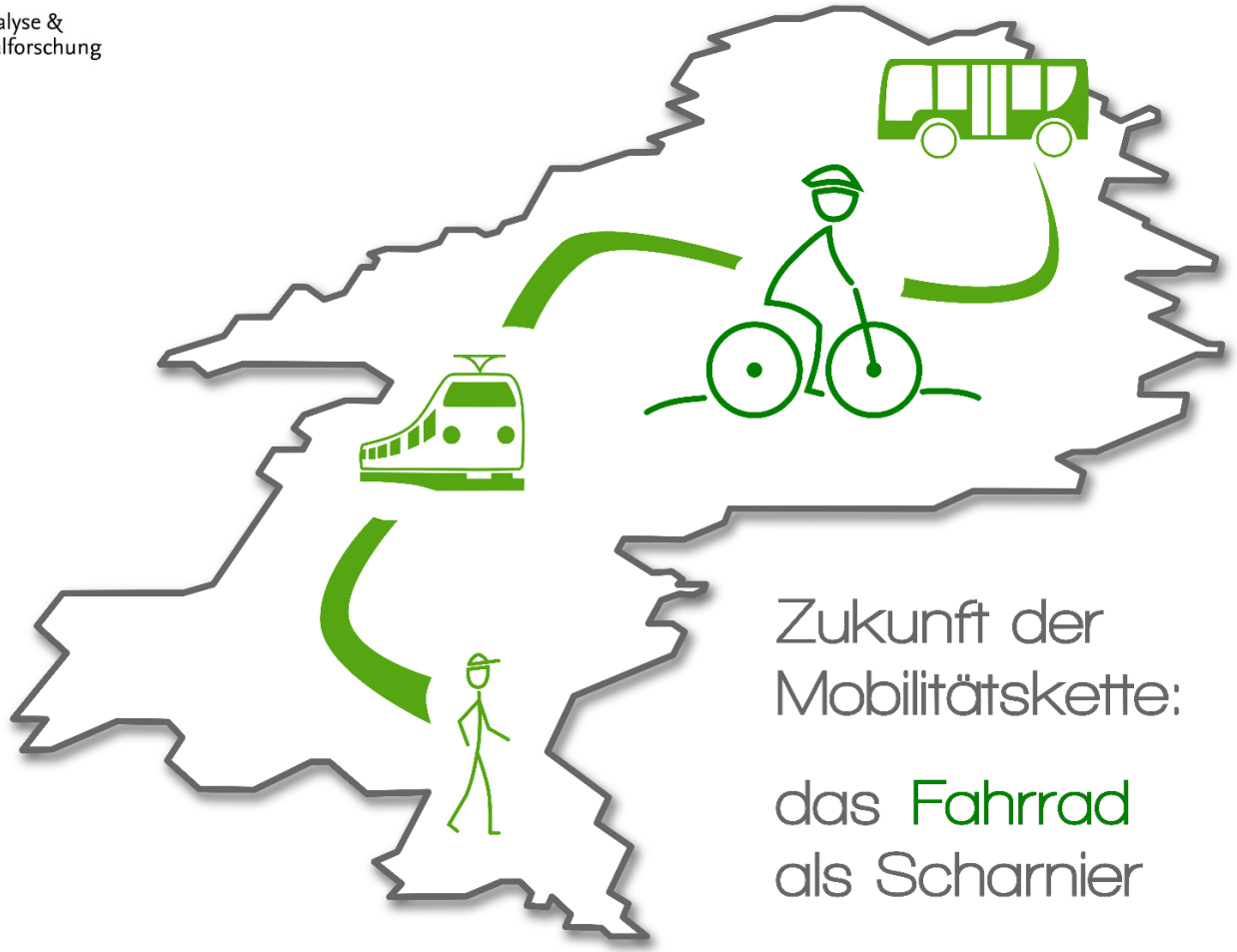
Technische Universität Braunschweig

ISW
Sozialstrukturanalyse & empirische Sozialforschung



Zukunft der Mobilitätskette:

das Fahrrad als Scharnier

Gefördert durch:

Bundesministerium für Verkehr und digitale Infrastruktur

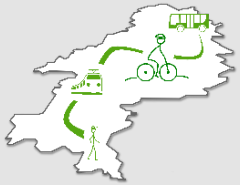
aufgrund eines Beschlusses des Deutschen Bundestages

Intermodal mobility - requirements for a willingness to change mobility patterns

13th November 2017 | Barcelona

Amrit Bruns M.A. | a.bruns@tu-bs.de | TU Braunschweig I Department of Social Sciences

Agenda



- Background and targets
- Methodological Concept
- Results of the explorative stage
- Results of the qualitative interview research
- Outlook

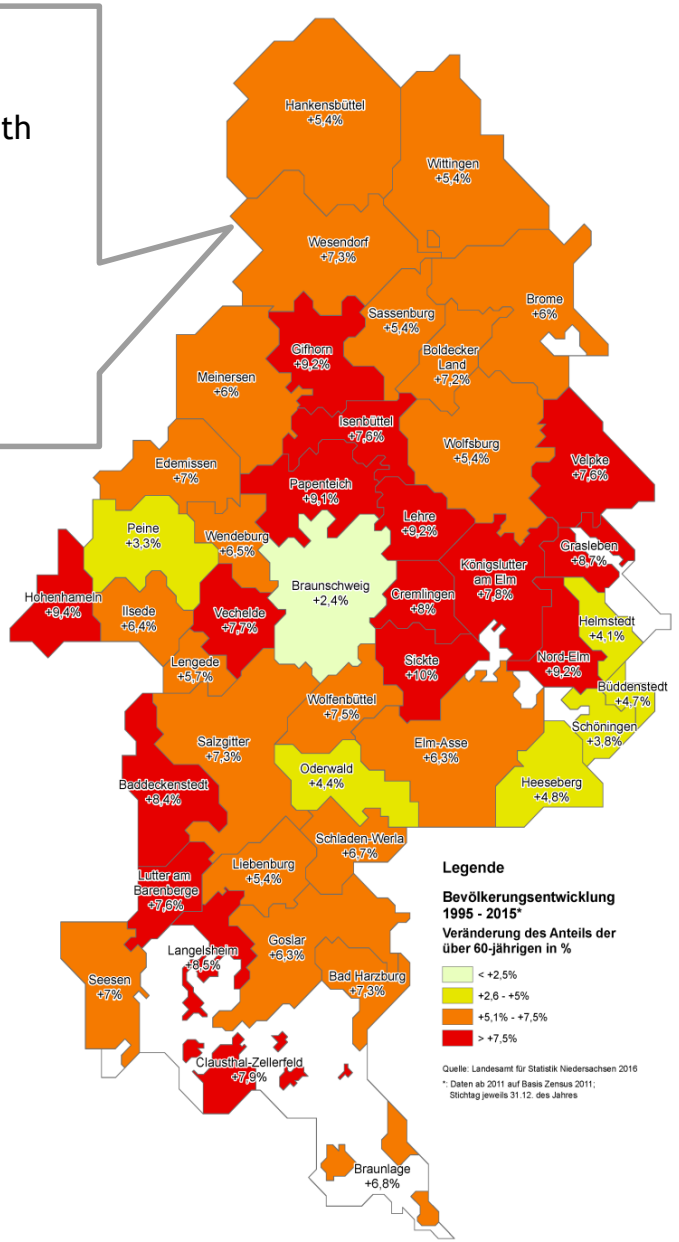
Background and targets

Area of research: Braunschweig and the surrounding region

Emphasis of research: Compatibilty of pedestrian and bicycle traffic with public transport in context of Demographic Change

⇒ Growing decrease in population as well as the population gets constantly older especially in rural regions

⇒ younger people prefer moving into the urban regions



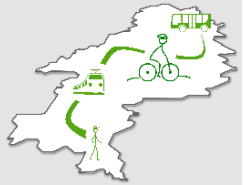
Forecast 2030 – quota of people older than 60 years:

- Braunschweig 28,6%
- Goslar 55,8%

Challenges due to Demographic Change:

- Effects on the accessibilty of infrastructure
- Preservation of mobility and possible participation in everyday life for every individual

Background and targets



Main assumption: Peoples` mobility takes place under everyday conditions which can be characterized by different individual resources and subjective suppositions. Simultaneously diverging contextual conditions will always be an additional challenge.

Target: Strengthening of the usage of environmentally friendly means of transport in general and especially the use of bicycles.

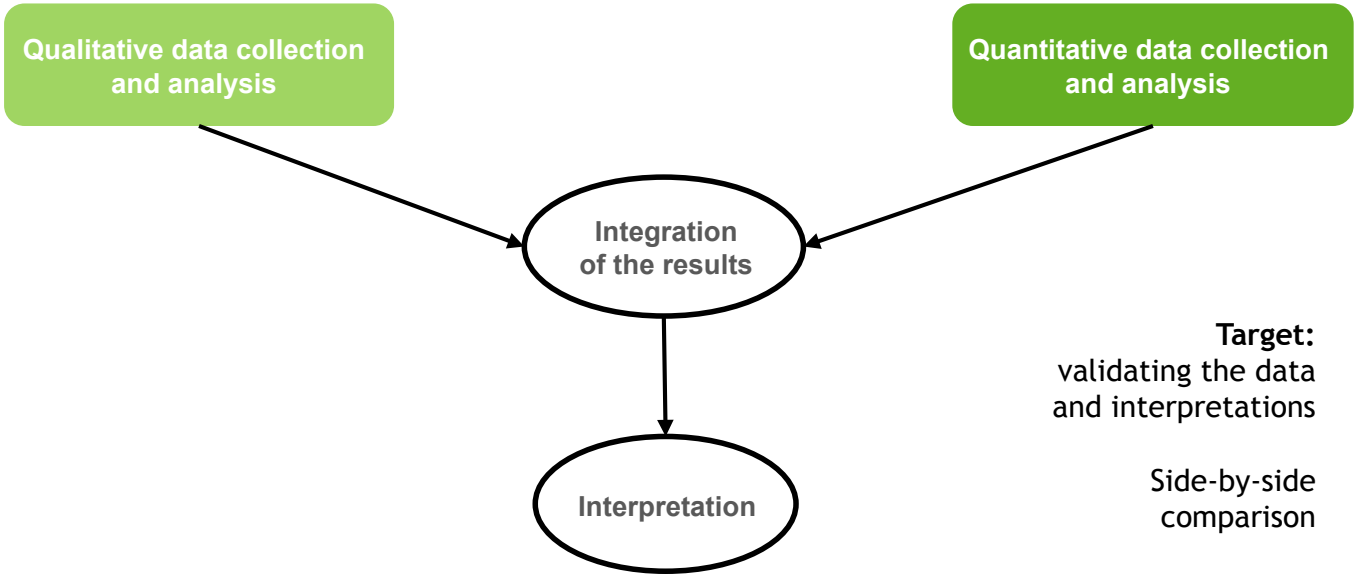
Identification of:

- Existing patterns of mobilty (everyday, leisure or shopping mobility) of younger and older people
- Diffenrences between mobility patterns in rual and urban regions
- Requirements which support the use of bicycles and the combination with other means of transport in a positive way
- Conditions of age-appropriate mobility that matches with the anticipated requirements

Methodological concept

Mixed Methods Approach - Combination of qualitative und quantitative research methods *(Convergent Design*, Creswell 2016*)*

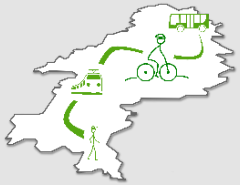
- Qualitative data - **User diaries** and **qualitative interviews**
- Quantitative data - **explorative questionnaire survey** and **representative telephone survey**



Target:
validating the data and interpretations

Side-by-side comparison

(Creswell/Plano Clark 2011)



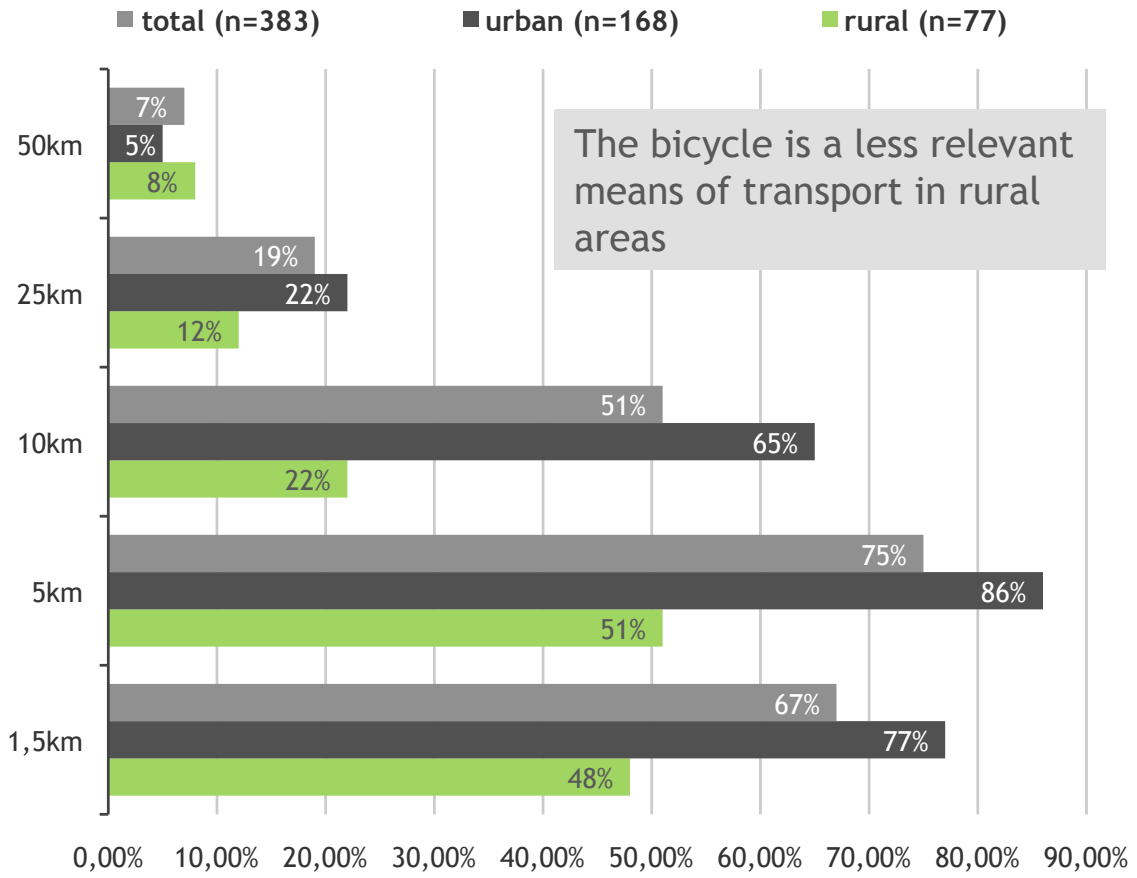
Results - explorative stage

Quantitative results of the explorative stage

Characteristics of the sample (n=383)

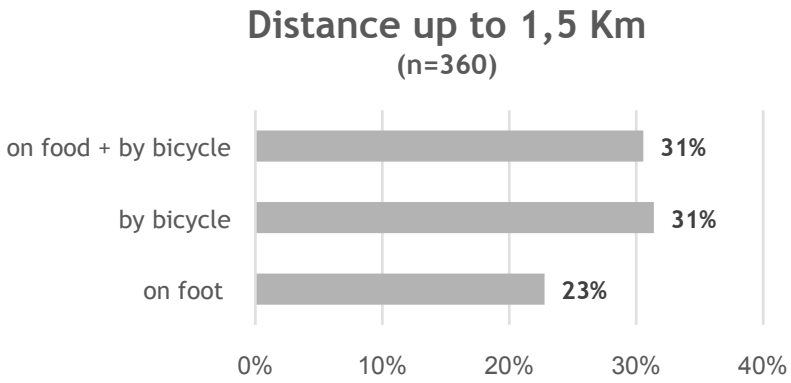
♀ ♂	59,3% male 40,5% female
	Age range - 18 - 89 years Average age - 49,1 years
€	43,1% - more than 3.000€/month 22,5% - 2.000-2.999€/month 15,9% - 1.000-1.999€/month
	43,9% live in a city 35,3% live in a town 20,1% live in a rural region

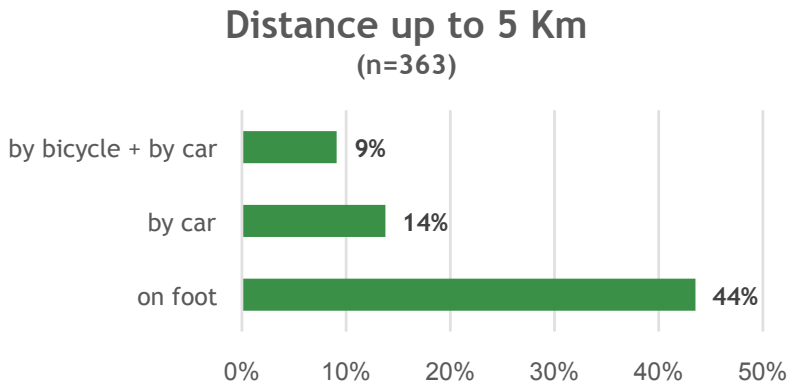
Bicycle use and distance



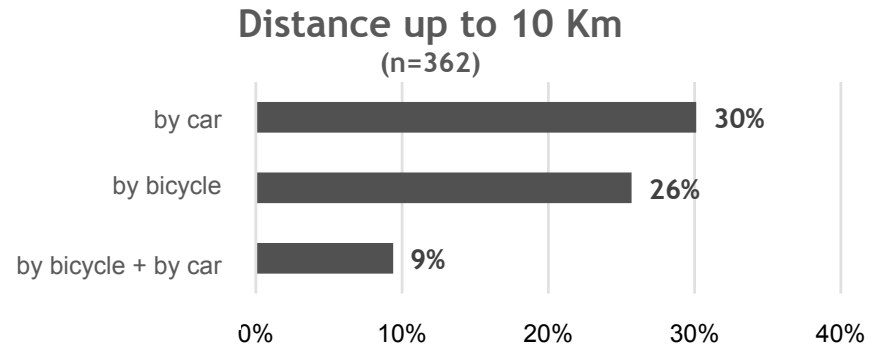
Quantitative results of the explorative stage

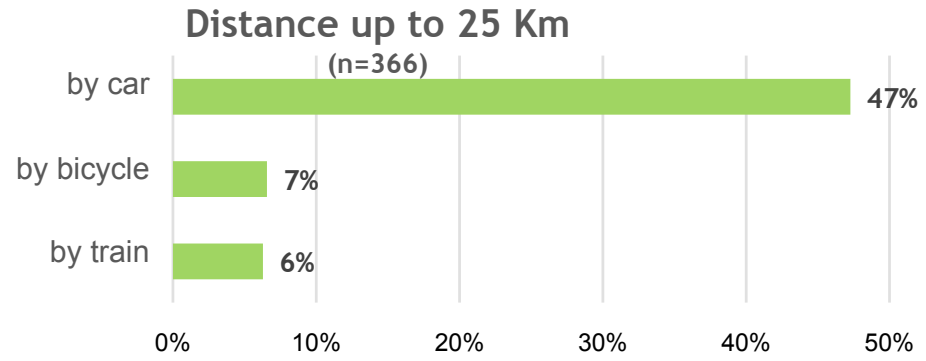
„Which means of transport do you usually use when you have to overcome a distance of…?“ (Multiple answers are possible)“





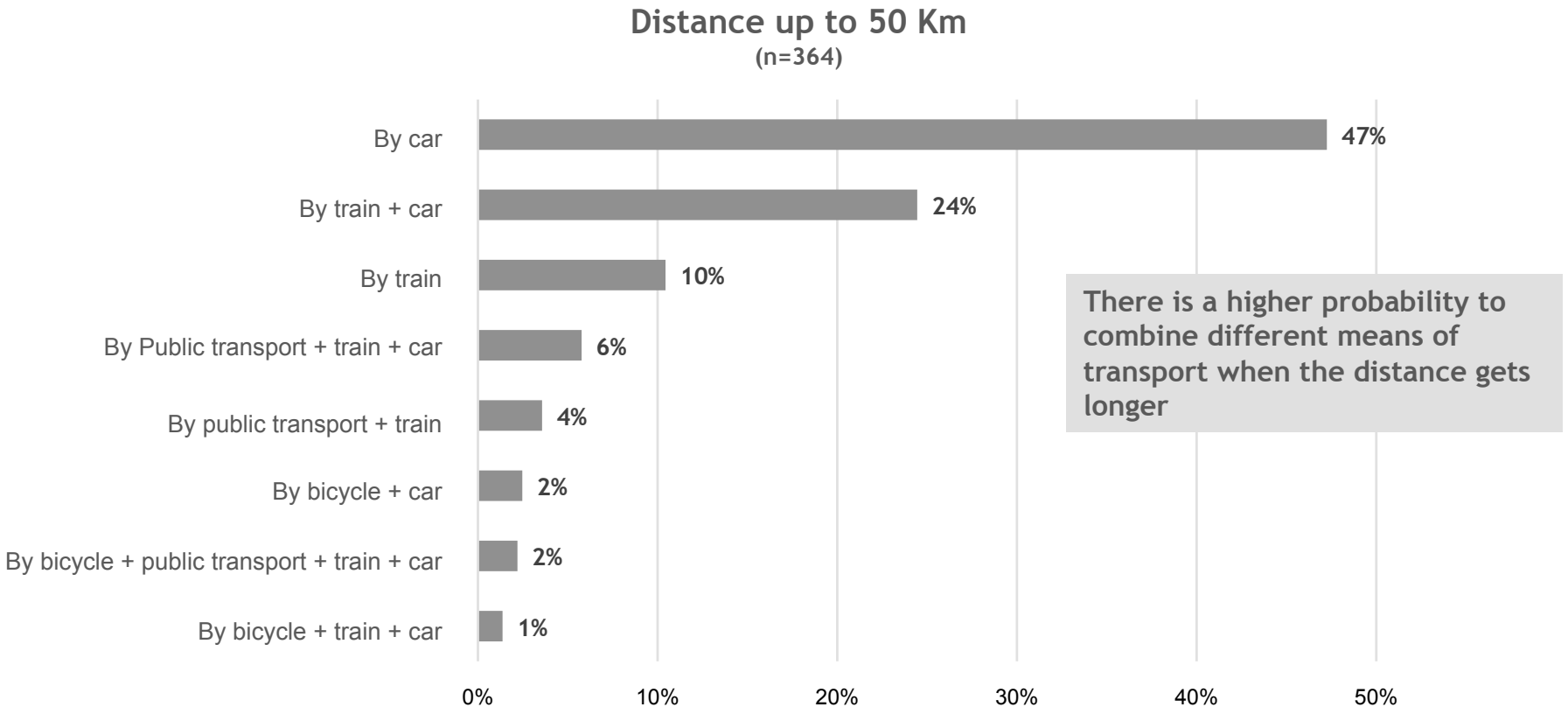
Up to a distance of 25km a distinctive monomodal kind of mobility can be identified.



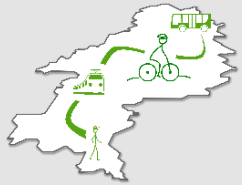


Quantitative results of the explorative stage

„Which means of transport do you usually use when you have to overcome a distance of…?“ (Multiple answers are possible)“



Qualitative results of the explorative stage

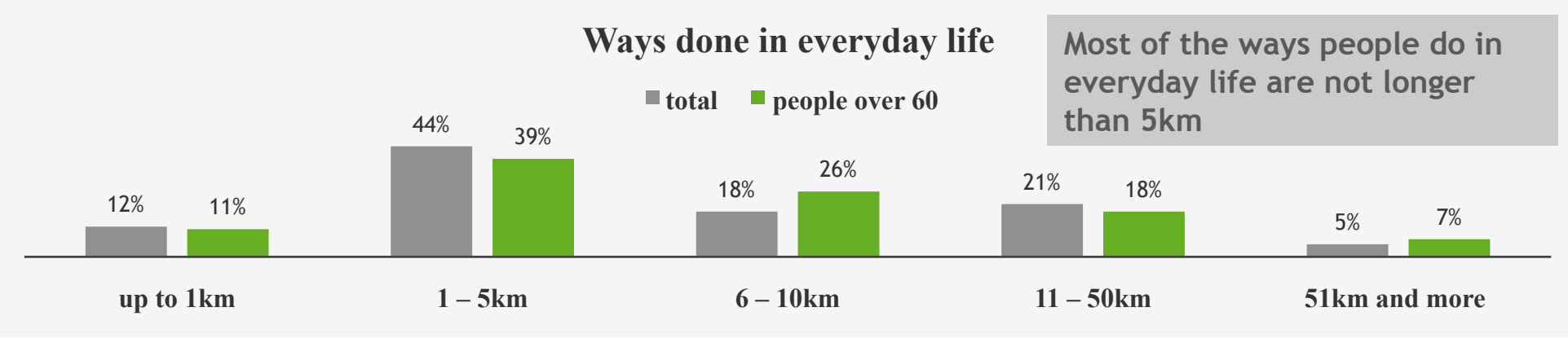


Characteristics of the sample
(data: user diaries, n = 40)

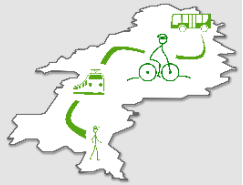
- period of documentation: 21 days
- 1st period: spring 2016
- 2nd period: autumn 2016
- 11 participants took part in both periods
- the documentation includes:
    - date, duration, distance
    - weather conditions
    - purpose
    - means of transport

♀ ♂	23 male 17 female
	Age range: 26 to 81 years Average age: 56 years - Half of the sample was older than 60 years
	22 live in a city 10 live in a town 8 live in a rural region

Qualitative results of the explorative stage

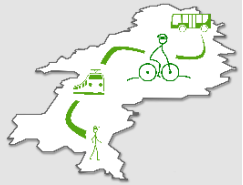


- The amount of time available influences the number of ways and the tendency to connect several purposes
- State of health and weather conditions are factors influencing individual mobility patterns
- The need to transport goods or people leads to an increased car usage
- When people combine different means of transport they prefer combinations without public transport (due to possible waiting times and scheduled timetables)



Results - qualitative interview research

Qualitative results of the qualitative interview research

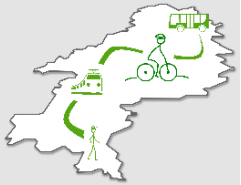


Characteristics of the sample
(data: qualitative interviews, n = 40)

- duration: 30 – 90 minutes
- aspects of the directory:
  - everyday mobilility patterns
  - development of individual mobility
  - rating of the place of residence
  - rating of the availabel means of transportation

♀ ♂	21 male 19 female
	Age range: 26 to 90 years Average age: 56 years
	10 live in a city 20 live in a town 10 live in a rural region - Sample consiststs of people from the whole region around Braunschweig

Results - qualitative interview research



Car

- Usage is associated with flexibility, comfort and speed
- Opportunity to transport goods and a place for storage
- Different purposes can be combined easily

Train

- Usage ist experienced differently, partly as stressful and partly not
- People do not approve fares and travel intervals

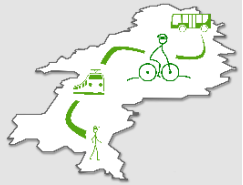
Public transport

- People complain about fares and scheduled timetables
- Usage of other means of transportation can be faster (timetable, especially in the evening and during the weekend)
- Fares are only attractive for those who do not want to use a car

Bicycle

- The bicycle is partly used almost exclusively and partly just for certain destinations
- Appreciation of the flexibility
- By using pedelecs the sphere of activity of older people can be expanded

Results - qualitative interview research

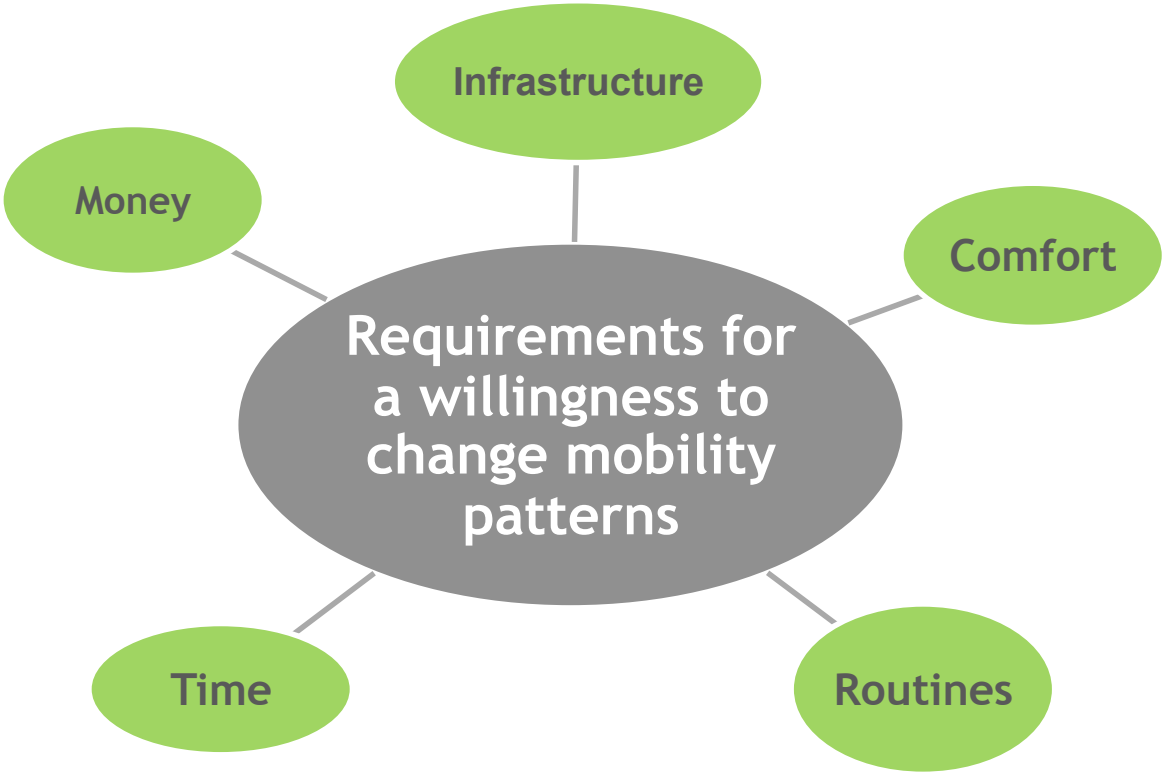


Reasons for monomodal mobility or why people avoid intermodal mobility

- People prefer monomodal mobility patterns in everyday life – more convenient, faster
- Depending on the means of transport monomodal mobility can be but does not have to be environmentally friendly

- In everyday life people do not tend to combine different means of transport – they do not make use of intermodal mobility
- Only when distances are longer than 50km there is a greater tendency to use options of intermodal mobility – especially on special occasions like business trips or holidays

Outlook


Infrastructure
Money
Comfort
Requirements for a willingness to change mobility patterns
Time
Routines

Contact

Technical University

Department of Social Sciences

Bienroder Weg 97

38106 Braunschweig | Germany

Sociology II -social structure analysis & empirical social research

Amrit Bruns M.A.

Mail: a.bruns@tu-braunschweig.de

Phone: +49 531 391 8936

www.tu-braunschweig.de/soziologie/schwerpunkte/sozialstruktur/forschung/drittm/fahrrad