

Implementing Co-Design Strategies in Creating Accessible Future Mobility Solutions in TRIPS Project

Laura Alčiauskaitė, European Network on Independent Living, Belgium, laura.alciauskaite@enil.eu,

Elvia Vasconcelos, Technical university of Eindhoven, The Netherlands, **Kristina Andersen**,

Technical university of Eindhoven, The Netherlands

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1. INTRODUCTION

There are around 42 million people aged 15–64 years who are considered to have a disability (European Commission, 2019). Today's transport systems remain inaccessible in considerable parts for people with disabilities, compromising their equal access to important services, job opportunities, travel, lifestyle choices and capacity for independent living. By ratifying EU Treaties and the UN Convention on the Rights of Persons with Disabilities, the member states have committed to respecting the rights of people with disabilities and providing equal opportunities to enjoy accessible and independent travel. This can not be done without having persons with disabilities involved in the process of creating these future mobility solutions. Co-design is a promising way to engage users with disabilities to become active participants in open innovation since they are experts of their own mobility and access needs.

The European Research project TRIPS (<https://trips-project.eu/>) develops and applies a participatory approach that aims to 1) co-produce knowledge on existing barriers in transport, 2) co-create solutions for making transport more accessible and 3) co-evaluate the resulting prototypes and services in seven European cities. These aims are delivered through a Co-design-for-All methodology that creates the conditions for the equal participation of all citizens in open innovation and for the development of inclusive mobility designs from their inception.

A key methodological output of this project is to prove the social value and validity of such co-design-for-all methodology through enabling equal access to open innovation for all citizens, including those with different types of disability. The project thereby engages seven European cities (Bologna, Brussels, Cagliari, Lisbon, Sofia, Stockholm and Zagreb) in the open innovation process.

2. METHODS

In the TRIPS project co-production is a way of working which empowers all the actors in the process to participate fully on the basis of shared knowledge and equal partnership. In order to achieve this, we have set-up some ground rules:

- Each city has a team consisted of persons with different types of disabilities, local and national transport providers, city representatives, assistive technology suppliers and academics. All team members must work together from the very beginning: before important decisions are taken, when as much as possible can still be influenced and changed.

- Support will be provided to meet the needs of every team member so they can fully participate (e.g providing information in captioning or easy-to-read language).
- Everyone is perceived as an expert of their own field and is welcome to share their experience and knowledge. All parties indicate their area of expertise and what they would like to learn in the process.
- All team members are equal partners. Persons with disabilities are often considered volunteers in a consultation process. In co-design, all team members are equal partners in the process and hold equal power in decision making. This also means that all participants in the co-design group are compensated for their work and time. Traditionally, cities or service providers take the lead in the process given that it is seen as part of their professional activity. Co-design changes this way of looking at traditional hierarchy by bringing in the importance of the experience people have and implementing a non-hierarchical approach to the team work. There can be multiple coordinators for different aspects of the process; however decisions are taken by the whole group.

3. IMPLEMENTING CO-DESIGN IN PRACTICE IN TRIPS

The work to co-create and deploy collaborative methods with the teams in the seven cities was initially intended to be developed through a string of in-person activities allowing for the methodological approach to be designed in short bursts of engagement. However, due to Covid-19 pandemic related restrictions, all the project activities have been conducted online and from home. Therefore the co-production has taken on a much more elaborate and personalised form. To make up for the loss of in-person activities, we engaged each city group in a string of conversations to anchor the methodologies into strongly held local concerns and to guarantee that the processes remain within our understanding of co-design and co-production, despite the clear limitations of online work. This work unfolded as a series of regular 1:1 sessions, where we used a combination of qualitative research methods: semi-structured interviews, open-ended activities, writing exercises, surveys, offline activities, etc. Our focus was on creating a dynamic working rhythm and generating mechanisms to allow for heterogeneous interests and in-depth understandings to come forward. In these sessions, we regularly had two to four participants, and the workshops were open to the full local core user team (CUT) in each city. The number of activities varied per group because in this work we recognise that not all cities arrive at this process on the same footing: their needs, wants and challenges are unique and contingent to their local contexts, and therefore require ways of working that emerges from within each one of the groups involved. Our methods are situated in the lived context of each group.

This way of working has allowed us to tailor each interaction to local and personal preferences, which may mean that not everyone has the exact same experience but that we work towards shared understandings and convergence through an array of interactions and strategies. Practically, this work was done using the following techniques:

- **Workshopping:** Through workshopping we aim to create an experience where individuals' narratives coexist with complex understandings of collective knowledge, leading to a great diversity in outcomes.
- **Brainstorming:** Brainstorming allows for a broad range of knowledge to manifest, be shared and co-created. This has a dual effect in user involvement: it generates possibilities and equally improves the social dynamics of exchange as a basis for shared meaning.
- **Sketching:** Through sketching we aim to explore notions of collaborative visual thinking in which nonverbal techniques like drawing are used to represent unified action.
- **Interviews:** Interviews elicit individual knowledge and narratives. We propose to use them as open engagements where personal stories guide participants and interviewers in the telling of lived experience.

Due to the Covid-19 restrictions, these methods have been re-purposed in order to be executed online and in smaller groups. To identify local concerns and establish a collaborative atmosphere, we engaged in a string of iterative conversations that made use of elements from brainstorming and interview in order to identify a local focus. These conversations were documented as field-reports and through sketches resulting in consolidated outputs for each city, together with shared resources for all CUT. These local outputs were then used as material for workshops, deployed through a number of local iterations that continue throughout the project.

As our experience in TRIPS revealed, the implementation of the co-design approach might take extra time and resources. Building up relationships of trust between the people involved is not always a fast process, especially if the team members have not worked together before. In spite of this, implementing such approach has many advantages. As a previous study revealed, taking part in a co-design process can increase people's self-worth and confidence and help them gain new skills and experience (Brandsen, Steen & Verschuere, 2018). In addition, the whole team can benefit from peer networks and support, and gain a new sense of purpose. Moreover, such way of working allows building long-term connection between different partners and the process can be very motivating (Bovaird, Van Ryzin, Loeffler & Parrado, 2015). Finally, co-design can make services a better fit for the people that use them, and more accessible. It can make an otherwise institutional situation feel more human, which is very important when creating accessible and inclusive future transport services.

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