

# The challenge: experiences of travellers with disabilities

Insights from the European research project TRIPS

Dr. Alexandra König

German Aerospace Center, Institute of Transportation Systems

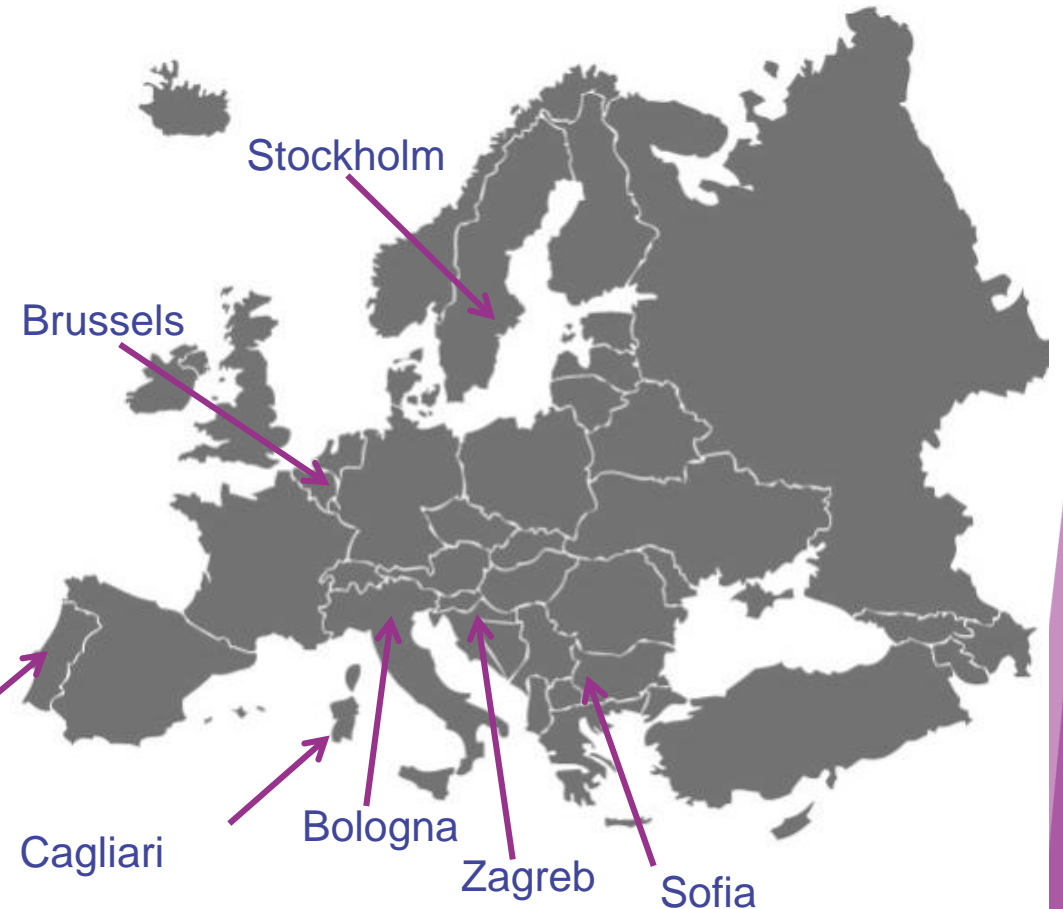
# The challenge

- **Freedom of movement** is a universal human right
- Moreover, the UN Convention values the **freedom of choice**
- However, people with disabilities often don't have the choice to choose among alternatives due to:
  - high pre-ordering times of assistance services
  - lack of adapted vehicles
  - inaccessible infrastructure
  - inaccessible information
  - ...
- What are the main barriers people with different disabilities face when travelling and how could we break down these barriers?



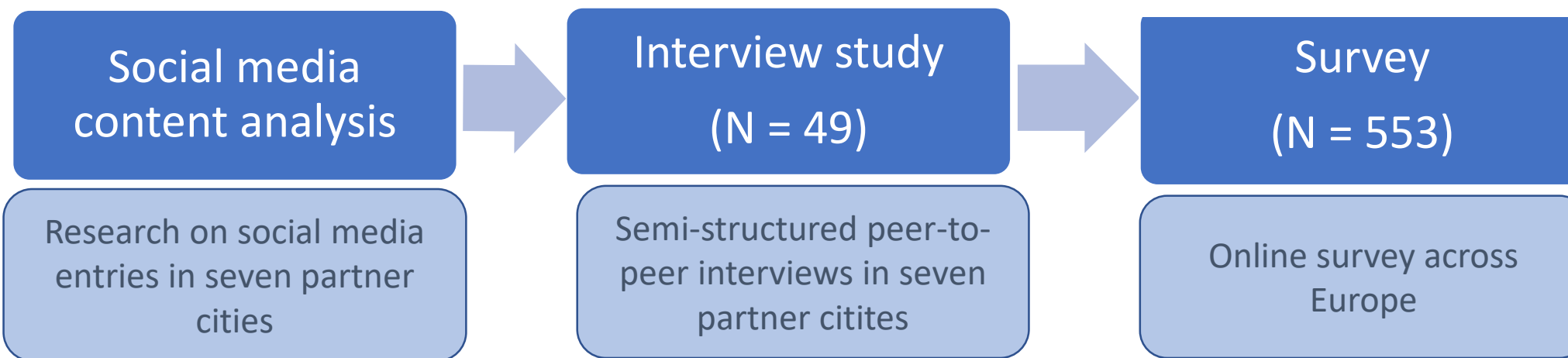
# The European *TRIPS* project

- *TRIPS* stands for *TRansport Innovation for vulnerable-to-exclusion People needs Satisfaction*
- The project is funded for 3 years (02/20 – 01/23) by the EU Horizon 2020
- Consortium: 10 partners and 7 European cities
- Main objective: Engage disabled citizens and institutional actors in improving accessibility of transport



# Empirical studies

Lead question: What are the main barriers people with different disabilities face when travelling?



# Findings



# Barriers addressed in Social Media

- Qualitative content analysis identified more than 200 barriers from social media entries clustered to eight categories of barriers



Figure: Exemplary tweet from Sofia

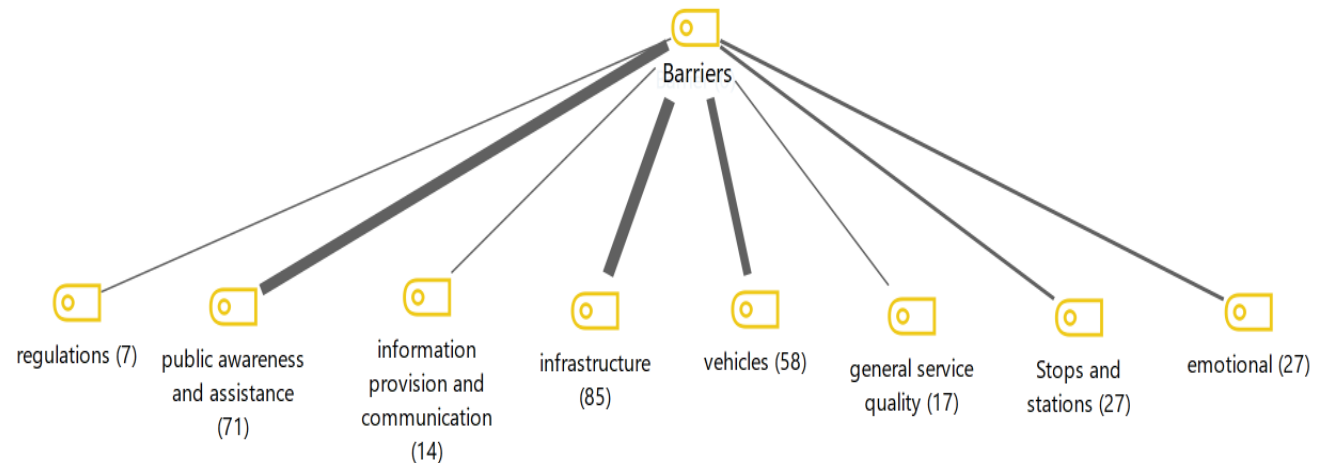
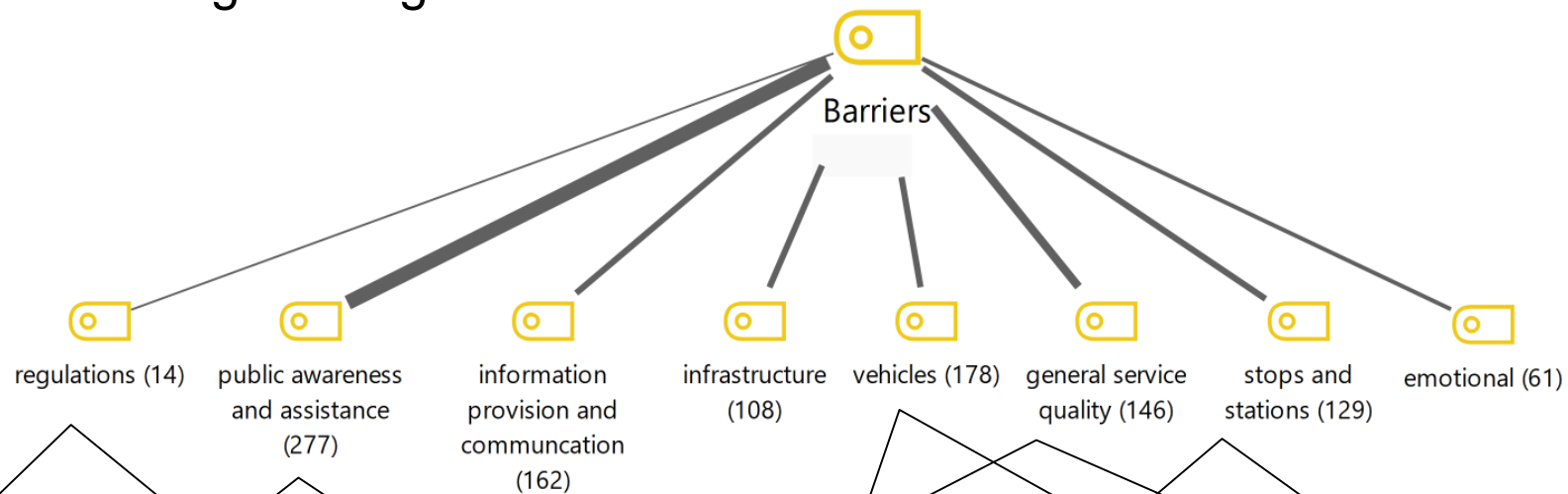


Figure: Eight clusters of barriers

# Barriers addressed in interviews

- Qualitative content analysis identified more than 1.000 barriers in 49 interviews clustered to eight categories of barriers



“There is great anarchy where works are concerned! It is one of the smallest communes in Brussels – it’s unbelievable when you see the quantity of discrepancies. From one pavement to another, even between two pavements opposite one another, there are already differences.” (Brussels\_06)

“In Sofia for example, a specialized van needs to be ordered with three chairs and a table.” (Lisbon\_02)

“The drivers should also be mindful of the passengers that they are driving. For example, sometimes how easy it is for me to travel can depend solely on the mood and the disposition of the driver.” (Lisbon\_07)

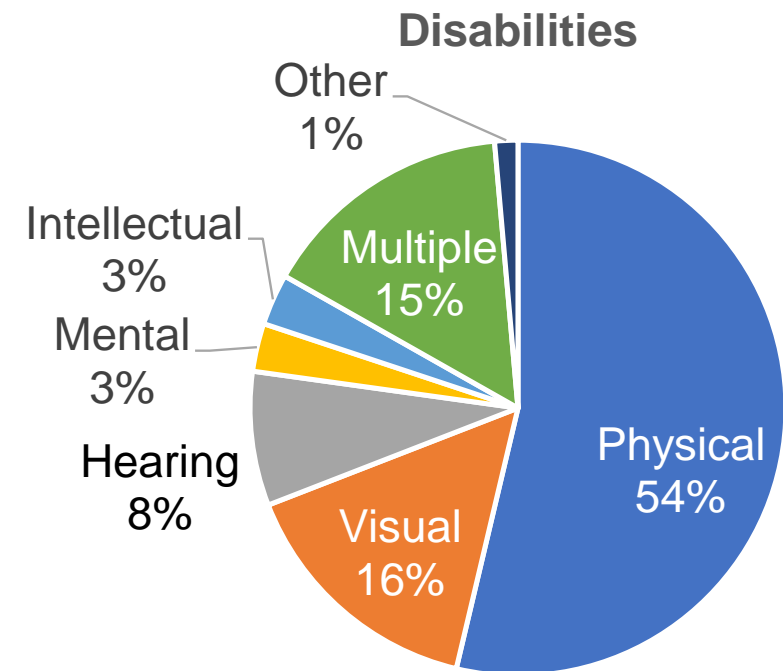
“In some cases it is not possible to travel with more people with disabilities, with friends, more specifically, because the spaces are very small and this is an interesting question that should be given more attention.” (Lisbon\_08)

“I never reject the service, most of the time I spend hours waiting for them, until finally, I give up for another alternative.” (Lisbon\_06)



# Mobility Survey - Method

- Survey was accessible online from Nov. 20 to Feb. 21
- Data of 553 persons with disabilities from 21 European countries were analyzed
- Sample was relatively gender-balanced, with 45.8% women
- The mean age was 46.4 years (SD = 15.7 years)
- Subjective assessment of 9 mobility concepts, e.g., robotaxi and 13 future technologies, e.g., Augmented Reality

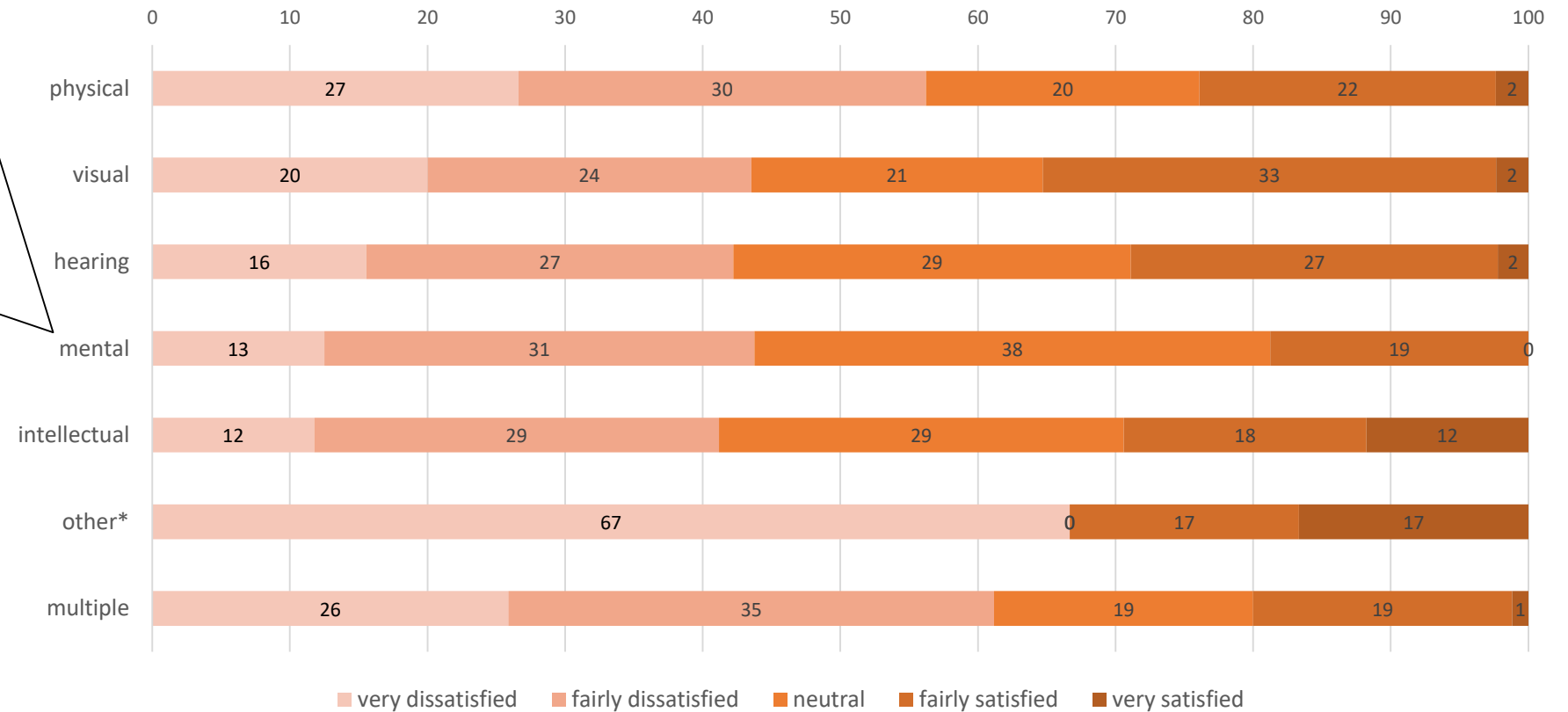




# Mobility Survey - Results

- Across all disabilities 40-65% of people are very or fairly dissatisfied
- The share of dissatisfied people is the highest among people with physical, multiple or other disabilities

Satisfaction with public transport by type of disability

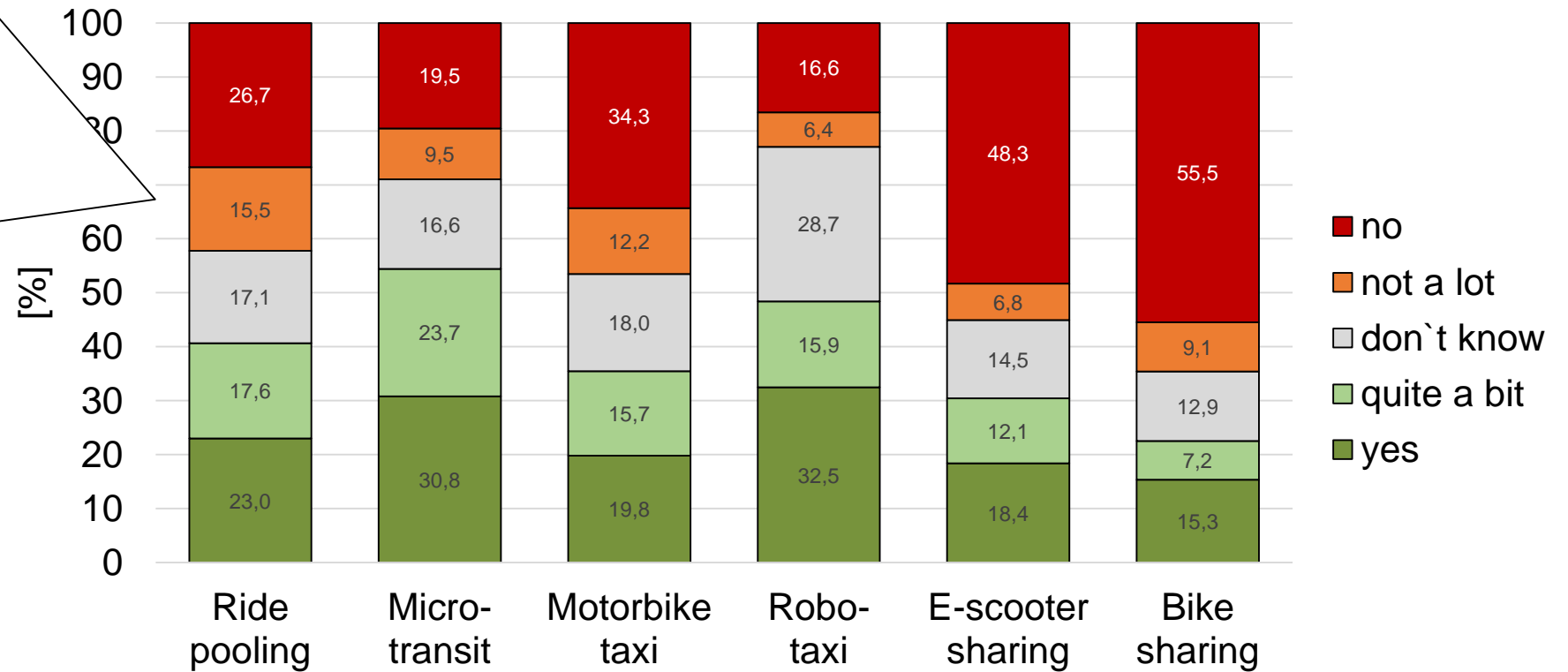


\*other = e.g. chronic disease, diabetes

# Mobility Survey - Results

- Emerging mobility systems, like robotaxis offer the potential to make journeys more independent for PwD.
- Two-wheeled vehicles like bike sharing are considered rather unpromising

„If we could make this system available, would it make your journey more independent?“



# Summary of main barriers

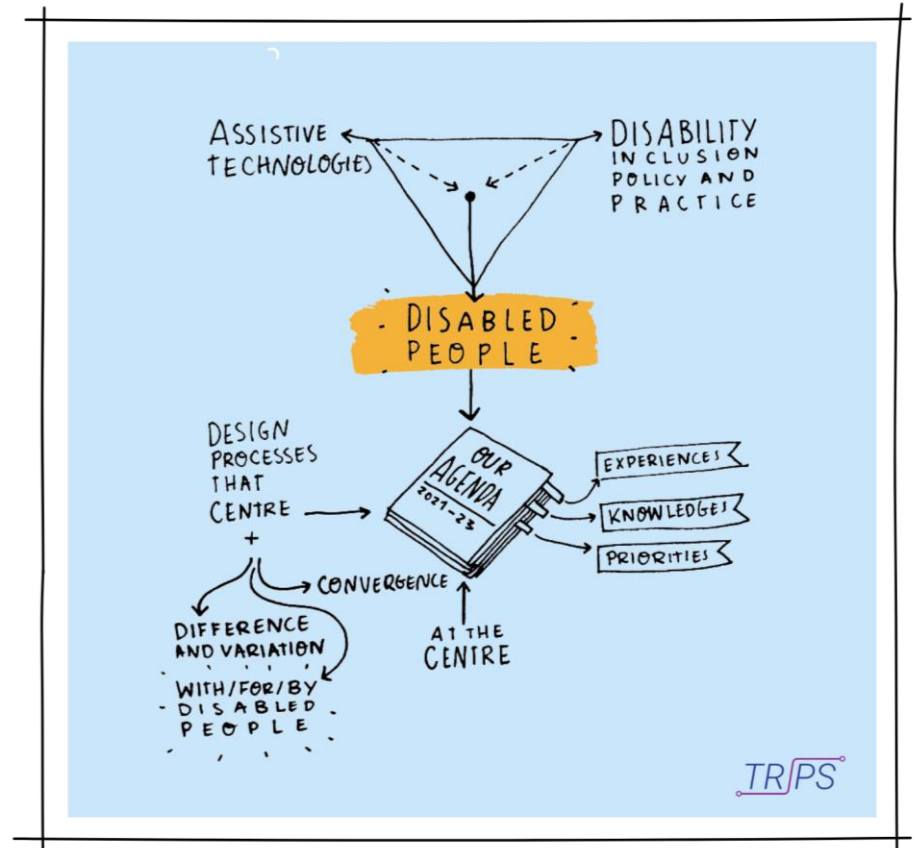
- **Lack of flexibility** due to long pre-ordering hours
- **Lack of choice** due to inaccessible vehicles and services
- **Lack of independence** due to the need for assistance
- **Lack of information** due to inaccessible/incorrect/inappropriate information
- **Lack of standardization** due to single solutions
- **Lack of support** by staff and other passengers
- **Lack of appreciation** due to a lack of public awareness



Deliverables D2.2 and D2.3  
available [trips-project.eu](https://trips-project.eu)

# Recommendations

- Identify ways how assistive technologies can help people to travel more independently and flexible
- A larger representation of people with mental health issues and cognitive impairments would be desirable in future research
- Organise more awareness campaigns for the general public and sensitise staff in trainings
- Drive universal design approach
- Engage disabled users in the design of inclusive mobility solutions to address their requirements right from the beginning
- Invest in building a European Accessibility Design Center



Co-design approach of TRIPS @ E. Vasconcelos de Gouveia

# Thanks for your attention and interest!

For further information on the project visit

<https://trips-project.eu/>



Please take part in our 2nd TRIPS mobility survey:

SCAN ME

