



# PROCEEDINGS

Conference for Artistic and Architectural (Doctoral) Research

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Technische Universität Berlin

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## GUIDELINES FOR THE CO-DESIGN: HOW TO SOLVE URBAN ISSUES

My research aims to test how co-design can help to solve different urban issues and wants to produce a vademecum with guidelines on how to set a urban living lab to involve stakeholders for a co-design process. To do so I needed to study the state of the art, but I also needed to search for case studies with which to check the good and the bad practices.

The study of the state of the art gave me a more complete comprehension of the situation in which my research is framed, and it included:

Scandinavian "cooperative design" in the 60s;  
De Carlo participatory design of the Terni project;  
"Participatory design" in the USA during the 70s;  
Siza and SAAL process in the 70s;  
"User-centered design" by Donald Dorman in the 80s;  
"Participatory budgeting" in Portugal from the 2000 on.

The methodology is that of the research by practice which, in my research, uses case studies to: check which practices can be considered good or bad; cross data collected from the state of the art and the case studies and compare the case studies.

The case studies I'm working with are two: one is the planning for the City of Sport in San Donà di Piave (Italy) and the other is a European Research Project, funded under the JPI Urban Europe, called LOOPER (Learning Loops in the Public Realm) which will apply the learning loop to the co-design process. To better explain, in the City of Sport of San Donà di Piave I am analyzing a basic participatory design process. On the other hand the case study of the LOOPER project has the ambition of creating a new way of decision-making which brings together all stakeholders, including policymakers, that iteratively learn how to address urban challenges. This is an implemented co-design process as stakeholders in the end are called to evaluate what they have done.

The expected result of my research is that of creating a set of guidelines which can be used to solve different urban issues, such as planning problems or air quality, using the co-design process applied to urban living labs.

There is an intrinsic part of innovation in my research, which is linked to the novelty of the LOOPER project that inserts co-monitoring in the participatory design process and applies the learning loop to it (research by practice). Also another novelty stands into the possibility to implement the guidelines, written with the case studies experiences, with other cases.

**Keywords:** co-design, learning loop, air quality, urban issues

**Chiara Scanagatta**  
University Iuav of Venice

### Guidelines for the Co-Design: how to solve Urban Issues

#### RESEARCH FRAMING AND METHODOLOGY

My research aims to test how co-design can help to solve different urban issues and wants to produce a vademecum with guidelines on how to set a urban living lab to involve stakeholders for a co-design process. To do so I needed to study the state of the art, but I also needed to search for case studies with which to check the good and the bad practices.

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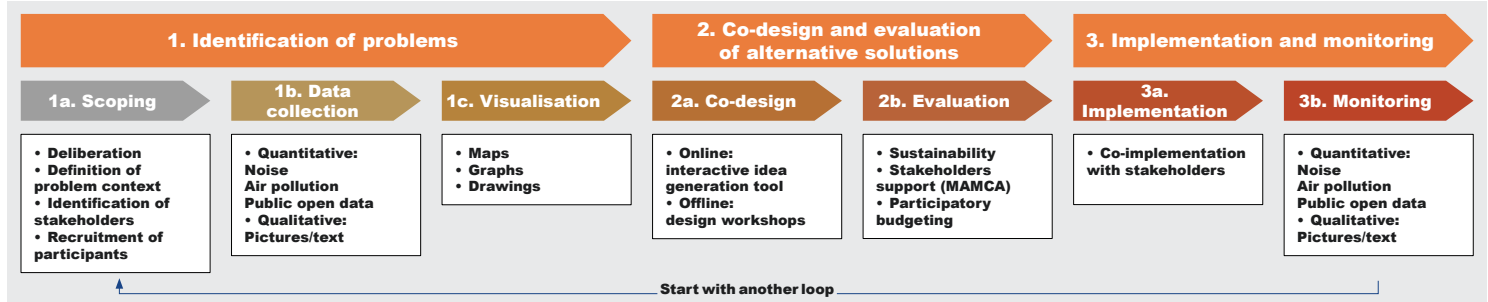
#### CASE STUDIES, RESULTS AND NOVELTY

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There is an intrinsic part of innovation in my research, which is linked to the novelty of the LOOPER project that inserts co-monitoring in the participatory design process and applies the learning loop to it (research by practice). Also, another novelty stands into the possibility of implementing the guidelines.

#### LEARNING LOOP PROCESS APPLIED TO CO-DESIGN



#### 1a. SCOPING

The first stage of the work was the scoping of issues. It helped researchers and policymakers to better understand the perception of citizens, and helped citizens to focus on what are their priorities when talking about urban issues.

#### SCOPING

Participants are able to create a point of contact with policymakers as they feel that someone is listening to them on what is important.



1. Lectures about basic info of pollution.
2. Participants working on maps to express which urban issues linked to pollution are the most important.
3. Workshop.

#### 1b. DATA COLLECTION

The co-monitoring stage turned out to be very important as it has been an essential step to reach the co-design and it helped participants to feel they are part of the process. In LOOPER the co-monitoring was more practical as participants could decide where to monitor pollutants with both official and participatory sensing tools (qualitative and quantitative data).

#### DATA COLLECTION

Participants learn how data are collected and feel more in touch with what is happening and which issues are more relevant.



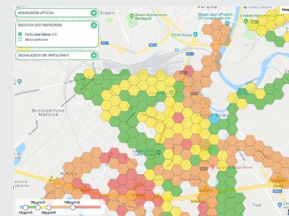
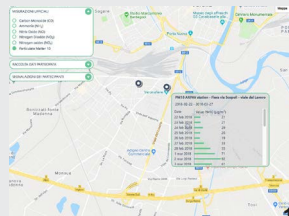
1. Noise box: crowdsensing
2. Geotagging tool: crowdsensing
3. AirBeam: crowdsensing
4. Passive sensor: official
5. Mobile station: official data

#### 1c. VISUALISATION

The visualisation stage helps participants to understand if their thoughts about urban issues, and amount of pollutants present in their neighbourhood, were right or wrong. This is essential to open up their mind about the possible mitigation solutions.

#### VISUALISATION

Stakeholders can see the result of the work they have done with the data collection. They can have a complete idea of the situation.



1. Visualisation of data collected with official tools. Here PM10 collected with mobile stations.
2. Data collected with participatory sensing. Here PM2.5 collected with AirBeam.

#### 2a. CO-DESIGN and future stages

The visualisation stage helps participants to understand if their thoughts about urban issues of their neighbourhood were correct or incorrect. This means that when the co-design stage will start they will be able to have a complete overview of the situation. To make the most out of the co-design stage it will be possible to use a combination of online and offline tools which can help participants to express what they would like to do to solve issues.

#### CO-DESIGN

Stakeholders actively participated to previous stages, this means they have all the tools needed for the co-design. They will be helped in the process to develop ideas.

#### NEXT STEPS AND THE VADEMECUM

