



**Collectie van
de Gentenaar**

O4.1.2

Pop-up urban laboratory (PUL)

Methodological description & reflection



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Introduction

Goals & framing

This document is written in the context of the [CoGhent-project](#) (WP4) and offers an overview of the “pop-up urban laboratory” (PUL) methodology. This methodology was developed and used in this project to co-develop an immersive and technological space that presents local cultural heritage to the inhabitants of three different neighborhoods. As such the methodology was targeted at establishing an **in-situ 'prototyping third space'** which acts as a temporary physical environment where co-creation and multi-stakeholder collaboration can take place. It is aimed at providing both the environment and the tools needed for creativity, knowledge exchange and media tinkering.

Positioning in the NPD-process

After a first conceptual design of the innovative urban media interface (the CoGent-box), three testing days were organized where co-creative activities with citizens were conducted. The main goal of these tests was to gain insights which feed the further development of the interface as well as the social activities which should resonate with the developed technology. As such, the outcomes of the PUL fueled further creative developments and helped in identifying design requirements during the early stages of conceptual development.

In practice, the UPL-methodology was applied on two different locations in the city of Ghent in order to involve local inhabitants in these tests. These locations were two of the selected locations where the technology would be implemented in the later stages of the project (a playground in a multi-cultural neighborhood and the green environment next to a residential care center). By conducting this research “in situ” (on the place where the technology will be implemented), we could also include (or “resonate with”) contextual factors of these neighborhoods. The starting point were raw prototypes (D4.2.2), which were showcased to the inhabitants and further co-developed (D4.2.3). This document briefly discusses the details of the PUL methodology, and also analyses the strengths and weaknesses of this methodology.

Methodology

Research questions

As discussed, the PUL was applied in the phase of “conceptual development” within the project. Earlier in the project, a first “high-level” design was developed at a rather conceptual level. The goal of pop-up urban laboratory was to (1) validate this design and especially (2) further develop/co-create this concept in collaboration with neighborhood inhabitants. Hence, this method wanted to provide an answer on the following research questions:

- How do the neighborhood inhabitants **react** to the concept of the technology?
- What are the **expectations** of neighborhood regarding the technology?
- How do the neighborhood inhabitants **want** to interact with the different interfaces?
- How would the neighborhood inhabitant **design** the technology?
- How we make the neighborhood inhabitants **co-owners** of the technology?

Pop-up urban lab in action

The UPL should be a “**quick to build**” intervention that can be set up in the time range of one day (or at least embrace the guerilla style pop-up mentally).

One of the primary goals of this PUL intervention was to create a setting where neighborhood inhabitants could freely share their thoughts on the technology. A PUL should try to establish a **safe space, where creativity boils**. To establish a ‘safe space’, a UPL should try to make the lab space as approachable as possible by making it cozy and appealing for by-passers (coffee, plants, comfortable chairs, enthusiastic researchers, ...).

On top of that, **both quick and more in-depth interactions should be facilitated**, to accommodate for different citizen profiles. A PUL somewhat invades the everyday life of the citizens (compared to, for example, inviting someone for an interview or workshop). We only worked with the natural population of the context we were working in. This meant we did not invite citizens that were not naturally present in the proximity of our lab



The pop-up urban lab in action in (1) Tolhuispark and (2) Liberteyt

Third, a pop-up urban lab requires **early (low-fidelity) prototypes**. This can be paper prototypes, sketches, MVPs, wizard of Oz-like setups, role playing concepts, etc. This is important, since research has shown that, when it comes to co-creation of technology an innovative solutions, random citizens often have a limited imagination. As such, these rough concepts provide a container and stimulus for more meaningful input and creative co-development.

Fourth, a pop-up urban lab requires the **tools for creative activities**. This means: post-its, flipcharts, markers, tape, cardboard, etc. Anything that can help citizens in materializing ideas and to facilitate an open, creative participatory process.

Finally, a pop-up urban lab requires a set of **modular participation protocols**. This means, you should compile a set of participation activities that can take place inside the lab. For example: (1) a think aloud test with one of the screens, combined with a co-creative function tree exercise, (2) a roleplaying game where citizens are co-designing the technology through storytelling techniques, etc. These activities should align with the research questions but also vary in length and engagement level. Such modular approach allows for a flexible way of working, which can be tailored to the citizens you interact with. For example, you need to be ready to work with: (1) a working man taking a half-hour break in the park, (2) a large group of 8-year old children, (3) a group of conspicuous drug dealers, (4) mothers with a

migration background not speaking any of the languages you know, (5) older people with deep sadness and long stories to tell, (6) groups of highly engaged and institutionalized participatory power in the neighborhood, etc. (these are all real-world examples of interactions that took place in our pop-up urban lab).

Practical build-up of the pop-up urban lab

As an illustration, our pop-up urban lab contained the following parts:

- **All of the equipment needed for the interface testing and co-creation¹:**
 - *Interface 1*: Wide touchscreen to simulate an application interface.
 - *Interface 2*: Cardboard storytelling screen which was created through rapid paper prototyping.
 - *Interface 3*: Touch-table in order to simulate an exploration tool for cultural heritage.
- **Easy to set up-party tent**: for protection of the equipment in the PUL and the participants during the test.
- **Green fake grass ground covers**: In order to make the PUL more appealing for by-passers.
- **Minibar with coffee and soda**: this served as a reward when a by-passer participated in the testing.
- **CoGhent-banner**: in order to show the PUL was conducted for the CoGhent-project. And **University of Ghent Banner**: in order to show that the university of Ghent is a partner in the project. We believed we could get more leverage by showcasing this.
- **Four beach chairs**: This was used to have a comfortable conversation with the respondents and attract random passers-by to sit down and grab a free coffee or soda.

¹ These interface were specific to the CoGhent-project; When applying the UPL methodology, the content needs to be specified according to specific context of the project. The protocols and project outcomes are not part of this document.

Reflection

- **“In situ”-testing:** by conducting the tests on the places where the technology will be placed when ready, we believed to have gained more valid research results. In addition, we could also ask the participants about the context of the location and we could possibly reach out to participants we would not reach when conducting the tests in a confined laboratory.
- **Observative capacity of the “in situ” testing:** By conducting the tests on location, the researchers were also able to observe and absorb the context. Both the physical, social, temporal context. E.g. How many people would walk by, what kind of people would walk by,... This gave us more insights in how to further develop the outside of the box and how the box would resonate with the surrounding environment.
- **Corona-proof setting:** The tests were conducted during the corona pandemic. This meant we were bound to strict conditions in terms of corona measurements. At the time of the tests, it was not allowed to conduct these tests inside. However, the conditions in which this pop-up lab was set-up, allowed us to conduct the test within the strict measurements.
- **Depth versus reach:** When ad-hoc intervening in the everyday life of citizens, it's tough to convince them to participate for a longer period of time. Therefore, most interactions were rather short. Compared to, for example a focus group or a workshop, this type of co-design was more superficial. On the other hand, we reached totally different populations that we would otherwise never have been able to convince to participate. So, while the PUL-methodology is strong in terms of reach, it is weak in terms of depth.
- **Ownership claims:** One of the goals of a PUL is to establish a feeling of co-ownership of a future intervention. However, A PUL also clearly reveals power unbalances in a neighborhood, as a participation elite made subtle attempts to mobilize and influence the intervention according to their agenda, while other groups were not organized and required our methodology to ensure their voice being heard.
- **The fear of going ‘out of the building’ in early stages:** Within the project consortium, different attitudes regarding such early public activities emerged. The PUL methodology pushes the team to go out to the neighborhoods early, with only

raw notions of the concept, almost no clue regarding implementation plans, value promises, content of functional decisions (fully embracing the fuzzy front-end of innovation). This is scary and hard to manage. Therefore it also rose challenges regarding traditional ways of communicating and managing expectations amongst citizens.

To conclude, we provide a hands-on information card for those who want to apply this methodology themselves.

pop-up urban lab

A pop-up laboratory which can be used to facilitate “in situ” (within context) co-creative workshops.

Why

- To gain insights in developing urban phygital (physical & digital) interfaces.
- To collaborate with different neighborhood stakeholders who are going to use these interfaces.
- To gain insights in the environment where the interfaces will be applied.

How

- Compose a lab set-up that can be easily transported, build-up and broken down
- Make use of elements which contribute in making the lab a safe and creative space. E.g. beach chairs, fake grass on the floor, banner of the project,...
- Develop modular participation protocols for the cocreation activities .
- Set up the lab in the context where the interfaces will be applied. Set up the materials which are needed for the further development of the interface.
- Start with conducting the activities. Approach people, don't be shy, be positive & energetic.

Tips

- In order to make the lab as agile as possible, make use of a party tent that can be set up in a few minutes. Avoid bulky and heavy objects.
- When attracting local stakeholders, try to reach out to by-passers who do not seem interested in the UPL. They hold relevant information but chances are that they don't feel comfortable in coming to the UPL.

Expected respondents: N=10-15 / Day