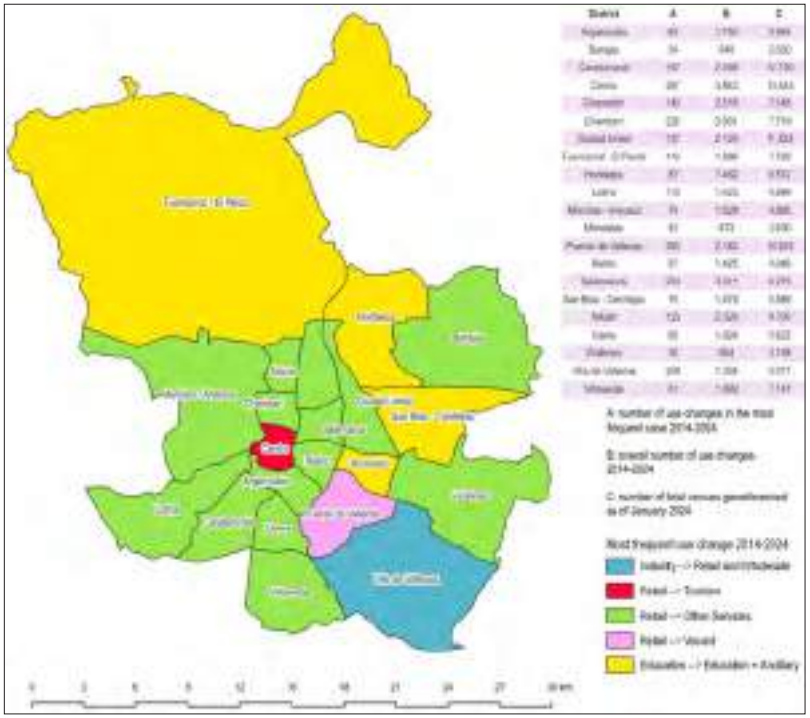

Fig. 1.
Use changes in Madrid at street level. Source: Censo de Locales y Actividades, https://datos.madrid.es/portal/site/egob . Map: Javier Barros_Guerton

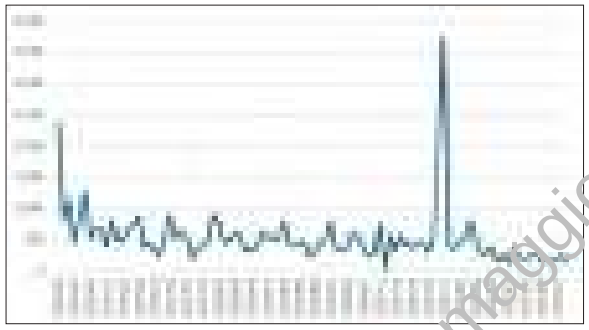

Fig. 2.
Total number of use changes at street level in the municipality by month, 2014-2024. Source: Censo de Locales y Actividades, https://datos.madrid.es/portal/site/egob . Graph: Javier Barros_Guerton

Eco-Fusion: Bridging Architecture and Nature in Urban Design

Panagiota Koulali, Anastasios Tellios***

Abstract

This paper introduces a pioneering approach to modern urban reforms, bridging the gap between nature and architecture, a divide that has widened in the context of the 20th-century evolution from modern to postmodern design. Central to this new ecological approach is the reintegration of architecture with nature, proposing a symbiotic relationship akin to natural ecologies.

By harnessing functional concepts from biology and ecology, the paper suggests innovative techniques for creating 'bio-interactive buildings' through the use of cutting-edge technology. These techniques involve mimicking organism systems and processes found in nature, leading to the development of 'Modern Ecologies.' This novel architectural philosophy emphasizes a 'second nature' that seamlessly blends the natural and the artificial, resulting in buildings that are not just structures but dynamic ecosystems. These ecosystems embody a continuous interaction of matter, energy, and information within their environments, blurring the lines between life and matter. The concept of 'smart buildings' is redefined, with structures that are not only responsive but also 'alive' in a sense, marking a significant shift in how we perceive and interact with our urban environments.

Introduction

The evolution of urban design during the 20th century led to a significant separation between architectural development and natural ecosystems, prioritizing operational efficiency over environmental considerations. Today's urban landscapes face critical challenges, such as climate change and biodiversity loss, necessitating a paradigm shift towards more sustainable practices. Eco-Fusion proposes an innovative solution to this issue, aiming to harmonize architectural endeavors with nature, fostering sustainable and resilient urban environments.

Literature Review

Eco-urbanism highlights the integration of green spaces and biodiversity within city planning as a step towards sustainability. Meanwhile, bioarchitecture emphasizes designs inspired by natural forms and processes, advocating for environmentally friendly and efficient structures. Although information technology (IT) and artificial intelligence (AI) have become indispensable in contemporary urban management for their efficiency and responsiveness, their potential for ecological integration remains largely untapped. Eco-Fusion seeks to amalgamate these diverse fields, advocating for a built environment that exists in symbiosis with the natural world.

Conceptual Framework

Eco-Fusion is predicated on the merger of ecological principles and architectural innovation, targeting the development of urban spaces and buildings that function as living systems. This approach is grounded in principles such as symbiosis, self-organization, and biomimicry, all facilitated by technological advancements. This framework aims to redefine the concept of 'smart' architecture by placing a strong emphasis on environmental integration and sustainability.

Methodology

The methodology encompasses case studies, simulations, and theoretical modeling to investigate the practical applications and implications of Eco-Fusion. This involves gathering and analyzing data from architectural designs and environmental metrics, employing both qualitative and quantitative analysis techniques. The goal is to assess the viability and effectiveness of Eco-Fusion in real-world settings.

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Case Studies and Applications

Illustrative examples, including The Edge in Amsterdam and Bosco Verticale in Milan, embody the Eco-Fusion ethos by integrating advanced technologies with natural elements, such as vertical gardens, to create sustainable, bio-interactive structures. These projects demonstrate how architecture can emulate and bolster natural ecosystems. However, they also highlight challenges related to maintenance and scalability, which need to be addressed to further the adoption of Eco-Fusion principles.

Discussion

The Eco-Fusion approach has the potential to fundamentally transform urban planning by promoting cities that are not only operationally efficient but also deeply integrated with the ecological environment. The concept of buildings that are 'alive'—actively contributing to and integrated with their natural surroundings—introduces a new dimension to urban resilience and sustainability. Nonetheless, achieving this vision on a larger scale will require overcoming significant challenges, particularly in terms of scalability and the adoption of new technologies.

Conclusion and Future Directions

Eco-Fusion presents a forward-looking pathway for reconciling the built environment with nature, marking a significant step toward the goal of sustainable urban design. Future research should explore the development of new materials and technologies that facilitate this integration, addressing the critical need for solutions that harmonize ecological principles with architectural innovation. This direction not only promises to enhance the sustainability of urban spaces but also contributes to a more harmonious coexistence between humanity and the natural world.

Cybernetic Urbanism: Digital Twins on Artificial Neural Network

*Angelica Rocco**

The concept of Smart Cities originated in the 1960s and 1970s when the US Community Analysis Bureau started using databases, aerial photographs, and cluster analysis for data collection and resource management. The aim was to optimize services, address emergency situations, and reduce poverty. The Smart City represents a new urban ideal where management is based on data obtained through the joint use of KETs and ITC [1]. The actions of citizens who are part of the sensor network are translated into data streams from their personal devices [2]. However, according to second-order cybernetics, the Smart City is a dynamic system in equilibrium, a space-network whose data are translated into vectors. According to Frei R. [3], this process can be pursued by converging towards the circular economy. The adoption of the *Life Cycle Assessment* methodology for the management phases of individual systems and looking at the end-of-life never. Sayama [4] explains that a complex system can self-organize and remain in an optimal state by managing its individual elements. Let us take the example of the characterizing element of the Smart City. According to Losasso [5], the physical architectural artefact follows a law of linear involution from disorder towards higher order since the time of Descartes, Bacon and Newton. Therefore, the quality of the technological construction process of the built space regulates the interpolation and dynamic decomposition of complexity. and UNI regulates this process. The UNI Standard [6] recognizes the systemic nature of the building system, which is reflected in its degree of complexity. However, it would be oversimplifying to reduce the complexity of the building by breaking it down into its component elements without considering their iterations and dependencies. Heylighen [7] suggests that when considering a block wall, it is important to go beyond simply counting the number or type of blocks used. Instead, one should also consider the dynamics of the particles that make up the block, the chemical elements that characterize them, and the interactions between these elements that contribute to the construction of the wall. Additionally, it is important to consider the dynamics that can generate changes to the complex block system. Unforeseen dynamic events, such as earthquakes, can cause irreversible changes in block-wall systems. Therefore, a third option for complex systems is to anticipate such events for the self-organization of the system. Simulation, after the design of the model, is the way to extend the life of the building and thus contribute to that of the Smart City. According to Vittoria [8], technological design is the fundamental phase in which technological knowledge can aim for a universal design, where the unitary element, as mentioned by Wachsmann [9] [10], can fulfill its function in the fractal universe, including physical, dyadic, or cybernetic space. In this universe, space is organized based on the coexistence of objects, while time is grounded on the succession of events, as Aristotelian philosophy predicts. In this scenario, the Principle of Decomposition allows for the analysis and understanding of individual parts and design variables, from the dyadic space to the system structure. This leads to a transition from chaotic manifestations to harmonic reconfiguration in the triadic gnosis.

The aim of this research is to explore the value of "Architecture, Technology and Complexity" [6] in the current scientific context. This is in relation to a digitized reality where the complex building system is not only related to graphical architectural models, but also to a set of Key Enabling Technologies (KETs), Information Technology (ITC) and additional technological tools that can support the Smart City model. The methodology outlines an architectural framework for the management of complex building systems. Starting from the development of philosophical thinking and the UNI standard, the management of the complex building system goes through the decomposition and evaluation of the individual elements that make it up, to ensure the usability of that environmental well-being thought of in the design conception phase throughout the entire life cycle. The adoption of Digital Twin technology systems results in the autonomous management of building systems through the Cyber Physical Model and mathematical modelling supported by Artificial Intelligence. In the Smart City, this is achieved through the management of DT systems connected on a Neural Network (NN) (fig. 1).

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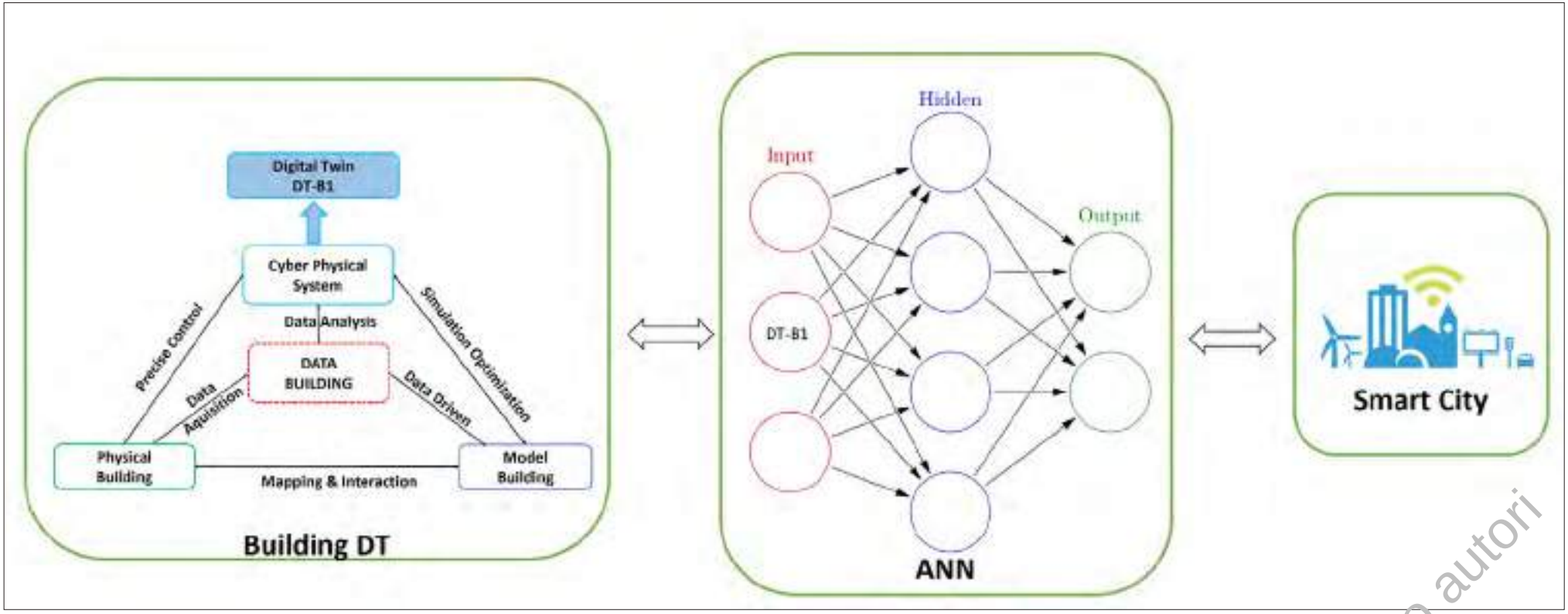

Fig. 1
DT to CPS for ANN in the Smart City.

The Regional Digital Twin as support for innovative multi-risk planning

*Sara Sacco, Federico Eugeni, Donato Di Ludovico**

The Digital Twin (DT) is a tool intended as a digital copy of a real object. It differs from the 3D digital model of an object as it uses a bidirectional data connection with its physical counterpart and thus allows interaction with a real system[1] (1). In this context, the DT can generate real-time information as well as analysis, simulations, and interactions through the use and interaction of technologies for predictive models (such as IoT, Big Data, 5G, Cloud, AI, AR/VR). From the literature analysis, DT can be considered as a general tool that can be used in any field of application such as DTP (DT Prototype), DTI (DT Instance), DTA (DT Aggregate), DTE (DT Environment). As for DT used specifically in the study of the urban context, the definitions of - CS-DT (City-State DT), PDT (Participatory DT), UDT (Urban DT), CDT (City DT), LDT (Local DT) may be common, although they are still ill-defined. Further categorization can be provided depending on the type of participants and implementers in data creation and management, such as the government, public agencies, private entities, and the population itself[2] (2). The interaction between the above emerging technologies and geospatial information models (BIM, CIM, GIS), can respectively feed and generate "dynamic data" and "static data". In addition, static data information can be represented by CityGML, at multiple levels of detail (LOD), and will be able to support dynamic data provided by sensors and simulations. The reciprocity of these data provides the tool with the ability to interact with the physical model in real time and enables operations of collection, monitoring, management, analysis, control, visualization, planning, simulation, forecasting, and decision-making. In this context, we focus on the concept of DT related to urban planning as a support tool for planners and all the actors involved in the planning process. A DT tool can help structuring smart, sustainable, participatory, and supportive city governance, simplifying and flexibilizing planning methods/models thus helping urban planners, urban designers and citizens, and becoming a tool for collaboration, communication, and decision support. It is useful to define the possible relationships between DT, traditional planning, and Disaster Risk Management (DRM) planning[3] (3). The aim is to accelerate analysis timelines, prevent potential risks and damages, optimize operations, and increase the efficiency and performance of planning/design at a spatial scale. In this regard, this research attempts to realize a prototype of RDT (Regional Digital Twin), intended as a tool to support new planning models related to multi-hazard in the spatial sphere. After analysing and defining the general characteristics of the Digital Twin tool (the interaction with the real object, the level of scale relative to the scope, "traditional" technologies and technologies for predictive models), the specific characteristics related to the RDT prototype needed for the development of the research were identified. Thus, our prototype RDT must be a digital object bidirectionally connected with its physical counterpart, which in this context will cover a regional framework. For its definition, the (R)DTI, (R)DTA, (R)DTE, and (R)PDT will be kept in mind. The scale levels considered will be the Sub-Area scale and the regional scale. The application fields that will constitute the layers that make up the land will be infrastructure, smart city/smart land, rural areas, settlements, environment, and risk. The RDT will be composed of and fed by static data with multi-scale LOD 0-1 modelling, and dynamic data that can be defined using IoT and its complementary technologies, including the management tools that comprise it. In addition to these two types of information, a third branch of data will be added from the collaboration with the Civil Protection Agency of the Abruzzo Region (CPA of Abruzzo Region). Future developments will concern the methodological definition of the digital tool and the analysis of traditional and innovative planning models based on the potential of the RDT with a specific focus on the concept of multi-risk. In addition to the collaboration with the CPA of the Abruzzo Region, for the study of Risk Planning And Management, there will be a collaboration with the chair of Computer Science, for the algorithmic definition of RDT technologies. These phases will be concluded by testing and applying methods and models studied to an Italian case study and a foreign one to validate them.

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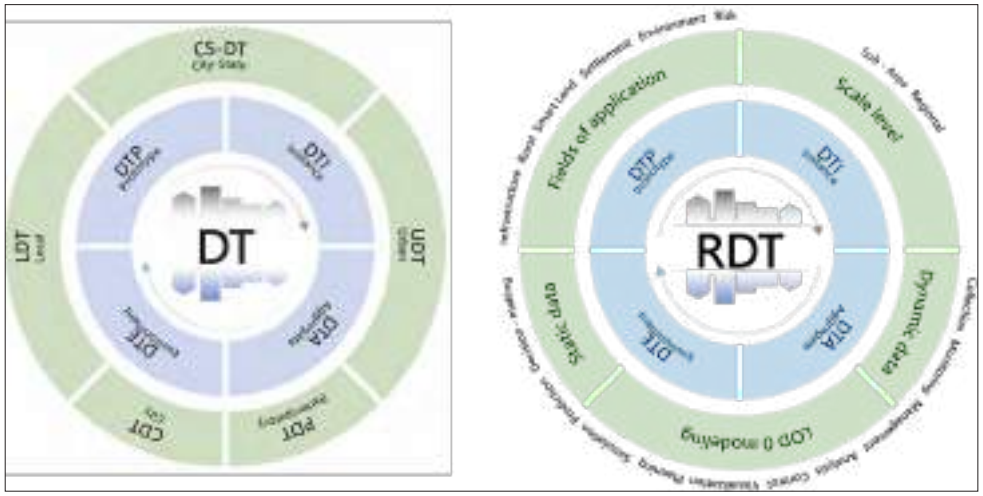

Fig. 1.
characteristics of the DT and RDT

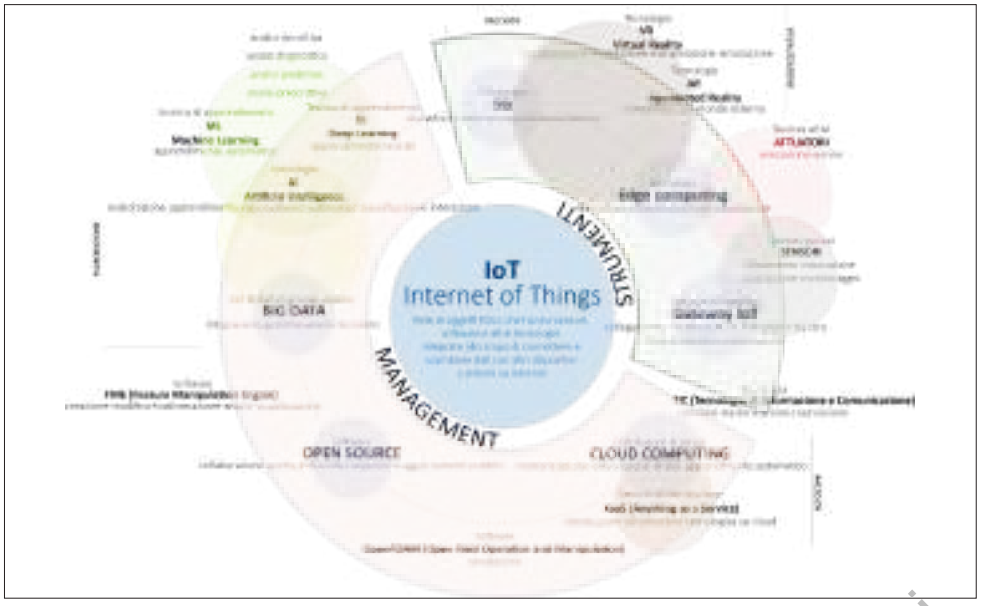

Fig. 2.
components and technologies for dynamic data

Beyond Data Extractivism:
Convivial Approach in AI-Enhanced Urban Planning

*Sabrina Sacco**

In contemporary urban planning, the integration of Artificial Intelligence (AI) emerges as a significant catalyst, transforming cities towards more sustainable and efficient trajectories. The abundance of urban big data[1] presents novel opportunities for enhancing various aspects of urban life, facilitating well-informed decision-making. Machine learning algorithms, real-time data analytics and smart sensors provide unparalleled capabilities in analyzing intricate urban systems, such as traffic flow, population density, land use patterns, crime detection, air quality monitoring. The accumulation of urban big data through different platforms has facilitated the creation of huge databases utilized for training machine-learning algorithms, improving efficiency and rapid responses to challenges in AI-driven urban planning. However, it also brings to the fore significant challenges and risks, particularly concerning the extractivist nature of current practices. Data extractivism refers to data as raw material to be extracted, refined, processed, and transformed into products with added value[2]. The extractivist paradigm in AI-driven urban planning prioritizes the collection and utilization of digital urban data without full consent or awareness from the communities it serves. This approach often neglects the nuanced needs and desires of citizens, focusing instead on optimizing systems and processes based on data-driven algorithms. While AI enables cities to prevent faults, identify breakdowns and predict future scenarios, it does so at the expense of community active involvement in the decision-making process. As a result, it raises fundamental questions about privacy, consent, extensive surveillance, individual and collective autonomy loss[3]. Furthermore, data extractivism can exacerbate existing inequalities and power imbalances within communities, undermining the central role played by community empowerment in sustainable urban planning processes. According to Sustainable Development Goals (SDGs), the dynamic landscape of urban development calls for a shift away from conventional top-down approaches. Indeed, there's a growing emphasis on participatory methods that involve diverse perspectives in decision-making. This necessitates a collaborative effort involving governments, civil society, scientific communities, and businesses to collectively address urban challenges. In response to these challenges, a convivial approach to urban planning offers a more inclusive and participatory alternative. Coined by philosopher Ivan Illich[4] and further developed in the "Manifesto Convivialista"[5], "conviviality" emphasizes using technologies, including AI as nowadays' predominant technology, as tools to enhance human flourishing and address community needs rather than instruments of surveillance and control. To associate the term "conviviality" with urban planning means prioritizing and emphasizing community desires and social interactions to enhance livability and sociability in urban contexts. Unlike traditional top-down planning approaches, convivial urban planning adopts participatory design methodologies, ensuring that every adopted technological tool would be developed in collaboration with the communities they serve. This approach empowers citizens by giving them a voice in shaping their urban environment and aligns technological interventions with their collective values. In this perspective, an AI-enhanced urban planning could adopt a convivial approach to AI[6], involving expert and non-expert into the various phases of an AI system (requirements elicitation, data collection, design, development, deployment). By adopting this approach, the involved community is considered as an expert in its domains, promoting transparent and clear communications, trustful relationships and building collaborative design processes. Rejecting the extractive model of data collection and analysis means advocating for a more ethical and equitable approach to urban planning, prioritizing human relationships and well-being over narrow technocratic objectives. Convivial AI-enhanced urban planning promotes deliberative practices as a valuable tool to make better decisions, analyze complex data, and facilitate discussions, with the overarching goal of empowering human decision-makers rather than replacing them [29][30]. In these endeavors, citizens are engaged in thoughtful and informed discussions to collectively

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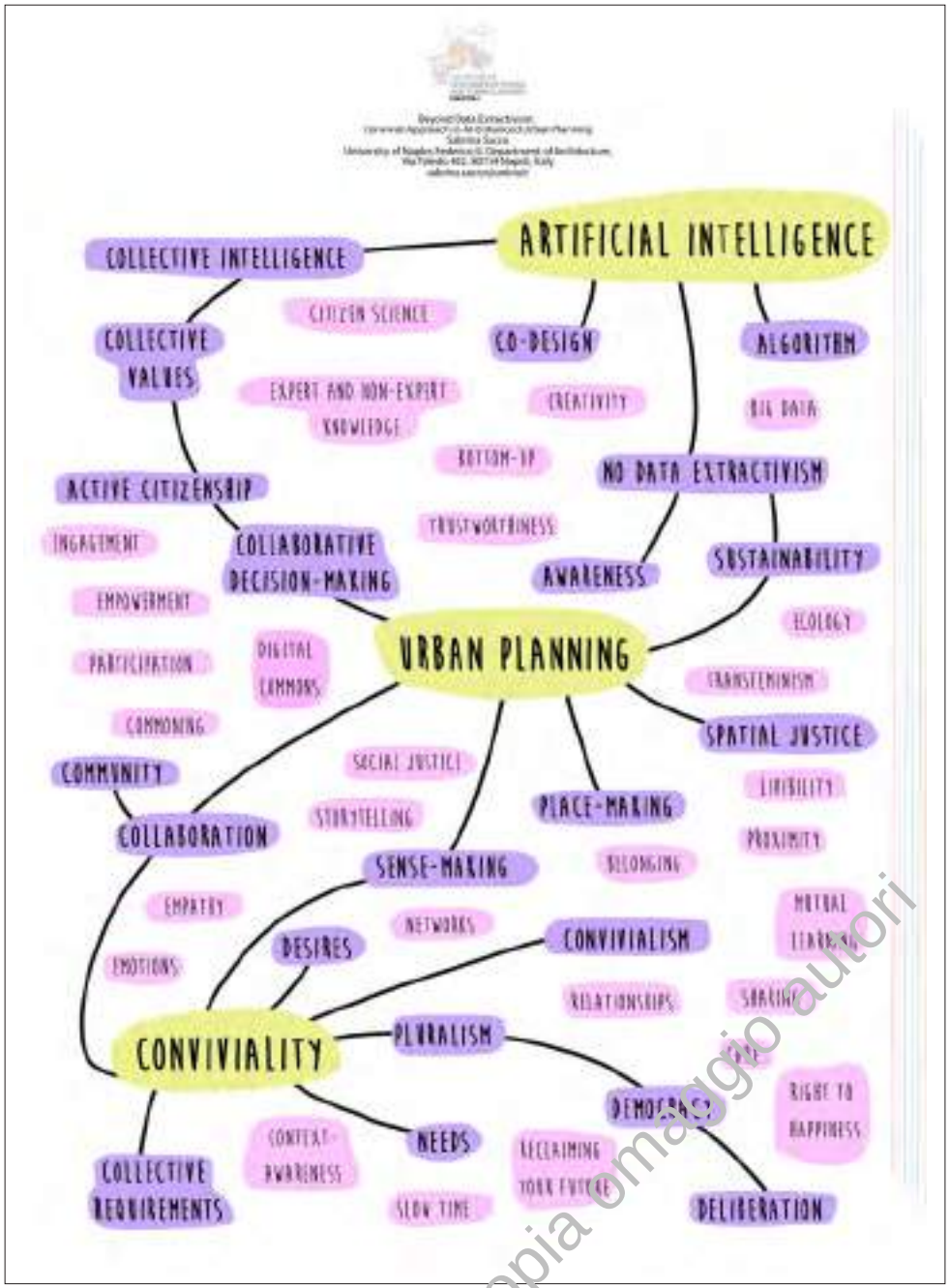
reach decisions or encourage the definition of policies [29] centered on collective values. By adopting this perspective, significant attention is directed towards promoting collective intelligence processes through co-design processes, and recognizing the environmental impact of data, and their related infrastructures, placing great emphasis on climate and environmental sustainability and spatial justice. As a value-driven approach, guaranteeing inclusion, plurality, autonomy in interdependencies with others and the environment and context awareness, Convivial AI-enhanced urban planning fosters shared democratic principles driving towards a more sustainable way of planning cities that aligns with the desires and needs of each community.



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Augmented reality as an innovative tool for citizen participation in planning: Results of the 5G-CityVisAR research project

Lars Sievers, Eva Reinecke*, Frank Othengrafen**

Cities are currently experiencing a transformation in living environments towards sustainable spatial development. In this context, sustainable urban development requires innovative and inclusive approaches to involve different members of urban society in the design of urban space and decision-making. Conventional participation formats often reach their limits. This raises the question of how planning participation can be made more diverse and appealing for different stakeholder groups in order to strengthen digital participation in the sense of democratic participation. In this context, the use of augmented reality (AR) in planning participation is becoming increasingly important, as digital data and models support urban planners in their daily work and decision-making with the involvement of the public (Othengrafen et al. 2022, 12; Friesecke 2020, 148). By using AR, it is possible to enrich reality with additional digital information and objects (Kikuchi et al. 2022; Zeile 2017). This enables various groups of people to view a virtual adaptation of newly planned urban structures 'live' on site. Various case studies already show that the use of AR not only increases the motivation of residents to participate in planning processes, but can also improve the overall quality of participation (Othengrafen et al. 2023: 61). For example, AR can be used to capture the dimension of the realisation of an urban design at different levels of detail, especially with regard to the impact of the planned project on the real space (Leu 2021). AR can also introduce new target groups to complex processes by motivating young people in particular to participate through the use of innovative technologies. However, AR visualisations are often very abstract, focus only on partial aspects of urban planning (e.g. street furniture) and are not directly comprehensible to citizens as non-professionals.

As part of the 5G-CityVisAR research project (Funded as part of the 5G.NRW funding competition by the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia), an app was developed that augments 3D models as urban planning designs in situ and can be used as part of participatory processes. A planned area in a central location in the city of Schwerte (Germany, North Rhine-Westphalia) was selected as use case for the research project. The area has a disorganised urban structure with partly unused areas and is suitable as a potential area for redensification for internal development. In the run-up to the app development, established AR projects in the field of urban planning in German-speaking countries were first analysed in order to derive useful functions and special features for the developed AR application as an initial result. Based on this, individual advantages and disadvantages of the applications were analysed and specific requirements for the app were formulated. Two urban planning designs with different design variants were developed as fictitious planning scenarios that can be viewed live in the app and in situ as an augmented representation (Fig. 1). The two design variants were each visualised via four different models with different levels of detail (LOD). A test of the developed CityVisAR app with a selected group of stakeholders was carried out in February 2024 (Fig. 2). The designs were first presented in a conventional way as analogue 2D plans; the AR app was then tested on the planning area. The added value for participation processes in urban planning and the general user-friendliness of the app were then scientifically evaluated in an anonymous survey. During the workshop, 19 participants took part in the survey.

The survey revealed that the test subjects generally prefer 3D models with a LOD3 for visualisation in AR, as a certain LOD in the visualisations can convey a better impression for planning. In contrast, cubatures with a reduced design in LOD 1 or LOD 2, which contain simple structures and roof shapes, appear too abstract to convey a realistic impression, which makes it difficult to understand the design concept as a whole. Certain details (e.g. windows) seem to be important for the visualisation of the buildings, as they give buildings a more comprehensible form. The participants rated the app as more vivid in the context of planning participation than abstract 2D plans and saw the application

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as an "experience factor". The fact that participants can view the urban planning content in the app and use it as a basis for discussion in the participation process is seen as added value for planning participation. The app enables a more serious examination of the planning, as the user is located directly in the area to be planned and is given a realistic impression of the design concepts. It is important that the participants see the AR application as an additional supplement and not as a substitute for the actual plan content. Accordingly, the majority of participants are of the opinion that the use of AR can improve planning participation in the long term.

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Fig. 1.
In situ visualisation of an urban design as 3D model via augmented reality in the City of Schwerte, Germany. Copyright: TU Dortmund University - Department of Spatial Planning - Research Group of Urban and Regional Planning, 2024

Fig. 2.
5G-CityVisAR Workshop in the City of Schwerte, Germany: Participants testing the AR-App in the planning area. Copyright: TU Dortmund University - Department of Spatial Planning - Research Group of Urban and Regional Planning, 2024.

Algorithms based on the Casual Loop Diagram to identify problems supporting the urban regeneration process

Marco Volpatti, Marta Carla Bottero, Adriano Bisello*

To achieve the ambitious CO2 emission reduction targets set by the Sustainable Development Goals, it is crucial to act on cities. Indeed, cities are responsible for 67% of the world's primary energy consumption and about 70% of energy-related CO2 emissions. Climate change has reached a critical point where its effects are unequivocally evident in our daily lives. From irregular weather patterns to rising sea levels, its impacts are being felt on every continent, forcing nations and communities to confront its multiple repercussions. In response, the European Union has emerged as a key player, directing resources and efforts towards initiatives to combat climate change and promote sustainability.

To support the urban energy transition, extensive implementation of zero-emission districts is planned. However, in the development of a sustainable district, it is necessary to consider a technological inclusiveness that is supportive of monitoring and ensuring the perception of urban transformations over time. To be effective, it is important to provide decision-makers with tools and models such as casual loop diagrams or cognitive maps that can monitor the data of sustainable urban neighborhoods so that they can be effectively evaluated from a multi-stakeholder perspective.

Casual loop diagrams and cognitive maps are the most popular and effective diagrams for immediate cause and effect-based assessment. In fact, all over the world, they are used in emergency situations for immediate resolution with diagrams showing and highlighting the causes related to the people involved, intersecting with the effects of actions caused by people or things.

The objective of this research, through a literature review, is to analyse current urban regeneration monitoring diagrams to contribute to the definition of a diagram that considers possible hidden problems and impacts that could hinder the urban regeneration of public and private spaces. This simple and effective tool would be aimed at architects and urban planners in the design phase, but also at administrations and agencies that will monitor the optimal functioning of the intervention.

Starting from a literature review on urban regeneration, a definition is identified to identify the actors, causes and effects of actions in the process of urban regeneration. Although the very nature of regeneration makes it an evolving and varied activity, an initial definition of urban regeneration could be: a comprehensive and integrated vision and action that seeks to solve urban problems and bring lasting improvement to the economic, physical, social and environmental conditions of an area that has undergone change or offers opportunities for improvement.

The result will be guidelines for the urban regeneration of public and non-public spaces that are effective and easy to implement according to the evaluation criteria of the protocol certificates. Important qualitative and quantitative results emerge from the research. In general, we can start by saying that the casual loop diagrams allow us to identify very easily, on a graphic level, the problems related to the urban regeneration process. In fact, a first tangible result that emerges from the first analyses of the research are precisely the weak points such as the actions and decisions that are taken during the decision-making process. Important stakeholders may interrupt or support the urban regeneration process when faced with emergent issues. Both socially and economically, visualising the effects on the flowchart of the effects caused by the different stakeholders involved allows us to keep an eye on possible threats that could jeopardise the success of actions and objectives in the urban regeneration process. This simple methodology would be applicable on a large scale, on all continents, in all urban districts allowing a more linear and favourable development, preventing and identifying threats, problems. As the casual loop diagram is the starting point of system dynamics, one could implement this methodology and flowchart on the urban regeneration process in order to identify problems and threats in a dynamic way, enabling authorities, planners and administrators, how causes and effects act on and in the system, making it weak.Fig. 1.

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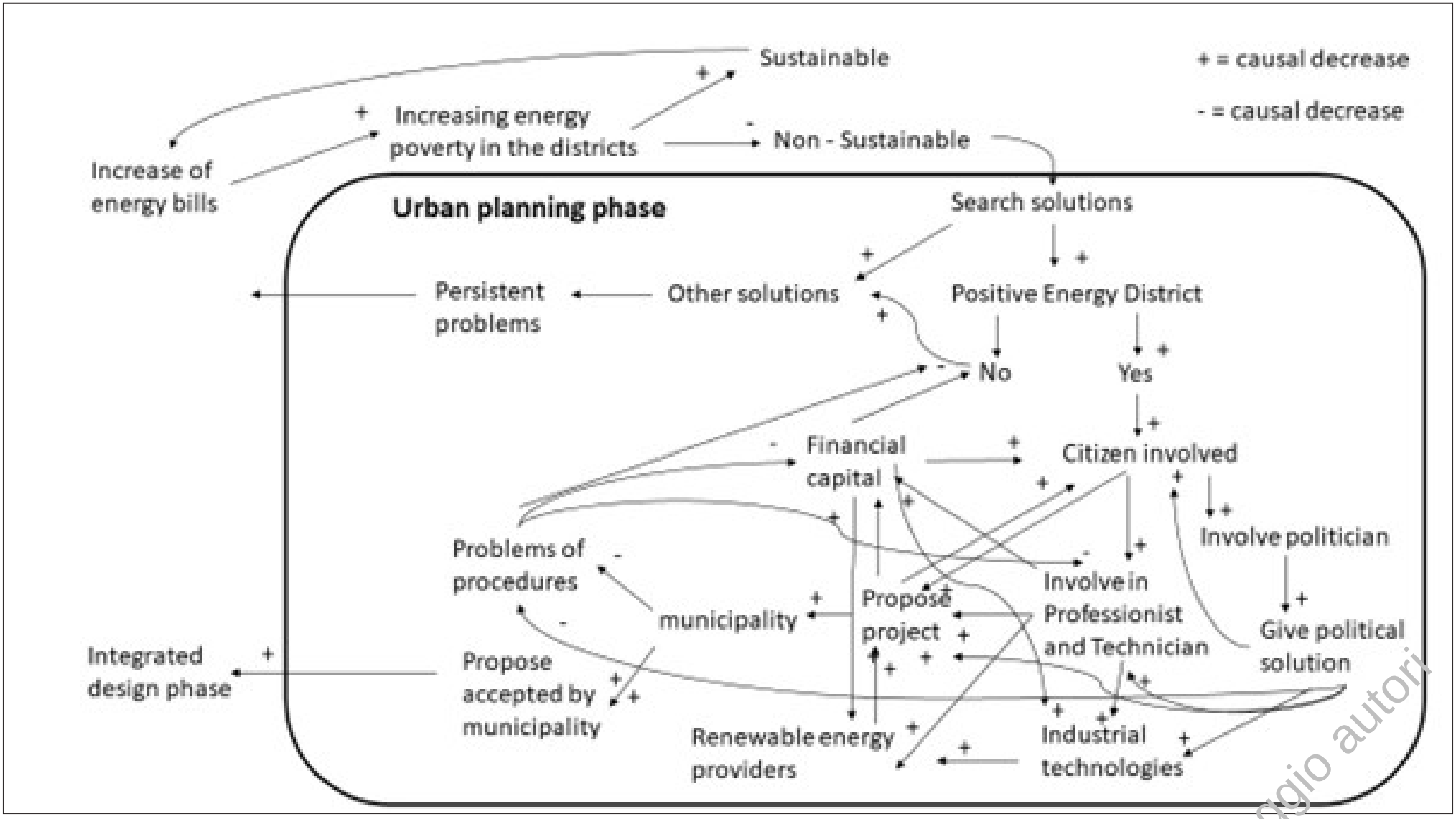

Fig. 1.
Casual loop diagram of an urban regeneration process typical for a District scale.

Informative city modeling and augmented reality: the City Augmented Reality for the Environment-CAREproject

Ida Zingariello,Romano Fistola***

New technologies, applied to urban planning processes, are increasingly assuming a central role as a tool to support planners in decision-making processes, orienting design choices towards sustainable solutions that are compatible with the available resources. The phenomena triggered by the relationship between planning processes and new technologies are capable, among other things, of enabling new experiential modes capable of creating alternative levels of knowledge of the city to the traditional ones. In particular, information digitization processes, necessary for the development of the city information model, better known as Urban Digital Twin (UDT), and Augmented Reality (AR) tools represent an innovative resource at the service of territorial governance policies[1]. The pre-figurative approach, made possible by the fruition of the UDT through the visualization tools of Augmented Reality, will allow all the stakeholders of the planning processes (planners, decision-makers and citizens) to share the outcomes of these processes, throughout the entire planning process, making possible a new collaborative process for the co-creation of new urban assets. The visualization of a city information model by common digital devices represents a transversal sharing tool that can be used by experts in the field as well as by ordinary citizens who can finally become active players in decision-making processes. Starting from these reflections, the City Augmented Reality for the Environment-CARE project, developed by the AURUS Research Group, was created with the aim of simulating new design choices and testing them in terms of economic, environmental and social sustainability. Specifically, the CARE app allows users to visualize, through a common smartphone or tablet, the possible tree essences that will green up Via Posillipo in Naples. As a result of an attack by parasites, the historic pines in Via Posillipo had to be felled. Hence the need for a replanting plan which, following analyses by administrators and agronomic experts, will have to provide for the alternation of tree species in in order to favour a biodiversity capable of preventing new infections by parasites. The CARE application, designed by Unity, takes advantage AR image tracking technology, so it's necessary to frame, by the smartphone an image used as a marker and by tracking this image, it's possible to see the tree in its future location (Fig. 1-2). Using information modeling and augmented reality tools, the CARE app represents a dual planning tool, allowing planners and decision-makers to simulate and verify their planning choices in advance, and at the same time, when put at the service of citizens, it is able to trigger new participatory planning processes. Thanks to their smartphones, in fact, all stakeholders, first and foremost the citizens, will be able to have a preview of the new morphological asset of one of Naples' most iconic street, visualizing live and on demand a shortlist of the trees envisaged in the Via Posillipo replanting plan, in order to express their own point of view that will have to be taken on board by the administrators and guide the final choice. City information modeling and AR technologies generate a profound transformation within the traditional categorization of urban spaces. Placing one or more Digital Twin Instances (DTI), which in the case of CARE correspond to the different tree essences, in the urban context triggers a process of interaction between physical and digital entities that generates a Hybrid Digital Space (HDS)[2]; a new category of space that declares the overcoming of the common categorization of physical space and digital space in favour of a contamination capable of defining a new type of hybrid space[3]. The experience generated by the HDS approach is a new process of augmented knowledge of urban places, which comes from the possibility of interacting simultaneously with physical objects and digital objects, perceiving both as real. In conclusion, the result of CARE application is twofold: on the one hand, it represents an innovative planning tool at the service of planners and citizens; on the other, it is a tool for urban regeneration capable of giving urban space the new configuration of a hybrid digital space.

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Fig. 1.
Prefiguration by CARE app of the trees that will be planted in via Posillipo.

Fig. 2.
Prefiguration by CARE app of the trees that will be planted in via Posillipo.

A "phigital ecomuseum" of the territorial heritage for the House of Emerging Technologies of Campobasso (MolisCTE)

Luciano De Bonis, Giovanni Ottaviano***

The concept of a "phigital" ecomuseum of the territorial heritage was developed as a component of the "MolisCTE" project, under the Emerging Technologies Support Program (2014-2020) of the Investment Plan for the broadband dissemination prepared by the Italian Ministry of Economic Development. The Plan provides for the establishment in various Italian cities of "Houses of Emerging Technologies" (CTE, Case delle Tecnologie Emergenti), serving as transfer centres for the advancement of IoT, AI, and Blockchain technologies, in order to conduct experiments and applied research in support of creation of start-ups. The concept, drafted by the authors as team members of the project partner University of Molise, assumes the ecomuseum experiences as forms of territorial self-government (1), and consequently as forms of self-organising spatial planning. The ecomuseum is conceived as "phygital", that is to say both physical and digital, but aligning with an interpretative trend (2) that distinguishes itself from pure analog duplication (known today as "digital twin"), or complete substitution (e.g. smart working), or simple assimilation (e.g. the so called "information highways") of virtual environments to physical structures and infrastructures. The phygital ecomuseum specifically articulates the relationships between physical and digital space by recognizing the very different qualities that characterise them (2). What remains physical in the specific case is the "territorial heritage" (3), as a result of long co-evolutionary processes between humans and the environment. In the context of the MolisCTE project, the phygital ecomuseum is framed within the theme of "Smart Tourism", which in turn can certainly be traced back to the broader phenomenon and rhetoric of the "Smart City". Consistent with this interpretation, relevant efforts have been made by the urban planners members of the University project team in order to support harmonious forms of Smart Tourism, while facing some criticalities emerging from the literature in the field. Among these, the usual separation between platforms for tourists on the one hand and those for inhabitants on the other), as well the predominantly passive (non-regenerative) approach to heritage preservation). To overcome them, the phigital ecomuseum concept aims to support the convergence of different digital technologies in the "physical body" of people and territories, creating a hyperconnected skin (4) on it, in order to facilitate the customisation of tourism experience). Thus, the phigital ecomuseum is shaped up as an environment in which both tourists and inhabitants are immersed) and participate in the recognition and reproduction of the "territorial heritage". The modules composing the phigital ecomuseum have been conceived to satisfy the request of personalised tourist experiences while transforming tourists and inhabitants into "produsers" (5) of information and/or products/services, and co-creators of the same experiences, also integrating into the tourism "produsage" chain certain activities that re-generate territorial heritage. The modules, still under development, regard the connectivity of resources and generation of territorial tourist geo-itineraries, AR/VR visualisation of landscape throughout history, and a georeferenced e-shop of local productions. Each of the modules described above also constitutes a module of an Interactive Territorial Information System (ITIS), consisting of a back-end component, given by a GIS-DBMS, and of a front-end component, given by a Geo-Social web environment, with which the GIS-DBMS will interact closely through the exchange of information contents.

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AI approach of emotion detection for multi-risk analysis in urban context

*Vittorio Miraglia, Barbara Cardone and Ferdinando Di Martino**

The application of sentiment analysis approaches to information flows extracted from the social network connected to particular critical periods generated by pandemic, climatic and extreme environmental phenomena allow the decision maker to detect the emotional states of citizens and to determine which areas are most at risk and require specific resilient adaptation interventions. Of particular relevance today is the need to analyse the multiple risks generated by extreme phenomena in urban settlements in order for the decision maker to identify which areas are most at risk and select optimal resilient action plans with respect to all the phenomena analysed. To monitor pandemic and climate/environmental multi-risk in urban settlements, we propose a GISbased framework in which an emotion detection method is applied to determine the prevailing emotional categories in urban study areas during periods of pandemics and in periods of emergency climate. Emotion Detection (ED) techniques are generally employed to detect emotions in unstructured texts posted on social networks. These techniques implement Natural Language Processing (NLP), lexicon-based, machine learning, and deep learning algorithms using the Ekman or Plutchick models of emotion categories to detect the most relevant types of emotions in the texts. To classify documents according to the most relevant emotional categories a fuzzy-based ED framework called FREDoc (Fuzzy Relevance Emotions Document Classification) was used. The main advantages of FREDoC are its high computational speed and the implementation of a multiple document classification method, which introduces a new measure of the relevance of an emotional category in a document. This approach allows to determine a more precise classification of the document, taking into account all pleasant and unpleasant emotional categories with relevance that is not negligible or above a specified threshold. The aim of the framework is to perform a multiclassification of the subzones of the study area in a set of periods based on the relevance of pleasant and unpleasant emotion categories detected in posts inserted by citizens and related to a set of environmental and climatic phenomena. FREDoc is executed separately to assess the relevance of citizens' emotions in a specific time frame due to the presence of each phenomenon in order to carry out the multi-risk analysis of the critical issues generated by the joint occurrence of hazard scenarios generated by different environmental and climatic phenomena. The joint importance of the emotions resulting from the coexistence of several phenomena at the same time frame was then evaluated; this was done by creating theme maps of the significance of both pleasant and unpleasant emotions in order to identify the critical subzones. The two data streams, Social stream hazard 1 and Social stream hazard 2, are, respectively, flows of social data connected to the first and second phenomena and inserted into the network by residents in the study area throughout the entire time frame of the investigation. This period is partitioned into atomic time intervals of equal width, called time frames. The framework was tested on the neighbourhoods of the city of Bologna (Italy) to detect, based on the emotions expressed on social channels, which were the most critical city neighbourhoods in pandemic periods and in the presence of extreme heatwave climatic events in the period 2020-2022The summer months of June through September were selected as the three periods of the year in which heatwave phenomena occurred frequently in the city of Bologna, as several heatwave occurrences took place in the city of Bologna in the three years 2020, 2021, and 2022, particularly in the months of July and August. In the experiments, we carried out queries on all the posts published on Twitter by residents in the six districts of Bologna in the past three years, separately analysing all the posts whose keywords contained themes correlated with heatwave phenomena and with the COVID-19 pandemic. For each of the two hazards, the emotional relevance of the sixteen pleasant and unpleasant emotional categories was assessed separately over the three years; then, the aggregation of the relevance with respect to the two hazards was carried out. Moreover, for each time frame, the thematic maps were elaborated, in which the six districts were classified based on their emotional relevance. The outcomes, represented by thematic maps, show that the proposed model can be a valuable tool to support decision-makers in identifying the most critical urban areas in the presence of pandemics and environmental/multi-climate risks. The results highlighted that unpleasant emotion categories prevailed in the north-eastern region of the city over the entire period; this region represents a more critical city area in which predominantly unpleasant emotions expressed by residents over the three-year period were detected. The proposed framework can represent a tool to support decision-makers and urban planners in evaluating which urban areas are the most critical in the presence of multiple environmental and climate hazard scenarios and determining where it is most appropriate to plan resilient strategies and actions.

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Parallel Workshop

9. Ports, airports and other infrastructures

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An Alternative Sustainable Future for Vlora: An Integrated Decision-Support System for a Green Smart Port City

Giuditta Mikhail, Gaetano Tortorella**, Andrea Paglialunga***, Giuseppe D'Aniello****, Massimo Savino***** and Maria Cerreta*******

A robust and positive interaction between ports and cities has become essential for maintaining resilient and sustainable economies within the European coastal framework. Ports function as pivotal hubs, fostering economic competitiveness, employment, and investments and yielding substantial positive implications for cities, concurrently generating adverse environmental impacts on urban centres. The effective integration of circular economy initiatives and energy efficiency measures in port-city areas becomes essential for mitigating climate change effects and enhancing the port-city relationship, as the ESPO (European Seaport Organization) Environmental Report 2022 underlines in the "Top 10 environmental priorities" where in the first three positions there are Climate change, Air quality and Energy efficiency.

The present research focused on the port of Vlora in Albania. In the beginning, it studied the Albanian context and the Vlora one to understand the history, culture, infrastructures, and other general data for figuring out the development that this country carries out. At the end of this framework, through the Sustainable Development Goals (SDGs) and Agenda 2030, as well as the ESPO GREEN GUIDE 2021 the researchers worked on the criticalities and the potentialities of this site and the three alternative scenarios of the city-port of Vlora have been explored, reflecting the economic interests, environmental conditions, and social identity of a city that runs the risk of being altered by rapid and uncontrolled development. The first one "Sea to the Citizens" wanted to give back the port spaces to the citizens eliminating the port activities, the second one "Dubai style" represents the development that Vlora city wants to implement, an intensive development with high buildings in front of the beach with luxury hotels, the last one "Green smart port-city" is a compromise because implement a growth of the city but in a sustainable way with a new concept of the port that communicate with the existing city and new connections with buses, new train station, new bike lines for the entire region, and a new service of taxi boats for linking the port of Vlora with the other coasts, in particular the Sazan Island and the Karaburun peninsula.

The study delineates an integrated decision-making process to tackle the interactions and conflicts of the Vlora city-port. A multi-criteria analysis has been used to compare the three scenarios, through an impact matrix with three dimensions (economic sustainability, environmental sustainability, and social sustainability), two or three criteria for each dimension, and finally, different indicators to give a quantification and a weighted score for each solution and make the final decision strong. The multi-criteria analysis was conducted by Socrates software, a result gathered by alternatives pairwise comparison for each criterion, assigning the relative value of preference and/or indifference, allowing understanding of which criteria make a scenario preferable compared to the other one. From the final ranking, the favourite scenario is "Green smart port city", mainly well-liked by environmental dimension's criteria. The same tool gave the possibility to implement a stakeholder analysis and understand the conflict and coalitions with a dendrogram. As a result; it represents the distance of social groups' positions and the classification of the various scenarios based on the impacts and the preferences of the different actors. The stakeholder groups were inserted with a specific weight depending on their decision power. All the analyses showed that the better scenario for Vlora is "Green smart port-city" and a new concept planning of the port was elaborated on both the sea side and land side.

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Fig. 1.
The Vlora port system

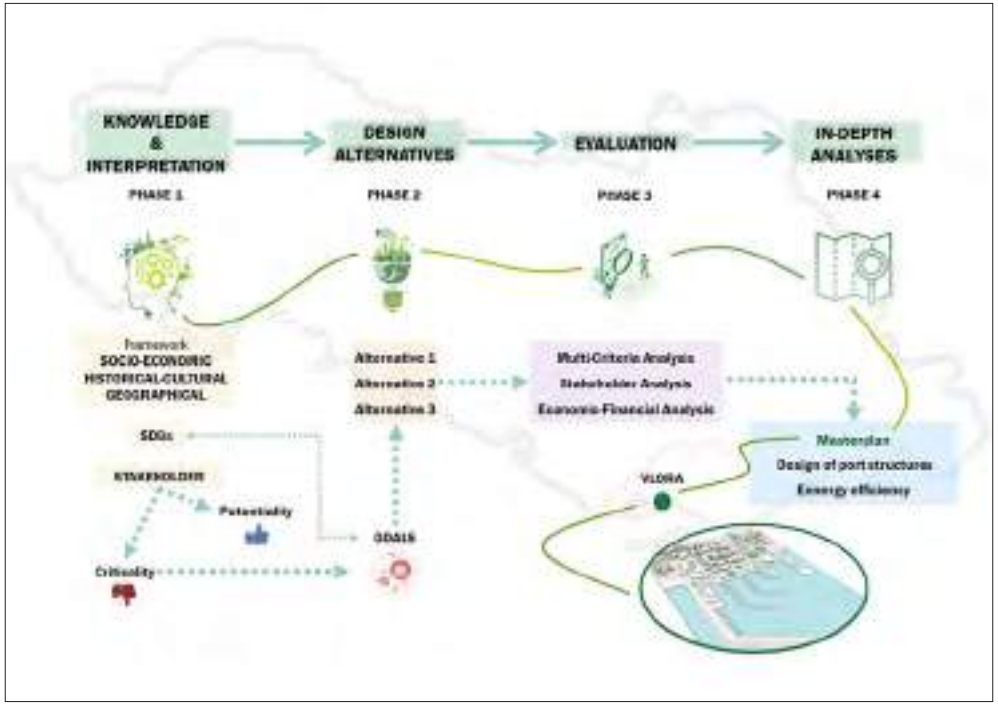

Fig. 2.
The methodological approach

City-Port interface planning
An integrated approach applied to Brindisi

Giuseppe Ciciriello, Francesca Calace***

Port cities display a strong connection between maritime economic activities and cultural identity; the harbour represents the city's infrastructural appendix, and at the same it is a distinctive public space as a continuity of the urban centre and the coastal landscape[1]. Since the 19th century, this symbiotic relationship progressively came into crisis as various technological developments took place, demanding the port to turn into a specialised area, and provoking a tear or displacement (according to its geographical context) between the historicised fabric and the new industrial spaces[2]. Over the last five decades, the port has become a major source of environmental harm, as part of a purely expansive and exploitative logic, resulting in air and water contamination, as well as land use and anthropic coastal alteration, making it unable to cope with human settlements[3]. Therefore, the waterfront is a space of functional conflict and, moreover, an unsolved overlap among different institutional stakeholders. Present-day Italian legislative setup, derived from Law 94/1994 and its following reforms, physically splits waterfronts and their corresponding governance: the Port System Authorities approve Port Master Plans, partitioning productive zones, which come under exclusive jurisdiction, from City-Port Interaction Areas (CPIAs), which instead are jointly planned in cooperation with affected local institutions (e.g. regions, municipalities)[4]. Within the Mediterranean context, CPIAs are typically layered with cultural and natural resources, providing a key setting for regenerative interventions on the city-port binomial, performing circular and inclusive practices[5].

This paper presents a qualitative analysis and interpretation methodology aimed at the development of an integrative strategy, concerning both the overlaying of the various components and the different actors involved, applied to the Brindisi port case study in Apulia. The object of the research was initially investigated in terms of governance, by examining the recent planning tools adopted by the Municipality and the Port Authority, bringing out the contrasts between the proposed visions. Therefore, it was decided to carry out a spatial analysis of the territorial values and disvalues, using mainly the knowledge categories of Apulia's Regional Territorial Landscape Plan ("PPTR"), as well as identifying coastal area uses, services and relevant urban infrastructures. In particular, the PPTR is an implementation tool for the European Landscape Convention (2000), and has been employed for its capability of pivoting planning onto the specific local assets, thus laying emphasis not on abstract development projects, but on an acknowledged set of common resources[6]. The resulting analysis is then processed applying the STEEP[7] framework, a qualitative procedure used to classify data into five semantic themes (social, technological, environmental, economic, political). For each theme area, one or more critical issues are identified, and then associated with a general objective to be achieved. The goals relating to each topic are articulated in a coordinated series of targeted actions, interconnected in a multi-scalar, cross-sectoral performance logic.

This leads to a regeneration strategy of the relational balance between city and port, which is based on a complex of locally identified values, intrinsic to the landscape and the socioeconomic environment, and therefore endorsed by the stakeholders and able to catalyse the political decisions required for structuring and planning CPIAs. Synthesis visions can be produced in the CPIAs, hybridising the port's economic functions with civil activities, testing innovative combinations of marine, technology and urban culture, and also being open to private financing. CPIAs do not only involve areas reclaimed from incompatible port industry, but also subtend reuse and neglect architectures or public areas, hosting facilities for social reactivation, inclusion, cultural promotion and contact with nature. The environmental programme focuses on sea and soil decontamination, preservation of watercourses and permeable surroundings, in a broader perspective of renaturalisation of hydro-geological forms and coastal biodiversity.

This presented strategy gives a guiding vision for the development of effective tools in conflict resolution inherent to waterfront transformations, and could be implemented by the application of qualitative-quantitative models for the assessment of ecosystem performance (terrestrial and marine renaturation, carbon sink) offered by CPIAs planning.

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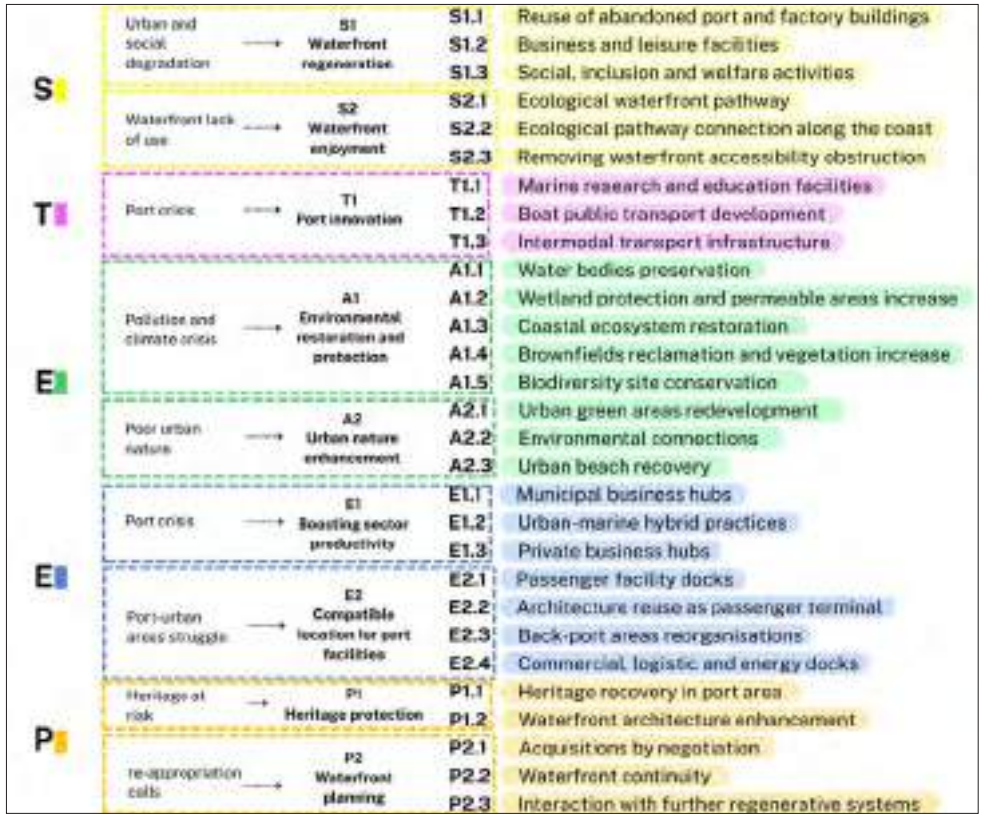

Fig. 1.
Strategy action set-up in STEEP framework (authors' elaboration)

Fig. 2.
Strategy plan synthesis for Brindisi port (authors' elaboration)

Port heritage enhancement for sustainable development: the case of Naples, Salerno and Castellammare port cities

Massimo Clemente, Gaia Daldanise*, Benedetta Ettorre** and Eleonora Giovene di Girasole**

Maritime culture and urban texture of port cities represent key realities for the economic development of territories by impacting on the well-being and quality of life of citizens. This implies the need to identify new services able of increasing the port's performance and the city's development in an integrated way.
In the international debate, cultural heritage enhancement has a key role in the definition of new trajectories of sustainable urban development (European Commission 2017; 2018; KEA European Affairs, 2017). In Europe, within port-city interaction areas (e.g. Rotterdam, Barcelona, etc.) some cultural assets have been transformed into laboratories of experimentation (Barcelona Tech City, 2020; Liverpool Baltic Triangle, 2020; RDM Rotterdam, 2020) for the sustainable management of cultural heritage and the urban quality of public spaces.

Starting from these studies and practices, the research developed a "Port Heritage Enhancement" approach to assess and plan cultural and sustainable transformations of historical-architectural buildings, industrial archaeology, and symbolic urban spaces within the port-city interaction areas (Daldanise & Clemente 2022; Ettorre, Daldanise, Giovene di Girasole & Clemente, 2023).

The methodological framework, aimed at improving the decision support system of port-city planners, is structured into three key phases: 1. Analysis of policies and practices, 2. Construction of port knowledge dataset, 3. Tools and Data Processing.

The Analysis phase involves several activities, including a scientific literature review and the prevailing port regulatory framework in Italy. Furthermore, a desk analysis of key policy documents and best practices, at both national and international levels, was conducted to identify the diverse analysis domains (Giovene di Girasole & Daldanise, 2021). Among these studies, it emerges that port heritage is widely recognised as key asset to identify new value chain for local development, in which cultural, social, environmental elements are the engine of economic sustainability.

In this perspective, starting from assessment frameworks on culture, creativity and sustainability (UNESCO, 2019; Montalto et al., 2019) five essential dimensions for regenerating port-cities were identified: 1) Port and maritime culture; 2) Port, innovation, and creativity; 3) Port, education, and human capital; 4) Port, knowledge, and dissemination; 5) Port in transition.

Within the collaboration agreement 2021–2022 between Institute of Research on Innovation and Services for Development (IRISS) of National Research Council of Italy (CNR) and Port System Authority of Central Thyrrenian Sea (AdSP), this approach has been tested on the Port of Naples, Salerno and Castellammare di Stabia in Italy to provide the with a strategic guidance as part of their efforts to draft a new Port Master Plan.

In the second step, the research analysed the three ports focusing on their historical and architectural heritage, selecting and analysing forty buildings and spaces. For each building and space, a comprehensive evaluation of their present condition and utilization status (in use, partially in use, disused, abandoned) was undertaken, inlcuding on-site assessments and an exhaustive review of documentation provided by the AdSP (e.g. Document of Strategic Planning of port authority System - DPSS).

This analysis facilitated the categorization of buildings and spaces based on their geographic location and primary attributes, resulting in the identification of various distinct categories: Buildings of Historical/Architectural Significance; Industrial Archaeology; Port–City Hinge Buildings; Urban Landmarks; Port–City Hinge Spaces; Spaces Linked to the Sea.

The third phase is aimed to address the identified gap concerning the limited application of ICT in sustainable planning for port–city interaction areas, an area that remains relatively unexplored. The process of census and cataloging produced an operational information database tailored on different user needs (Excel, GIS and Google Looker Studio formats). Within this database, the key characteristics and potential functions of each building and space have been documented in user friendly platforms.

The results encompass the establishment of an operational database to facilitate stakeholders within the Port, with the implementation of a deliberative decision-making process enriched by ICT. The tool was devised to seamlessly combine data visualization

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and spatial data integration (Figura 1), thus fostering collaboration between port and urban stakeholders.

The database was structured according to the principle of scalability. This means that the existing data structure can be expanded both vertically by adding more detail and horizontally by introducing new data categories.

This tool aids local stakeholders in understanding the various resources at their disposal, fostering cooperation in heritage management and the design of services that promote the reconnection of the port and the city. Moreover, the outcomes encourage public debate on co-planning scenarios by visualizing decisions, ultimately enhancing comprehension and transparency in the decision-making process at different scales.

In this context, ports continue to be logistic infrastructures but broaden their sphere of action, through innovative and collaborative governance able of becoming hinges with the city through the construction of a synergic relationship between the maritime cluster, the creative cultural sector and the territory, activating urban regeneration processes.

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Fig. 1.
Dashboard of Naples Port Heritage (elaboration of authors on Looker Studio)

Integrating UAV Infrastructures in Urban and Rural Landscapes: a Framework for Sustainable and Inclusive Development

Stefano Cunietti[*,**], *Chiara Sammarco*[**], *Ilaria Ferrando*[*] *and Domenico Sguerso*[*]

The presented work aims to establish the optimal positioning of infrastructures such as vertiports and air corridors to improve connection with remote areas, thus regenerating neglected regions without pollutant emissions CO2 emissions, hence reducing regional disparities in an environmental-friendly way. We considered the case of the Emilia Romagna region because of data availability, especially related to weather. After describing the proposed method, we illustrate a use case to show the benefits in terms of equality, climate change impact, and traffic congestion.

Our proposal falls within the scope of the 'Digital European Sky' initiative[1] and focuses on co-planning and decentralization. Taking as a reference the urban planning discipline, we propose a method to identify ideal locations for tangible and intangible infrastructure for drones. The Airport Risk Plan (Piano di Rischio Aeroportuale, PRA) is an example of the intersection between urban planning and aeronautical risk management, grounded in the Navigation Code. Its cornerstone, Article 707, along with Legislative Decree n. 96/2005, establish urban planning restrictions to mitigate risks in areas near airports, limiting activities such as chemical industries and healthcare facilities. UAV integration in urban landscapes extends beyond traditional aviation and requires strategic planning as envisioned in the Advanced Air Mobility (AAM) National Plan by ENAC[2]. In Italy, transportation planning is delegated to the regions, which are responsible for conveying national interest infrastructures to the Ministry of Transport. In the Emilia Romagna region, the current plan is the PRIT 2025, which mentions the development of drones, particularly small private deliveries. Additionally, Emilia Romagna implements intermediate plans between the municipal and regional levels, the provincial plans. These include the Urban Plans for Sustainable Mobility (PUMS) across one or more municipalities and the Urban Traffic Plans (PUT) for smaller towns.

The method we propose to identify ideal locations for vertiports, and air corridors is a 3-step process that exploits spatial analysis algorithms like Weighted Multi-Criteria (WMCA) and Least Cost Path (LCP). Considering orography, obstacles, meteorological seasonal information, mandatory regulations, protected areas, and bird migratory routes, we determine the optimal airspace-to-fly. This first step requires data preparation to convert the information stored in each layer into a "convenience-for-the-flight" factor, followed by a summation process based on WMCA. The second step, through iterative LCP calculations, aims to determine the optimal routes that maximize the objective, which – for the illustrated use case – is the number of remote areas served with one vertiport. The third step is the optimal vertiport positioning determination, which is calculated considering drones' energy constraint, main constraints for the vertiport placements (like public transportation system and energy supply network), and the regulatory requirements for the vertiport area. These last two steps may be switched according to the objectives' type, as shown in[3], which more deeply describes the method. It distinguished extra-urban and urban cases. In the urban case, the social acceptability factor - measured in terms of noise, privacy, and visibility impact - has a much greater relevance. Moreover, considering the population density, the classes of use of the buildings flown over, the Global Navigation Satellite System (GNSS) and 4G/5G signal coverage will be of interest for the corridor positioning.

Use cases within the realm of passenger and cargo transportation are the primary beneficiaries of the proposed method. In the cargo transportation context, large drones

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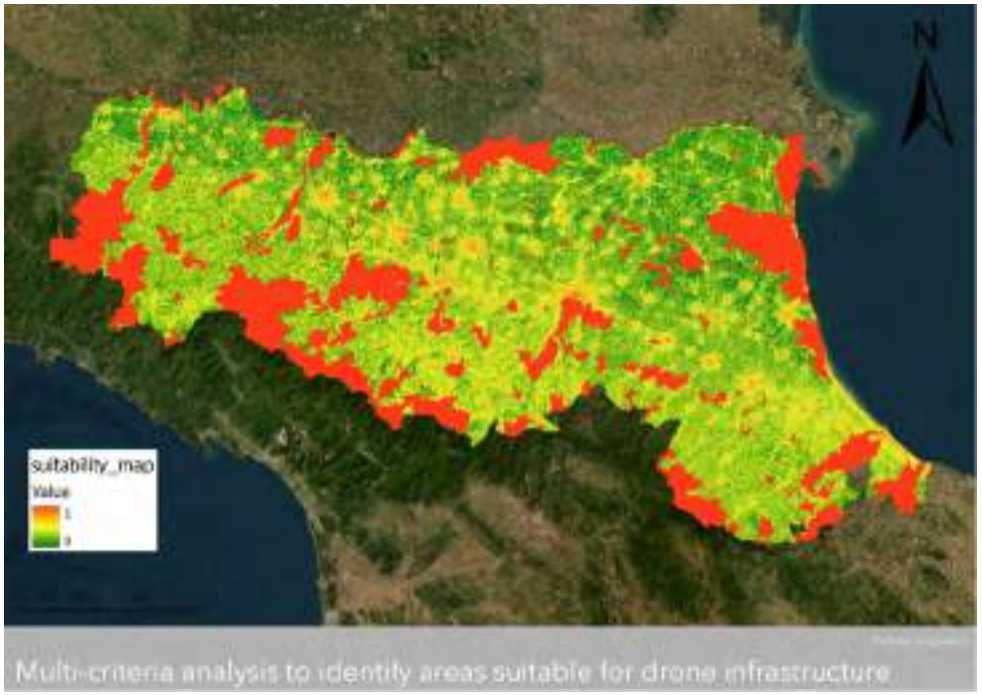
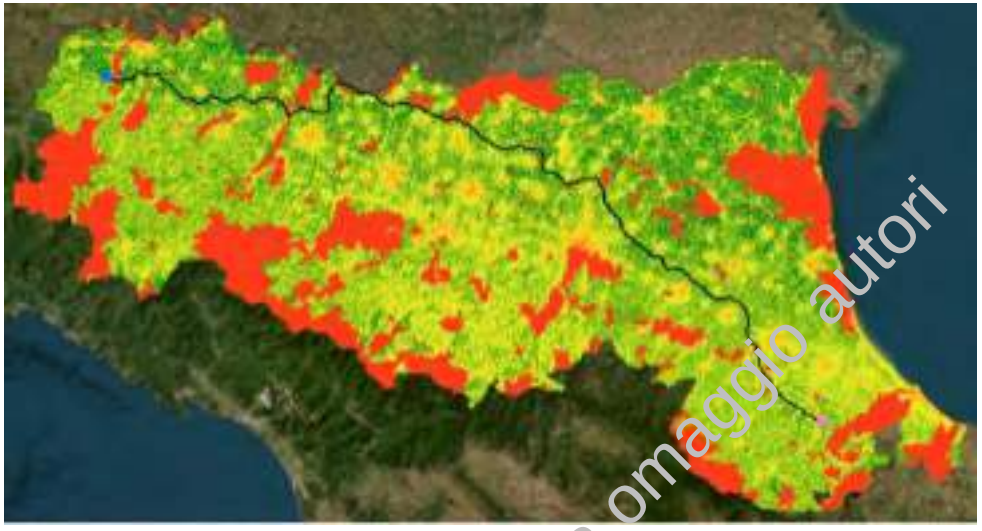
Fig. 1.
Multi-criteria analysis to identify areas suitable for drone infrastructure (0) or not (1)

Fig. 2.
LCP in the multi-criteria analysis between two points





travel from distant locations to a logistics center. Once they reach the delivery point, the "last mile" is handled by smaller drones that deliver them to the destination or a pickup point. In this case, our solution would assist the authorities in improving connections with remote areas while planning the most convenient flight routes, considering relevant factors for urban and extra-urban cases. Therefore, such infrastructural integration will promote a more inclusive and, also, sustainable development. Indeed, the eVTOL (electric Vertical Takeoff and Landing) vehicles used for the envisioned transportation, being electric, will avoid emissions as with traditional transportation routes. Moreover, using the air as a transportation system would help alleviate potential traffic congestion issues on roads.

In conclusion, in a historical moment where discussion on advanced aerial mobility as an integral part of the future of transportation is gaining ground, the project's envisioned process wants to promote inclusive decision-making, crucial for the success of drone infrastructure that hinges on cooperation between public and private stakeholders. The core of this strategy is the identification of ideal locations for air corridors, and vertiports, essential for drone takeoffs and landings, ensuring their strategic placement throughout the region to optimize the transportation of goods and people, avoiding high-risk areas according to safety regulations. The proposed method will effectively highlight the strengths and weaknesses introducing such infrastructures in a particular place. The envisioned outcome is an extended and integrated urban transportation system where technology, people, and nature harmonize, steered by principles of sustainability and inclusivity.

Integration between land-use and climate action for port cities. The case study of Port of Hamburg

*Irina Di Ruocco**

At the regional, national, and worldwide levels, the Port of Hamburg creates a great deal of employment and plays a major role in value creation since it is a pan-European center with excellent connections to international marine trade routes. The Port of Hamburg is directly or indirectly responsible for around 607,000 employment, 51 Bn € of gross value added, and 2.57 Bn € in tax revenue in Germany. The port gains additional advantages from its central location inside a creative and thriving urban area. Because of its distinctive inland location, it offers resource-efficient, ecologically friendly water transportation to the center of one of Europe's primary import regions. Hamburg is unique in that a large percentage of rail transportation uses the port railway network. The Port Development Plan of Hamburg city is guided by four principles: I) Value creation and quality, II) Sustainability and climate action, III) Innovation, IV) Customer focus and competitiveness.

Developing a land use strategy is essential to directing port growth toward the future. The objective is to enhance value generation, actively encourage structural transformation, and keep prosperous businesses in the port. By drawing in new businesses and sectors, Hamburg's multipurpose port will grow and be reinforced. The relevance to port operations and the guiding principles of value generation, sustainability, and competitiveness will be given more weight when awarding land. Urban transformation concerns the different infrastructures present in Hamburg: green, road, water, and pedestrian. The central port area is the focus of development for the connection between port and land use. The "Port Area" is being redesigned to enable attractive new developments, especially in the Steinwerder Süd area. The Waltershof area, which focuses on container handling, will also be expanded in the coming years to increase production capacity. For example, the "Western Expansion" project will extend the existing terminal area "Predöhlkai" and install two new berths suitable for large modern container ships. The Port of Hamburg also wants to position itself as a center for sustainable energy. Sustainable companies in the energy sector (storage, processing, suppliers, service providers, etc.) are participating on priority basis in the development of former fuel bases.

Concerning the revolution for land-use, a particularly important project is the development of the new Grassbrook area near the harbour. In addition to the new residential area, the district also includes Hafentorquartier, a future-oriented commercial district for innovative and value-added companies connected to the port. Harbor is full of interesting places, viewpoints, and experiences. Improving access to and between these attractions is important for visitors, residents, and dockworkers, whether traveling on foot, by bicycle, public transport, or private vehicle. The plan is innovative and integrates port functions with city ones, in which urban transformation is present and protagonist. Supporting port activities with neighbourhoods translates into determining actions for emissions and environmental quality. To achieve net zero carbon operations by 2040, the Port of Hamburg is drastically cutting emissions of greenhouse gases and other pollutants from cargo handling and transportation. Standardized carbon reporting, based on the approach outlined in the Hamburg Climate Plan, will be implemented for the port in order to oversee and manage this process. The switch to new energy sources will be a crucial sustainability step. A comprehensive review of the circular economy's potential for sustainability and value generation will be conducted, involving pertinent enterprises and stakeholders. Additionally, initiatives to promote a resource-conscious, circular planning and building system are being proposed. The plan calls for cutting-edge infrastructure tactics backed by a digital transformation process that involves ongoing communications infrastructure growth. From a practical standpoint, the port's physical infrastructure will be planned and maintained predictably with the use of sensor technologies and building information modeling (BIM) processes. For digital twin assets, BIM can be utilized to gather current and pertinent data across the course of the port infrastructure's existence. The homePORT innovation complex, which offers the maritime

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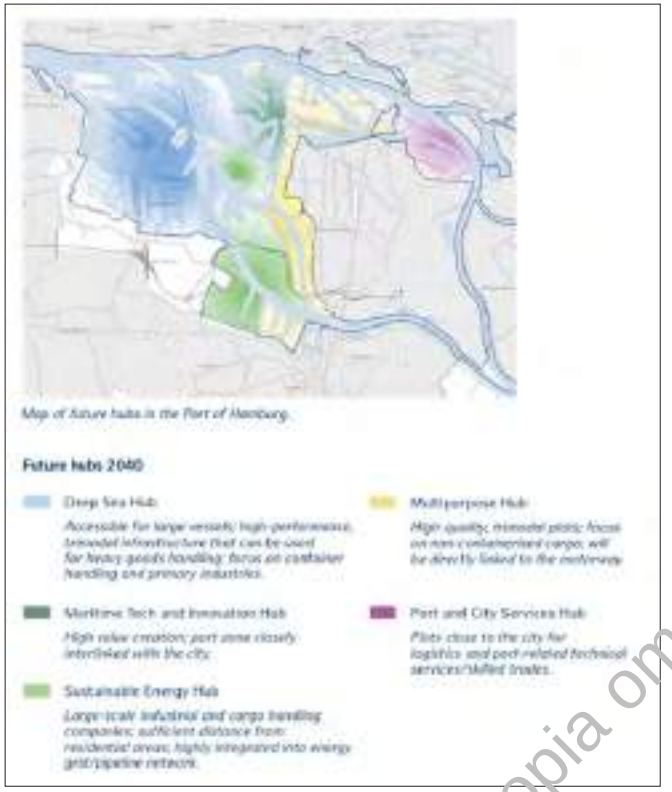
Fig. 1.
Port Traffic Hub. Source: 2040 Port Development Plan

Fig. 2.
Map of future hubs in the Port of Hamburg. Source: 2040 Port Development Plan



sector a real-world laboratory for the development and testing of novel technologies, will be a crucial foundation. The goal of the national Border One Stop Shop (BOSS) pilot project is also to improve digital cooperation between the agencies in charge of managing imports of goods into the Port of Hamburg. Any measures carried out at port city interfaces need to consider both port strategic and urban development aspects. Communication between stakeholders is useful and should be continued, particularly regarding the spatial interface with cities. The Port of Hamburg's outstanding hinterland links and diverse economic environment are important factors in its success. The port also gains from its location at the center of a creative, thriving urban area. Because of its distinctive inland location, it offers resource-efficient and ecologically friendly water transportation to the center of one of Europe's primary import regions. Hamburg is unique in another sense since a large amount of rail traffic uses the port railway network. This nearly 300-kilometer network ensures quick, economical, and ecologically friendly logistics.

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The culture of integration for the sustainable development of port cities. The case of Livorno as a national best practice

*Massimo Clemente, Benedetta Ettorre**

The regeneration of city-port interface areas represents one of the most powerful and complex challenges of contemporary coastal cities (Carta, 2021). This complexity arises partly because ports are often situated as peripheries within the heart of cities and partly due to the limited adequacy of existing models of port governance. The loop that encompasses the abandonment, neglect, recovery planning, reuse, and revitalization of port areas, along with the construction of port infrastructure suited to contemporary needs, involves an intricate network of often conflicting actors and interests (Ettorre, Daldanise, Giovene di Girasole, Clemente, 2023). Stakeholders in the purely port sphere, including government authorities, policymakers, city planners, logistics and freight service providers, etc., are contrasted with actors in the urban spheres immediately adjacent to ports. The latter group of actors, having less economic power, often play marginal roles within decision-making processes. As evidenced by several studies (Pugliano et al., 2018; Sanchez, 2016; Parola, Maugeri, 2013; De Langen, 2006), economic aspects of logistics activities take priority in the port context while the issue related to the urban regeneration of degraded areas is not recognized as urgent by actors with greater decision-making power. In this context, the adoption of collaborative decision-making processes becomes crucial for the mitigation of both internal and external conflicts and, consequently, for the reconstruction of urban and social networks that have deteriorated over time.

Building upon the review of frameworks and reports developed within the 2030 Agenda for Assessing the Sustainability of Port Cities and Activities (AIVP, UNCTAD, ESPO), this study aims to demonstrate how the application of collaborative governance models in port cities can create an enabling environment for the emergence and success of new regenerative initiatives. To achieve this, an interpretive grid was developed for the identification and evaluation of transferable and scalable best practices. In the initial phase, the use of the open-source SDG Impact Assessment Tool (SDSN, 2020) facilitated the identification of the Sustainable Development Goals and related indicators on which the adoption of collaborative practices within contemporary cities would produce the greatest impact. The intersection of these elements with the objectives of AIVP, UNCTAD, and ESPO has shifted the focus toward port cities, providing the necessary dimensions for the analysis of case studies. Four focus areas have been defined concerning port-city integration processes viewed through the lens of collaborative governance: culture, environment, new technologies, and economic growth. The interpretative framework was applied to the context of Livorno, which has been on a well-defined and solid path in constructing a new city-port relationship for several years. This effort culminated in the Municipality introducing a department with a delegation for port-city integration, a pioneering example in Italy. The analysis of the practices and processes implemented highlighted the transformations and benefits generated by the intense and fruitful collaboration between port governance and citizen bodies in the four identified focus areas.

In recent decades, the Tuscan city has undergone a notable process of transformation and a progressive reconnection between the city and its port. This transformation has been driven by the development of significant infrastructure, the redevelopment of abandoned and disused port buildings, and a constant search for integration between the port and the city. Key milestones, such as the signing of the Livorno Blue Agreement, the establishment of steering committees to support the economic and social resilience of the city during the Covid-19 pandemic period, and the organization of events aimed at aligning the business world related to port activities and logistics with the applied research system, are just some of the transformations identified through the use of the interpretative framework.

Regarding urban regeneration initiatives, the case of the "Porta a mare" project has been

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identified and explored. In this context, the incorporation of directives for the demarcation of the city-port interaction subzone and the port regulatory plan by local urban planning instruments (Mariano, Racioppi, 2024), combined with the implementation of a collaborative decision-making process supported by local authorities, has led to the redevelopment of the neighborhood as a multifunctional waterfront. This initiative has returned to the city an area that constitutes a unique heritage for the community, inaccessible for years. Based on the proposed in-depth analysis, the Livorno case study becomes significant because it demonstrates that transitioning from a vertical (government) to a horizontal (governance) perspective allows for the construction, on one hand of a unified vision of the coastline starting from its cultural significance, and on the other hand, for overcoming the issue of fragmentation in plans and projects within the coastal system.

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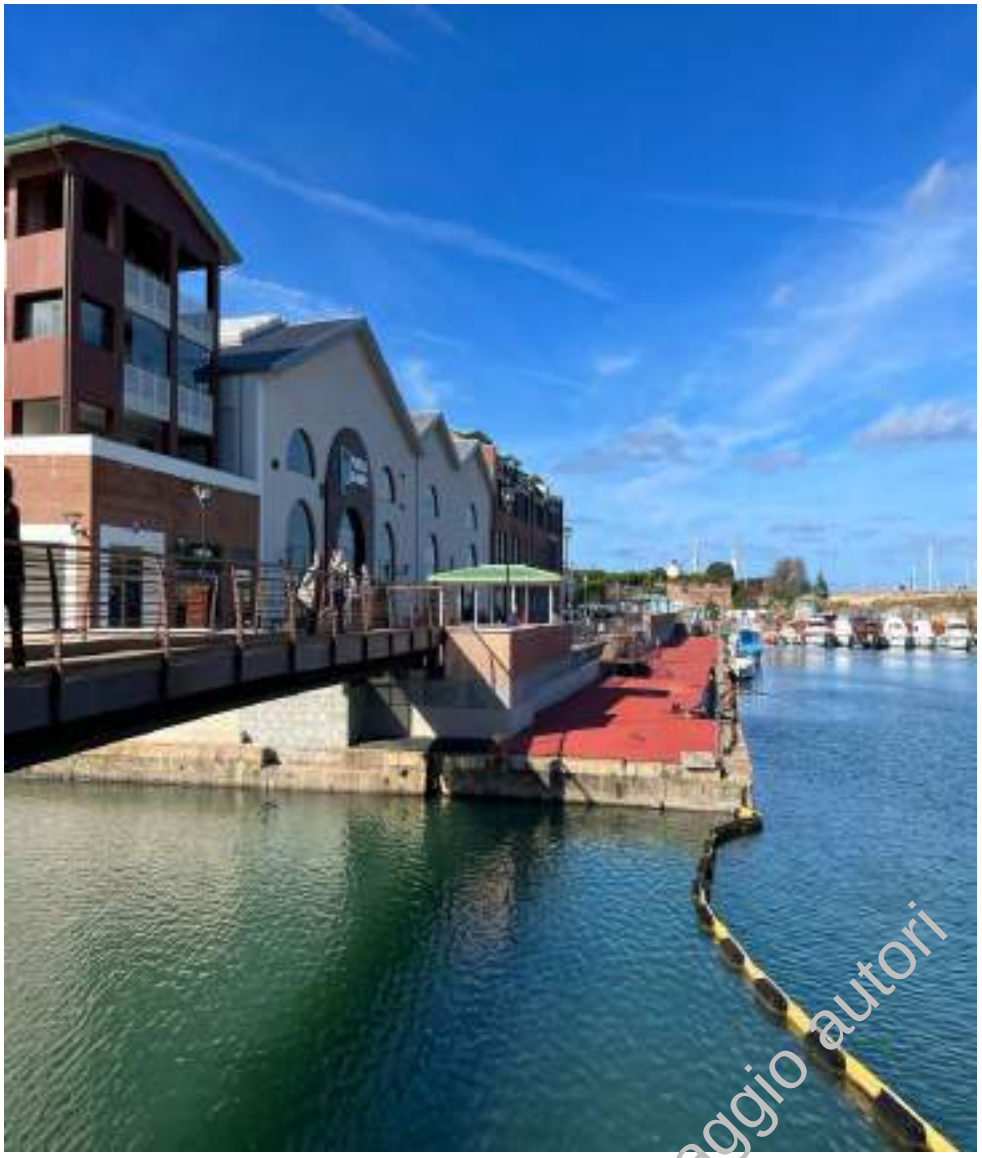

Fig. 1.
View of the "Porta a Mare" neighborhood (Foto: M.Clemente)

Exploring unrevealed land-maritime borders in the Eastern Mediterranean through infrastructures

*Carlotta Giordani**

The context: the Eastern Mediterranean migration route

In recent years, migration issues have become central to the public policy agenda (Ataç, Rygiel, & Stierl, 2016). The recent EU legislative ongoing reform and the currently amended Italian legal framework along with the implementation of pushbacks and harsher borders' control are merely confirming the attestation of the politics of *non-entrée* (Moreno-Lax 2008; Gammeltoft-Hansen e Hathaway, 2014). Migratory journeys, in the last decade, happened to appear necessarily subject to a variety of "organizational structures" that shape and sanction people movements. This overall situation leads migrants on to experiencing a permanent transit condition (Hirsch, Bell, 2017; Marconi, 2016; Düvell 2012) and - when crossing a border or temporarily residing in a city - territorial segregation.

Since 2014, the Eastern Mediterranean has been an important access route for refugees, asylum seekers, and migrants who have reached Europe from the Middle East, Asia, and Africa. The Eastern Mediterranean route refers to the migration route to Greece, Cyprus, and Italy, by land and sea, mainly through Turkey. With the March 2016 agreement, the EU delegated de facto control of part of its external borders to Turkey (Yılmaz-Elmas 2021) causing an initial and gradual decrease in entries to Greece, only to see a further increase to 36,310 people in 2017 and 50,508 in 2018. In 2022[1], there were about 42 800 irregular border crossings detected on the Eastern Mediterranean route, which includes the Adriatic route.

Borders as infrastructures: dwelling into the 'infrastructural approach'

Some of the existing literature on mobilities studies describes infrastructures as a "system of substrates through or upon which humans and non-humans are moved" (Star 1999, Hannam et al. 2006, Collins 2017). More in specific, the term infrastructure stresses the idea of selective channels which construct barriers for some and ease access to a territory for others (van Heur 2017).

Migration (infra)structures – i.e. not only physical structures but also technologies, institutions, and actors that influence mobility – can explain how mobility is shaped by the interaction between material infrastructures and public policies: the relation between migratory journeys and infrastructures used during them (Crawley et al. 2018). In this way, the 'infrastructural approach' entails that today any migratory journey is necessarily dependent on a "variety of organisational structures that shape opportunities for, and sanction certain movements" (Lin, Lindquist, Xiang, and Yeoh 2017).

Likewise, the concept of borderscape (Brambilla, 2015; Perera, 2007) alludes to a kaleidoscopic geo-political-cultural space created by the many interactions, both symbolic and material, that revolve around a physical boundary (Cuttitta 2021). Therefore, the 'infrastructural approach' and the concept of borderscape stay into the nexus between spatiality, human beings, and public policies (Gibson 1977; Schiffer 1999). For this reason, interrogating migration infrastructures allows the explication of different mobility regimes of people in transit (Lin, Yeoh 2016). While much has been written about transit migration in general, less literature focuses specifically on migration infrastructures as transit migration hubs (Düvell, Preiss 2022): the regulation of mobility is tied to new forms of functional use of infrastructural boundaries – both at state and city scale (Wimmer, Glick Schiller 2002; Cresswell 2010).

Infrastructures as borders: ports as land-maritime borders

Recent studies in mobilities have shown a growing interest in the myriad of infrastructures that daily support the movements of people, objects, and even Internet signals (see Crang, Crosbie, and Graham 2006): infrastructures can be most broadly understood as

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[1] https://www.frontex.europa.eu/what-we-do/monitoring-and-risk-analysis/migratory-routes/eastern-mediterranean-route/

socio-technical platforms for mobility (Larkin 2013). As is well known, internal EU borders have been reintroduced through the enforcement of border controls at transit locations between member States: much attention has been focused on research on *land border locations* such as Calais on the French-UK border (Agier et al, 2018), Brenner on the Italian-Austrian border (Weissensteiner, 2015), Ventimiglia and Valle Roja on the Italian-French border (Giliberti and Queirolo Palmas, 2020). Regarding *transit by sea*, on the other hand, the focus has been on the central Mediterranean route, given the numerical relevance of the flow of migrants that characterizes it. In this sense, it may be considered how the militarization of the Mediterranean has brought the concept of "safe harbour" to the center of the public debate on sea-based migration, but a port is not safe *per se*, it becomes safe based on the functional purpose it is given. Border zones with their own autonomous purpose can be built on coastal areas, land-sea borders that, like land borders, perform a containment function (Taylor, 1999), characterized by the peculiarity of the space in which they insist: the port. Notwithstanding the productive and political nature of infrastructures, the port system has remained made up of a regulatory set that is not easy to reconstruct, in which regulations of a general nature are overlaid with those of a special or singular nature, dictated in relation to each port realities in the territory (Premont et al. 1996). Adriatic ports, and cities on the Adriatic coastal areas, could therefore be given a new significance and direction as infrastructures in consideration of their peculiarity as land-maritime border as specific part of migrants 'transit *through* – and not *to* - the ports of the Eastern Mediterranean route.

Between protection and land development: evaluation of a strategy

Federica Isola, Federica Leone***

The Region Administration of Sardinia (Italy) with the collaboration of the research group of the University of Cagliari to which the authors belong is developing the Regional Tourist Port Network Plan to make the Island's entire coastline navigable and safe for nautical tourism. The initiative follows the 2010 Feasibility study on the Island's network of tourist ports to improving the tourism infrastructure and encouraging the local economy. This Plan includes the construction of new port facilities, with a focus on the coastal slopes most exposed to adverse weather and sea conditions. From this perspective, this study has evaluated the landscape and environmental impacts of the proposed interventions in the Plan within the framework of the Strategic Environmental Assessment process. The assessment process has considered the most sensitive environmental and contextual factors that may be affected by the potential infrastructural constructions. In particular, the study has developed an assessment model to identify the optimal location for the regional tourist port, considering its development prospects. The evaluation model is crucial for identifying the area's most susceptible to transformation because it considers environmental and landscape aspects in relation to land use and possible developments. The level of transformation is defined based on territorial and spatial elements, taking into account their level of protection and the potential impact of new infrastructures. The methodology integrates protection strategies and spatial development strategies using three assessment classes that determine the degree of transformability of a given stretch of coastline based on the scenarios defined in the Plan. Transformation class and level are defined based on territorial, point, and areal elements, their level of protection, and potential impact factors of new infrastructure. The model will enable a preliminary analysis, which will be further verified during subsequent project phases. Conducting specific geo-spatial analyses at the local scale will determine the ability to transform. The evaluation model defines three classes of evaluation, as described below:

- The "Restricted areas not subject to transformation" Class identifies areas that are subject to conservation and protection constraints. Our aim is to preserve the constituent elements and their relative morphologies in order to maintain their integrity.
- The "Restricted areas with the possibility of transformation" Class is divided into two sub-categories:
  - "Restricted areas with a low level of transformation" are areas that require landscape authorization and/or approval from relevant bodies before any transformation can take place during the planning stage. To achieve valorization in these areas, we must ensure adequate protection of the territory to prevent potential risks, maintain a lasting balance between human activities and the environment, and enhance ecosystem functionality. It is crucial to identify and address any potential risk situations.
  - "Restricted areas with a high level of transformation" are subject to both environmental and historical-landscape constraints. The level of transformability of these areas must be verified during subsequent planning phases, taking into account the presence of constraints and obtaining authorization from landscape and reference authorities during the design phase.
  - The Class "Areas suitable for transformation" identifies areas that can be transformed without any current constraints.

In particular, the Plan presents three scenarios (Fig. 1). Scenario A, "Conservative Scenario", preserves the existing spatial configuration of the network of marinas, including those

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Fig. 1.
The environmental landscape sustainability assessment Model - Scenarios A, B and C. Source: Tables of the Sardinia Regional Tourist Port Network Plan, 2023.

Fig. 2.
Evaluation model - Scenario B

SCENARIO B					
	Areas excluded from assessment	Restricted areas not subject to transformation	Restricted areas with possibility of transformation		Areas suitable for transformation
			Low degree of transformation	High degree of transformation	
Classification	The system exists and 'works well' and it is therefore not a priority to intervene. It is therefore not preferable/priority to intervene in these areas, although there is no absolute constraint in doing so.	The system is characterized by areas subject to conservation and protection aimed at maintaining the characteristics of the constituent elements and their morphologies so as to preserve their integrity. Rarely controlled. No Habitats.	The system is characterized by constrained areas whose transformability is subject in the planning phase to landscape authorization and/or nulla osta by the reference authorities. For these areas, the objective of valorization must be combined with adequate land protection	The system is characterized by constrained areas where transformation is subject to landscape authorization and/or authorization from the relevant authorities during the design phase	The system is characterized by transformable areas in which there are no constraints.

that are existing, planned, and under construction. As such, the model is not applicable to this scenario since the interventions are focused on areas of the territory that have already undergone transformation. Scenario B will expand the network's spatial configuration and enhance the existing port; new port infrastructures will be implemented to ensure the safety of recreational navigation along coastal areas. Scenario C is defined as the "Growth and Development objective Scenario". The results of the study highlight how the interventions aim to achieve a continuous, widely distributed, and homogeneous spatial articulation of port structures along the entire coastal arc.

A further consideration concerns the objectives of densification of port along coastal stretches that lack them, the study proposes the localization of new ports within 10 nautical miles and a few hours of navigation from each other. The model was applied exclusively in coastal areas where a navigation distance of less than 20 nautical miles could not be guaranteed.

In conclusion, the location and realization of interventions are defined by specific criteria focused on environmental, urban, and landscape aspects and are utilized to evaluate the feasibility of the Plan's location choices. In the image below, the table explains the territory and associated restraint levels for each Class (Fig. 2).

Plan of the Tourist Port Network of Sardinia

Italo Meloni, Massimiliano Ponti**, Giuliana Caruso* and Massimiliano Mongelli**

The Autonomous Region of Sardinia recognizes nautical tourism's strategic importance for the entire regional tourism sector and widespread economic growth. With the technical-scientific consultancy of the University of Cagliari's Department of Civil, Environmental, and Architectural Engineering (DICAAR) from 2020 to 2023, it developed the Regional Tourism Port Network Plan, coordinated by the Regional Department of Public Works. The goal is to legitimize nautical tourism and tourism ports, crucial not only for the tourism industry but also for regional socio-economic development. The policy focuses on strengthening port infrastructures' role in socio-economic landscape structuring, requalification, and capitalization of territorial resources, promoting sustainable development.

Planning Method

Addressing nautical tourism complexities requires **a systemic approach**, considering infrastructural, functional, managerial, economic, social, and environmental aspects. Nautical tourism integrates best within a complex system that encompasses traditional and territorial, landscape, economic, social, and tourist elements. The Plan shapes a multi-purpose territorial system, a "**territory project,"** fostering sustainable development through spatial and functional impacts, balancing technical, environmental, economic, and social aspects for medium to long-term positive impacts on individual well-being and the social and economic growth of local communities.

Infrastructure Component

The infrastructure component of the project takes on a broader role, not only fulfilling functional aspects but also contributing to economic and social benefits in a complex system of territory, community, and environment for the enhancement and management of the common good. The Plan does not only focus on planning port infrastructure but also extends its action to a broader context to address the identification of impacts on environmental, economic, and social components that these infrastructures may contribute to generating beyond the strictly coastal territory. The Plan is complete by implementing appropriate and innovative engagement and participation activities with the "public" and the "community," aiming to create new forms of cooperation and activate direct interaction with the concerned territory, promoting a shared initiative process, focusing on the sensitivity of stakeholders and the needs of the territory and communities.

System Components

- The territorial nautical tourism system of the Sardinia region includes:
- A set of nautical service infrastructures (tourist ports, moorings, anchor points, buoy fields, etc.) at the regional level, spatially and functionally integrated along the entire island's coastline, connected on the terrestrial side with the rest of the territory and intermodal integration nodes for interregional accessibility.
- One or more structures dedicated to port shipbuilding activities (at the local level and in highly equipped hubs), especially those related to ordinary and extraordinary maintenance (production activities are usually limited to highly developed ports).
- A complex of direct services dedicated to meeting the needs of pleasure craft and nautical tourists.
- A network of terrestrial transport integration nodes, with different levels of the transport network (urban, local, regional), different vehicles (individual and collective), public and private means of transportation, to establish physical and functional connections with the inland territory.
- A market for nautical products that includes all sector operators (port and marina managers, shipbuilding and storage companies, sellers of nautical products and boat builders, sellers of charter services and maritime services).

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Fig. 1.
Strutture per la nautica da diporto esistenti, scenari A, B e C

- A coordination and management structure of the system (regional office for nautical infrastructure and tourism), necessary to implement and manage over time an efficient nautical tourism system.

Planning Scenarios (see Fig. 1 below)

The Plan proposes the construction of spatial configuration scenarios for the network to be implemented over a medium to long-term timeframe with a target year of 2055. The different scenarios may not be mutually exclusive. In a medium to long-term perspective, they could be considered sequential, with implementation times assigned to each scenario.

1. Conservative Scenario (No Intervention):
   Realized in the target year without new interventions beyond those already in the implementation phase.
2. Expansion Scenario of the Spatial Configuration of the Network, Technical Efficiency Improvement, and Structural and Functional Growth of Existing Port Facilities:
   The scenario aims to secure and make the sailing along the entire regional coastline of Sardinia more comfortable, increasing the number of port structures in coastal stretches lacking safe ports for more than 20 miles and exposed to the most adverse marine weather conditions. It also involves increasing the degree of connection/integration between the port structure and the surrounding inland area.
3. Development and Growth Scenario (Objective Scenario):
   Densify the offering of port structures and berths along coastal stretches with strong tourist and bathing attraction that have significant landscape and cultural emergencies inland, capable of intercepting the potential demand for nautical tourism currently unexpressed and unsatisfied. These become the gateway to the territory (territory project) with one port every 10 miles.

Strategies, functional taxonomy, and typologies for planning city-port interaction areas

The complex relationship between city and port: towards integrated planning

Carmen Mariano, Maria Racioppi***

One of the open questions in the scientific and disciplinary debate concerns the difficult relationship between city and port in terms of governance and the regulatory framework governing the planning of city-port interaction areas (1) (2) (3). The relationship between city and port has always been complex and articulated, but at the same time full of challenges and opportunities. On the one hand, the port represents an important commercial and logistical hub, a source of economic development and a driving force of the local economy. On the other, it can generate conflicts over the allocation of competences of the city-port interaction areas, which become a complex area of confrontation where balancing the different needs requires an innovative and integrated vision.In this context, the contribution returns some of the results of the PhD research "New challenges for port cities. Experimentation and innovation of port and local planning tools" within the framework of the PhD in Planning, Design and Technology of Architecture of the PDTA Department Sapienza University of Rome (tutor Prof. Carmen Mariano). The general objective of the research is the elaboration, through an inductive analysis, of new theoretical-methodological and operational references for the innovation of the Local Urban Plan in order to recompose the conflict in the so-called city-port interaction areas.The specific objective of the contribution is to elaborate a methodology for the integrated planning of city-port interaction areas through a survey of the state of the art of port town planning instrumentation in the national sphere, going through the regulatory framework that regulates the planning of areas of overlapping local and port town planning instrumentation. These are areas located between two urban systems, the port and the city, and which can generate conflicts of environmental, settlement and infrastructural derivation, as well as conflicts arising from a difficult attribution of competences. The laws of 1994, 2016 and the Ports Correttivo of 2017 established the Port System Authorities (AdSP) with the task of guiding, planning and coordinating the ports in their area. Urban planning instrumentation is divided into two levels: a strategic one, represented by the Strategic Planning Document (DPSS), a detailed document that provides long-term guidelines for individual port plans, and an operational-regulatory one, represented by the Port Master Plan (PRP), which concerns the specific plans for each port, including the definition of the areas of interaction between city and port. However, the law does not provide precise indications on how to define these areas, leaving many open questions. The methodology developed involves three macro-phases: 1. Survey and Evaluation: Knowing to Understand and Classifying to Manage;2. Integration and elaboration of strategies and operational references for the innovation of the local urban plan: Innovating for planning; 3. Application of the methodology. Specifically, the contribution contextualises the first macro-phase by arriving at an explication of the categories of city-port interaction. The first macro-phase consists of three steps: 1.1 The first provides for a reconnaissance of the current port planning instruments of the Italian Port System Authorities (AdSP); 2.1 The second provides a functional taxonomy of port city planning instruments that analyses the functions involved within the sub-environments of city-port interaction; 3.1 The third involves the experimental definition and categorisation of three types of city-port interaction as a result of the previous ones. Through a reconnaissance of the port urban planning instrumentation (updated to December 2023), the Port System Authorities (AdSP) were identified and the ports that are equipped with Port Planning post 2004 and that include within them the subdivision into City-Port Interaction Areas. This study helps map the d' areas through an analysis that considers physical connections, functional compatibility, current uses, and specific

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The research is part of the PhD programme "New challenges for port cities. Experimentation and innovation of port and local planning tools" at the PDTA Department Sapienza University of Rome (tutor Prof. Carmen Mariano).

interactions related to port functions. The survey made it possible to classify the areas of interaction into three main categories: 1. Typology of interaction with a predominantly port function; 2. Predominantly urban interaction typology ;3. Mixed interaction typology or "urban port". The areas of mixed interaction are the next areas of in-depth study. These are areas that balance urban and port needs and require joint planning between the Port System Authorities and the local administration, hence between port and local urban planning. The innovativeness of the contribution lies in the attempt to promote 'a unified and shared action of territorial government in the areas of interaction between the city and the port', to overcome the difficult dialogue between the two administrations and authorities involved, due to the presence of two distinct regulatory plans, the port and the local plan. The contribution offers a first step towards the recomposition of conflict in areas of city-port interaction. The proposed methodology, based on area categorisation and integrated planning, can support the public administration in co-managing and co-planning these strategic areas for port cities. The research will continue with the testing of the methodology in an applied case study in order to verify its effectiveness and applicability in different contexts.

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The role of railways toward sustainable and cohesive territories

An integrated approach for the territorial impact assessment

Mario Tartaglia, Serena Martini**, Chiara Ravagnan**, Chiara Amato***

The growing attention on the territorial impacts of transports policies and infrastructure projects is fostered by the progressive strengthening of sustainability and cohesion among the great objectives of the European Union. This attention has boosted research paths of the many companies and sectors of the Italian Railway Group (FS Group) to update the methodological frameworks related to the evaluation of the socio-economic and environmental impacts of railways from an integrated territorial perspective. In fact, mobility infrastructures represent a main sector that contribute to the socio-economic, spatial reorganisation and environmental sustainability objectives, both directly, by improving accessibility, and indirectly, with a series of complementary interventions (es. public spaces) and indirect impacts (es. reduction of travel costs and time). In particular, railways can reduce greenhouse gas emissions, improve the goods traffic, increase the quality of services, and create indirect benefits for all citizens and users. On the other hand, a low transport endowment and quality, with consequent high transport costs, together with a low competitiveness, can have negative impact on the territorial development (Prezioso, 2020).
In this framework, the Next Generation EU, the NRRP and the Procurement Code in Italy have given rise to new environmental and socio-economic projects assessments, fostering the elaboration of new documents, such as the *Sustainability Report*, to deepen multi-dimensional impacts of projects, including Life Cycle Assessment and Territorial Impact Assessment (TIA).

To this end, in order to evaluate the potential of Transport infrastructures projects on territorial cohesion, interpreted as the "territorial dimension of sustainability" (Camagni, 2006), and in consistency with the scientific debate on TIA methods, the Italferr Sustainability Unit and the FS Research Centre have developed a joint study to propose a framework of pillars and indicators for the assessment of railways projects territorial impacts. This activity takes into consideration various phases in order to define guidelines for *the TIA methodology* relating to railways (Fig.1): (1) the delineation of a methodological framework of indicators, which is mainly illustrated in this abstract; (2) ongoing discussions with experts and development of the model, including the discussion in international conferences; (3) the next steps relating to institutional and local stakeholder feedbacks; (4) within these phases, the methodology has been experimented in project cases. In particular, the research path presented in this abstract involves phase (1) and (2) and is articulated in 3 steps: (a) the literature review on territorial cohesion that points out the main pillars of the TIA; (b) the literature review on the TIA methods and sustainability protocols for infrastructure projects for the selection of indicators; (c) a proposal of a framework of pillars and indicators for the TIA for railways projects supported by cases.

With regards to the literature review (a), *territorial cohesion* is relatively recent and commonly understood as a concept made up of multiple interconnected dimensions (Prezioso, 2020), mainly aimed at counteracting the prevailing tendency of territorial and economic polarisation around the most competitive and populated regions. This concept has been progressively highlighted in several EU emblematic documents, including the ESDP (1999) and the Green Paper on territorial cohesion (2008), which states: "the concept of territorial cohesion builds bridges between economic effectiveness, social cohesion and ecological balance, putting sustainable development at the heart of policy design". Despite the absence of a unique definition, the literature review point out a convergence on several crucial aspects: reduction of socio-economic disparities, rebalancing of access to services, efficient use of territorial capital, improvement of territorial cooperation and integration, local identity protection, contribution to territorial quality and the efficiency of the environmental resources, as well as mitigation of climate change.

With regards to the studies on TIA (b), many researches (including ESPON) have

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Fig. 1.
Research path

Fig. 2.
Indicators framework

proposed multi-dimensional TIA methodologies and tools (Camagni, 2006; Medeiros, 2020; Prezioso, 2020), showing convergences in infrastructure projects assessment. In particular, the TEQUILA - Territorial Efficiency, QUality, Identity Layered Assessment model (Camagni, 2006) proposes an "operational notion of territorial cohesion" paying attention to territorial efficiency, territorial quality, territorial identity.

In order to propose a summary and comparison of the references of these studies, the research used an inductive methodology to select the pillars and indicators (c), compared with the Envision Protocol, a rating system of infrastructure sustainability. The selected indicators are illustrated as follows (fig. 2) and supported by metrics. The purpose and interest of the study are not to propose a new methodology that is unrelated to the other methods, but rather to begin establishing an integrated, open, and consolidated framework of indicators that can meet the main requirements of the Sustainability Analyses, in order to build a bridge between economic effectiveness, social cohesion and ecological balance, as stated by the Green paper. The methodology is actually used to assess several projects including the Doubling of the Decimomannu- Villamassargia line (in Sardinia, Italy).

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Parallel Workshop

10. Underground space

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VCHM – Venice Central Hub Mestre: Think deep to create metropolitan cohesion

Gianfranco Gramola, Markus Hedorfer**, Matteo Montagner***, Donatella Schiuma**** and Roberto Misceo******

The Venice metropolitan region has a highly untapped spatial development potential. At the beginning of the 20th century large industrial plants were the basis of Mestre's demographic growth. The inability to tackle the subsequent economic structural changes highly reduced new occupational opportunities. Tourism became one of the most important sectors, with negative impacts and badly distributed economic benefits. Venice-Mestre has low economic attractiveness though being an important transport hub connecting motorways, railways, port, airport and 2,000 hectares of industrial land. Internal mobility, especially in the lagoon, is problematic.

This work represents the outcomes of an informal think tank created in 2016 by a group of local professionals offering a vision for Mestre and Venice to the population, city administration and regional entrepreneurship. It is aimed at giving a durable social, ecological and economic perspective to overcome the city's decades-long stagnation. Key element is the creation of a robust and co-operative spatial system where cutting-edge local, regional and international mobility represents the main stimulus to attract important investments in central Mestre, strengthen location factors for the whole area and offer an enhanced urban quality. Two of the vision's core actions are outlined:

1. New mobility concept and paradigm for the Venice-Mestre metropolitan area;
2. Reorganisation of a huge critical area in central Mestre.

Both are possible by moving underground the railway station, tracks and streets. This permits reconnection of the three parts of Mestre divided by infrastructural barriers: Piave neighbourhood; Marghera; Gazzera – Santa Barbara. The proposed VCHM is both, a regional transport hub and a gateway of a new port/airport-related residential and business district in Mestre with possible fast transport links (10 minutes) to the airport terminal, transferring this way the concept of 'airport city' from locations close to the airport to the city centre.

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Mobility

Venice-Mestre is an excellent infrastructure node whose efficiency must be improved to keep up with the needs of a future-proofed city and support its essential elements: economy, inhabitants, heritage, nature. Current weak points are the terminus topology of the railway station, the lack of quick and comfortable airport links, inadequate public water transport and a local public transport system based on four different, poorly co-ordinated modes (train, tram, bus, boat). In addition, much of the private transport of tourists still enters the lagoon or uses parking spaces localised on the mainland's waterfront. Strengthening the mobility concept means:

1. Transforming the Mestre railway station into an actual through station for high-speed and inter-regional connections;
2. Keeping goods trains outside the urban tracks by reactivating an existing suburban bypass line;
3. Expanding the current railway network into an extensive surface and underground tram-train system (Karlsruhe model) with some of the land lines continuing underwater ('sublagunare');
4. Quick and high-frequency tram-train links between Mestre, Venice and other terminals in the lagoon;
5. Directly connecting the Mestre railway station to the airport through high-speed and other trains, then continuing to the north and east;
6. Unified fare and ticket system for all modes of transport in the Venice metropolitan region;
7. Park-and-ride facilities which should become mandatory for tourists and strongly incentivised for commuters.

Underground infrastructure

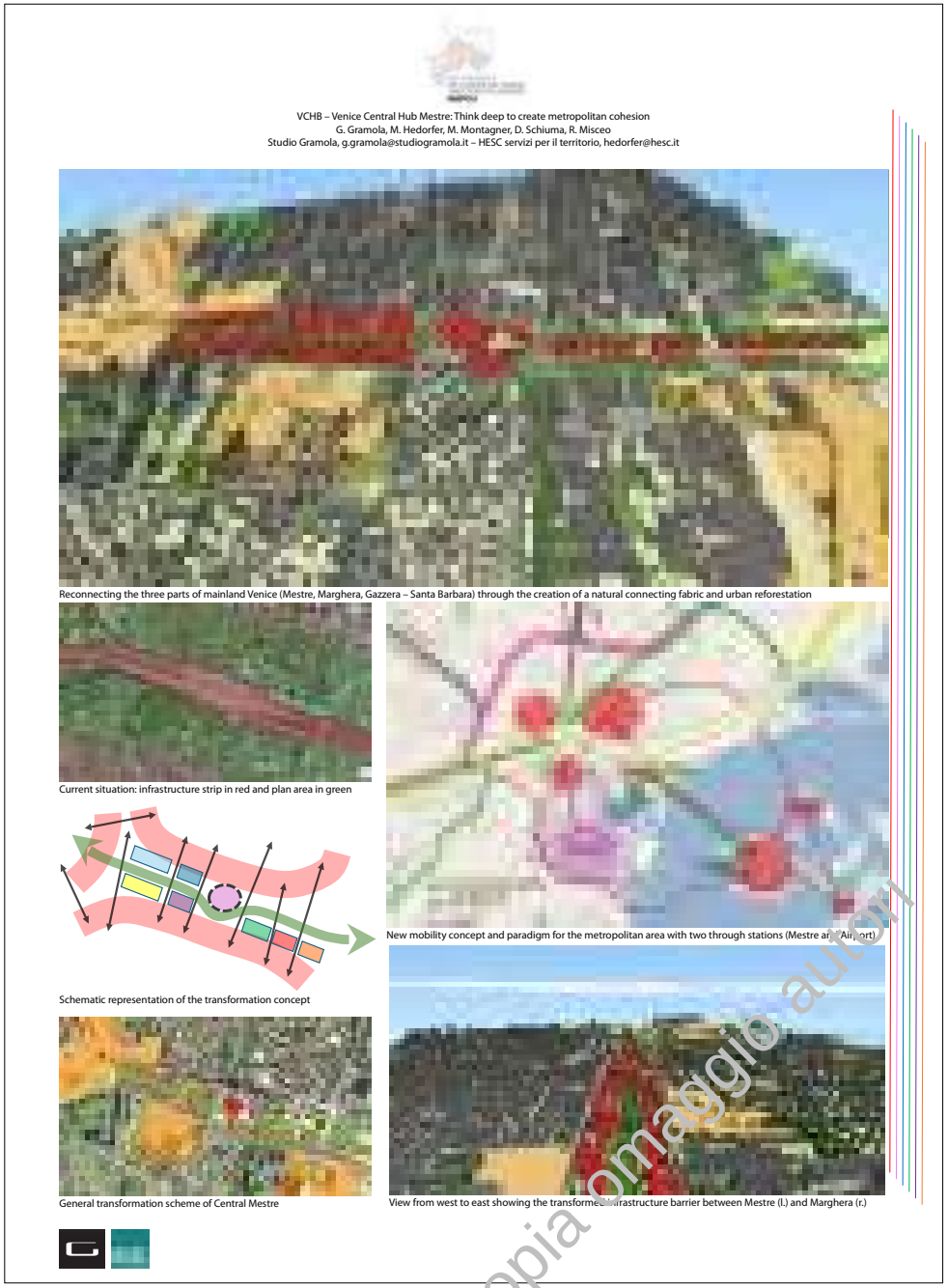
The VCHM is based on a huge undergrounding project of the Mestre railway station with 10 tracks on two underground levels instead of the current 13 surface tracks. The station currently serves 7 different directions, 4 of which would be undergrounded over a length of about 3 km, 2 need not to be undergrounded since they leave the track bundles at 3.5 – 4 km west of the station; the industrial track serving Porto Marghera from the north can be dismissed. In addition to this, the airport connection running underground for at least 10 km. Also, a 2-3 km long motorway section and a 4 km long motorway connection stretch running parallel to the station's railway tracks should go underground.

Reorganisation of central Mestre

Undergrounding frees an area of about 130 hectares. Four of the 7 railway lines were built between 1842 and 1885, i.e., decades before mainland's intensive urbanisation started. Continuous urban fabric reached the railway station only in the 1920s. This means spatial reconnection must refer to rural historical elements, some of which can still be recognised in Mestre's current structure, while others (Marghera garden city) have almost completely disappeared. Goal of the reconnection strategy is creating a continuous urban structure by recalling historical elements as well as Marghera's urban design. Green areas, as part of a metropolitan nature connectivity concept, are one of the characterising elements of the VCHM. Well-designed urban avenues with business locations, residential units and public and private services complete this concept. Public transportation and soft mobility can be conceived as its skeleton.

Expected results

Efficient public transport system for the metropolitan region and lagoon; renewed economic and residential attractiveness of the Venice old town and islands; economic attractiveness of Mestre to accommodate important international firms; increased service standards for individuals, families and businesses; urban quality as location factor for new residents.



Landscape of disruption
Outcome of telluric actions in the territory of Rome

*Ilaria Maurelli**

The territory of the city of Rome is affected on a daily basis by the appearance of sinkholes and hydrogeological instabilities with the creation of subsidence of the road surface that affect daily life and regularly tie up municipal resources. There is often talk about what the causes of these phenomena might be, and the cause is attributed to a lack of maintenance, lack of control and verification of the good condition of asphalt surfaces. Various culprits are attributed to heavy goods vehicles or the various vehicle flows that travel the streets of the metropolis, generating vibrations. Another important aspect to highlight is the presence of water, and its interaction with impermeable surfaces and the subsoil. Underground utilities lie beneath a built-up city and the soils that surround them are poorly absorbent, should in theory be free of water circulation. On the contrary, every time an excavation is carried out, water-laden backfills are found, this is particularly the case in central areas and flood plains. At present, the presence of asphalt is so pervasive that we tend to take it for granted, our eyes only catching the value of it the moment we are deprived of it. The breaking of it, as the ultimate consequence of a subsiding movement, triggers this feeling of necessity, stimulating in man the urgency to restore it abruptly.This process of mutual urgency between man and asphalt allows us to reinforce the intrinsic value of breaking it. Asphalt degrades only slightly faster than human beings, and our relationship with the material somewhat reflects our ideas and fears about time and eternity. Thus, the approach to the repair of these events, identifies and underlines the position of superficial solutionist intention of the contemporary. The original morphology of Rome has been profoundly modified by human interventions over the centuries; earthworks, rubble accumulation, filling, canalisation and transformations have altered the primordial features of the landscape, leading to the concealment of structures that were originally on the surface, such as ditches. Backfill soils are defined as soils made up of a heterogeneous mixture of anthropogenic material used over the centuries for successive fillings and levellings of the terrain, stratified and sedimented at varying depths, compacting with the already existing layers, and settling, determining a new stratigraphic horizon. It is, therefore, a real geological unit artificially produced by man, whose technical and physical characteristics allow the passage of water that percolates and settles between the impermeable layer of the underlying geological unit and the anthropic soil layer. The accumulation of water in these materials is possible because they rest on alluvial, gravelly, clayey and sandy soils that generally have little or no permeability. The water descends to accumulate in the depths and, following the natural topographical inclination, flows finding preferential pathways until it washes away the finest granulometry. The characteristics associated with the presence of these topsoils outline an articulated and highly structured underground world, the complexity of which demands to emerge and reveal itself to the eyes of the inhabitants living on the surface. Therefore, we can say that the city of Rome is composed of two distinct worlds: the world of Gaia, which turns its face towards the sky, and the world of Ctonia, which extends from the asphalt crust towards the centre of the earth. In reality, these are not two worlds but a single one that dialogues via a threshold, the rupture. Gaia does not open up, but makes way for transit, a passage between high and low, an opening that makes it possible to understand that the earth has a connection to the sphere of depth and that man, human, that is, terrestrial, is part of both faces. Gaia and Ctonia, which retains a history of uses that are now remote and forgotten, have an urgent need to re-establish a dialogue, and this is achieved through a rupture. It can be assumed that the earth is a place of coexistence, of human and non-human entities, where the presence of the actions of this living soil goes beyond the human domain. This perpetual movement is fuelled by matter itself, which assumes the role of a dynamic and vital interface. This perspective opens up the possibility of understanding and recognising the multiple interactions and relationships that develop within this complex and moving world, linking experiences and relationships between bodies. Starting from the idea of the ground as a vibrant whole of bodies and recognising its vitality, the rupture becomes the tangible place to start from. This process is subject to a transformation, a morphing-like change, in which the modification occurs in an unpredictable and fluid way. The power of this transition becomes necessary from the moment one intercepts the bodies that interact with the rupture. This materialist perspective recognises and legitimises the existence of a geological layer that accumulates and emanates energy, allowing evolution towards something new, towards a second life, the end of a process and the beginning of a new relationship with urban life. The possible hypotheses of metamorphosis can be multiple, catastrophic and utopian, it is up to matter itself to define its own destiny. What once seemed solid and immobile moves and disintegrates. The ground thus becomes the interface of a condition of existence and modernity that

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suffers from a lack of solidity, charged with fragility, similar to that of the bodies that inhabit the surface of Gaia. Accepting the rupture implies intervening in the condition of temporariness and precariousness, in order to establish equilibrium. The new possible configurations change the current arrangement and interact directly with the bodies, this makes the ground a space permeated by impulses, desires and sacrifices.

The positioning we intend to propose is that of coexistence, conflicting and necessary, between humans and non-humans. A scenario of transition that takes part in the movement by modifying it, supporting it, simulating it, repairing it or inhabiting it. The metamorphosis of the rupture allows, in a way, to approach it with different visions and scenarios but which, to date, do not decide to impose a radical positioning. The suspension of the project firmly declares the will to cross thresholds and enter the cracks that open in front of us and under our feet, being part of these processes and entering into a relationship with them.

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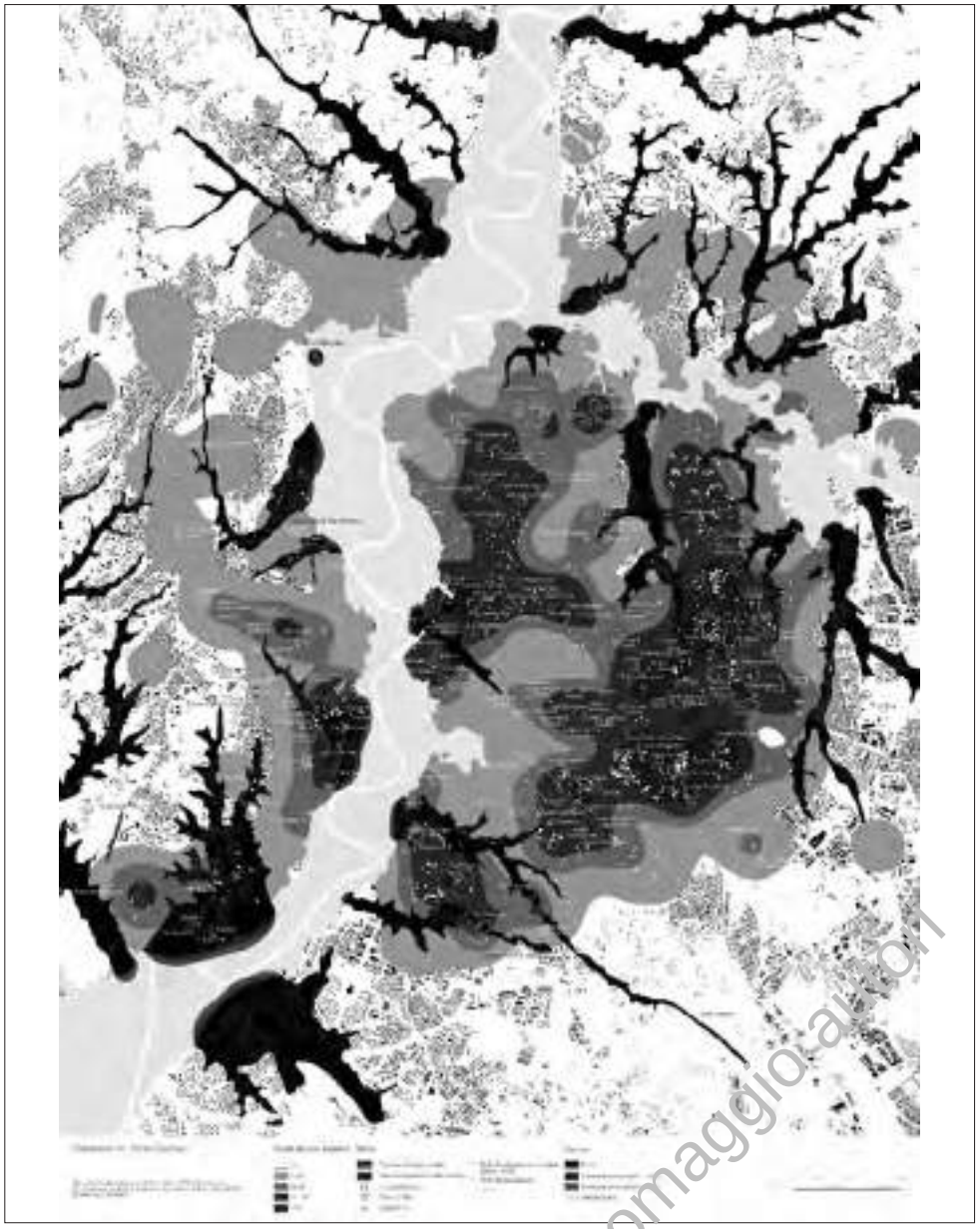

Fig. 1.
Compresenze. Constellations of co-presences, digital drawing / 594x841 cm. Overlays, sinkholes susceptibility map, cavity map of Rome, hydrogeological map of the territory of Rome.

Underground Built Heritage as catalyser of urban regeneration

Case-studies in the Naples Metropolitan area

Giuseppe Pace, Gabriella Esposito**, Luisa Fatigati****

This paper explores the critical role of urban planners in managing Underground Built Heritage (UBH) sites' transitions from neglected landscapes to tourist attractions. The current trajectory of tourism often sidelines local communities, leading to the loss of their spaces and, consequently, their traditional activities, rituals, and cultural practices. Such alterations, if not approved and adapted at the local level, can lead to socio-economic conflicts, inducing modifications to the original landscape, reduction of cultural heritage's integrity, and thereby reshaping the community's sense of belonging and 'ownership' [1]. Therefore, the Faro Convention's (2005) [2] mandate for respecting the heritage's integrity could become a wishful thinking without integrative networks, both local and global, able to establish open dialogues and stimulate a sense of "cultural" community.

Grounded in the results of the COST Action "Underground Built Heritage as a catalyst for Community Valorisation" (U4V), the paper aims at envisioning new integrated urban regeneration perspectives, by intertwining questions on heritage conservation and socio-economic development. U4V developed several approaches and tools, which advocate for a shift from an object-centred to a people-centred approach. Many underground sites, while not yet recognized as monuments, holy places, or urban attractions, are nonetheless historic and captivating landscapes. However, they often fail to attract sufficient investments and tourist flows, and their short-term economic returns are not assured. These sites risk inadequate protection or valorisation, and their heritage may not even be studied if they fail to catalyse a framework of shared beliefs, interests, and commitments.

The paper focuses on the metropolitan area of Naples and analyses two distinct case studies. The first is the Hellenistic necropolis in the Sanità neighbourhood, where three different organisations offer access and guided tours to small sections of the IV century B.C. necropolis (Fig. 1). The second is a Roman cistern, the so-called Piscina Mirabilis (Fig. 2), in the Campi Flegrei area, which is part of a large archaeological park and subject to a special public-private partnership. With a human-centred approach, each case study has been explored by a desk analysis of the contexts, mapping and interviewing the key stakeholders, to understand specific environments and their spatial and economic conditions, the stakeholders' needs, their social interactions, and the perceived barriers. Qualitative data collected from interviews have been clustered according three main perspectives: a) connections to the heritage site; b) interactions with the city and other social groups, and c) the touristic perspective.

Data collection provides an insight into the different governance approaches for heritage management and draws critical conditions for protecting UBH sites and fostering sustainable transitions at the local level. Data highlight the challenges connected to the community-level ownership of the economic initiatives, directly or indirectly linked to tourism, and to the cultural and educational initiatives.

Then, the two cases are confronted with the Strategic Transition Practice (STP) [3], an integrative approach for experimenting local community empowerment and multi-level strategic dialogue (e.g., Living Labs), based on the following elements:

- Experiment-based.
- Radical steps.
- Social innovations.
- Practice-oriented.
- Community-oriented.
- Co-design thinking.
- Collective learning [3].

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Fig. 1.
Hellenistic Necropolis, Sanità neighbourhood, Naples (2023)

Fig. 2.
Piscina Mirabilis, Bacoli, Naples (2022)

If the Piscina Mirabilis case, under the responsibility of an Archaeological Park, is part of a general strategy, which need to be shared at the community level, the Sanità case has never been incorporated into a comprehensive planning approach or attracted participatory practices. While the Piscina Mirabilis case requires more interaction between management and the local community, the second case appears to be managed by a fragmented set of stakeholders, each lacking adequate resource for scaling up. However, for both cases, the role of the planner would be to support a collective construction of meaning, stimulate experimentation, and foster political, cultural, and ecological change. Applying the STP, as preliminary step, it would be primary an empowerment strategy, by encouraging open dialogue and engaging stakeholders across the local community to determine their goals and the means to achieve them. In this process, empowering a community becomes part of a collective process of constructing meanings, visions, answers, and solutions. Planners should not contribute to defining the "What?", which will be determined by the community, but support the "Why?" and "How?" questions through a strategic thinking process [3]. In these participatory practices, planners and communities will inquire and learn together in the face of difference and conflict, telling compelling stories and arguing together in negotiations, coming to see issues, relationships, and options in new ways, thus arguing and acting together [4].

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It's getting crowded: Managing underground resource utilization through a network perspective

Katrin Pakizer,**, Fabienne Sierro*,****

Sustainable urban development increasingly relies on utilizing the underground space and its resources (Admiraal and Coronaro, 2016). Groundwater, geothermal energy, geomaterials, and space reserves play a more and more crucial role in the mitigation of socio-environmental challenges, such as, e.g., the depletion of freshwater reserves, the need for alternative energy sources, and growing urban density (Li et al., 2016). As the demand for these underground resources is expected to increase in the coming years, so will the need for actors (e.g., different public departments and industries) to collaborate and coordinate underground management efforts (Goel et al., 2012). Underground resources often concern the same geological layers, which means that using a specific resource might impede or prevent the use of other resources within the same layer of soil. However, the same underground resources bear the potential for synergies if actors coordinate their use interests. For instance, new tunnel systems can be designed to be multifunctional, including underground pipelines and geothermal energy production.
A precondition for coordination across policy domains and sectors – and ultimately sustainable underground management – is understanding the interdependencies between different underground use options and associated interests. So far, the underground space has been rarely developed and managed as a complex ecosystem encompassing conflictual and synergetic use interests. With our research, we illustrate the usefulness of taking a network perspective on underground management to explore conflicting and synergetic relations between existing and potential underground uses. We employ Social Network Analysis (SNA) to analyze and visualize the synergetic and conflictual network between underground resource uses. We define underground resource uses as nodes and their conflictual or synergetic interactions as edges, which indirectly represent actors' different interests.

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The aim of our research is 1) to identify the key underground resource uses with a high degree centrality that potentially require more attention for managing the underground, 2) to uncover interdependencies between different underground resource uses, and 3) to provide empirical evidence for SNA as a useful tool for the network management of complex ecosystems like the underground. We selected three Swiss cantons as case studies due to their use of multiple underground resources and ongoing debates on underground governance in Switzerland. We conducted semi-structured interviews (n=18) in each canton with local government representatives, industries, and associations with interests in underground exploitation or protection. The actors first identified current and planned underground resource uses (set of nodes), and second, the presence or absence of conflictual and synergetic interactions between use options (conflict and synergy datasets).

Our findings show that actors hold different assumptions about potential conflictual or synergetic interactions, suggesting fragmented knowledge and a lack of coordination. The two networks have varied but low density values, as not all interactions between underground uses can technically occur. The key node in the conflict layer is groundwater, even though clear regulations exist regarding its use and protection. At the same time, groundwater is also an important synergetic node, which highlights how a resource that potentially stands in conflict with other use options, can also be part of synergies. Underground transportation infrastructures emerge as the key node for synergies due to their potential for multifunctionality, integrating, e.g., pipelines and geothermal energy production. As practitioners, policymakers and scholars often focus more strongly on conflicts in the underground space, we argue for a shift in focus towards synergies, actively facilitating collaboration between different underground resource uses and this way, to promote sustainable and innovative underground development. In summary, this research provides first empirical insights about the usefulness of taking a network perspective on underground management, as it enables the coordination between protective and extractive interests in accordance with societal objectives.

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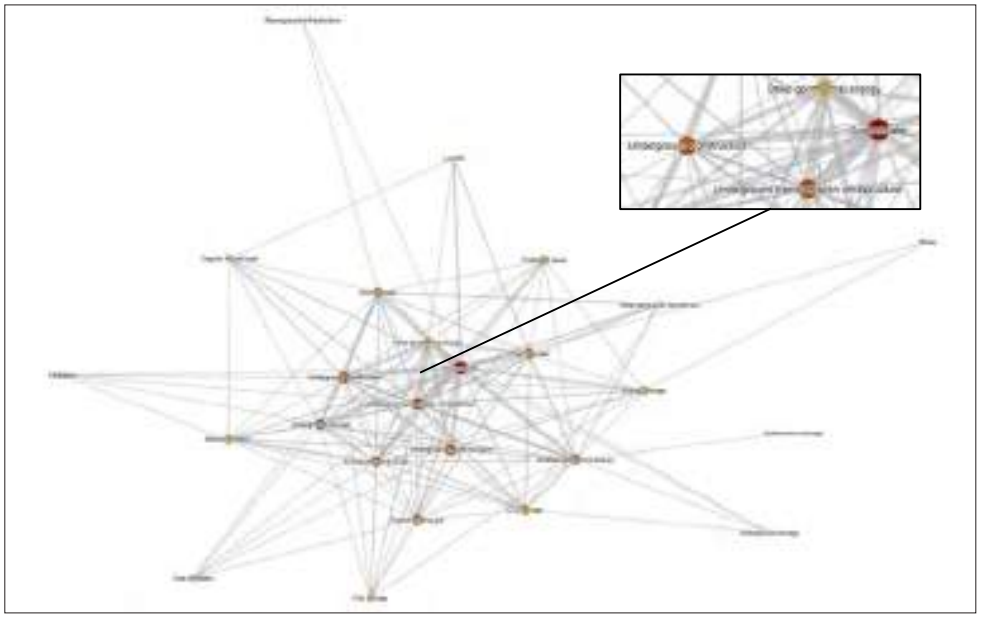

Fig. 1.
Conflict network between underground resource uses across all Swiss study areas with highlighted conflict constellation

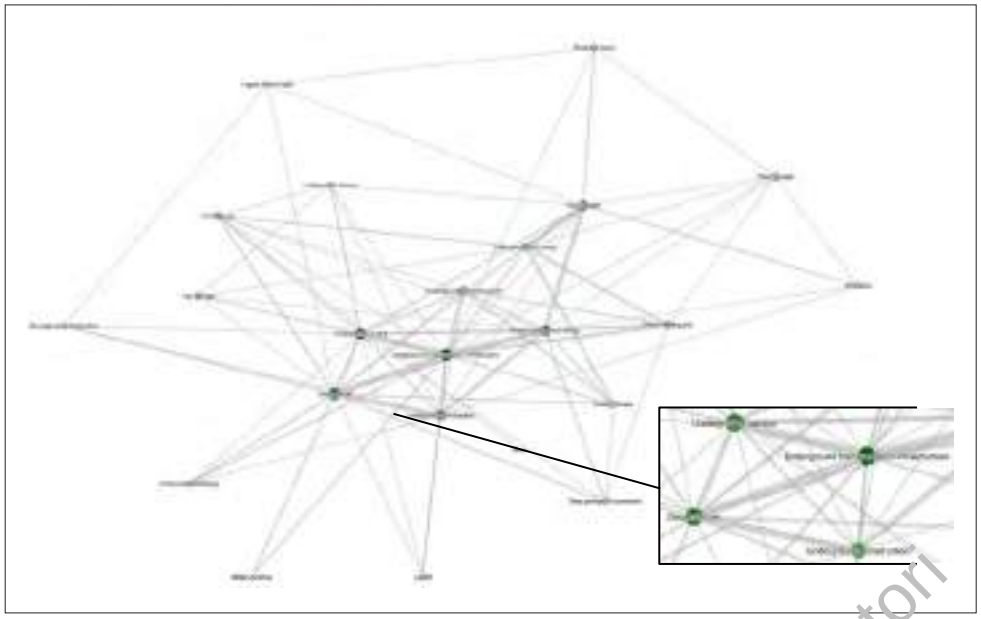

Fig. 2.
Synergy network between underground resource uses across all Swiss study areas with highlighted synergy constellation

Including all the layers – making better places from the (under)ground up

*Elizabeth Reynolds**

The land beneath our cities is comprised of complex, interrelated layers of natural and man-made objects. Yet despite being vital to our quality of life, it has been said that less is known about the land beneath our cities, than outer space. By painting a novel picture of these layers, the research for *Underground Urbanism* (2020) sought to provide a new perspective on our cities. From identifying low carbon energy solutions, to reducing flood risk, or delivering mass rapid transport infrastructure, Town Planners need a greater appreciation of the urban subsurface. Furthermore, Town Planners need to engage with a range of built environment experts, not least Geologists and Hydrogeologists, whose early stage involvement can help mitigate risks such as ground contamination or instability.

In a comparison of nine cities, only Helsinki, Tokyo, and Singapore were found to have legislation or planning policy relating to underground space use. In some cities, like London, the development of underground space is leapfrogging planning policy – potentially compromising the future delivery of public infrastructure. Vertical and lateral spatial planning is vital as our cities densify, take for example, Tokyo which has approximately 63,000 underground areas, 40% of which comprises underground paths, subway systems, and shopping complexes. Whilst Helsinki is the quiet world leader in spatial planning for the subsurface, and similar work is also being undertaken in Singapore and Hong Kong, it is a layer rarely included in city plans and policies. Taking inspiration from Paris however, cities can begin to plan for the land beneath them by cataloguing existing spaces that are surplus to requirements, and inviting proposals for their reinvention. In Naples, the Bourbon Tunnels, have become a popular tourist attraction, thanks in part to the dedication of volunteers removing tonnes of rubble from the historic network of streets hidden beneath the city.

Successive generations of Town Planners and Architects have theorised how underground spaces could be incorporated into the many layers of our cities. From Eugene Henard's Street of the Future in 1911, there has been an interest vertically separating and stacking land uses within cities. In the 1920s Harvey Wiley Corbett and Hugh Ferriss's Metropolis of Tomorrow was conceived in response to changes in the zoning regulations New York, and acted as a precursor to the later work of Ville Radieuse by Le Corbusier where (although not underground) pedestrians and vehicles were separated on different levels. In 1969 Oscar Newman responded to Cold War fears by conceptualising an Underground City of some 1.2 miles in diameter buried deep beneath Manhattan, that thankfully no one ever attempted to construct. Likewise, plans by Paul Rudolph in 1972 to create a Lower Manhattan Expressway thankfully never progressed beyond his designs for a canalised road and rail corridor at the base of an interconnected series of abstract megastructures for housing. More recently, in 1997 Rem Koolhaas and Bruce Mau illustrated their concepts for The Asian City of Tomorrow in their book Small, medium, large, extra-large. Although contemporary architecture is still interested in layering land uses to increase urban density, the emphasis is now on finding design solutions that improve quality of place. *Underground Urbanism* (2020) proposed the following framework for creating quality underground spaces:

- Well designed
- Sustainable
- Safe
- Welcoming
- Legible
- Comfortable
- Inspiring

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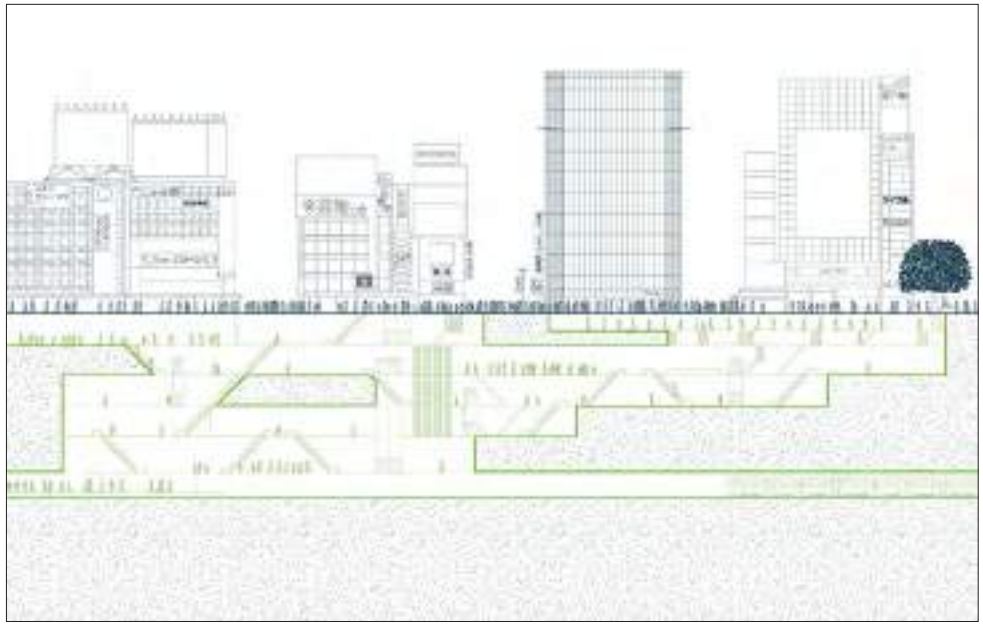

Fig. 1.
Underground Urbanism – imagining the layers of Tokyo

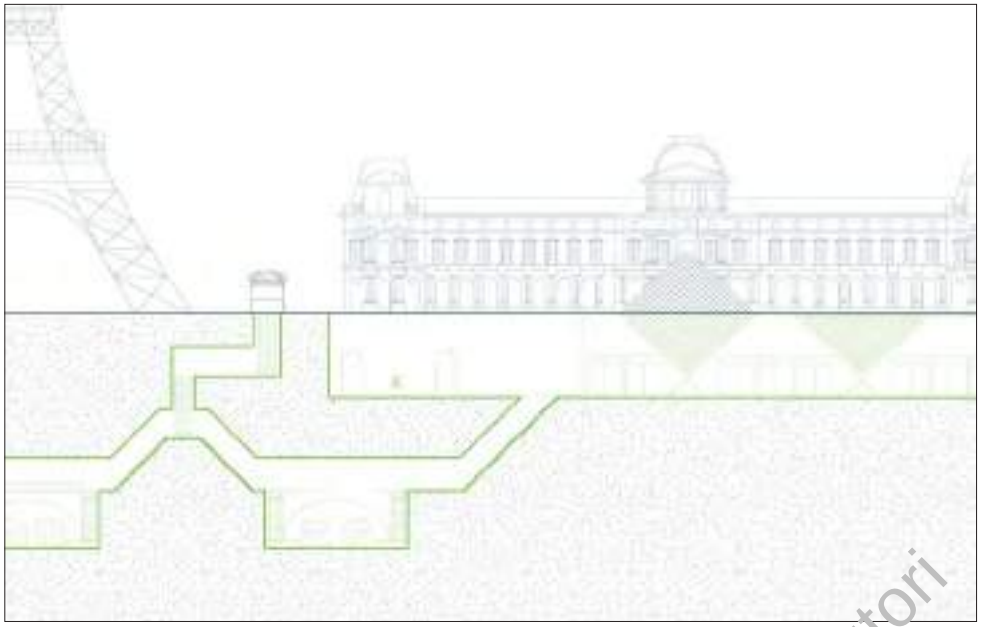

Fig. 1.
Underground Urbanism – imagining the layers of Paris

Potential of public underground car park reconversions in European cities

*Rosina Vinyes- Ballbé**

The interconnection between urban development and underground spaces has been a consistent theme throughout history. The modern era has seen subterranean networks and services play a pivotal role in addressing citizen's various needs. Such networks have included large containers designed for holding thousands of cars, a legacy of the 20th century, representing a considerable proportion of space in contemporary western cities. There are five types of car parks in urban environments, depending on their location: on land sites, in streets and squares, in specialised buildings, under buildings and under public spaces. The European situation differs from that of the USA, a car-centric society, where a large proportion of car parks are located in specialised buildings and on large, asphalted land sites. Most of Europe's car parks are in streets and squares, under buildings or under public spaces. Despite their urban potential, the latter two types have received little attention in urban studies.

Recent global challenges, particularly health and environmental crises, have prompted a revaluation of urban priorities with an increasing emphasis on new modes of eco-mobility and restricted uses of cars. An emblem of the automobile-centric era, our once-essential car parks are gradually being used less and less. This phenomenon is especially strong in the central areas of European cities, where decades of sound urban policies have led to a notable decrease in the presence of cars in streets and squares, thanks to excellent public-transport accessibility. A further consequence of this is the drop in use of underground car parks under public spaces, which happen to the easiest locations to reconvert.

This research aims to examine the potential of car-park conversions in European cities. It is a follow-up of previous research in 2022 conducted by a team including the author of this extended abstract which analysed underground public parking in Barcelona. The methodology involves two parallel stages: an in-depth examination of the available media on planned recycled parking in European cities and a close look at the case of Barcelona, to discover the qualitative and quantitative potential of these spaces in constructing contemporary and future cities.

As for international cases of interest, there is a notable absence of planned public policies in European cities, beyond specific cases, despite the highly topical nature of the issue. Only Paris has shown significant involvement here, in two initiatives. One is its City Council's periodically organised competition known as "Reinventer Paris". Its 2nd edition - 2017 - focused on "Les dessous de Paris". It invited reflection on the reconversion of 33 underground sites with potential – for car parks, stations etc. Fourteen of these are currently being developed, of which four are at the construction stage. The proposed uses are quite varied: sports, cultural, leisure and urban agriculture, to mention a few. The second initiative went ahead as an exhibition at the "Pavillon de l'Arsenal" in 2018 entitled "Immeubles pour automobiles: Histoire et transformations". The result was an analysis and classification of the 136 car park buildings in central areas, covering 150,000 m^2 and featuring 1/50 scale models, and a highlighting of their spatial beauty. In addition, promising preliminary projects of some of these buildings show how easily they can be reconverted into homes, offices, shopping centres, spaces for new mobility, etc.

As for Barcelona, the starting point is the cartography that came about from the 2015 doctoral thesis "Hidden Barcelona", showing a new urban underground reality with all the underground elements on a scale of 1:15,000, and excerpts on a scale 1:5,000 and 1:2,000. It can be seen from the new cartography that a large proportion of these underground constructions are car parks, which are of increasing interest in view of their decreasing use under the commitment to emission neutrality by 2050. The recent study, from 2022, takes this reality into account, focusing on car parks under streets and squares, for classification and consideration for reconversion. There are 108 car parks in total,

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representing an area of more than 1,000,000 m^2 located under public land, dedicated to private mobility, of which more than 400,000 m^2 are on the very attractive -1 floor, so close to the ground floor, and suitable for more contemporary uses. It is noteworthy that 38% of this land is located in the city's two densest and most central districts, which also happen to have the best public-transport accessibility: Ciutat Vella and Eixample.

In short, the potential of subsoil is at least as rich and valuable as land surface – if not more - in the central districts of European cities in general and Barcelona in particular. This is mainly because, for all the visibility and clear identification of the surface and its exploitation to meet urban needs, subsoil, given its invisible condition, offers highly valuable spaces waiting to be used for contemporary urban functions, beyond car parks. We can use the knowledge referred to in this extended abstract, along with the good practices applied in Paris and a description of the Barcelona reality as a first step, to serve as an inspiration to, or even guidelines for, any necessary conversion of these valuable spaces, these "buried urban treasures".

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di Elisa Caruso

The Biennial of European Towns and Town Planners is an event of the European Council of Urban Planners ECTP-CEU which aims at discussing the main issues in the European debate relating to urban planning by sharing them with urban planners, architects, engineers, economists, sociologists, historians of architecture, citizens, politicians, private and non-governmental organizations (NGOs).
The theme chosen for the 14° Edition, organized from 22 to 24 April 2024 in Naples with the INU as the main organizer, is Inclusive Cities and Regions/ Territoires inclusifs. Inclusion is understood in its multiple declinations that define the 10 general themes of this Biennial - Regional issues and regional disparity, Metropolitan or city proposals, Urban regeneration and Public Spaces, Migration and cultural inclusion, Cultural heritage, Resilience and adaptation, New economic approaches, IT and the use of artificial intelligence in planning, Ports, airports and other infrastructures, Underground space – and in additional ones proposed by the participants who further specify the general themes namely About Spatial Inclusivity, Urban regeneration and spatial justice with Nature-Based Solution, Inclusive public spaces for water cities facing climate change, Italian UNESCO Chairs vision and actions, A Transdisciplinary Approach to Placemaking and Inclusivity: COST Action Dynamics of Placemaking, Inclusive city Ecosystems, Youthbanism for a New Generation of Urbanists, Fragile geographies. Visions, projects and studies to mitigate and adapt to environmental and anthropogenic risk, Green Oasis for the 15 minutes city model, Making/unmaking urban circular economies with 'otherness', Public space for inclusive cities: the Biennial of Public Space, Universal accessibility and university education, the knowledge network, Findings and Evidences from the PNRR project RETURN, and River Contracts as voluntary and negotiated planning tools.
The works contained in this Catalogue, presented by administrators, professionals, academics, and researchers concern projects, policies and research that have international interest and, at the same time, attention to the local, all at different scales.
It is possible, from this vastness of topics, to understand the broad discussion that resulted, outlining new interested subjects and involved actors, as well as new possible intersections of themes.

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Sepe is President of the Biennial of Public Space Association, Vice President of INU Campania section and member of the national INU Governing Board, coordinator of the GUDesign network, member of the Eura Governing Board and member of Urban Design Group. In 2014-2023 she won: the Ardito-Desio Award for the paper presented at Ipsapa 2014, 2016 and 2018 Conference; the Urban Planning Literature Award of the Italian National Urban Planning Institute (INU) in 2014, 2015 and 2017 and the 2023 Horizon Europe Sapienza Award.

In the cover
Hug. Napoli, San Francesco di Paola colonnades.
(source: Marichela Sepe' archive)

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