

TRansport Innovation for disabled People needs Satisfaction



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Abstract	D5.3 is the third deliverable from WP5 and should be read as the overall methodology output of the TRIPS project. It describes the second iteration of the methods co-designed and personalised to the concerns and identities of the Core User Teams (CUT) in the seven cities represented in the TRIPS project. It reports on the experiences, feedback and lessons learned of making use of these methods in practise, and finally describes and delivers the Co-design for All methodology in the form of the TRIPS Co-design Toolkit.
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Executive summary and statement of intent

Deliverable D5.3 presents the methodological framework of TRIPS in the form of the TRIPS Co-design Toolkit. It builds on deliverable D5.1 (Method Framing document) and D5.2 (Methodological framework document (1st version) and reports on the process of utilising the methods outlined in D5.2 with our CUT workgroups in the seven pilot cities as well as updating our methodology based on reflections and participants' feedback. The overall goal is to devise a Co-design for All methodology that outlines principles of engagement with a strong stance on access, participation and ownership by participants including persons with disabilities.

In this document, we describe the transition from a set of co-design methods and tools towards a coherent TRIPS methodology. This takes the shape of a field-work report, lessons learned and methodology design - in keeping with the overall aim of work-package 5 (WP5) on how the perspectives of persons with disabilities, transport operators and policy makers, together with the local barriers and the technical solutions can be weaved together through co-production and co-design.

While D5.2 is centred on the development of a set of practical methods and templates, built on the theoretical foundations of D5.1, this document reports on task 5.4 (Co-design Method Deployment in Pilot Case Study cities) and the experiences of using our methods to generate local case studies in T6.1 and T6.2, and on the ongoing task 5.2 (Co-design for All Method Framework Development and Testing) with a focus on turning methods into methodology. With this document, we are closing the three main deliverables of WP5 by delivering the methodology toolkit for TRIPS developed by, with and for persons with disabilities.

List of acronyms / abbreviations

Abbreviations	Explanation
CUT	Core user team - consist of approxitamey 8 people (this varies per city) with diverse access needs. A core user team (CUT) has been established in each of the seven participating cities to be engaged in the entirety of the project.
D5.1	Deliverable 5.1 Method Framing Document. Internal draft delivery
D5.2	Deliverable 5.2 Methodological framework document (1st version)
D5.3	Deliverable 5.3 Methodological framework document (2nd version)
D5.4	Deliverable 5.4 A Co-design for All MOOC module
LC	Local coordinator – supports the local user lead and coordinates the involvement of the institutional partners in the working group.
LUL	Local user lead – leads and coordinates the involvement of the core user team members in the project.



T5.2	Task 5.2 Co-design for all Method Framework Development and Testing
T5.3	Task 5.3 Co-design Method Training in Pilot cities
T5.4	Task 5.4 Co-design Method Deployment in Pilot Case Study cities
T5.5	Task 5.5 Method validation
T5.6	T5.6 Generalisation of Codesign for All methodology for wider adoption
T6.1	Task 6.1 Developing the Pilot Case Study briefs
T6.2	Task 6.2 Conducting Pilot Case studies
TRIPS	TRansport Innovation for disabled People needs Satisfaction
WG	Working group – is the extended group of approximately 20 people, constituted by the CUT and the institutional actors i.e. transport providers, city representatives, assistive technology specialists. A working group (WG) has been established in each of the seven participating cities to be engaged in the entirety of the project.
WP	Work package
WP2	Work package 2 User research and needs identification
WP4	Work package 4 Evaluation and prioritisation of inclusive mobility challenges
WP5	Work package 5 Co-design for All methodology
WP6	Work package 6 Pilot Case studies and Business Case Development

Table 01: List of acronyms/abbreviations



Glossary of terms

Term	Explanation
Accessibility	The extent to which products, systems, services, environments or facilities can be used by people with different capabilities. (European Commission launches survey on 'Design for All' - Inclusion Europe, no date).
Co-creation	The act of making together rather than consulting people and then producing designs to the pre-set requirements.
Co-production	A way to generate knowledge in collaborations between people, technology and society. It is centred on the idea that we can come together in difference and collaboratively create new ideas and concepts.
Co-design	The action of designing together, while attempting to actively involve all stakeholders (e.g. employees, partners, customers, citizens, end users) in the design process to help ensure that outcomes respect all participants' point of view.
Disability	Disability is an evolving concept that results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others (United Nations Convention on the Rights of Persons with Disabilities, 2006).
Disabled people Persons with disabilities ¹	Persons with disabilities include those who have long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (Article 1 - Purpose United Nations Enable, no date).
Framework	The structure and support that may be used as both the launching point and the on-going guidelines for investigating a research problem.(Labaree, no date).

¹ In TRIPS the decision was made to use the terminology adopted by the United Nations of *persons with disabilities*. In D5.1 we used the term *disabled people* following the language used by ENIL. Both terms are used amongst our partners. We make space for variation in our working materials but for consistency will be using persons with disabilities in this document.



Methodology	A theory or analysis of how research does and should proceed. (Labaree, no date)
Methods	Systematic approaches to the conduct of an operation or process. It includes steps of procedure, application of techniques, systems of reasoning or analysis, and the modes of inquiry employed by a discipline. (Labaree, no date)
Underrepresented, Minoritised	<p>Groups resulting from social constructs have been granted less power or representation compared to other members or groups in society. Preferable to: minorities</p> <p>Benefits Minoritised places the emphasis on the power struggle, and on the systemic issues at play. It's also an adjective, which requires you to add "group" or "people" so it's people-first language.</p> <p>Impact It removes the pejorative nature of "minorities", illuminating that this is an effect upon the individual or group, rather than the singular way to identify the group. (minoritised « Definitions « Self-Defined, no date)</p>
Mixed-Methods	A research approach that uses two or more methods from both the quantitative and qualitative research categories. It is also referred to as blended methods, combined methods, or methodological triangulation. (Labaree, no date)
Participatory Design Research (PD)	A collaborative process that centres the involvement of people in the design of their own environment.
Research data	Information, in particular, facts or numbers, collected to be examined and considered as a basis for reasoning, discussion, or calculation. (H2020 Open Access Guidelines, 2017).

Table 02: Glossary of terms



1 - Introduction

This document forms the overall methodology output of the TRIPS project. It describes the second iteration of the methods co-designed and personalised to the concerns and identities of the Core User Teams (CUT) in the seven cities represented in the TRIPS project. It reports on the experiences, feedback and lessons learned of making use of these methods in practise, and finally describes and delivers the Co-design for All methodology in the form of the TRIPS Co-design Toolkit.

The TRIPS Co-design Toolkit synthesises the results of the engagements with the seven city groups and delivers them to 3 audiences:

1. The **Toolkit** provides training material for **persons with disabilities and designers** wanting to adopt this methodology in the context of public transport.
2. The **MOOC** is an online university course for **students and individuals who want to make use of the TRIPS methods** to engage persons with disabilities in open innovation and equality of access in any sector to tackle a broad range of design challenges.
3. The third audience is **a broader stakeholder group** which will be addressed through dissemination and exploitation engagements with academia, NGO's and industry partners. These groups will be addressed in D8.6 and D8.7.

The present document is structured as follows:

- Chapter 2: Task context. Overview of tasks reported here.
- Chapter 3: Outcomes. Description of outcomes generated through the WP5 methods.
- Chapter 4: Fieldwork Reflection. Discussion of work group activities and lessons learnt.
- Chapter 5: The TRIPS Co-design Toolkit
- Chapter 6: Impact
- Chapter 7: Conclusion

It is important to note that while this deliverable is written by the researchers involved in facilitating the co-design work in the project, the work had been conducted in close collaboration with the seven participating groups of persons with disabilities. Throughout the text we will quote from these groups in an ongoing effort to shift our attention towards their own accounts of what going this process has been like.



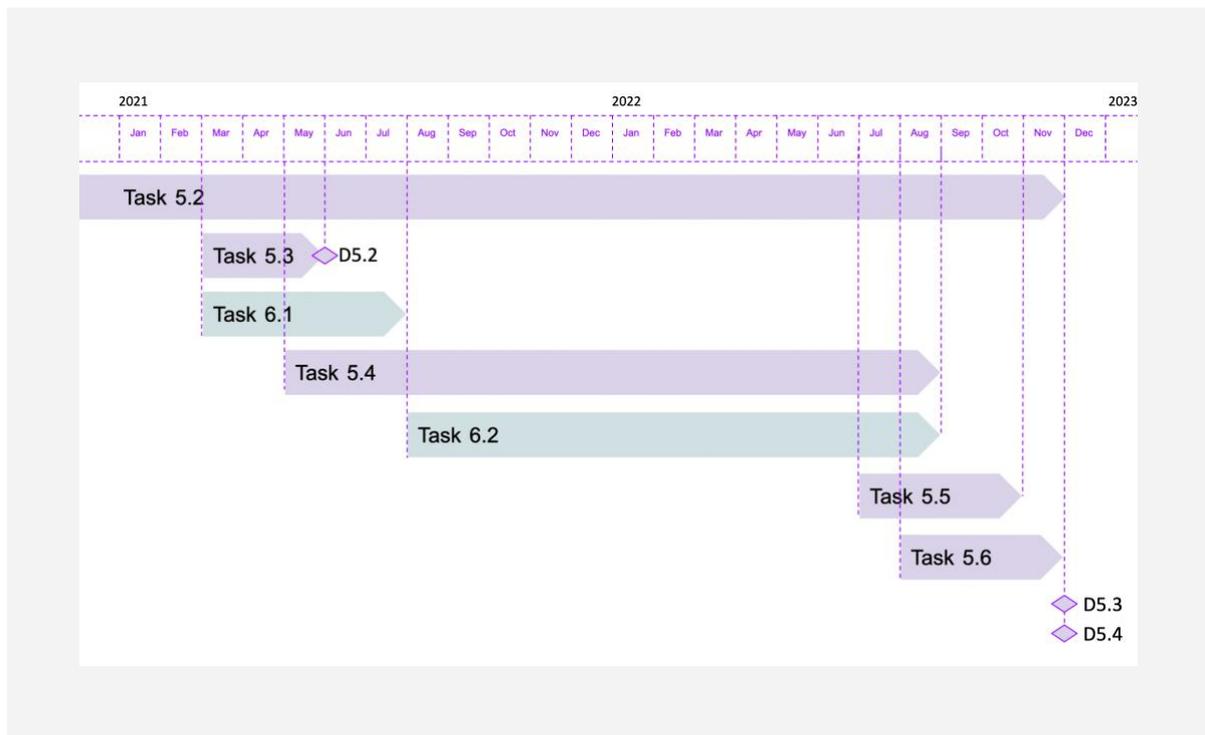


Figure 01: Roadmap of WP5 and WP6

2 - Task Context: From Methods to Methodology

This deliverable constitutes the final step of the journey in co-creating a methodology to engage persons with disabilities in the design of inclusive mobility solutions. This final step is complemented with D5.4, a **Co-design for All MOOC module (Massive Open Online Course)**, that synthesises the experiences gathered through the various methodological reports mentioned above and turns them into the teaching material of an open online course for designers, persons with disabilities and those working within public transport. The MOOC forms part of the **TRIPS Co-design Toolkit** which constitutes the final form of the **TRIPS Co-design Methodology for All**.

The work reported in this document was conducted in the context of the following tasks:

- T5.2 Co-design for All Method Framework Development (Oct 2020 - 31 Nov 2022)
- T5.4 Co-design Method Deployment in Pilot Case Study Cities (May 2021 - Sep 2022)
- T5.5 Method Validation (Aug - Nov 2022)
- T5.6 Generalisation of Co-design for All methodology for wider adoption (Aug - Dec 2022)

Task 5.2 (Co-design for All Method Framework Development) is the longest overarching task of WP5 that oversees all the work to co-create our working methods with the CUT (Core User Teams) and runs all the way until the end of the project. The overarching goal is to devise a Co-design for All methodology, with accessibility principles of engagement and a strong ethical stance on access, participation and ownership. This work has been documented in D5.2 Methodological framework document and is further reported in D5.3.



T5.4 (Co-design for All Method Deployment in Pilot Case Study Cities) reconsiders the methods developed so far and focuses on engaging with more complex audiences. The outcome is a set of principles and application guidelines of how these methods can be used to address specific challenges that are more complex than transport issues themselves. What are the real lived limitations of this work? What are the challenges with engaging with more complex audiences?

T5.5 (Method validation) reflects on the methods co-created with the CUT in the seven cities to produce recommendations for the further use of the approach in other projects and contexts. This task constituted our final engagement with the cities. We conducted a final round of 1-2-1 sessions with the Local User Leads (LUL) where we reflected on our work to produce recommendations for the further use of the approach in other projects and contexts.

T5.6 (Generalisation of Co-design for All methodology for wider adoption) consists of the development of a MOOC, that acts as both documentation and conclusion of WP5. The MOOC concludes on the methodological work and forms a dissemination opportunity.

In addition to this, the work was conducted alongside T6.1 (Developing the Pilot Case Study briefs) and T6.2 (Conducting Pilot Case studies) as reported in D6.1. In other words, the work to move from methods to methodology was conducted over a series of tasks moving us forward from the methods described in D5.2 to the final version of the methodology delivered here. In the following section, we describe the fieldwork activities and how the methodology was iterated in practise.

3 - Outcomes

In T6.1, the seven CUT developed their change proposition and from July 2021 to June 2022, as a part of T6.2 they set out to validate them in their local ecosystems and produce seven case studies (D6.1).

Through these activities, the consortium has generated three types of outcomes: first and foremost, **case study reports** of the work of workgroups in each city (D6.1); second **a MOOC** for sharing academic knowledge on design research (D5.4), and thirdly a series of methods and templates that make up the **TRIPS Co-design Toolkit** (annex 03).



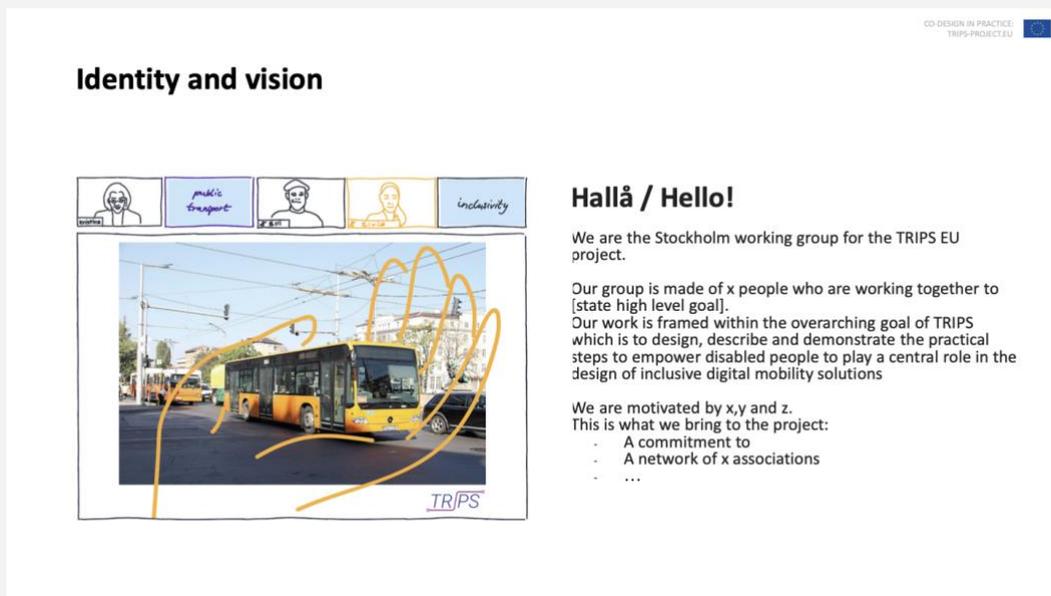


Figure 02: Slide from the 'Identity and Vision' module of the TRIPS Co-design for All online course

The first type of outcome articulates the unique work each of the cities has developed in the project. The goal was to support the cities in navigating the project and the tasks in a way that was meaningful to the members of their CUT and situated in the specifics of the political and infrastructural landscapes of their cities.

Practically, this generated a series of documents where the cities articulate their work in the project: first, creating an identity and vision as a group (fig. 02), then identifying the local problems they are facing in public transport, followed by showing how these problems were investigated and the knowledge that was gained about the decision making structures that govern these problems. Out of this emerged specific change propositions that the groups have been developing since (table 03 and annex 04). These documents combined make up a case study that demonstrates the end-to-end process that each group has gone through and the prototypes of these propositions (fig. 03).

Cagliari: Accessibility mapping of core bus routes

The goal is to map the accessibility information of a number of core bus routes (hospitals, schools, services and so on) selected by the persons with disabilities in the Cagliari group. We will map the accessibility features of the route between the selected bus stop and the point of destination using adequate mapping tools. The results will be uploaded to BusFinder (<https://www.ctmcagliari.it/en/busfinder/>), the official CTM's App, so that interested users will be able to verify the route feasibility. In order to meet visually impaired users' needs a vocal synthesis will be developed and tested for the same routes.



The mapping of the accessibility levels in Cagliari for disabled users might be further expanded once the project ends, as the city of Cagliari (and other local authorities) can allocate resources. It could also trigger a virtuous cycle thanks to the creation of a permanent exchange between disabled users associations, local authorities and local public transport operators. In this way we can merge what is a product/service improvement (availability of new information on BusFinder) with a process innovation (the protocol for the discussion of accessibility related issues).

Table 3: Cagliari’s change proposition

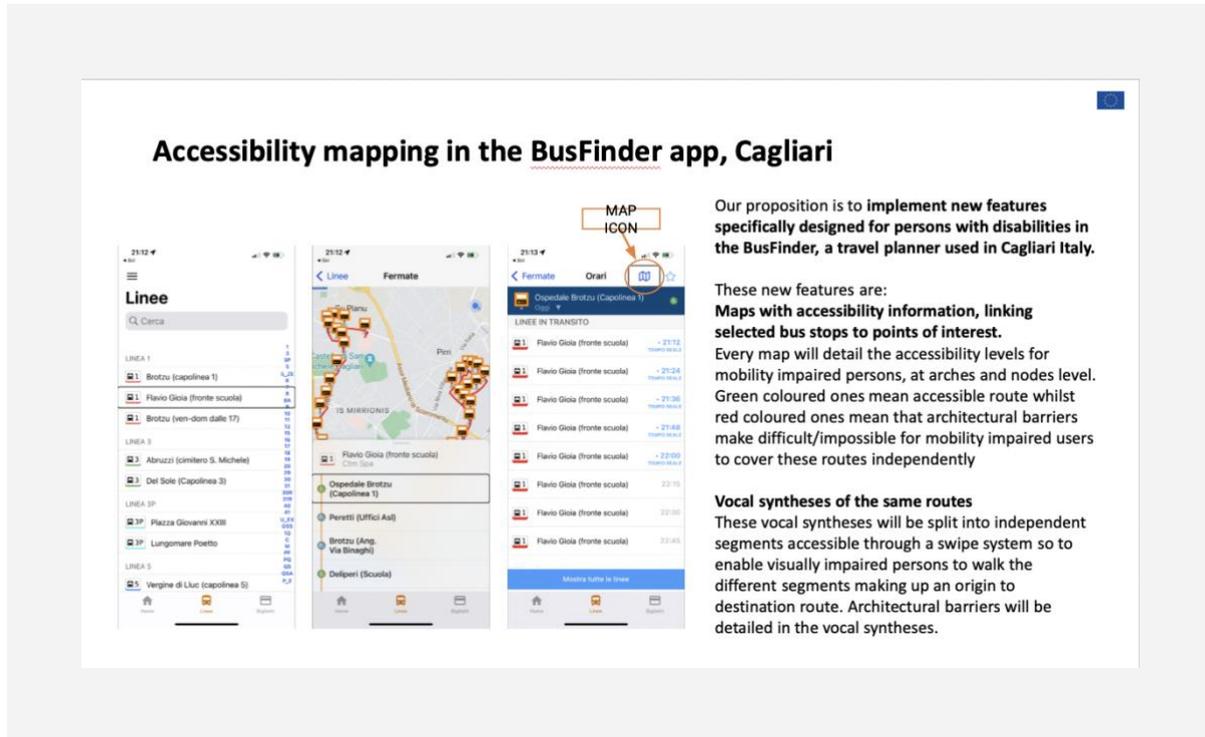


Figure 03: Cagliari’s Accessibility mapping prototype

The second type of outcome from the WP5 fieldwork engagements has been academic knowledge contribution. This contribution is delivered in the MOOC D5.4 but has also been gathered through previous deliverables, as well as in other documents created in a broader academic context.

Deliverable D5.1 (Method Framing Document) proposes a theoretical framework for the participatory inquiry work in the project. Through practical inquiry and reflection, knowledge has been co-created grounded in the realities of each of the seven CUT participating in the project. Deliverable D5.2 (Methodological framework document) contributes the analysis and insight generated from the experiences of putting to practise the theoretical foundations in the co-creation of local methods with the CUTs. This present document D5.3, proposes an overall toolkit created in relation to the situations covered by the project, while suggesting ways that such local approaches might be applicable to other locals.

Other knowledge contributions have occurred in a broader academic context:

- The chapter, ‘TRIPS Co-design as a method for accessible design in transport’ for the springer book ‘Making digital mobility inclusive and accessible’ (to be published 2023);



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- The paper lead by the group in Bologna 'Co-designing transport solutions towards an inclusive public transport in the city of Bologna for the 6th conference on Sustainable Urban Mobility (2022);
- The paper 'A reflection on participatory research methodologies in light of the COVID-19 - lessons learnt from the European research project TRIPS' published on Open Research Europe.
- Position paper "Collaborative methodologies that emerge from within: by who, for whom, what for, to whose benefit and at whose costs?" Participatory Design Conference (2022)
- A paper currently in development for DIS (deadline February 2023)
- A longer journal article in development (expected delivery February 2023).

Alongside this, WP5 have also been actively involved in a number of recent academic conferences:

- Joint International Conference on Digital Inclusion, Assistive Technology & Accessibility - ICCHP-AAATE 2022, Lecco, Italy, July 2022 (<https://icchp-aaate.org>)
- Participatory Design Conference PDC2022 in Newcastle, UK, September 2022 (<https://pdc2022.org/>)
- Transport Research Arena conference TRA2022 in Lisbon, Portugal, November 2022 (<https://traconference.eu/>)
- World Passenger Festival WPF2022 in Amsterdam November 2022 (<https://www.terrapinn.com/conference/passenger-festival/>)

And finally, WP5 has been participating in educational and cultural events such as the New European Bauhaus festival in Brussels June 2022, and in the Dutch Design Week in October 2022. The details of these engagements will be described in D8.3.

The third and final type of outcome that has been generated through the fieldwork activities is the set of methods and templates that have been used to support the cities as they went through the different tasks in the project. These methods and templates are now gathered under the TRIPS Co-design Toolkit. The aim of the toolkit is to turn the experiences of the cities into practical executable systems of engagement that can be applicable to other locales and situations.

4 - Fieldwork Reflection

While the outcomes described above are key to the WP, the following provides an **overview of the work process, i.e. the way these outcomes were achieved**. In this phase of the project there was a focus on engaging with a more complex audience of transport stakeholders. This meant that each group developed their own iterative process taking into account each city's local context in terms of current accessibility, local political climate, the situation of transport providers, disability policies and infrastructural landscape through knowledge sharing.

The tasks were articulated using a series of qualitative research methods: semi-structured interviews, open-ended activities, writing exercises, offline activities, etc. We report on these engagements below by sharing information about how these engagements were conducted and the materials that were created for them. **For each of these engagements we synthesise lessons learned, general principles and application guidelines.**



The reflection looks at the three main types of engagements used in the engagements with the cities:

- **Monthly working group meetings.** We would host monthly working meetings with representatives (mostly LULs) from each project city. The purpose of these meetings was to allow the CUTs to stay in touch with each other's progress and share outcomes and methods.
- **1-2-1 sessions.** We held a regular series of conversations with the LULs of each work group, this was done in order to work closely together to develop the methods of the project.
- **Making activities.** With this we refer to the making of knowledge structures that transcend the immediate tasks into a methodology that can be used in a broader set of contexts.

At the end, we share the general principles and application guidelines that emerged from our final round of shared reflection with the groups. These are split into three main themes that have been important in our considerations of what doing co-design in practise means: co-ownership, collaboration and motivation.

4.1 Engagement type 01: Monthly working group meetings

We learned that

Revisiting the purpose of activities regularly is a way to address the needs of those involved, as their work matures in the project and their needs for how to engage with the rest of the team evolve.

Principles and application guidelines

- Revise the purpose of activities regularly.
- Prioritise exchange between those involved as opposed to output from activities.
- Use time bound cycles that repeat over time to give participants the opportunity to iterate and make these cycles their own.
- Provide a clear template so that it is clear how people are expected to share their progress in a way that levels the playing field between those sharing.
- Nurture ownership.

Regular monthly meetings were held for all WP researchers to organise as a group, with the coordinators of each city group (the Local User Lead or LUL, and the Local Coordinator or LC). These monthly group sessions were regularly iterated in terms of how they were run, the kind of communication that was done before and after, and the kind of documents that were used to facilitate and document these gatherings (example figure 04, contextualising task 5.4 in a monthly cycle). Over time, the iterations worked towards prioritising ways for the groups to make these cycles their own. This process of ownership was slowly built over time.



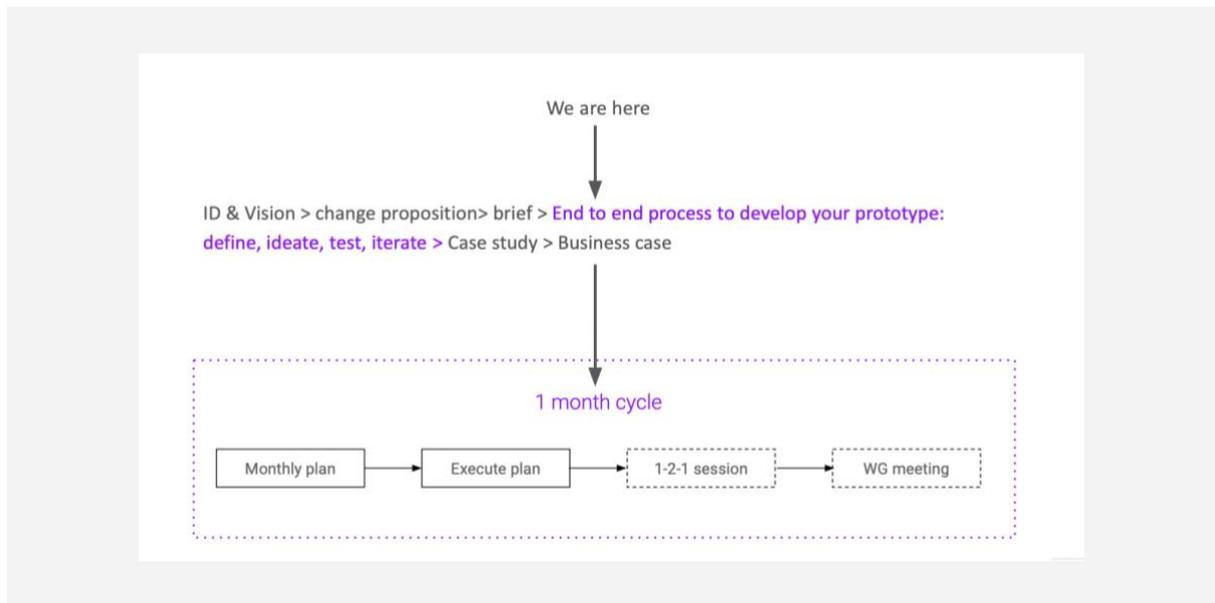


Figure 04: Slide contextualising task 5.4 in an end to end process and providing a time bound structure of monthly cycles.

Towards the end of the first year of the project, we consulted the CUTs to understand their experiences in the project so far. One thing that came up as being a priority in this process was the opportunity to learn from and exchange with the other cities. We took this as a mandate to reflect and reshape our ways of working, and from September 2021 the monthly working group meetings shifted focus from being a site for researchers to share their understanding of the tasks and coordinate with the CUTs, they became a site for city groups to share their work, discuss their progress and mobilise resources in the project to their efforts. The lead role in these sessions shifted to the LULs and their working groups.

We learned that revisiting the purpose of the monthly meetings was a way to put to practise what had been identified as a priority for the CUTs: to maximise the opportunities for peer-to-peer exchange, to learn from how the other groups navigate the project and what strategies from one cities can be applicable to others.

To support this city-to-city exchange we monitored and evolved the documents we used to work collaboratively. We evolved our own account making processes so that they prioritised the CUTs' own subjective and localised experiences of the project and could be used as living documents, continuously revised to cope with the emerging needs of each city. As an example, meeting notes were created collaboratively using an open document that we all contributed to, live during our monthly meetings.



[month] [city] summary	
What did you set out to achieve as a group this month?	
What did you do?	Add link to documents e.g. meetings, workshops
What did you learn?	
What questions are you left with?	
Any issues, difficulties, blockers, concerns, unknowns?	
What do you need to make progress?	
What would you like to do next month?	

Figure 05: Monthly group meeting template for groups

Nurturing ownership became a guiding principle for the ways we found of systematising our account making processes. We created documents that created a shared baseline for the CUTs to conduct and document their activities (fig.05), paying particular attention to making these open and flexible enough so that each city was able to decide on what to report on and how (see fig.06). These documents levelled the field to support the groups in sharing their progress and promoted ownership of account making.

4.2 Engagement type 02: 1-2-1 sessions with LUL

We learned that

Shifting the lead role in our 1-2-1 engagements to the local user lead (LUL) was a way of guaranteeing that our efforts were mobilised towards what the CUTs deemed most important as opposed to a formal roadmap. Also, by alternating between task-driven and reflection mode we were able to shape our methods to meet the evolving needs of the groups.

Principles and application guidelines

- Revise the roles in activities to distribute agency.
- Be explicit about the responsibilities involved in each role and revisit the scope of the roles together and throughout the project.
- Revise the different modes of activities to combine doing with reflecting in order to shape methods that reflect the lived experience of using them.

Following the process described above, we revised the 1-2-1 sessions that had been a regular feature in our process, so that these sessions became less shaped by the researcher and more led by the LUL. This shift was reflected in the documents we used to support these sessions, which switched from being prepared by the researcher to being prepared by the



LUL. Shifting the lead to the LUL meant that these sessions were shaped by the groups' priorities.

In this shift, the researcher adopted a supporting role, diagnosing problems and blockers to clear the way for the groups to make progress. We found it necessary to be explicit about the responsibilities involved in each role and revisit the scope of the roles together and throughout our engagements. The responsibilities were made explicit in the documents that instigated for the work of the CUT to be articulated focusing on who needs to do what and when (see fig.06).

January goals	
What do you want to achieve as a group until the next WG meeting?	
1	Define the graphic rendering of the maps to be embedded into the <u>Busfinder</u> app on 3 sites already monitored. This also refers to the maps legend and the colours to be used
2	Create maps for at least 7 more routes to a destination
3	Based on the architectural barriers met during the monitoring we want to discuss a possible demolition plan of the barriers preventing/making difficult for persons with disabilities to reach a destination. This shall be discussed with the municipality of Cagliari (<i>for example criticalities about tactile paving in and around the City of Cagliari shall be discussed in this phase</i>)
4	Prepare for 1-2-1 / Prepare for monthly WG meeting / Define your goals for next month

Figure 06: Cagliari monthly group meeting slide

As we revised the 1-2-1 sessions format, we also identified that there were two types of sessions: task-driven and reflection modes. In task-driven mode the focus was on day to day work to support the groups in making progress. In reflection mode, the focus was on analysing and evaluating our ways of working in light of how suitable they were in supporting the groups to make progress in a way that was relevant to their working group. The reflective sessions occurred less regularly, usually in transition moments between different tasks.

We used the reflective engagements to revisit and build upon our standpoints of how co-design is understood and attended to, in light of the work conducted so far:

“Co-design is being listened to and taken seriously.”

“Co-production is having the target group included, from the beginning until the end. We’re looking at change from a disability perspective. Through their experiences, write the application. Project application needs to have the target group involved, to have a say on what should be included in the project. Create ownership from the beginning.”

“I was a bit afraid of not finding as many people, people that were willing to work on these terms, that were just focused on shouting bad things, as



opposed to trying to find actual solutions to problems. People that wanted to find ways to make things work, trying to fix the world without actually fixing it. “

These reflective moments also elicited more systemic insights that point at what is hard about doing this kind of work:

“We can speak, but we cannot do it in real life. We can suggest, we can try and find the money but the decision, the people who can make change are the municipalities and the transport providers.”

“Working with lots of different stakeholders (WG) is a strength and a constraint at the same time - they understand what is the concept of the project, but the problem is how far they can go. The problem is the way companies and entities work internally, some people in the WG will not have power in their companies to do any actual change”

“A challenge has been working with really negative people that have been disheartened by 20 years of fighting. It’s the idealistic 3 year project vs the reality of 20 years of fight and seeing no change. “

Combining reflection with task-driven engagements allowed for the LULs and CUTs to reflect critically in a way that brought up their needs and what was most important to them:

“Let’s make evidence: things that people can disprove. This works, this doesn’t work, we have data about it. But as a disability rights activist, we are not going to convince anyone. It is a matter of how much do these things cost, what’s the return on investment is worth it. It’s more of a question of time. “

“The project is very open to being many different things in the same project - this is great because we can test many different ways. But then you have to work on things in a very structured way, and this is sometimes quite confusing.”

“I really enjoy the sharing aspect of the project, to understand how the same things work in different parts of the world. This is very exciting for me. I would like to know more about the other 6 cities, their realities, their solutions, and what would be possible for us to apply here in Lisbon. I would like to learn more from the other countries, their experiences so that we can apply these in Lisbon.”

Ultimately, using reflective engagements throughout the project was a way to put to practise a commitment articulated in the beginning of the project, where we stated our intention to treat our theoretical framework as a living document to be shaped by, with and for the seven groups of TRIPS to reflect their unique cultural, interpersonal, structural and policy-related conditions (Andersen and Vasconcelos, 2020).

Identifying these two types of sessions and further reflecting on them led us to a better understanding of how these two modes, task-driven and reflection, worked together to inform and shape our methods. Alternating and combining these two modes allowed us to put our methods to practise (in task-driven mode) and adjust them (in reflection mode), thus re-shaping our methods iteratively to reflect on the experiences of each group. This feeds into an ongoing thread in the project where we reflect and revise our working definitions to describe the multiple ways of working of the cities involved.



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4.3 Engagement type 03: Making

We learned that

Exploring multiple kinds of making have enabled us to support the groups in navigating the project to produce practical outcomes and to generate knowledge that is grounded in the experiences of the groups and their own accounts of going through this process.

Principles and application guidelines

- Combine multiple types of making to generate different types of knowledge
- Try different types of making to enable engagement, different types participation, and account making to come from lived experiences of the groups
- Make use of practical inquiry combined with reflection to generate qualitative and descriptive data
- Keep your making artefacts tidy to demonstrate how your thinking has evolved and use them to communicate the knowledge that has been generated in the project

On our road towards achieving concrete and tangible change, we look at the role material artefacts play in enabling participation (Noronha et al., 2020). This is supported by thinking widely about the socio-material arrangements that constitute material participation (Marres, 2012), and also by looking at the practical ways of generating knowledge through the making of things (Giaccardi and Stappers, 2027). The emphasis here is placed on what value is generated for the cities and how this can be brought forward through participants' own accounts of how this manifests in their material realities.

In the theoretical foundations set in D5.1, making was established as one of four components of our methodology. We take open-ended making as a tool that allows for a broad and complex range of understandings to manifest and therefore we propose the making of things as a method for broadening participation (Andersen and Vasconcelos, 2020).

As such, making has been an ongoing part of our engagements. In these engagements we also consider making within the notion of co-creation as 'the act of making together rather than consulting people and then producing designs to the pre-set requirements.' (annex 05).

In the work we have developed so far, the word making has been used to hold a number of different ways of doing with the groups: first, knowledge making, that is generating knowledge collaboratively through making; secondly, making visual artefacts to articulate the work of the groups and our understandings of the project; and finally, account making as a way to collaboratively analyse and report on our engagements and the knowledge generated by them.

Exploring multiple kinds of making have enabled us to support the groups in navigating the project to produce practical outcomes that tell the story of their end to end process in the project, whilst at the same time reflecting and analysing these processes together to generate knowledge that is grounded in the experiences of the groups and their own accounts of them.



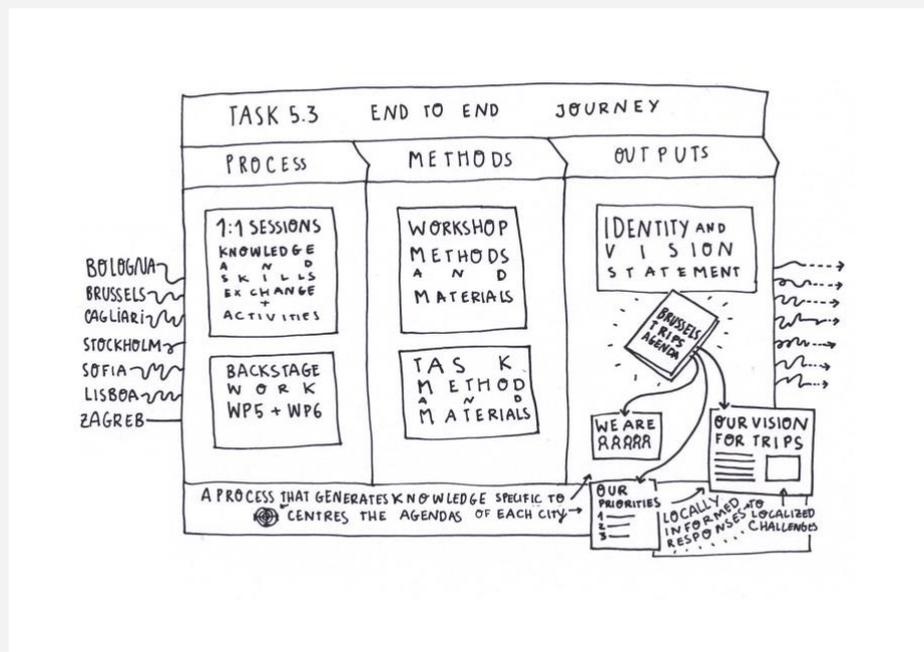


Figure 07: 'A process that generates knowledge specific to each city' task 5.3 end to end journey

The first type of making that we report on, is making as a way of arriving at knowledge (Andersen and Vasconcelos, 2020). We have used practical inquiry and reflection to generate qualitative and descriptive data that explains in detail what is happening, and how something is experienced from a subjective perspective. As an example throughout the project, we have revisited and evolved our understandings of co-design to reflect the multiple and evolving experiences of the cities as they navigate the project. This is in line with our commitment to anchor our work in the specifics of each group (Alčiauskaitė et al., 2021). This commitment has been put to practice by co-creating knowledge that is locally situated in each project city and is specific to each CUT (fig.07). This kind of knowledge gathers an in-depth understanding of the situations being studied, together with suggesting ways that such local approaches might be applicable to other locals.



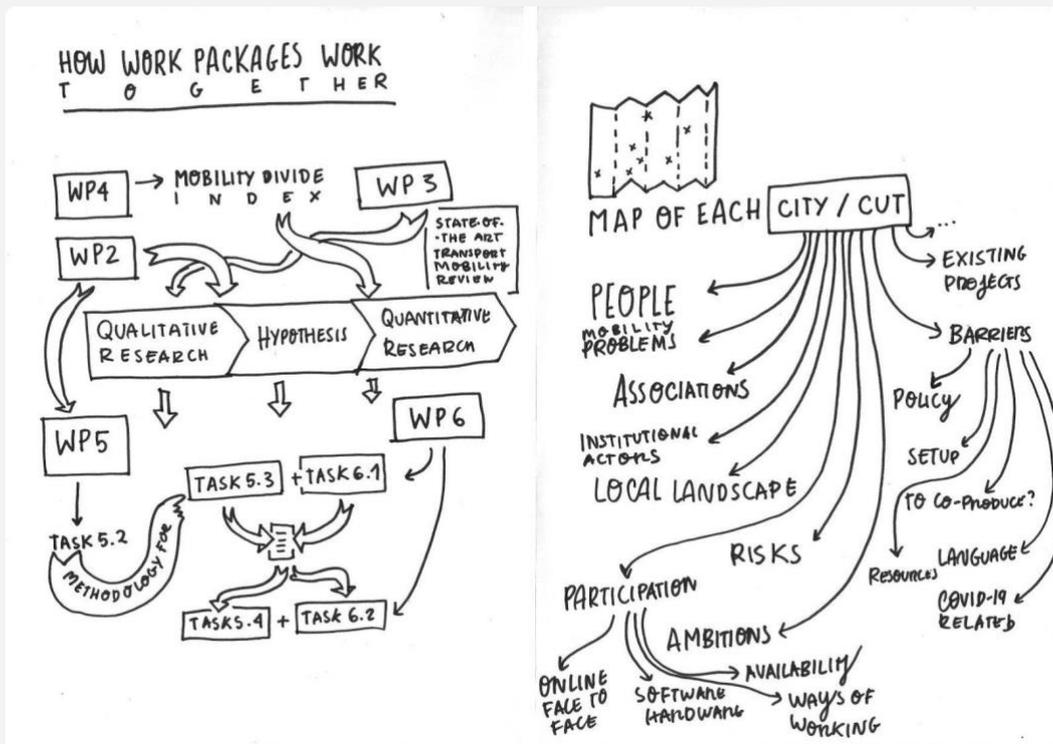


Figure 08: sketches 'how work-packages work together in TRIPS' and the situated work of TRIPS

The second type of making we report on, has to do with generating visual content. In our fieldwork we have made use of a series of techniques to collaborate with the cities, one of them has been sketching. We made use of diagrams and simple drawings to anchor our work into strongly held local concerns (fig.08). These diagrams have been used as a way to negotiate the broad structure of the project and its discrete components (work packages, tasks, deliverables, milestones, etc) that together have been translated into an actionable end to end process by each of the groups.

Sketching has also been used as a surface to document the exchanges and shared understandings as we work together. These sketches have acted as orientation devices in the sense that they allowed us to be explicit about our processes and how all its moving parts fit together, but most importantly this allowed us to do this through the lenses of each group: in what specific ways might these tasks be situated within the local and specific working landscape of each city and group (fig.08). Because we consider visual note taking as a learnable skill we also put sketching forward as an extra module in the MOOC.



Beyond sketches and diagrams, we have co-produced a series of visual artefacts to articulate the work of the city groups (fig.09) in meetings and presentations.

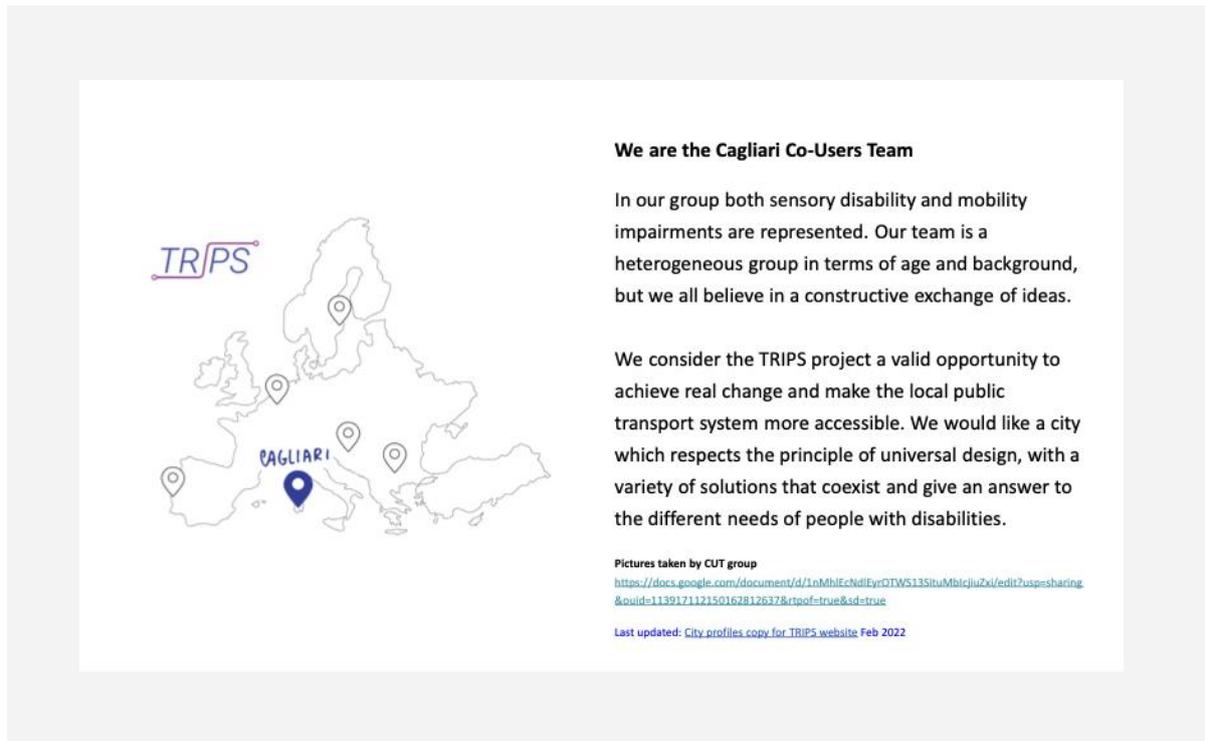


Figure 09: Slide from Cagliari's overview document

These documents bring together content created by the cities CUTs and the researchers, together with specific expertises like graphic design that been brought into the project on a need basis:

“CUT has to be representative but it also must be supported by people with technical skills (e.g. expert in accessibility, expert in transport accessibility...). In this co-creation we need the widest range of people and we need our work to be supported by expertise.”

An example of these efforts are the series of images that use the photographs taken by the groups in their cities, that were subsequently layered with graphical information (fig.10).





Figure 10: Images co-created with the group in Stockholm

The third and final type of making, we consider here, is account making. In the analysis and reporting of our work, we have committed to prioritising the CUTs' subjective accounts of what going through this co-design process means, and the value it generates in their cities. As such, the voices of the groups have been prioritised in the reporting of our work. As an example, the main image on the homepage of theTRIPS website (fig.11) is a photograph taken by the group in Cagliari to document the lived experiences of the members of the group using public transport.



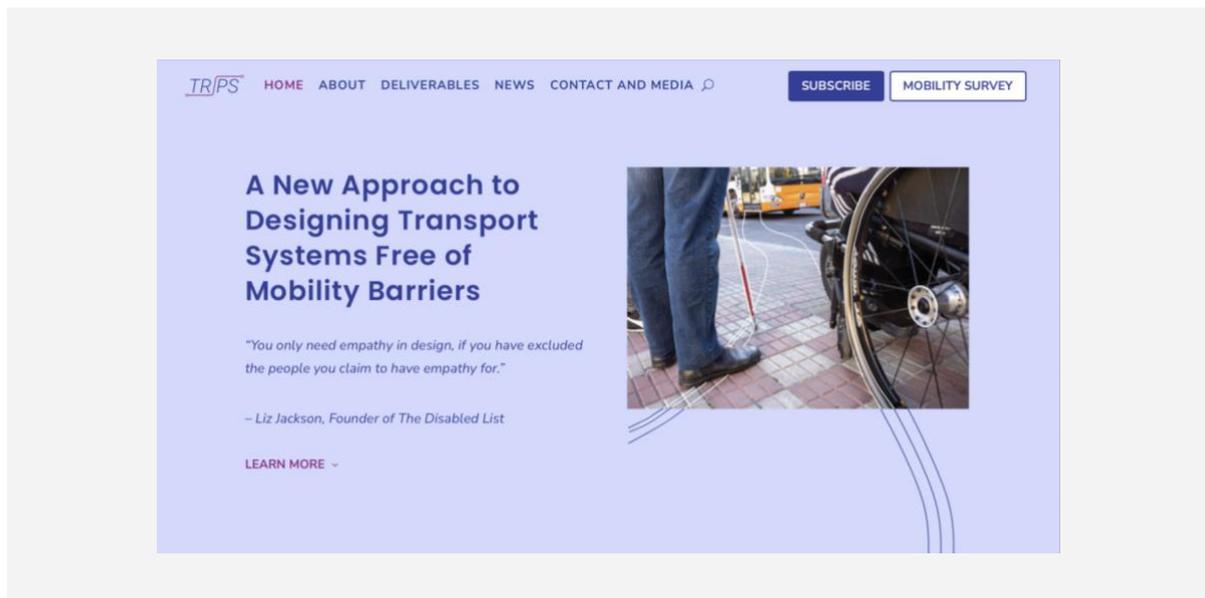


Figure 11: TRIPS landing page <https://trips-project.eu>

These first-hand accounts have also been present in our deliverables, through direct quotes that prioritise the voices and first hand accounts of the groups.

Prioritising account-making from the local working groups has been a way of generating knowledge collaboratively and guaranteeing that the CUTs are equal contributors to the outputs created in the project. This brings forward the value that is generated for the CUTs through the groups' own accounts. Ultimately this allows us to generate knowledge grounded in the everyday realities of the local communities driving the project.

4.4 General principles and application guidelines

We also conducted a final round of interviews with the LUL to continue our account making processes. These reflections encapsulate what we learned based on the experiences of putting co-design to practice and are clustered in three main groups: the first is about co-ownership; the second about a collaborative working process; and the final group is about motivation and friction. The outcome here is a set of principles and application guidelines of how our methods can be used to address specific challenges as proposed in the TRIPS toolkit.

4.4.1 Co-design = co-ownership

We learned that

Co-design is about having shared ownership of the project. This entails that people that will be most affected by the change process need to be involved as early as possible so they can shape the project from the beginning and ownership can be nurtured throughout.

Principles and application guidelines

- Involve participants in the entire project.
- Create co-ownership from the beginning.



- Provide support to nurture the continued involvement and commitment in the project.

Involve participants in the entire project:

“Co-production is having the target group included, from the beginning until the end. We’re looking at change from a disability perspective, through their experiences. Project application needs to have the target group involved, to have a say on what should be included in the project. Create ownership from the beginning.”

Create co-ownership from the beginning:

“If we want to have people really, really involved and committed in this project, It is important for them to feel they are important and that they are listened to. The CUT are the most important contributors, their different experiences and different points of view. The thing that is really important is to support this with knowledge and expertise.”

Provide support to nurture the continued involvement and commitment in the project:

“Meetings with everyone to establish concrete goals and establish next steps. The clearest possible way - establish what we are supposed to do, what is necessary to achieve it and what we will have done in the end. “

4.4.2 Co-design = a collaborative working process

We learned that

A significant amount of effort is required to implement and maintain a fully collaborative working process. These efforts are emergent and often unaccounted for in the original work package borders. Put a lot of effort into creating, implementing and maintaining an internal working process.

Principles and application guidelines

- Invest in onboarding from the beginning.
- Be aware that these efforts are emergent and often unaccounted for.
- Translate the project’s formal structure into actionable and clear tasks.
- Be explicit and descriptive about how you are going to work together.
- Continue to implement, monitor and improve your processes regularly and collaboratively.

Invest in onboarding from the beginning:

“In the beginning it was confusing. More support in the beginning would have been nice. Something that explained the process for us as the owners of the project here in Lisbon, so that we could understand what we could do in the project and to be able to explain that to other people.”



Be aware that these efforts are emergent and often unaccounted for:

“Although this might sound obvious, the practical reality is that there is a significant amount of unacquainted effort that is necessary to create a collaborative working process that creates alignment and consistency between all the groups involved. This is emergent and ongoing. What we observed is that this work didn’t necessarily fall under a specific work package, nor was there a clear owner of this effort. Further, this work is cross work packages and requires a distributed effort and a sort of turn taking in leading these efforts and align our approaches internally.”

Translate the project’s formal structure into actionable and clear tasks:

“Help me figure out what I need to do and *know*. If I have a plan with clear points on what is important that I know and what I need to do, what are the milestones between the tasks, what are the links between the tasks... This would *help me understand the project*.”

Be explicit and descriptive about how you are going to work together:

“I would start with a workshop on what does co-design mean and how we want to work together”

Continue to implement, monitor and improve your processes regularly and collaboratively:

“Maybe structuring the notes and other information we record from the meetings in a different way. We decided not to create reports, just documents, but then I realised it would have been interesting to have some documents like the ones you provided, with a very simple structure, to use and manage things when you collect certain information. On my side I would say to have risk assessments in the beginning of the project, all the things I need to be aware of, things that could impact or not the project in Lisbon, as a way of tracking things across time. “

4.4.3 Co-design = motivation

We learned that

Monitoring what is motivating people and how that changes throughout the project is an important aspect of collaborative working.

Principles and application guidelines

- Engage with friction and frustration as it emerges.
- Monitor how what is motivating people changes through the project.

Engage with friction and frustration as it emerges:

“Don't speak about flying taxis without speaking about accessible bus stops. We lost interest in the project because of these workshops with the flying taxis.”

Monitor how what is motivating people changes through the project:

“more exchange between people in the different countries, feel the togetherness and that we are part of the same project; more motivation, more information flow. “

So far, we have reported on the final engagements with the CUT groups, where the methods developed so far were put to practise in order to engage with more complex audiences. The



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main outcomes have now been gathered and synthesised into the TRIPS co-design toolkit, whose main components are outlined below.

5 - The TRIPS Co-design Toolkit

In this section, we describe the final **TRIPS Co-design Toolkit**, which is constituted by the exercises, templates and guidelines that have been co-created and continuously iterated with the CUTs as they were put into practise in each city.

The TRIPS Co-design Toolkit consists of an overview of the forms and tools developed, as well as a selection of supportive material, such as recorded lectures. It is delivered in three different ways:

- **As a MOOC** (D5.4), a free online open course hosted on the Coursera platform (<https://www.coursera.org/learn/co-design-for-all>), consisting of a linear educational structure with weekly lectures and exercises.
- **As a linked PDF document** (in Annex 03), that delivers the core forms downloadable as a discrete offline standalone.
- **As an online interactive repository** hosted on the TRIPS website, consisting of all relevant material (including all of the above), to be delivered at the end of the project.

In the following, we outline the main elements in the toolkit. These have been co-created, piloted and validated through practice with the cities in the final engagement phase where these co-created tools were put to practice and evolved to meet the emerging needs of each group.

The tools themselves are constituted by exercises, templates and guidelines. Some of these have been reported in the previous versions of this deliverable (D5.1 and D5.2) but have been generalised as part of **T5.6 Generalisation of Co-design for All methodology for wider adoption**. They are presented here in the overall context of the final methodology Toolkit.

The Toolkit consists of the following sections:

01: Identify who needs to be involved in your project

- Exercise: [The co in co-design exercise](#)
- Templates: [Access needs protocol](#), [Contact tracker](#)
- Guidelines: [TRIPS participatory framework](#)

02: Create a research plan and set up a collaborative working structure

- Exercise: [A process informed by research exercise](#)
- Templates: [City overview template](#); [Sharing work in progress monthly](#);
- Guidelines: [Task guidelines for facilitators](#)

03: Create an identity and a vision statement as a group

- Exercise: [Identity and vision exercise](#)
- Templates: Identity and vision templates [slides version](#), [word version](#); [Survey for groups: defining how we want to work together](#).

04: Identify a problem to address and define a clear scope for action

- Exercises: [Set a target exercise](#); [Understanding decision landscapes exercise](#); [Social](#)



- [Media content analysis](#);
- Template: [Develop and test your change proposition](#)

05: Come up with a change proposition as a group

- Exercise: [How to come up with a change proposition as a group exercise](#);
- Templates: Workshop [word version](#), [slides version](#), [screen reader version](#);
[Collaborative notes and debrief document](#)

06: Documenting and communicating your work

- Exercise: [Communicate your work exercise](#)
- Template: [Briefs to create visual materials](#)

Below we unpack each phase and its materials. The exercises can be downloadable as a discrete offline standalone available in Annex 03.

5.1 Identify who needs to be involved in your project

01: Identify who needs to be involved in your project

- Exercise: [The co in co-design exercise](#)
- Templates: [Access needs protocol](#)
- Guidelines: [TRIPS participatory framework](#)

The first theme addresses the most important ingredient of our methods: who is involved and how they are involved (fig. 12). The first exercise functions as a way to identify who needs to be involved and ways to get them started.



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EXERCISE: IDENTIFY THE WHO 1/3

<p>1 - List of potential groups involved</p> <p>2 - Prioritise the people most affected by a change-process</p>	<ol style="list-style-type: none"> 1. Groups at risk of exclusion from public transport <ul style="list-style-type: none"> - Persons with disabilities - Persons with reduced mobility due to old age; to temporary states e.g. an injury, pregnancy; to transporting other people e.g. babies and children; caring for a person with reduced mobility; - refugees 2. Groups that shape and are responsible for public transport <ul style="list-style-type: none"> - Government authorities - Transport providers - Accessible transport tech people 3. Groups that advocate for the groups at risk of exclusion from public transport <ul style="list-style-type: none"> - Activist associations - Individuals 4. Other groups who might be involved <ul style="list-style-type: none"> - Researchers - Consultants and business delivery companies
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Figure 12: Slide from The co in co-design exercise

This theme is made up of a series of supporting materials:

- a video lecture that demonstrates how this tool can be used to bring the people that will be affected by a change process into the centre of it, and how it can be used to initiate a co-design process with these groups, by them, for them.
- two templates:
 - the Access needs protocol (part of annex 03) communicates the practical setup that each group needs to participate in an online session e.g. if a member of the working group is blind or requires an interpreter to participate;
 - the Contact tracker that keeps hold of the practical details of the groups and individuals that have been contacted to engage with the project
- TRIPS participatory framework, that provides the theoretical foundations of co-design (fig. 13).



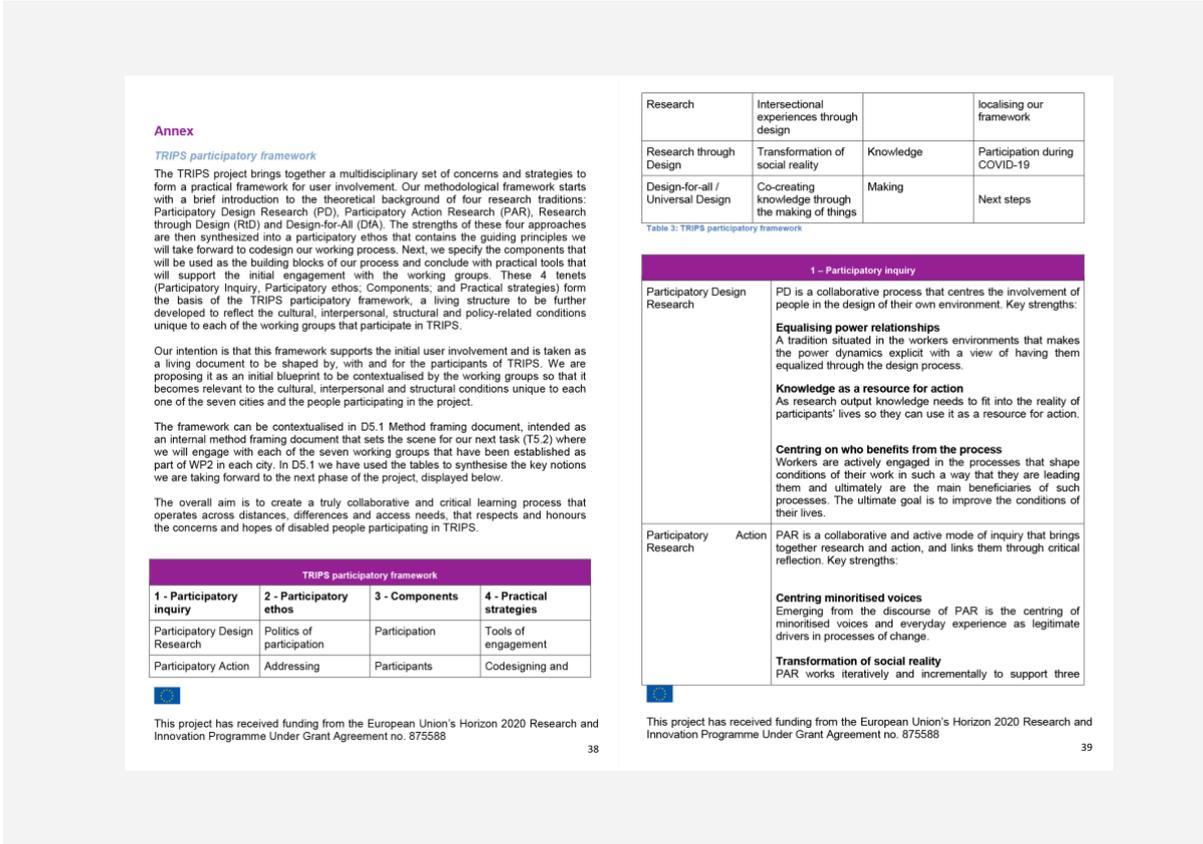


Figure 13: TRIPS participatory framework (part of D5.1)

The TRIPS participatory framework (fig. 13) forms the theoretical backdrop for the methodology work in TRIPS. It was created early in the project as part of the method framing document that defines the user involvement strategies for TRIPS and the background theoretical considerations that underpin them (Andersen and Vasconcelos, 2020).

The framework functions as a base document, for users to be able to query the background of the Toolkit and create common ground and collaborative processes that make concerns and concepts visible, while integrating cultural, interpersonal, structural and policy-related viewpoints.

5.2 Create a research plan and set up a collaborative working structure

02: Create a research plan and set up a collaborative working structure

- Exercise: [A process informed by research exercise](#)
- Templates: [City overview template](#); [Sharing work in progress monthly](#);
- Guidelines: [Task guidelines for facilitators](#)

This exercise is about creating a process that is grounded in real life needs. Such a process is about investigating something in its context and generating research knowledge from that.



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EXERCISE: START YOUR RESEARCH REPOSITORY

<p>1 - CREATE A FOLDER AND ONE DIRECTORY DOCUMENT</p> <p>2 - LIST THE NEEDS AND QUESTIONS YOU HAVE</p> <p>3 - GROUP THEM BY THEME</p> <p>4 - PRIORITISE THEM</p> <p>5 - IDENTIFY THE ACTIVITIES THAT MIGHT ADDRESS NEEDS AND QUESTIONS</p>	<h3 style="text-align: center;">SOFIA RESEARCH DIRECTORY</h3> <div style="border: 1px solid black; padding: 5px;"> <p>Folders</p> <ul style="list-style-type: none"> » Sofia_CUT_TRIPS (main folder) » » 01_Workshops_Sofia (sub-folder) » » 02_Output_documents_Sofia » » » Photos_sofia » » » Designed_images_Sofia » » 03_WG_monthly_meeting_presentations_Sofia <p>Documents</p> <ol style="list-style-type: none"> 1. Sofia overview slides: Sofia TRIPS Overview 2. Who are we <ol style="list-style-type: none"> a. Access needs protocol b. Identity and vision 2. Change proposition <ol style="list-style-type: none"> a. Prototype b. Mobile app design c. UX Sofia d. Pilot case study V01 T6.2 Jul 2022 e. Pilot case study brief T6.1 May 2021 f. Earlier articulation of the change proposition Jan 2021 </div>
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Figure 14: Slide from 'A process informed by research' exercise

This exercise can also be used to address the practical aspect of creating a research repository, a place to hold research activities as well as the documents that are created in the process (fig. 14).

As supporting materials we share a video lecture, and two templates that have been used by the groups to keep a running overview of their work as it emerges (annex 07) and a document to share their work in progress regularly (part of Annex 03). A final supporting document, Task method for researchers (Annex 08), proposes a shared baseline for how tasks can be facilitated across work packages that provides guidelines for researchers to onboard the groups and support them in transitioning from task to task.

5.3 Create an identity and a vision statement as a group

03: Create an identity and a vision statement as a group

- Exercise: [Identity and vision exercise](#)
- Templates: Identity and vision templates [slides version](#), [word version](#); [City overview](#); [Survey for groups: defining how we want to work together](#).

The exercise for 'Identity and vision' is about how to create an identity as a working group together with a set of motivations and a specific vision (fig.14). This can be used as a way to clearly communicate who the group is, what is trying to be achieved, how this relates to a target audience and how they can contribute towards this group's vision (annex 09).



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EXERCISE: Identity and vision

1 - WHO ARE YOU?	
2 - WHAT IS YOUR CONCERN?	
3 - SPECIFIC PROBLEMS YOU FOCUS ON	
4 - WHAT IS YOUR LONG TERM VISION?	
5 - CHANGE YOU WANT TO MAKE HAPPEN NOW	

Figure 14: Slide for the 'Identity and vision' exercise

This exercise is supported by a video lecture and a set of complementary templates that have been used to support the groups in articulating their identities and visions. The first templates provides three different formats on which to communicate these identities and visions (annex 09). The second is a survey (annex 10) with a set of questions that the groups used to arrive at a shared understanding of how they wanted to work together.

5.4 Identify a problem to address and define a clear scope for action

04: Identify a problem to address and define a clear scope for action

- Exercises: [Set a target exercise](#); [Understanding decision landscapes exercise](#); [Social Media content analysis](#);
- Template: [Develop and test your change proposition](#)

Two exercises are proposed to set a target and an actionable plan. The first exercise consists of defining a problem to address and a clear scope of action that engages political, economical, social and technological factors (fig.15).



EXERCISE: THE PEST ANALYSIS

	ENABLER	CONSTRAINTS	MITIGATION
POLITICAL	Integration with existing services and database	Different accessibility needs to be considered	Create guidelines to develop involvement among disables
ECONOMIC	Hardware available at reasonable costs	Wearables still not widely known, limited diffusion	Public funding
SOCIAL	Easily acceptable by the potential users	Good quality information not widely available	Public- private partnership to improve data quality
TECHNOLOGICAL	Mature technology	Training required compared to smartwatches	Enhance UX in interface design (guidelines)

Figure 15: Slide from the 'Set a target' exercise

The second exercise is about gaining an understanding of a specific decision making process and identifying the groups involved in making decisions around a specific problem (fig.16). This can be used as a means to gather the necessary information to deliver ideas for change that are mutually desirable.



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EXERCISE: Decision landscape

1 - LIST ALL STAKEHOLDERS	CARRIS - transport provider
2 - WHAT IS THEIR VISION?	Improve Carris app to inform passengers in a better way, providing more information regarding accessibility.
3 - WHAT ARE THE OPPORTUNITIES?	Provide requirements and functionality for existing project that is delivering new features to the existing app in 2023.
4 - WHAT CAN BE DONE NOW?	Provide accessibility information to be implemented in the Carris App.
5 - WHAT IS THE LONGER TERM GOAL?	A transport network designed in co-production with disabled people to meet our requirements and desires, becoming a welcoming network where people make the difference. More specifically, we are focused on improving the connectivity, real-time information and reliability of the systems and services in use in our city.

Figure 16: Slide from the ‘Understanding decision landscapes’ exercise

Combined, these two exercises can be used to create an actionable body of knowledge around the divergent needs and barriers faced by persons with disabilities as a means for designing accessible and inclusive mobility solutions.

This is supported by: a video lecture; a template and a complimentary video that explains the social media content analysis exercise that was conducted in the project (annex 11); a template that has been used to support the groups in specifying their change propositions as a set of needs, functional requirements, and steps in a journey to develop and test their proposition in situ (annexes 12 and 14).

In the MOOC we also provide complimentary videos that provide an insight into the structures that govern public transport decision making: UITP Interview, [No Passenger Left Behind Series Ep.1: Creating Physical & Digital Barrier-free Public Transport](#); [No Passenger Left Behind Series Ep.2: The Relevance of Accessible Transport Post-COVID](#).

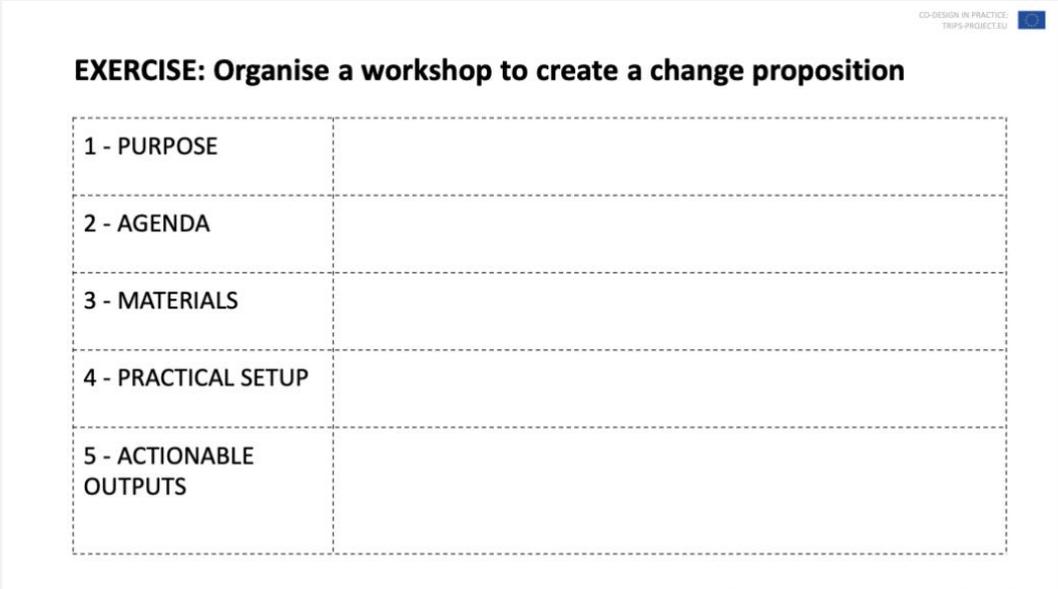
5.5 Come up with a change proposition as a group

05: Come up with a change proposition as a group

- Exercise: [How to come up with a change proposition as a group exercise](#);
- Templates: Workshop [word version](#), [slides version](#), [screen reader version](#); [Collaborative notes and debrief document](#)



This exercise uses the workshop as a format to come up with a change proposition as a group (fig.17). What is proposed is that this exercise can be used as a means to come up with specific and actionable outcomes, together with a plan to generate knowledge about these outcomes together.



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EXERCISE: Organise a workshop to create a change proposition	
1 - PURPOSE	
2 - AGENDA	
3 - MATERIALS	
4 - PRACTICAL SETUP	
5 - ACTIONABLE OUTPUTS	

Figure 17: Slide from the 'Come up with a change proposition as a groups' exercise

This exercise is supported by a lecture, and a series of templates that have been created with the groups: the workshop method in three formats, a slides, a word, and a screen reader versions (annex 13); and notes and debrief template (part of Annex 03) to document and analyse the workshop as a group.

5.6 Documenting and communicating your work

06: Documenting and communicating your work

- Exercise: [Communicate your work exercise](#)
- Template: [Briefs to create visual materials](#)

The final exercise is about concluding an end to end process and to come up with a communication strategy (fig.18) to share this process and its outputs. This exercise can be used to identify the messages, target audience, actions and artefacts you need to create in order to disseminate your work.



CO-DESIGN IN PRACTICE:
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EXERCISE: CREATE A COMMUNICATION STRATEGY

1 - WHAT: MESSAGE	- define your communication messages
2 - TO WHOM: AUDIENCE	- identify your target group - define your aims
3 - WHY: IMPACT	- State what you will achieve from this communication
4 - HOW: FORMAT AND MATERIALS	- plan the communication method
5 - WHEN: BEFORE, DURING AND AFTER	- establish the most opportune moments to communicate

Figure 18: Slide from the ‘Create a communication strategy’ exercise

This tool is supported by a lecture, and a few examples of how we’ve packaged our work with the cities in the template ‘Briefs to create visual materials’ (annex 14).

6 - Impact

Considering the impacts set out in the work programme, we consider that the expected impacts have been addressed in two fundamental ways: firstly, **research has been used to support the local working groups to come together to find ways to influence and mobilise decision-makers**. In this process, the groups have engaged with a number of regulatory frameworks in order to propose inclusive digital transport systems with particular attention to those facing the most barriers using public transport. Secondly, this **knowledge has been gathered and presented as educational material, in the form of the TRIPS Co-design Toolkit and as a free online course (MOOC)**, which is open to everyone.

Further, we suggest other impacts. We see a **societal impact** in the reframing of the issue of accessibility in a structural manner that brings together persons with disabilities and the several institutional groups to engage in systemic co-creation. The aspiration has been to explore synergies and propose solutions in the intersection of these that address mobility needs in feasible ways. **Our proposed contribution has been to stimulate the importance of accessible design and to demonstrate its feasibility and value by employing it ourselves in the seven pilot cities.**

In terms of **capacity building**, we put forward the idea that in supporting the groups to assume a leading role in the design of accessible transport systems, we have generated profound and lasting change in these groups, but also in the institutional partners we have engaged. **We propose that this will in turn create a capacity building impact in the broader transport sector by placing a strong stance on and example of co-creation.**



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Our **conceptual impact** has been centred on creating methods that reframe accessibility as a systemic issue, rather than a transport infrastructure issue. Our methods have allowed us to redefine gaps, areas of focus and priorities for innovation, in particular with regards to the need of involving users in design and decision making processes. **We believe that in this way our toolkit will make the practicalities of co-design available to a broader audience and lead to better outcomes for all stakeholders.**

Finally, the **academic impact** has been focussed on the synthesis of a set of methods that are now made available in the MOOC and soon on the TRIPS website. **We believe that this material can be used by a broad audience and will enable future projects to be done in a co-design way.**

7 - Conclusion

This deliverable has described the process of synthesising a set of co-design research tools that together form the TRIPS methodology in the shape of a toolkit. We have gathered this toolkit as a stand alone document in Annex 03, and in the last months of the project it will be shared on the project website. This deliverable should be considered alongside D5.4 that details and describes the MOOC design, including details of lectures, exercises and additional teaching material. The MOOC is now available hosted by TU/e at the leading MOOC site, Coursera (<https://www.coursera.org/learn/co-design-for-all>).

Through this process we have gathered a set of learning points that have in turn made it into the deliverables as described above.

In addition to this, we have outlined how we see the impacts of the work conducted, and we would like to end with our working definition of what it means to implement co-design in practise. In deliverable 5.1 we defines co-design as follows:

“Co-design describes the action of designing together, while attempting to actively involve all stakeholders (e.g. employees, partners, customers, citizens, end users) in the design process to help ensure that outcomes respect all participants' point of view. The aim is to make sure that the process is shared and the participants feel engaged with the outcomes.” (Andersen and Vasconcelos, 2020)

As we near the end of the project we would like to add to this that a successful co-design processes can only take place when the following conditions are present: a shared ownership of the project itself; a collaborative working process that involves all stakeholders; and a strong focus on what is motivating all stakeholders and participants.



Annex

Annex 01 - List of tables and figures

Table 01: List of acronyms/abbreviations

Table 02: Glossary of terms

Table 03: Cagliari's change proposition

Figure 01: Roadmap of WP5 and WP6

Figure 02: Slide from the 'Identity and Vision' module of the TRIPS Co-design for All online course

Figure 03: Cagliari's Accessibility mapping prototype

Figure 04: Slide contextualising task 5.4 in an end to end process and providing a time bound structure of monthly cycles.

Figure 05: Monthly group meeting template for groups

Figure 06: Cagliari monthly group meeting slide

Figure 07: 'A process that generates knowledge specific to each city' task 5.3 end to end journey

Figure 08: sketches 'how work-packages work together in TRIPS' and the situated work of TRIPS

Figure 09: Slide from Cagliari's overview document

Figure 10: Images co-created with the group in Stockholm

Figure 11: TRIPS landing page <https://trips-project.eu>

Figure 12: Slide from 'The co in co-design' exercise

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Figure 14: Slide for the 'Identity and vision' exercise

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Figure 16: Slide from the 'Understanding decision landscapes' exercise

Figure 17: Slide from the 'Come up with a change proposition as a groups' exercise

Figure 18: Slide from the 'Create a communication strategy' exercise



Annex 02 - Reference list

See [V06 D5.2 - Methodological framework document \(1st version\) .docx](#)

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Annex 03 - TRIPS CO-Design for All Toolkit (offline version)

The toolkit is constituted by exercises, templates and guidelines that have been co-created and continuously iterated throughout the project. These materials are organised according to the six phases of the end to end design process the groups went through in the project:

[01: Identify who needs to be involved in your project](#)

[02: Create a research plan and set up a collaborative working structure](#)

[03: Create an identity and a vision statement as a group](#)

[04: Identify a problem to address and define a clear scope for action](#)

[05: Come up with a change proposition as a group](#)

[06: Documenting and communicating your work](#)

In this offline version we offer a reduced version of each phase.

01: Identify who needs to be involved in your project

- Exercise: [The co in co-design exercise](#)
- Templates: [Access needs protocol](#)

Exercise: The co in co-design: who needs to be involved

The exercise is to identify who might need to be involved in your project, how you might go about finding them and defining how you wish to involve them. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - List of potential groups involved

[Your answer goes here]

Step 2 - Prioritise by who will be most affected by a change-process, and how much they have at stake in the situation

[Your answer goes here]

Step 3 - Situate yourself

[Your answer goes here]

Step 4 - Plan to get them onboard

[Your answer goes here]

Step 5 - How would you like these groups to be involved



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[Your answer goes here]

Template: Access needs protocol

The purpose of this document is to communicate the practical setup that our group needs to participate in an online session (workshop or meeting).
Any questions please reach out to [add contact details].

Practical steps to follow

1. Before an online session we kindly ask you to share information about how the session will be run (platform you will be using; documents you will be sharing; the kind of input / tasks we will be required to participate in)
2. We will share the practical setup that we need to be able to participate
3. We ask you to confirm that you are able to implement our access needs protocol

Here is the practical setup we need to be able to participate in an online session

As a baseline this is what we have found works for our group:

- Platform: We have been using Zoom
- Needs: Two members of the working group are blind. One of our members requires an [type] interpreter to participate.
- Documents
 - Our default is a Word document / google doc. Here is our [template](#).
 - We avoid the use of images. Best practice is to describe things in the images.
 - We only use tables for data
 - Ideally, we try to send a word document in advance (24hrs at least)
- Tasks: We engage participants in exercises mostly through speaking.
- Language: We run our sessions in English
- Privacy: please inform us in advance if you intend to record the session

02: Create a research plan and set up a collaborative working structure

- Exercise: [A process informed by research exercise](#)
- Templates: [City overview template](#); [Sharing work in progress monthly](#);

Exercise: A process informed by research

The exercise is to create a research plan and set up your working process.
The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - Create a folder and one directory document

[Your action]

Step 2 - List the research needs and questions you have

[Your answer goes here]



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Step 3 - Group them by theme

[Your answer goes here]

Step 4 - Prioritise them

[Your answer goes here]

Step 5 - Identify the activities to address your needs and questions

[Your answer goes here]

Template: City overview template

Use these headers as a guidance for the storyline you will be building throughout the project.

1 - Who are we

[Your identity statement]

2 - Our vision

[What do you stand for? What change do you want to see happen / contribute towards?]

3 - Our concerns

[What are the problems you are wanting to address?]

4 - Our change proposition

[What are the practical and feasible outcomes you want to generate from your work?]

5 - Supporting materials

[Keep track of the materials you produce to substantiate your work and show your end to end process]

Template: Sharing work in progress

1 - What was the plan?

Brief description of what you set out to achieve as a group this month.

2 - What happened?

Brief overview of what you did. What did you learn? Any issues, difficulties, blockers, concerns, unknowns? What questions are you left with?

3 - What is the plan for next month?

Brief description of what you set out to achieve as a group this month.



03: Create an identity and a vision statement as a group

- [Exercise: Identity and vision exercise](#)

Exercise: Identity and vision exercise

The exercise is to create an identity and vision statement for you and your group. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - Who are you

[Your answer goes here]

Step 2 - What is your concern?

[Your answer goes here]

Step 3 - Specific problems you focus on

[Your answer goes here]

Step 4 - What is your long term vision?

[Your answer goes here]

Step 5 - Change you want to make happen now

[Your answer goes here]

04: Identify a problem to address and define a clear scope for action

- Exercises: [Set a target exercise](#); [Understanding decision landscapes exercise](#)

Exercise: Set a target exercise

The exercise is to define a clear scope of action, setting a target. This means defining the problems that will be the target of your efforts, together with the research and analysis that will help you in creating a clear scope of action. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - List the problems

[Your answer goes here]

Step 2 - Identify and conduct research to refine your scope for action



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[Your answer goes here]

Step 3 - Analysis

[Your answer goes here]

PEST analysis	Enabler	Constraints	Mitigation
Political			
Economic			
Social			
Technological			

Step 4 - Set a target

[Your answer goes here]

Exercise: Understanding decision landscapes exercise

The exercise is to map your understanding of the structures that govern the problem you are wanting to address. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - List all stakeholder groups

[Your answer goes here]

Step 2 - What is their vision?

[Your answer goes here]

Step 3 - What are the opportunities?

[Your answer goes here]

Step 4 - What can be done now?

[Your answer goes here]

Step 5 - What is the longer term goal?

[Your answer goes here]



05: Come up with a change proposition as a group

- Exercise: [How to come up with a change proposition as a group exercise](#);

Exercise: How to come up with a change proposition as a group

The exercise is to create a change proposition as a group and generate knowledge about it together. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - Define the purpose

- Who is this workshop for? [Your answer goes here]
- What is this workshop for? [Your answer goes here]
- By the end of the workshop we would like to have created... [Your answer goes here]

Step 2 - Create an agenda

[Your answer goes here]

Step 3 - Produce the materials

[Your answer goes here]

Step 4 - Take care of the practical setup

[Your answer goes here]

Step 5 - Turn insight into actionable outputs

[Your answer goes here]

06: Documenting and communicating your work

- Exercise: [Communicate your work exercise](#)

Exercise: Communicate your work

The exercise is about communicating your work and case study. The following steps act as a starting point for you to adapt and apply these strategies to your chosen real life scenario.

Step 1 - Define the message: what is the message you wish to communicate?

[Your answer goes here]



Step 2 - Identify your target audience

[Your answer goes here]

Step 3 - Impact: state what you will achieve from this communication

[Your answer goes here]

Step 4 - Plan the communication method: format and materials

[Your answer goes here]

Step 5 - When: identifying the most opportune moments to communicate and what to do when

[Your answer goes here]



Annex 04 - City by city change proposition

City by city change propositions

Bologna: Towards an inclusive public transport in the city of Bologna

The Bologna group is working on producing a series of recommendations on how to improve the overall accessibility of public transport in Bologna. The recommendations are split into five groups: the first is concerned with the official app of Bologna's bus transport operator, the Roger App, which is difficult to use for people with visual impairment and doesn't provide useful information to people with physical impairment who want to create an accessible itinerary; the second set of recommendations deals with improving the bus stops so that they can be easily identified by people with visual sensory disabilities and better usable by those who travel in wheelchairs; the third set of recommendations concentrates on boosting the accessibility of buses in general; the fourth set of recommendations addresses the training of the personnel of the transport provider; and the final set of recommendations targets the accessibility of car-sharing services.

Brussels: Accessible Journey Planner based on user profile and type of disability

Our goal is to design an Accessible Journey Planner application, based on what disabled persons experience today in their journey in public transports in Brussels. Our prototype is based upon the existing public transport journey planner in Brussels, the STIB Trip planner. This prototype brings to life improvements needed by disabled persons on the basis of the user profile and type of disability. The prototype will be delivered as a detailed guideline to STIB, and hopefully have an impact on STIB's accessibility short and long-term developments.

Cagliari: Accessibility mapping of core bus routes

The goal is to map the accessibility information of a number of core bus routes (hospitals, schools, services and so on) selected by the persons with disabilities in the Cagliari group. We will map the accessibility features of the route between the selected bus stop and the point of destination using adequate mapping tools. The results will be uploaded to BusFinder (<https://www.ctmcagliari.it/en/busfinder/>), the official CTM's App, so that interested users will be able to verify the route feasibility. In order to meet visually impaired users' needs a vocal synthesis will be developed and tested for the same routes.

The mapping of the accessibility levels in Cagliari for disabled users might be further expanded once the project ends, as the city of Cagliari (and other local authorities) can allocate resources. It could also trigger a virtuous cycle thanks to the creation of a permanent exchange between disabled users associations, local authorities and local public transport operators. In this way we can merge what is a product/service improvement (availability of new information on BusFinder) with a process innovation (the protocol for the discussion of accessibility related issues).

Lisbon: Implementing accessibility information in the Carris App and providing recommendations for the ticketing system

Lisbon has a series of problems which are mostly linked to lack of good and easy to use information, poor infrastructure, problems regarding maintenance, lack of training and lack of services adjusted to demand. The Lisbon group sets out to work on two parallel



solutions in the duration of the project. The first is about implementing accessibility information in the existing travel application: Carris app. The second has to do with providing recommendations to improve the ticketing system's usability.

Sofia: What might an accessible bus stop look like in Sofia?

Our vision is to contribute towards making public transport in Sofia accessible, safe and comfortable. We want to see change happen in Sofia in the duration of TRIPS. The change we want to see happen in Sofia has to do with practical solutions we would like to implement in our city to address the problems we have today. At the moment bus stops are not accessible - this is a common problem that we think can be addressable within the duration of TRIPS. Further, creating common ground between disabled people, government authorities and transport providers is crucial to turning our vision into something that can be practically achieved

Stockholm: Collective ID - travel support with personalised information

As a group, we have focused our efforts to outlining what travel support with personalised information could be like in Stockholm. Practically we will specify the requirements for a solution that provides travel support with personalised information for each traveller. This solution can be described by its functional requirements e.g. should work throughout the country; by the information that is required e.g. real time information about the space available on a given transport; by the relation between information and the needs of the traveller e.g. information personalised to the dimensions of their wheelchair.

Zagreb: A personalized, accessible digital journey planner in Zagreb

The city of Zagreb is developing the [Accessible Zagreb service](#) which provides several layers of accessibility information. The service is accessible as a mobile app and a web page. The first layer (implemented in 2019) targets buildings and facilities and references them as accessible, inaccessible or partially accessible, with detailed listing of accessibility features. The second layer (implemented 2020) targets city streets and possible obstacles such as stairs, high curbs, uneven ground, insufficient pavement width, excessive pavement slope, etc. The proposed solution - personalized, accessible digital journey planner, would constitute the third layer and would specifically target public transport, providing real-time information on location of buses/trams/trains, accessibility of individual vehicles, tram/bus/train stops and related facilities.



Annex 05 - Co-production and co-design in practice definitions 2020

WP2, Co-production Definitions and Plan, TRIPS

CO-PRODUCTION AND CO-DESIGN IN PRACTICE

TRIPS Word Definitions:

Co-production is a well-established way to generate knowledge in collaborations between people, technology and society. It is centered on the idea that we can come together in difference and collaboratively create new ideas and concepts. Everyone shares their knowledge, skills and resources. This also means everyone shares responsibility for making the process successful. **(We think of co-production as the idea.)**

Co-design describes the action of designing together, while attempting to actively involve all stakeholders (e.g. employees, partners, customers, citizens, end users) in the design process to help ensure that outcomes respect all participants' point of view. The aim is to make sure that the process is shared and the participants feel engaged with the outcomes. **(We think of co-design as the action.)**

Co-creation is the act of making together. Rather than consulting people and then producing designs to the pre-set requirements, Co-creation involves all actors in the process as active creators of their own futures. **(We think of co-creation as the making of design material.)**

How do we generate knowledge in TRIPS?

- **User Experience Research**, both qualitative and quantitative. This may take the form of interviews, surveys, focus-groups, video's.
- **Auto-ethnography** and reflection. This may take the form of video diaries or written reflections.
- **Observation**. This may take the form of in-situ observation of behaviour, semi-structured or fully-structured observation.
- **Iterative Design** describes the process of developing a design in many rounds. This may take the form of returning to the site as well as the co-design process to evaluate and elaborate on an idea.
- **Pilot Test Cases** are explorative outcomes from the co-design process. They can take the form of a practical intervention, a consultation format, a way of working or a roadmap.
- **Content and Data Analysis** is used to generate patterns of knowledge through looking at gathered data. It can take the form of statistics or thematic analysis.
- **Research through Design** is a branch of design research that produces new knowledge through the making of design artefacts and designerly material. This means that we generate knowledge through making and refining explicit design material, and reflecting on the outcomes.

How do these terms hang together?

We work under the umbrella of **Co-production** (ethos, attitude and approach), making use of both **Co-design** (systems, scope and shared notions) and **Co-creation** (production of explicit design material). Through making we will generate knowledge as understood in a **Research through Design** framework.

Co-production is a new way of working which empowers all the actors in the process to participate fully on the basis of shared knowledge and equal partnership. Below you find some important elements of the co-production process:

- Co-producing from the start: people must work together from the very start. This means before important decisions are taken, when as much as possible can still be influenced and changed.

WP2, Co-production Definitions and Plan, TRIPS

- Working together to achieve an outcome: at the start the partners agree what end result (or outcome) they all want to see. Then they work together to achieve it.

Setting ground rules:

- Make sure everyone has a shared understanding of what co-production is and that they are committed to working in this way.
- How are you going to work together?
- If you are to build and maintain good relationships it can be very helpful to co-produce some ground rules.
 - Example:
 - Say if you don't understand something.
 - Always be respectful, even if you don't agree.
 - Keep everyone informed if something relevant happens.
- Agree on a work plan and the activities
 - What are goals this year. What are the goals next year
 - When are the meetings and who will take notes during the meetings?

Everybody gets the support they need to fully participate:

- This can include support to physically access a meeting (e.g. ramps, hearing loops, sign language)
- Access to information (e.g. easy-read texts)
- Support for transport to get to the venue (e.g. assistance, digital apps)

Access to information

- All involved parts of the project share their experience and knowledge.
- Participants are given the time and resources to study and understand all aspects of the topic (This can include in team learning)
- Participants have access to clear and easy to read information

Skill development

- At the start of the project all participants indicate their area of expertise and what they would like to learn in the process (skills ID). This will facilitate the recognition of the experience present in the group. These can of course change over time.
- Agree on roles and responsibilities and also areas of development for the different partners
- If needed skill sets are missing from the group, they can be added by expanding the group.

Rethinking traditional ways of working towards Co-design

- Traditionally disabled people are considered volunteers in a consultation process.
- Co-design starts from the notion that all participants are equal partners to the process with equal power of decision making.

Source:

<https://drive.google.com/file/d/1lejyUfGhGphZxtGc8oKnuCRFzPvOTI3x/view?usp=sharing>



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Annex 07 - City overview template

Introduction - [City] working group	
Who are we	We are the [city] working group for the TRIPS EU project . Our group is made of x people who are working together to [local vision]. Our participation in the European TRIPS project is motivated by the desire to actively participate in the improvement of public transport in the city of Bologna in relation to their use by people with any type of disability.
Our vision	During the duration of the TRIPS project, we would like to: <ol style="list-style-type: none"> 1. study and work on concrete and precise improvements cases for the accessibility of public transport in [city] 2. lay concrete foundations for the future of accessibility in the city (including the integration of disabled persons in decision making) Link: [City] detailed vision

Change proposition - [City] working group	
Proposition	A description of the specific change proposition you are working on in the duration of TRIPS & long term Link: [City] detailed proposition (T6.1)
Supporting material	List and link all the material that substantiates your change proposition, for example: <ul style="list-style-type: none"> - Problems with public transport in [city] <ul style="list-style-type: none"> - A prioritised list of the problems in your city - A description of the specific problem you are addressing, what that journey feels and looks like (user scenario) - Data that substantiates this e.g. WP2 Research city by city summaries - Changes you wish to see happen in [city] <ul style="list-style-type: none"> - A prioritised list of change propositions

Source: <https://docs.google.com/presentation/d/1srORgN43H-KCOhhCkQtA86VT69dhe7Wi0TmN1B3AISK/edit?usp=sharing>



Annex 08 - Task method for researcher

Task method for WP FACILITATOR

Output produced by the end of T5.3

Introduction

What is this document about and for

This document provides (1) guidance and (2) a practical template to guide the WP facilitator in working with CUT on a task.

This document is complemented by the [TEMPLATE - Workshop method for CUT T5.3](#), a generic template for a workshop structure that was created to support the CUT in the workshops of WPS.

What is the mindset here?

Think of the CUT as a client stakeholder team that is actively involved in the project: they need to make decisions and make things happen in their cities. Your job is to get them there by building their knowledge, skills, tools etc and handle all the background noise. You're running the show backstage, they are in the spotlight.

The intention is that this is taken as a living document to be shaped by, with and for the task facilitators of TRIPS. We aim for a collaborative and critical learning process that operates across work packages, skillsets and ultimately respects and honours the concerns and hopes of disabled people participating in TRIPS.

The process offered here is structured as a set of steps:

[Step 01 - Start with a city by city analysis of the now - What is the CUT doing right now?](#)

[Step 02 - Translate the task for CUT members](#)

[Step 03 - Start with Intros and temperature check](#)

[Step 04 - Formally introduce WP and kick-off task](#)

[Step 05 - Conducting group activities - Workshop method](#)

[Ongoing - unfold task in regular sessions](#)

[Ongoing - collaborative working documents](#)

Step 01 - Start with a city by city analysis of the now -

What is the CUT doing right now?

Not all cities will arrive at the task on the same footing.

Speak to ENIL, Laura and Kamil to understand what activities the CUT are engaged on *right now*.

Consider the following things:

- What can you learn from the ways CUT *have* been engaged in other tasks? What works, what doesn't?
- What are the working processes that you need to adhere to?
E.g. Cagliari uses word docs mostly;
- Anything that you have to be particularly aware of? E.g. each city will be going through their own process. Some will need more support on certain things than others. Your approach needs to be tailored

Practical tip:

- Create a [notes document for each city](#) to keep a log of your sessions and their evolution through the task. In T5.3 we also created a city by city folder, which we could continue to use for upcoming task providing a repository for each CUT holding all their TRIPS work:

- [01 CUT Bologna](#)
- [02 CUT Brussels](#)
- [03 CUT Cagliari](#)
- [04 CUT Lisboa](#)
- [05 CUT Sofia](#)
- [06 CUT Stockholm](#)
- [07 CUT Zagreb](#)

Step 02 - Translate the task for CUT members

Make the task doable, but in specific ways that are grounded in the realities of each of the 7 groups.

Prepare the material to kick-off the task with LUL / CUT. **Answer these questions:**

1. **What is the purpose of this task and what is in it for me?**
How is this connected to what I've been doing so far in TRIPS? How will this contribute to what I want to do in TRIPS? (Relation to other WPs)
2. **What is expected of me?**
Task6.1 lasts for a 9 months (From-To). By the end of this task we will have:
 - Done activity 01 and activity 02
 - Produced output 01, output 02, more tbc

Practically this means that we will organise and conduct 2 CUT workshops; we will have weekly 1-to-1 sessions lasting ~1hr to prepare the workshops and to analyse what came

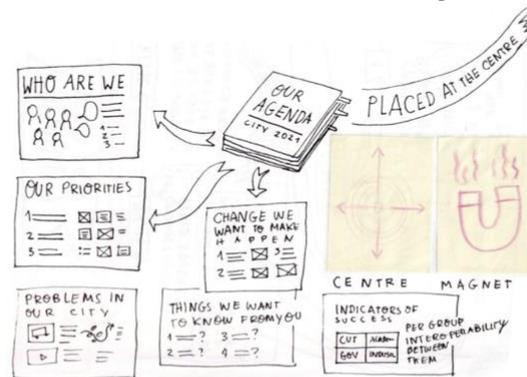
Source:

https://docs.google.com/document/d/18UhX06OwH3rr_WmucaUxZvXXH0DfnYhteh-C2Mj2SHU/edit?usp=sharing



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TEMPLATE - CUT Identity and Vision



CUT ID + VISION (outputs task 5.3) - content in english for:		
CUT Identity	CUT Vision for TRIPS	
<p>Identity A sentence / paragraph that says who the CUT is</p>	<p>List of problems A prioritised list of the problems in your city you are focused on addressing</p>	<p>List of priorities A prioritised list of change you wish to make happen</p>
<p>Access needs protocol</p>	<p>Problem description A description of what the journey for problem x looks like, feels like (user scenario)</p>	<p>Change description A description of what change might look like in the duration of TRIPS & long term (including the solution idea)</p>

Source:

<https://docs.google.com/presentation/d/1oXFLZ4e3oSR7dV2JpvNre6OZT1MT9j2dv3l96SifNjC/edit?usp=sharing>



Annex 10 - Survey for group members

WP5-undersökning för arbetsgrupper / WP5 survey for working groups

English version available at the bottom

Kära alla,

Vi skriver i samband med TRIPS arbetspaket 5 (WPS) för att ställa några frågor för att lära känna dig lite bättre. Vi delar också information om oss själva eftersom vi vill att vår arbetsprocess alltid ska vara ett balanserat utbyte.

Vi skulle ha föredragit att ha gjort detta anskrivt mot anskrivt / online men vi råkade inte ha tid. Men om du vill träffa oss och ha en [onlinechatt](#) skulle vi vara mycket öppna för det: emasconcelos.de.gouveia@tue.nl

Vilka är vi?

Jag heter Elvira Vasconcelos, jag är doktorand vid Eindhoven tekniska universitet. Tillsammans med Kristina Andersen, projektledare för TRIPS och WPS-ledning, är vi ansvariga för att underlätta WPS.

Vad är WPS?

WPS är en av åtta WP som arbetar tillsammans för att leverera det övergripande målet för TRIPS: att designa, beskriva och demonstrera praktiska steg för att ge funktionshindrade personer möjlighet att spela en central roll i utformningen av inkluderande digitala mobilitetslösningar.

WPS: s huvudfokus är en testad och validerad **kodningsmetodik** som kommer att testas i de sju deltagande städerna i WP6. Med kodningsmetoden menar vi en process som skapas med, för och av deltagarna i varje arbetsgrupp, dig. Målet är att involvera dig i processer som du inte bara deltar i utan potentiella kontrollerar, **gränssnitt** och använder dig till dina egna syften.

Vad vi ber dig idag?

Nedan presenterar vi några frågor som vi hoppas kommer att skapa en bra utgångspunkt för oss att definiera hur vi vill arbeta tillsammans. Vi vill veta vem du är och vad som motiverar dig att vara en del av projektet. Vi vill också veta om hur vi fullt ut kan stödja vår process genom WPS.

All din feedback är välkommen. Villigen meddela oss om vi har missat något, gjort ett misstag, gjort något fel. Det kommer säkert att hända och vi vill få saker att fungera för dig.

Tack för din tid.

Svara på frågorna nedan med så mycket detaljer som du tycker är lämpligt. Om något är oklart, skriv ner det.

Vad tar dig tid

1. Vad motiverar dig att gå med i projektet?
2. Vad är viktigast för dig i det här projektet?
3. Vad vill du ha gjort som en arbetsgrupp i slutet av projektet? Om möjligt ge några exempel.
4. Hur passar din roll i WG med andra aspekter av ditt liv, t.ex. arbete / personligt?

Din arbetsuppsättning

Vad är det som människor behöver för att få stöd så mycket som möjligt? Det kan vara teknik eller något annat?

5. Tillgångsbehov - vilka förutsättningar måste finnas för att du ska kunna känna dig och få fullt stöd för att delta i detta projekt?
6. Vilken programvara (om någon) använder du för:
 - Onlinemöten
 - Samarbeta / arbeta med människor t.ex. dela dokument
 - Anslut till människor
 - Specifikt programvara som du använder för att uppfylla dina behov
7. Vilka enheter använder du regelbundet och känner dig mest bekväm med? Till exempel surfplatta
8. Full i mening: Min bästa onlineupplevelse det senaste året har varit ... För ...
9. Saker som inte fungerar för dig? Detta kan vara ett specifikt program eller dokumentformat, t.ex. tabeller
10. Hur bekväm är du engelska som arbetspråk för projektet?

Om kodesign

11. Vad skulle kunna förändras eller läggas till följande definitioner:

Vi arbetar under paraplyet av samproduktion (etos, attityd och inställning) och använder både **kodesign** (system, omfattning och delade föreställningar) och **samskapande** (produktion av uttrycklig designmaterial).

Samproduktion - idén

Samproduktion är ett väletablerat sätt att generera kunskap i samarbeten mellan människor, teknik och samhälle. Det är centrerat om tanken att vi kan komma i skickad och tillsammans skapa nya idéer och koncept. Alla delar sina kunskaper, färdigheter och resurser. Detta innebär också att alla delar ansvaret för att göra processen framgångsrik. (Vi tänker på samproduktion som idén.)

Kodesign - Åtgärden Samdesign

beskriver handlingen att utforma tillsammans, samtidigt som man försöker aktivt involvera alla intressenter (t.ex. anställda, partners, kunder, medborgare, slutanvändare) i designprocessen för

Source:

<https://docs.google.com/document/d/1an1d4vjDQzer6EeHPQA4QI5pAiTu6HygfoP6zCVwIb0/edit?usp=sharing>

Annex 11 - Social media briefing guidelines

2. Procedure

The main idea of the analysis is to find media entries concerning topics like accessibility of public transport, barriers, assistance services etc. in your city or region.

One of the greatest challenges in working with social media data is its sheer volume. That is why we need to limit the number of findings by using appropriate search terms and a time span. For this analysis, we would like to limit our search to the last 2 years since the transport system transforms so fast. If you search for entries, limit your search to the years 2018-.

Since we are interested in the opinion and thoughts of mobility impaired people, we would like to research entries from comments at social media platforms like Twitter or Facebook as well as comments related to online newspaper articles. We are not interested in scientific articles or the content of the newspaper articles but the view of the readers.

As a first step, please scan the following social media platforms: Twitter, Facebook and Instagram. Search for online newspapers as well. Then search for entries related to barriers of mobility-impaired persons by using the following terms for your search. Please use one term from each category (1+2), such as "mobility-impaired and public transport":

1. Disabled/mobility-impaired/ wheelchair/visually impaired, blind, deaf, hearing impairment
2. Public transport / bus /metro/ subway/transit/mobility/taxi

Some examples:



Figure 1: Twitter



Figure 4: Online newspaper

As a next step, include your findings in the **Excel table** according to the categories:

- city/region
- source: link to the website
- publication date
- type of source: comment under newspaper article, facebook, twitter, Instagram
- form of disability referred to
- content: add the entire text/content of video
- barriers & challenges: extract the named barriers
- proposed solutions: if solutions are named

City/Region	Source	Publication Date	Type of Source	Form of Disability	Content	Barriers & Challenges	Proposed Solutions

Please try to collect at least 3 entries each from different online sources.



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Source:

<https://docs.google.com/document/d/1PcDs1sJTycKeatUpIUMSxASbjkqZOWO/edit#heading=h.qidgxs>

Annex 12 - Develop and test your change proposition

Develop and test your change proposition

The activities that might support you in developing and testing your change proposition:

- Organise and conduct activities to design and test your idea in an iterative process (e.g. co-design workshops)
- Develop high-level prototypes, examples for [how to bring your idea to life](#)
- Test solutions in situ where possible or validating them via UX research/testing with a relevant audience.

Group organising	
Groups involve	E.g. Institutional partners involved

1 - Change proposition

Our vision is to make public transport in Sofia accessible, safe and comfortable
Our proposition is to design an accessible bus/train stop considering the needs of all disabled people in our group.

2 - Needs and functional requirements

List all the steps involved in the journey of your proposition. In each step list the needs. Lastly, describe how those needs could be met functionally.

Phase 01: Before travelling		
Step	User needs	Meeting user needs
Plan the journey	I want to: <ul style="list-style-type: none"> - know what is the best possible route for me to get to my destination 	I need to be able to: <ul style="list-style-type: none"> - specify origin and destination - see a list of results for available routes (what information do people want to see?) - plan the timings of this journey so I can arrive at
		- be able to decide on what is the best possible route for them

3 - Technical description

Describe the technical specifications of your solution to your best ability. It is ok to put things that you are not sure about, you can highlight them as things that you need to test / get more knowledge around / find answers to. Start with the requirements you have listed under user needs and functional requirements above: how can your mobility solution technically meet the [equipment\(s\)](#)?

Phase 01: Before travelling		
Step	Requirement	Technical description
Existing service?	Integrate with existing [add the name of application, website, service etc]	E.g. any known constraints? Refer to someone that has technical insight about the existing service
Specific solution in mind?	E.g. access this information on a number of devices (phone, tablet, laptop, desktop)	E.g. App that can be accessed in all smartphones. Refer to your technical team for more input on this.
Plan the journey	Users need to be able to: <ul style="list-style-type: none"> - specify their origin and destination - see a list of results for available routes (what information do people want to see?) 	
Add steps in the journey ...		

Source:

https://docs.google.com/document/d/1Jgeev_Xsa3M4aOBVaTrfv5DTqeQRVD1G/edit?usp=sharing&oid=113917112150162812637&rtpof=true&sd=true

Annex 13 - Workshop method

TRIPS

Welcome

- Roles
Introduce facilitator; technical troubleshoot person;
- Ground rules
explain what you expect from participants; how to ask questions, intervene, accessing document and participating in the exercises
- What to expect
Documents e.g notes will be available here; At the end of this workshop we will send you all materials an email.

Exercise 02 - your vision for TRIPS in your city

The most important thing for me in the project is:

1. _____
2. _____
3. _____
4. ...

Source: https://docs.google.com/presentation/d/1eRe2C_SZ_x6CVpWw9RfjUulJjwIB0lq97i-9ZUxV4yY/edit?usp=sharing

Annex 14 - Briefs to create visual materials and examples

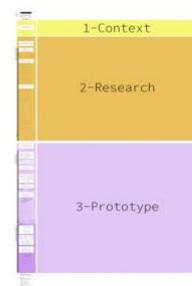
Prototype

A prototype can be many things, but it is usually something that shows how your idea will work in real life. You don't need to prototype the whole thing, you can be strategic about what you decide to prototype depending on what argument you are trying to make. Prototypes can have varying levels of fidelity. Here's three examples:



2 - Examples: Telling the story of your end to end process

Example of how to tell the story of an end to end design process:
<https://unplanet.org/ux-for-a-better-public-transport-23b81ccc56de>
(fully unpacked in the annex)



Source:

<https://docs.google.com/presentation/d/1UO9cNvnfJvufPRrUYKEquH4QIBKlZcdDe4iD6-HNnbk/edit?usp=sharing>



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