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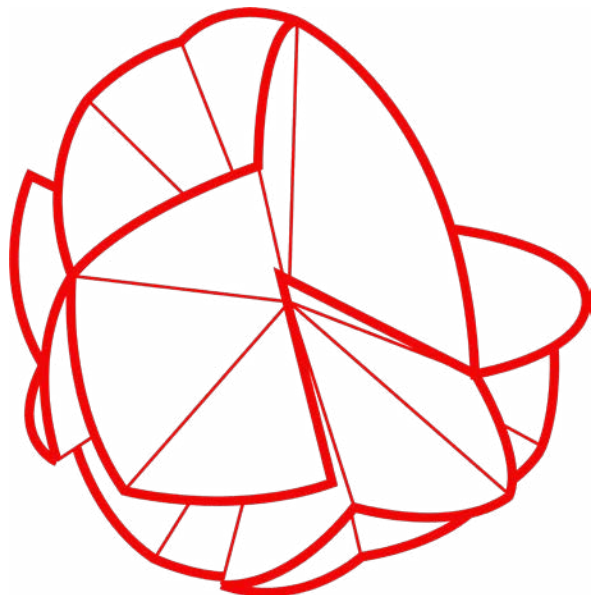
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# Disrupting Geographies in the Design World

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# Alter\_Azioni: Designing between Biological and Artifactual. Scenarios for a Short-Term Future

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## Abstract

The contribution describes the activities of a teaching and research experience, named *Alter\_Azioni*. It consists of three main parts. Firstly, it introduces the lagoon context as the reference framework used to experiment with a design local based to address the problems of the local territory and the environment. The paper moves on to discuss the design approach proposed to the students, contextualizing research and experiences based on the needs of the region and its inhabitants, through the exploration of a possible balance between the biological approach and the artifactual one. Furthermore, it summarizes some references about these issues, in order to gain a deeper insight into the chances or the pitfalls of this project. The second part provides an overview of the possible design range of concerns scenarios for a short-term future, focusing on the design projects developed and mapping them following three paths. Finally, in the third part, a look back points out what has been experienced as possible alternative scenarios.

## Keywords

Design for social impact  
Design for fragile environments  
Product-service system  
Service design  
Proximity relationships

## Scenario - the Venetian Lagoon

The reference scenario for this paper is the Venetian lagoon, a vast territory with a surface area of approximately 550 km<sup>2</sup>, of which approximately 130 km<sup>2</sup> is made up of islands and terrestrial land, and the remaining 420 km<sup>2</sup> is made up of bodies of water (Maticchio et al., 2017). This is an area that is, by its very nature, mutable and in constant transition between land and water, in which it is possible to experiment and explore new possibilities for research and design projects. In this context our interest has shifted towards systems of things in which aesthetics and poetics are brought into play to load 'nature-based' solutions with expressive potential, suitable for the survival of very fragile situations, going beyond approaches and strategies of the design project based on functionality directed principally at the industrial system. The experimental aspect consisted in driving the students to analyse different circumstances of a local context, a very particular territory such as the Venice lagoon.



Fig. 1  
Lagoon of Venice: a fragile environment. Ph: Giorgio Bombieri.

This area represents a wealth of biodiversity, landscapes, culture, and history, which is not comparable to other coastal areas of the Mediterranean basin (Zanetti et al., 2007).

The Venice lagoon is an emblematic and successful example of the interaction between man and nature, which contrasts the slowness and apparent unchanging place with an extreme fragility due to the unstoppable rapid transformation of the ecosystem, the unresolved issues related to climate change, the human intervention too invasive and short-sighted. Among the causes of the deterioration of this territory, of which only 8% consists of dry land, prevail the issues of sea-level rise and wave motion, large tourist flows, trawling, isolation of small villages with a rich cultural heritage, water pollution, microplastics, alteration of flora and fauna with the consequent loss of biodiversity, the progressive weakening of craft economies. The apparent immutability threatens to be disrupted by the quickness of the traumatic effects.

Beyond the constrained and traditional paths of industrial design, these urgencies impose the need for a strong and rapid push exploiting the design capabilities to imagine and build possible futures. In fact, this project started with the idea of facing the complexity of the lagoon ecosystem by inviting students to research specific local situations - social, cultural, environmental - through collaboration with local stakeholders to imagine scenarios of daily life for a short-term future. The primary objective was to highlight possible chances for the sensitive nature of this environment, testing with the students a different way of conceiving and managing the design skills, tools, and processes. Young designers were asked to contribute to the collective process of social innovation (Manzini, 2015) for the quality of life in vulnerable areas such as the Venetian lagoon.

### **Reorienting the Design Approach Between Biological and Artifactual**

The *Alter\_Azioni* project focuses on a specific region and the people who live in it, their needs, and their behavior, aiming at the heart of a problem in order to foster new visions and generate ideas capable of influencing the lagoon context: a shift from designing forms, spaces, services, and artifacts, to conceiving a way of being and living.

Increasingly frequent critical emergencies on an environmental, social, political, and economic level bring into focus the need to rethink the dynamics of the production system and distribution of goods, pushing design to interrelate with the local territory or a specific context in which to develop circular and proximity relationships. Driven by a responsible vision, the project deals with the most critical issues of everyday life, and, beyond form-related features, aspires to content (Papanek, 1971) with a greater focus on semantic and cultural aspects, in relation to history and traditions, relationships and feelings, using tools and a more empathetic language (Fagnoni, 2012). As Paolo Cardini states, design can be considered “an endogenous act, that lives and grows in specific contexts, rather than being an exogenous element implanted in existing systems with a high risk of rejection” (Cardini, 2022, p. 17).

In this framework, design is not a goal to be achieved, it's not the design *of* something, a form-oriented investigation, but rather the design *for* something, as a medium to bring about changes that have a positive impact on society and the environment. In this way, the design tools and approaches are applied to intervene in changing a specific situation, or, quoting Herbert Simon, to “devise courses of action aimed at changing existing situation into preferred ones” (1969). The concept of *designing for* something has become established especially since design has started to expand from the design of tangible things to the design of services, experiences, and processes (Sangiorgi, 2011).

Meanwhile, designers have begun to spread new conjunctions of design in areas aimed at the social, the commons and the environment: *social impact design*, *socially responsible design*, *design for social innovation* (Resnick, 2019), recall the connection established by pioneers such as Papanek, Maldonado, Yona Friedman, between design, ecology, and social development. This has

brought to the attention of designers those instances of the research for an ethical and sustainable design path – as opposed to a vision aimed exclusively at commercial purposes – that has been spreading since the 1980s through those participatory and responsible practices. Emanuele Quinz (2020), in his late book, talks of design as an anti-industrial project.

After all, as Manzini points out, most of the problems people face lie in proximity (Manzini, 2021). Relationships develop within a given context understood both as a physical space and as a social form in which action becomes possible and the project takes on meaning. The system of constraints and opportunities that are proposed, the possibilities for action, also need to be repositioned in proximity, going to strengthen the thickness of the social fabric, operating in the hybrid physical-digital space.

Therefore, the pursued approach combines the humanistic and sensitive dimension of design with the technical-scientific perspective that regulates the way of working.

Through an osmotic process of micro-actions, which connect and establish rhizomatic relationships (Deleuze & Guattari, 1980) the design processes and tools are used aiming to sensitively reunite the individual with the surrounding everyday reality.

Designers who “shape a design space in which non-specialised users can access user-friendly environments in which they can design their own objects” are defined as meta-designers by Jos De Mul (2011). The transition from designer to meta-designer means allowing a passive user to evolve into an active agent of change that overcomes limitations and problems with endemic and endogenous solutions (Cardini, 2022)

## Back-Casting

Already in 1998 John Tackara in *Domus* magazine (1998) clearly analysed futuristic visions for the design of 2028, talking about entropy and seeing how design was already able to detach itself from industry and also innovation. He also talks about *back-casting*, a project path that aims at processes rather than products, investing more in the collaboration and the integration of skills and disciplines, to arrive at imagining concrete opportunities and new directions for design.

The *Alter\_Azioni* project works on 16 products-services, actions able to stimulate reflection and address specific behaviours, rather than defining the materiality of the products, to recover an increasingly limited social imagination (Mulgan, 2020). The ability to conceive great technological developments and futuristic scenarios and the progressive blurring of the boundaries between human and artificial are diminishing the capability to react even in front of the prefiguration of apocalyptic visions (Latour, 2018; Morton, 2018; Staszowski & Tassinari, 2021).

Rapid evolutions in digital technologies have transformed production processes and information systems, and the dematerialization of products has changed the way we consume, work and travel, offering alternative experiences and creating new collaborative market logics in which services or product-services take the place of traditional goods in a perspective of innovation by meaning



(Verganti, 2018). The primacy of servitization (Siagri, 2021) indicates that the raw material of the economic and social system may now become sharing and collective intelligence (Mulgan, 2018) in the context of a different function of territories, no longer considered as matters of mere extraction of materials and energy or support for industrial settlements, but as evolving intangible assets (Siagri, 2021).

### **Alter\_azioni: Designing Otherwise**

In this time of the extreme present in which everything can change in a very short time, there are things and circumstances that seem to remain unchanged and unchangeable, such as the lagoon. The term *Alter\_Azioni* refers to a different way of approaching design. In this combination of words, *Azioni* (*Actions*) relates to design acts and interactions between place, people and peculiar circumstances, the aim of which is to design starting from the priorities of the geographical context. In its turn, the term *Alter* indicates the *otherness*: related to the Venice lagoon this term investigates the concept of *other* and refers to a pluriverse (Escobar, 2018), a system in which it is possible to rethink other ways of moving, caring, feeling a sense of belonging, and preserving. When considering the pluriverse, we expand the horizon of our perspective, recognizing and appreciating the multiplicity of realities co-existing. Each reality within this pluriverse, holds unique interactions, dynamics and ways of living which inspire alternative design practices. These universes propose a multitude of potential, encouraging a shift away from a singular, dominant perspective to a vast array of interconnected realities.

This approach encourages young designers to focus on an in-depth research phase with an ethnographic and geographical field analysis, which supports and guides the different stages of the design process. As a consequence, it follows the Double Diamond design process model of the British Design Council, which has been adapted for this specific context.

In the first divergent part of the design process, it was essential to carry out some preparatory exercises using visual collaboration platforms and guided brainstorming sessions, to identify some characteristic aspects of the target territory, even in a preliminary way. Subsequently, the students were engaged in creating a postcard on a subject that had particularly impressed them, such as biodiversity, recovery of local craft traditions, and conservation of natural heritage, with the aim of understanding a possible approach to such a specific context. A key stage is an on-site investigation, when the students carried out an exercise called *Video Personas*, which had a twofold purpose: on the one hand to collect valuable information directly on the place, using the ethnographic approach typical of UX design and service design, and on the other hand to move in a real context and experiment with design as a tool to perceive social impact, contextual reality and proximity relationships in a direct way. The *Video Personas* become in this way a design artefact.

With this approach it was possible to identify some situations that were unknown to the students, through personal confrontation with some people found on site (e.g. the elderly farmer who grows

vegetables on the island of Sant'Erasmus, the CNR researcher who is an expert on algae, the chef who only uses local raw materials from the lagoon area, the foreign tourist who arrives in Venice for the first time and has to plan his timetable, etc.) with the aim of identifying for each of them needs, desires, habits and cultural backgrounds.

Compared to the already well-known Personas tool, the use of video offers different information: “The video supports empathy, engagement and understanding of the character, it communicates the softer details on behaviour, action and motivation and creates curiosity” (Nielsen, 2013, p. 78).

Through the video interview, the student is no longer forced to design by imagining the world in its most global and abstract dimension but enters a direct relationship with the real context, with the people who inhabit it, their stories, and their work, establishing a deeper and more authentic knowledge process.

During the following phases, design projects have been developed, enabling students to gain experience, making their proposals take shape, using local materials and realizing study models, with the help of local stakeholders. Some of them will be carried out with local associations, others received some funding and prize, others probably could be involved within the framework of the post initiatives of an Interreg project (<https://www.italy-croatia.eu/web/crew>) on the local development of the Venice lagoon.

### Three Paths for a Short-Term Future

The *Alter\_Azioni* activities and design projects aim to take care of the place, be rooted in the local context, and feed circular processes. Starting from the research work and design experiences three trajectories can be classified, useful to identify possible directions of the design role in the contemporary context.

#### Bio-Based and Second Life

This path includes bio-oriented projects that experiment with natural materials approaches, that enhance local products, crafts, activities, and their related contexts.

A critical emergency in the lagoon is the progressive erosion of the salt marshes, which endangers the survival of the lagoon and its inhabitants both physically and culturally. Addressing these problems, the project *Pitàro* is a product-service system that involves people in a community and collaborative action aimed at the environmental restoration of salt marshes. It allows people to grow halophyte plants at home, with the purpose of replanting them in salt marshes.

Another design proposal considers that Venice has the potential to become a benchmark on the topic of seaweed. Therefore, *Tressa* is an open-source product-service for the collection and reuse of algae, a fundamental natural element for the fragile balance of the lagoon ecosystem, but at the same time a versatile material in its adaptability of use.



Fig. 2  
*Tressa*, a project for algae.  
 Collection, information,  
 witnessing through  
 products-services. @luav  
 Alter\_Azioni Lab Design 3.



Fig. 3  
*Pitàro*, a proximity sharing  
 service for a community  
 and collaborative action  
 aimed at the environ-  
 mental recovery of salt  
 marshes (barene). @luav  
 Alter\_Azioni Lab Design 3.

### Traces and Experiences

This path includes projects related to local traditions, which recover stories and knowledge of crafts, places, rituals or ways of life that are in danger of disappearing.

One example is the tradition of pearl manufacturing: since the 13th century pearls have been used as currency, but it is only since 2020 that the know-how related to this long-standing knowledge has become part of the Unesco heritage. The *Contatto* project is a product-service system that offers an experiential tour in the Venetian Lagoon to raise interest in the art of Venetian pearls.

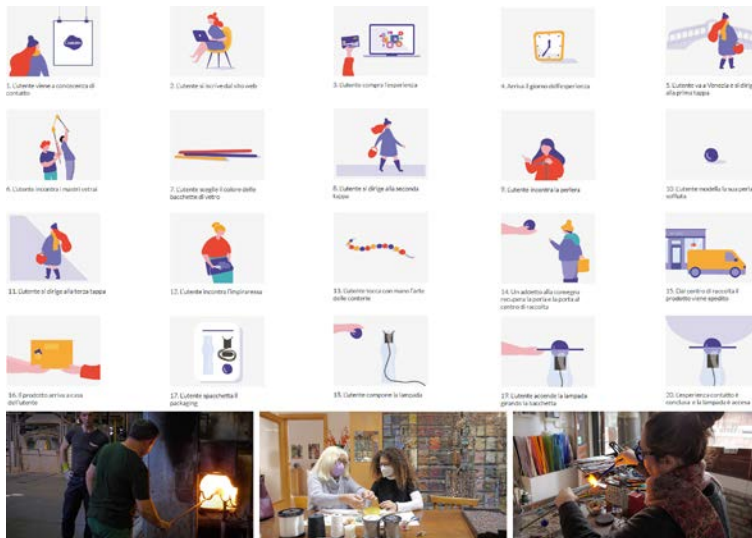


Fig. 4  
*Contatto*, an experiential tour that guides people to the art of Venetian pearls.  
 @luav Alter\_Azioni Lab Design 3.

## Habits and Welfare

This path includes projects that aim to facilitate the maintenance of lifestyles and habits, seeking a balance between the distinctiveness and image of the lagoon, and the needs of its inhabitants.

In the lagoon the problem of travel between the city and the islands is real and urgent, on the one hand because of the huge influx of people and on the other because of the complications involved with the use of public transportation. *'Ndemo* is a special boat pooling service accompanied by a set of products (pinpoint, raincoat, and seat) that allows the best possible use of private boats.

Another problematic aspect is the lack of care services: many islands have no pharmacy, forcing residents to make very long and difficult journeys to purchase medication: *Medice* is a product-service that consists of a communicating system composed of hubs, drones and a mobile app and it has been designed to integrate the existing pharmaceutical service system.

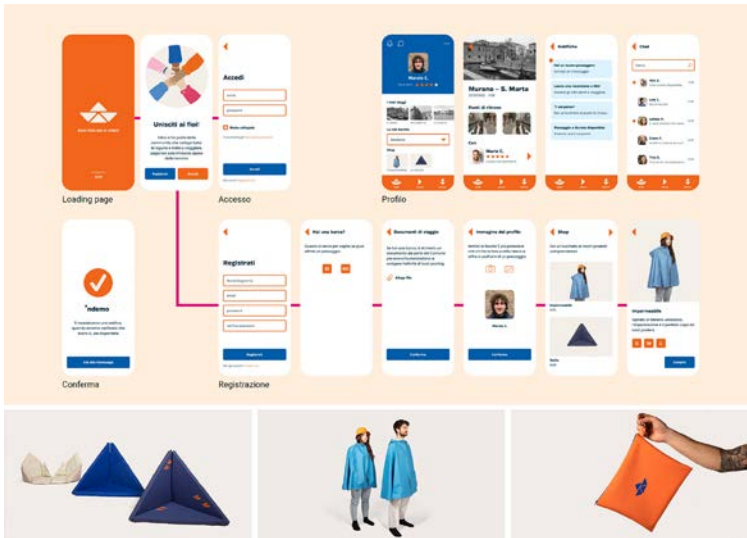


Fig. 5  
*'Ndemo*, a boat pooling service to facilitate movement in the Lagoon in an economically and ecologically sustainable way. @luav Alter\_Azioni Lab Design 3.

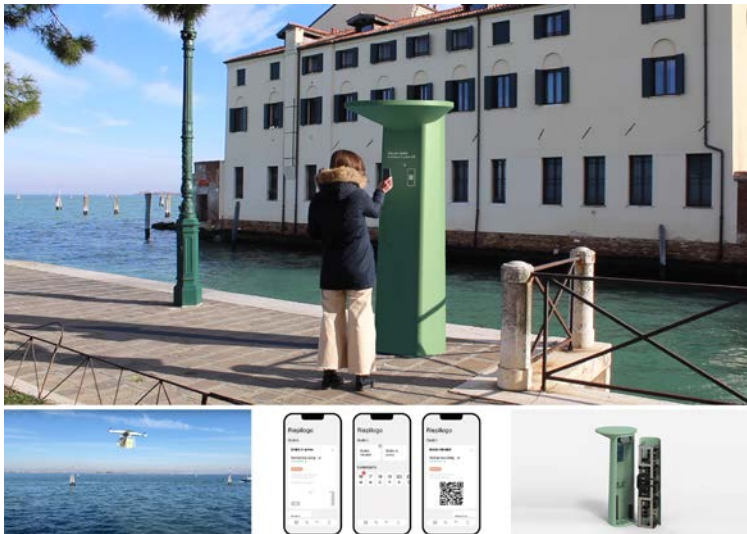


Fig. 6  
*Medice*, a product-service system for health to improve the pharmaceutical system, with hubs scattered around the lagoon and drugs transported by drones. @luav Alter\_Azioni Lab Design 3.

The aim of these projects is to go beyond the academic exercises centered on theoretical tasks, fostering practical experimentation in the development of personal projects in collaboration with local stakeholders. This hands-on approach is exemplified in *Tressa* project through the prototyping of a bioceramic and a bioplastic film derived from algae. These materials have been used to create a set of tableware, underlining an emerging trend in the use of second-generation materials. Similarly, *'Ndemo* project resulted in the development of a service and the necessary artifacts for its operation, also participating in the incubation process as a startup.

## Changing Design Paradigms

In a world of ever-increasing emergencies related to climate change and pollution, it is not possible to continue with the idea of design feeding the global commodity system (Rawsthorn, 2018). Instead of seeing design as the production of goods and commodities, it needs to be understood as the making of what is necessary for sustaining the environment.

If the aim of design discipline is to improve people's life, today we need to think about maintaining and protecting the habitat in which they live.

We are facing a momentous change: an unstoppable process of social and environmental ruin puts us in front of the faults of the previous ones. The young generations of designers are much more sensitive to these issues: they feel anger towards those who preceded them thinking without any scruple only about their interests (Fagnoni, 2021). In this sense, as educators, we try to make experiences with our students to imagine a different approach to our disciplines: how to apply design skills and tools to contribute to the maintenance of the fragile local habitat in which we live.

Fundamental to this project is the idea that designers need to consider designing as/for the common goods (Botta & Jungiger, 2021) and consequently the commons, not only as a matter of result but as an attitude (Rawsthorn, 2018), testing a process in an experimental way, to finalise an *alter* way of conceiving and developing product-service systems.

Following the outlines of a post-digital craft, a long time after Sennett's book success (2008), good hands have regained vigour, although electronics, computer science and artificial intelligence dominate and dematerialize customs and traditions. The "good hands" (as they are virtuous, technically skilled) are also "good hands" (as they are polite, doing right). These practices recover the culture of proximity between the local workers, the local economies, and emerging designers (Fagnoni, 2021).

The mapped three paths address the *environmental* sense of design, offering a contribution to the ecological concerns of human cohabitation within a biosystem and taking care of the making of a relationship system.

In order to address these needs, the design process experimented in the *Alter\_Azioni* project was based on a multidimensional design: it includes projects of services, products, installations, actions, and participatory practices, characterized by a commitment to activate social transformations and improvements of the existing environment oriented towards the common good, citizenship, sustainability, and accessibility. The process starts from a careful analysis in the field, experimenting with methods to reconstruct a representation of reality: video interviews carried out on the territory are a concrete example of this. They do not represent a mere ethnographic and documentary investigation phase, but are intended as an artefact, constituting the story designed for and with local stakeholders, the recipients of the interventions, in response to increasingly pressing social and environmental needs. These video interviews gave origin to the product-service systems described above.

Some steps underpin this paradigm shift: the first one is based on the importance of using local materials, rethinking production as an environmentally friendly system, and introducing an experimental approach through the re-circulation of natural waste. The second gives importance to the enhancement of territorial heritage through the recovery of rituals, gestures and actions related to objects, artistic and craft products, foods, memories, and places. The third process focuses on the primacy of servitization, considering sharing and collective intelligence as the raw material of the economic and social system for a different balance of territories resources.

The challenge is thus to promote and support the shifts towards sustainable habits and practises. This is possible by adopting a systemic and planet-centric approach, strengthening the ethical approach of design, by reactivating and re-enabling its role in tackling the wicked problems that distinguish our time through focusing on the hyperlocal context.

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The 8th International Forum of Design as a Process, themed “Disrupting Geographies in the Design World” was held in Bologna from 20 to 22 June 2022. The event was organised by the Advanced Design Unit of the Alma Mater Studiorum – Università di Bologna, Department of Architecture, in collaboration with two partner universities: Tecnológico de Monterrey (TEC) and Pontificia Universidad Católica de Chile.

The Forum engaged speakers from the Global Design community, expanding the original vocation of the Latin Network for the Development of Design as a Process to include researchers and designers of the Mediterranean Area, Middle East, IOR (Indian Ocean Region), and Global South regions. The goal was to share new perspectives on imagining design futures in a responsible and just perspective, at the forefront of change, while building strategic partnerships and creating accessible knowledge.

Structured around three pillars — seminars, workshops, and exhibitions — the Forum hosted meetings, reflection opportunities, networking activities. It involved designers, scholars, young researchers, design entrepreneurs, in an experimental format.

Speakers’ contributions not only inspired the practices of the designers’ community, but also resonated with students and the broad audiences. The presentations explored intersections of materiality and culture, post-coloniality, decoloniality, gender studies, and other areas of human thought and action which seek to analyse, question and challenge the disruptive geographies in the world, today.

The papers submitted to the five tracks proposed are published in the Digital Special Issue 1 of *diid. disegno industriale – industrial design*, celebrating during those days its 20<sup>th</sup> anniversary and serving as the fourth partner of the event.

## The Editors

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