

The TRIPS project

Co-production of knowledge for designing inclusive digital mobility solutions – the methodological approach and process

Alexandra König, Laura Alčiauskaitė, Frank Sioen, Tally Hatzakis
and Kristina Andersen

Agenda

- Transformation of the transport system
- Project objectives
- Fact sheet of the project
- Methodology
- Phase 1 – Prepare
- Phase 2 – Co-product
- Next steps



Transformation of the transport system

- The transport system is currently undergoing a rapid transformation with new mobility models (e.g. vehicle sharing schemes) and transport-related digital solutions (e.g. Augmented Reality) emerging at an increasingly pace.
- This is an opportune moment to design future mobility systems to be more inclusive from the very beginning.
- Participatory approaches are a promising way to engage users with access needs to become active participants in open innovation.



Do we have more pictures?



Project objectives



Objective 1

Understand disabled citizens' divergent needs and attitudes towards future mobility as a means for designing inclusive mobility solutions.



Objective 2

Review the state of the art and future trends in mobility, assistive technologies and digital trends relating to mobility to identify gaps.



Objective 3

Develop and test a Co-design-for-All methodology to enable equal access to open innovation to all citizens.



Objective 4

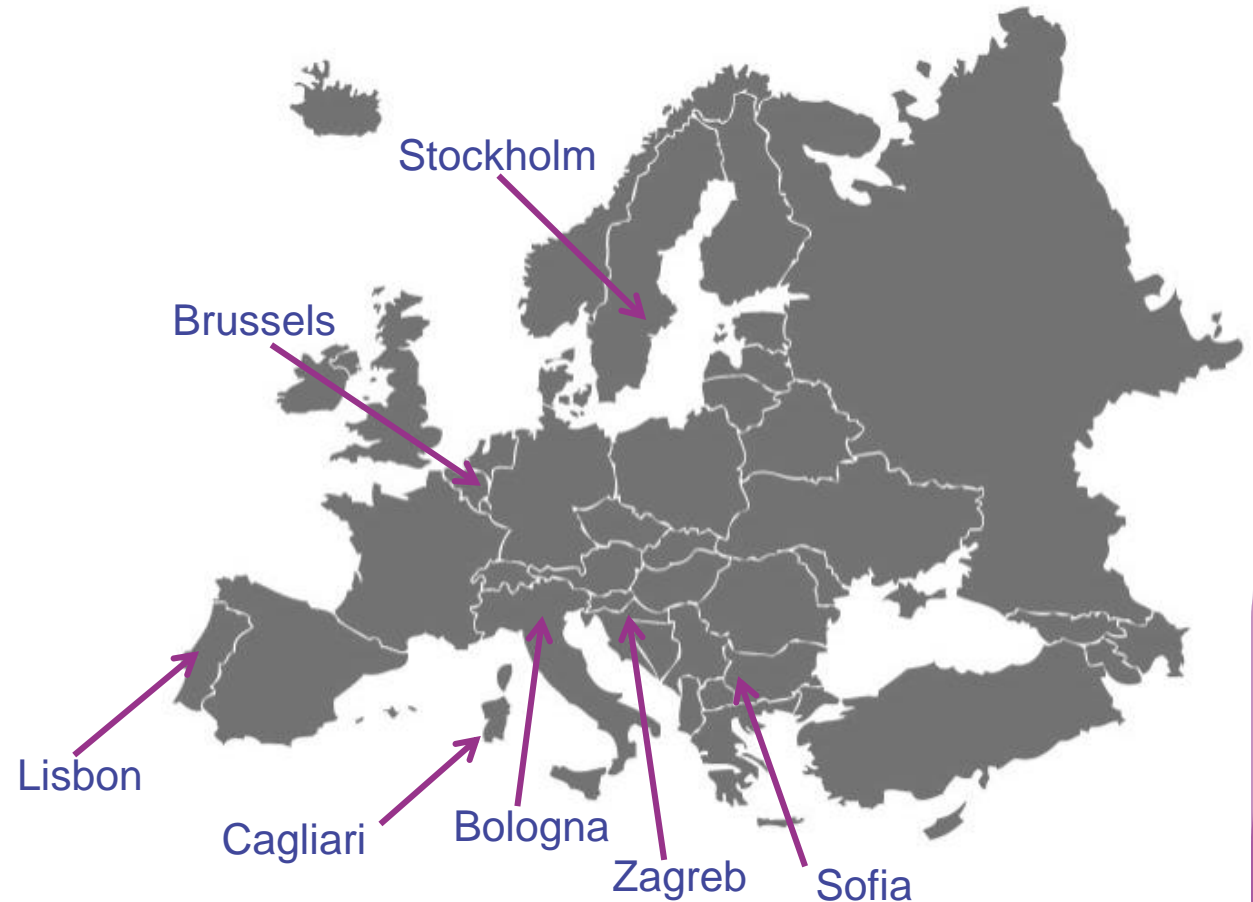
Engage disabled citizens and institutional actors in developing policy recommendations, research priorities and an industry roadmap

Fact sheet of the project

- TRIPS stands for *TRansport Innovation for vulnerable-to-exclusion People needs Satisfaction*
- 10 partners and 7 European cities are engaged in the project
- The project is funded for 3 years (02/20 – 01/23) by the EU

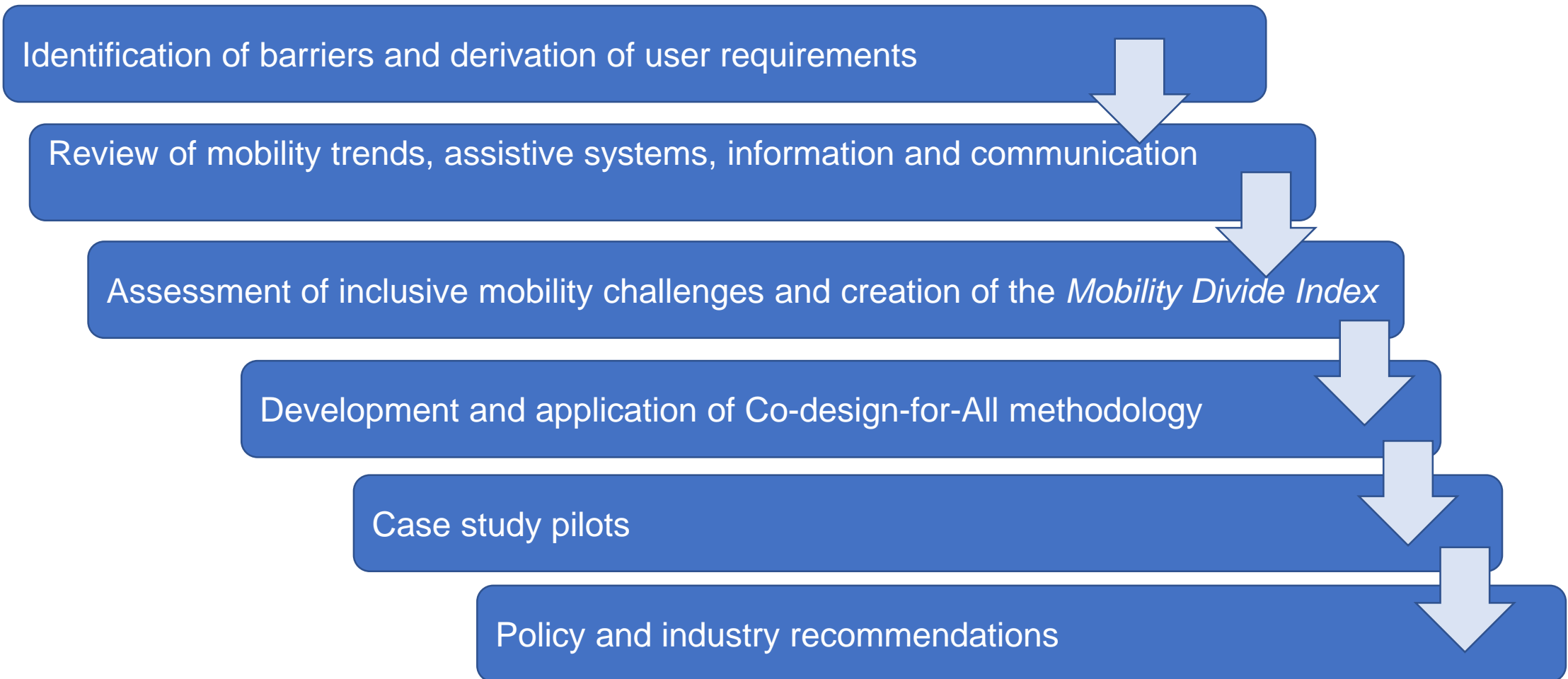


Pictures: Logos of the 10 partners

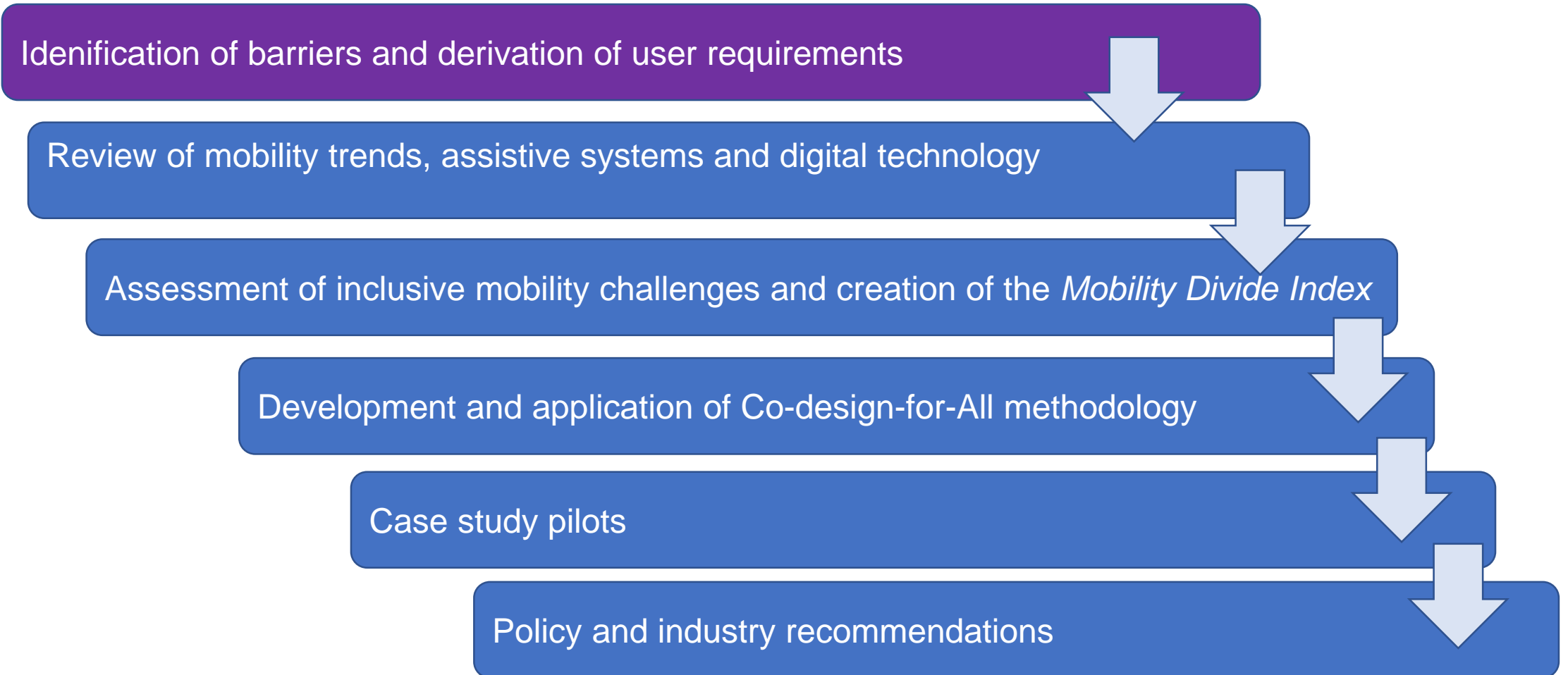


Picture: European map showing the seven cities

Methodology



Methodology



Methodology

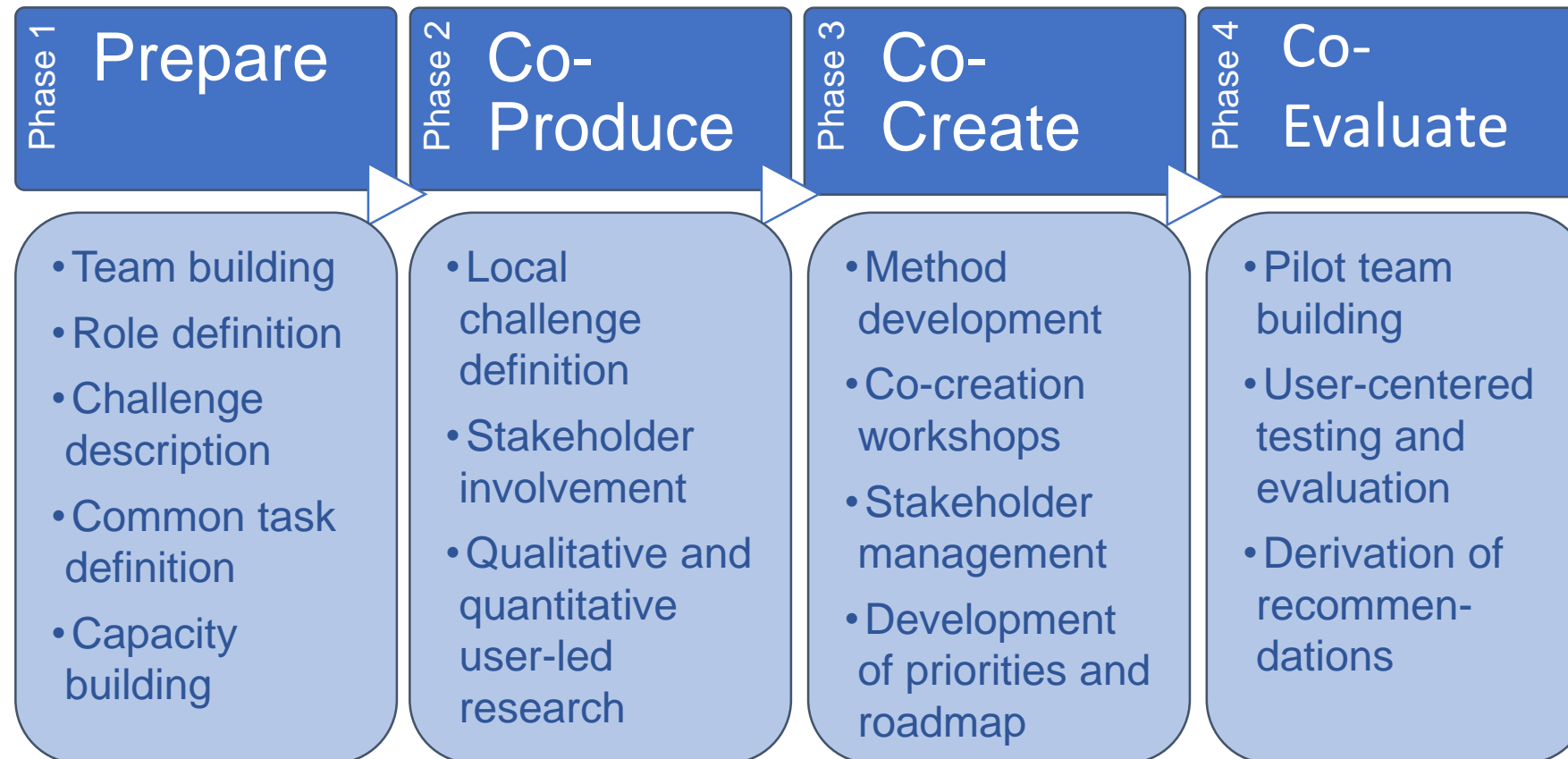
The project develops and applies a participatory approach that aims to ...

- co-product knowledge on existing barriers in transport
- co-create solutions for making transport more accessible
- co-evaluate the resulting prototypes and services in the seven cities



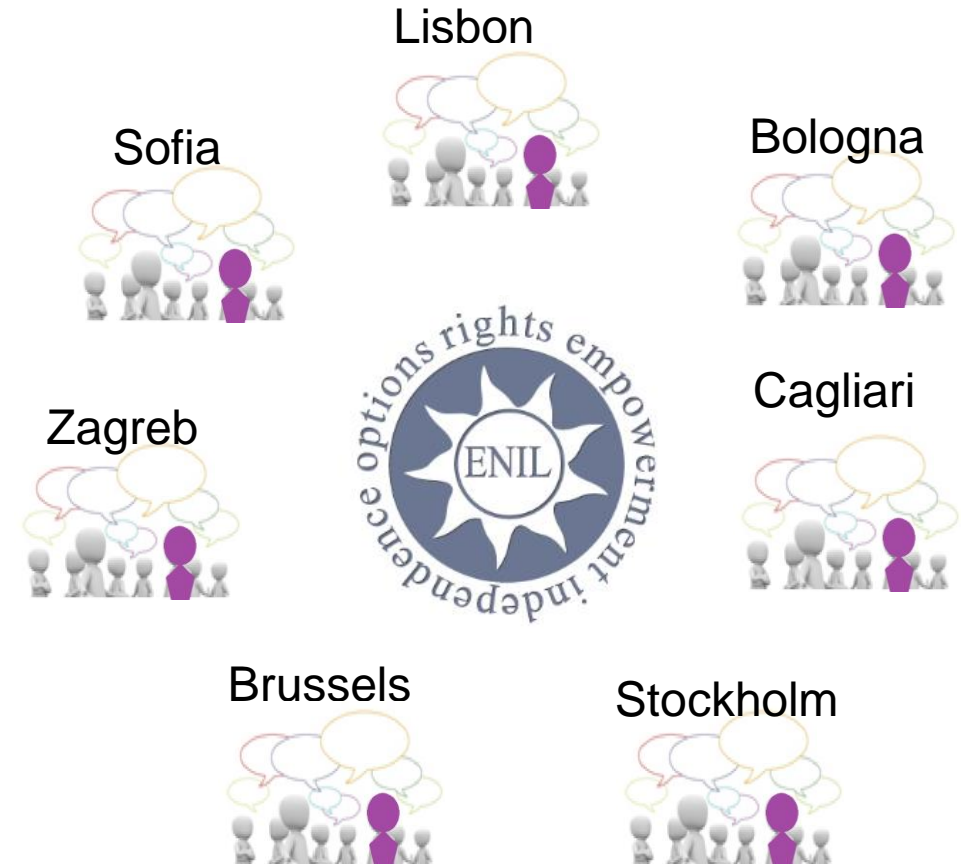
Methodology

- The methodology of the TRIPS project can be described in four phases of collaborative work



Phase 1- Prepare

- Forming of local working groups of 10-15 people, including persons with different access needs, transport providers and representatives of city municipality
- Coordination by European Network on Independent Living (ENIL)
- Nomination of Local User Lead (LUL) for each working group
- Preparation of a document for a joint understanding of co-production in practice.



Picture: Local working groups and LUL in the seven cities coordinated by ENIL

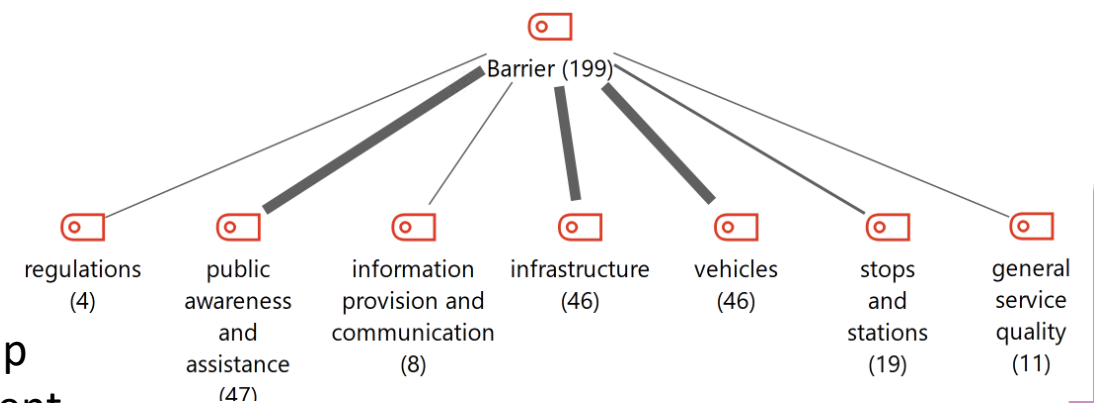
Phase 2- Co-produce

Social media content analysis

= a method to analyze social media content that serves as a barometer for attitudes and opinions (Lai & To, 2015)

- used to identify barriers that people with access needs face before, during and after their travelling with public transport
- 30 entries per city were researched by Local User Leads of working groups

Upper picture: Instagram post from Sofia showing stairs and a ramp
Lower picture: seven categories of barriers from social media content analysis



Phase 2- Co-produce

Interview study

- 7 disabled citizens per city ($N = 49$)
- Conducted to acquire in-depth information and insights concerning the knowledge and opinions of the interviewees
- Interview guidelines were prepared together with Local User Lead (LUL) based on open semi-structured questions regarding the four topics: 1) choice behavior 2) barriers, 3) assistance and 4) participation
- Interviews were conducted by LULs by phone or video chat

Picture of interview situation

Next steps

In the upcoming months and years, we will ...

- ... conduct a survey study that aims for > 500 respondents from all over Europe
- ... develop and apply of a Co-design-for-All methodology for equal participation of persons with disabilities in open innovation
- ... develop the Mobility Divide Index (MDI) based on a set of comparable indicators to propose a new, user-centric standard available for researchers, policy makers and transport providers



Conclusions

The TRIPS project will help policy-makers to design appropriate regulatory frameworks by creating a comprehensive roadmap that distils the project's findings into recommendations for policy-makers, transport authorities, regional authorities and operators.

The project will empower people with disabilities to play a central role in the design of inclusive digital mobility solutions.

TRIPS puts forward a co-design approach that underpins Mandate 473: *Design for All* to eliminate discrimination and improve *Access for All* to mobility services (European Commission, 2020).



Questions?

For more information please visit: <https://trips-project.eu/>

References:

- European Commission. Standardization mandate to CEN, CENELEC and ETSI to include “Design for All” in relevant standardization initiatives (2020)
<https://ec.europa.eu/growth/tools-databases/mandates/index.cfm?fuseaction=search.detail&id=461>
- Lai, L.S.; To, W.M.: Content analysis of social media: A grounded theory approach. Journal of Electronic Commerce Research 16(2), 138-152 (2015)

Thank you for your attention

Alexandra König
German Aerospace Center
Institute of Transportation Systems,
Brunswick, Germany
alexandra.koenig@dlr.de

