„Mobility in Germany 2017" - German NTS
Mobilität in Deutschland (MiD)

Examples of visualisation, data analytics and data dissementaion
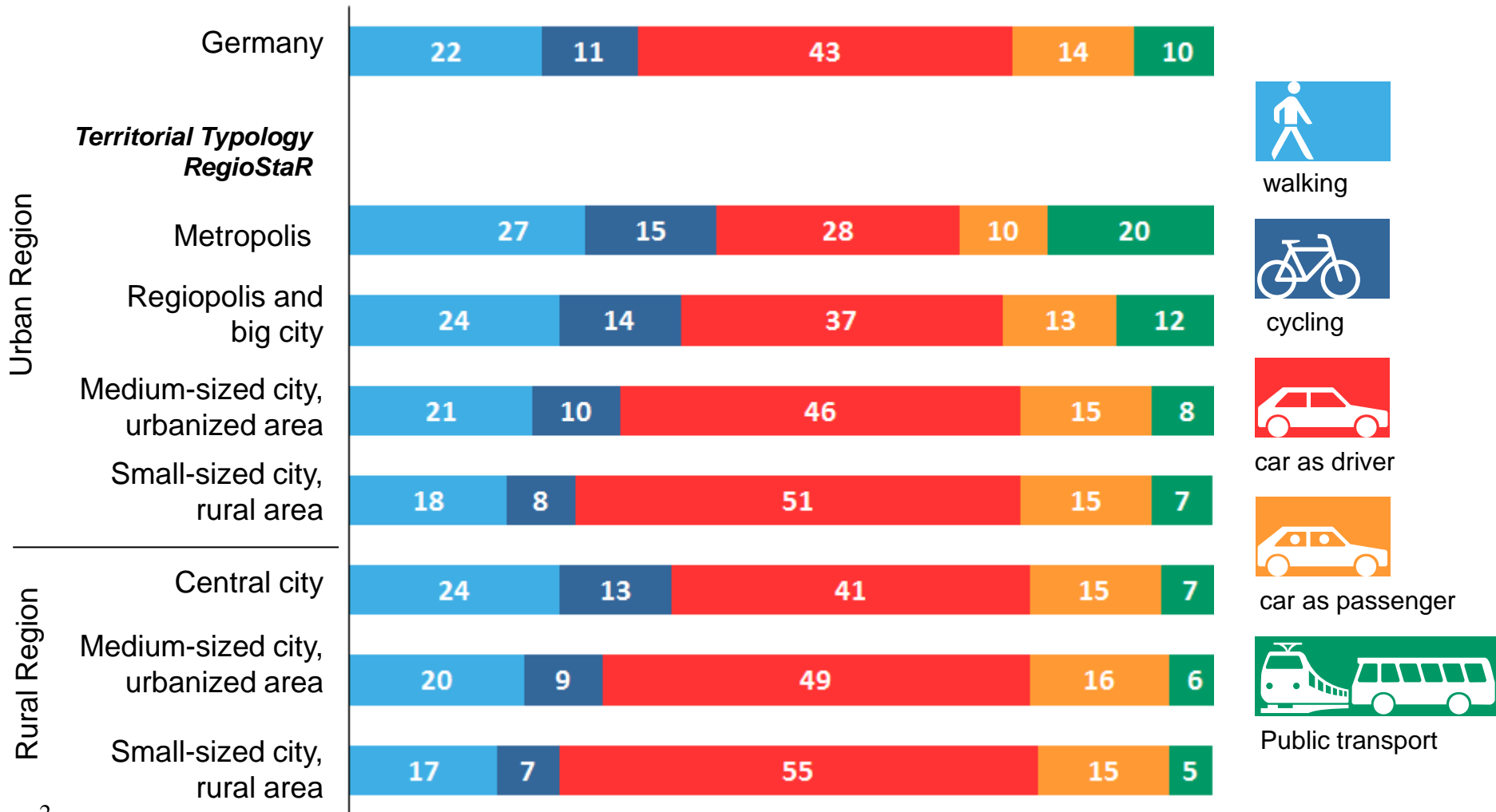
6th ITF Transport Statistics Meeting 18./19. April 2019

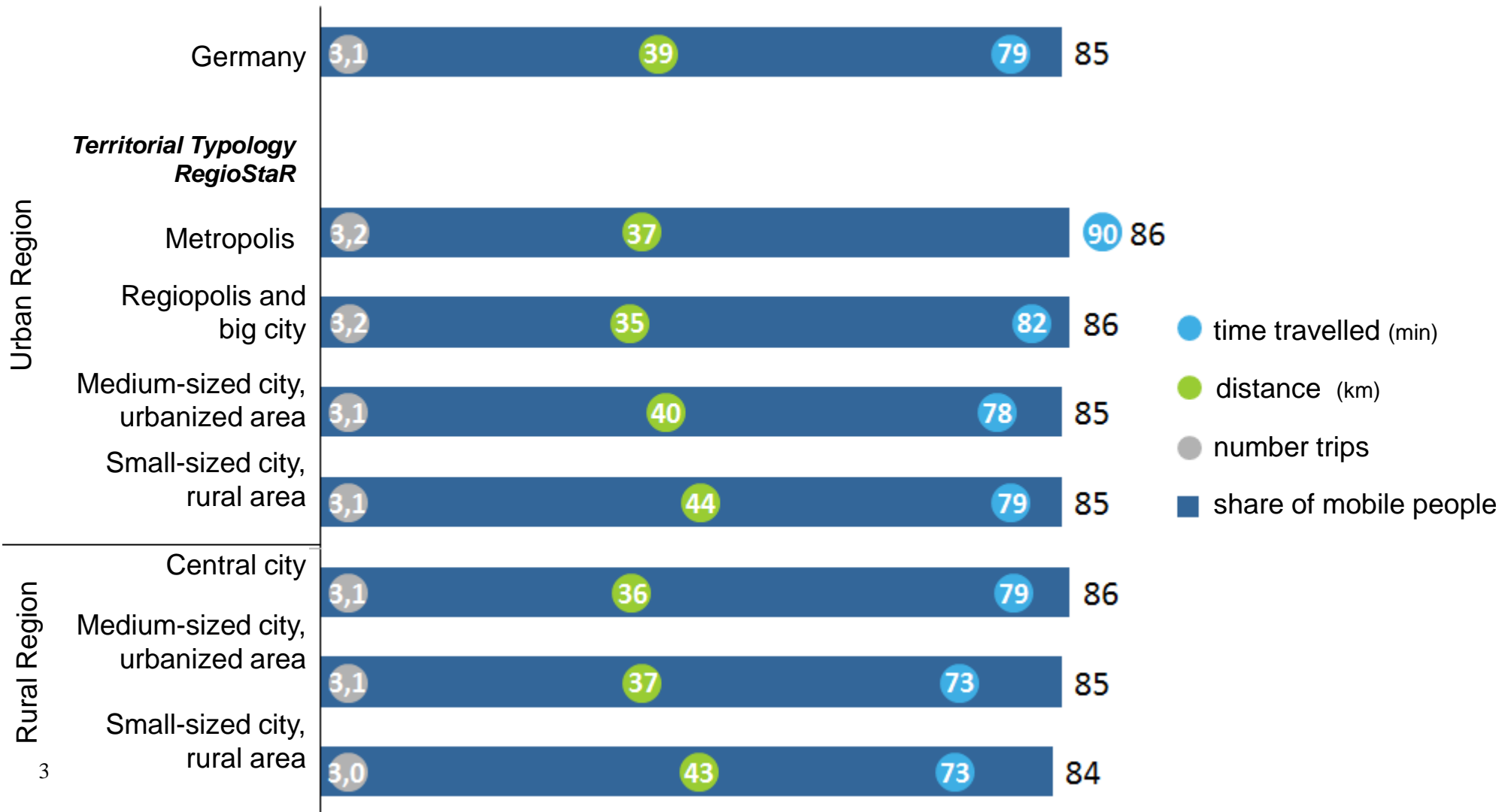**Top: Lightning talks on visualisation methods and data analytics**
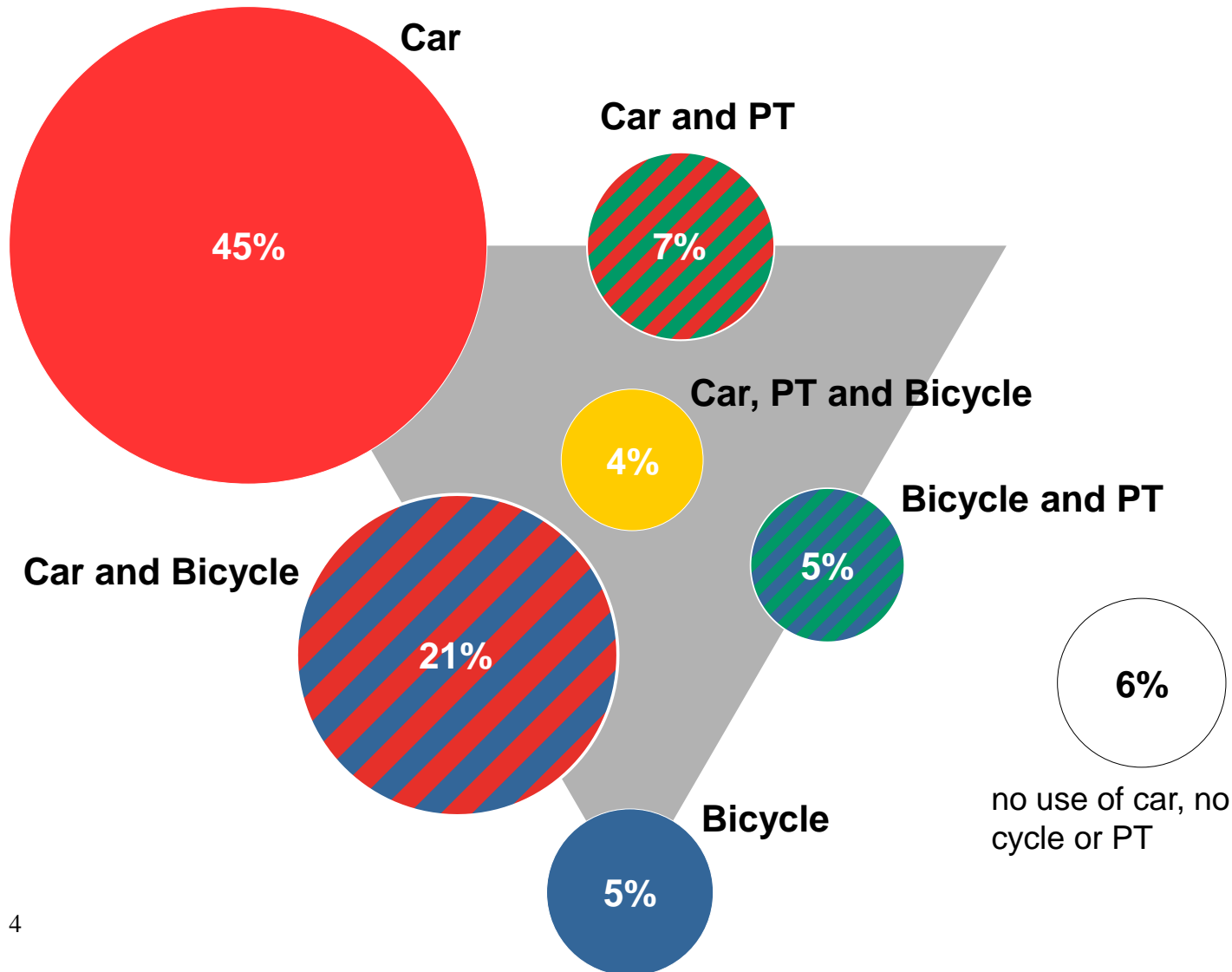
Modal Split in Germany 2017

percentage of trips

Federal Ministry of Transport and Digital Infrastructure

Mobilität in Deutschland – MiD

Region	Territorial Typology RegioStaR	walking	cycling	car as driver	car as passenger	Public transport
	Germany	22	11	43	14	10
Urban Region	Metropolis	27	15	28	10	20
Urban Region	Regiopolis and big city	24	14	37	13	12
Urban Region	Medium-sized city, urbanized area	21	10	46	15	8
Urban Region	Small-sized city, rural area	18	8	51	15	7
Rural Region	Central city	24	13	41	15	7
Rural Region	Medium-sized city, urbanized area	20	9	49	16	6
Rural Region	Small-sized city, rural area	17	7	55	15	5

2

![Federal Ministry of Transport and Digital Infrastructure]

Characteristic Values for Mobility per Person in Germany 2017 by Territorial Types

Germany: 3,1 | 39 | 79 | 85

Territorial Typology RegioStaR

Urban Region

Metropolis: 3,2 | 37 | 90 | 86

Regiopolis and big city: 3,2 | 35 | 82 | 86

Medium-sized city, urbanized area: 3,1 | 40 | 78 | 85

Small-sized city, rural area: 3,1 | 44 | 79 | 85

Rural Region

Central city: 3,1 | 36 | 79 | 86

Medium-sized city, urbanized area: 3,1 | 37 | 73 | 85

Small-sized city, rural area: 3,0 | 43 | 73 | 84

Legend:
- time travelled (min)
- distance (km)
- number trips
- share of mobile people

3

Multimodality
(usually used within a week, persons >= 16 years)

Car

45%

Car and PT

7%

Car, PT and Bicycle

4%

Bicycle and PT

5%

Car and Bicycle

21%

6%

no use of car, no
cycle or PT

Bicycle

5%

4

Daily Usage Pattern of Cars
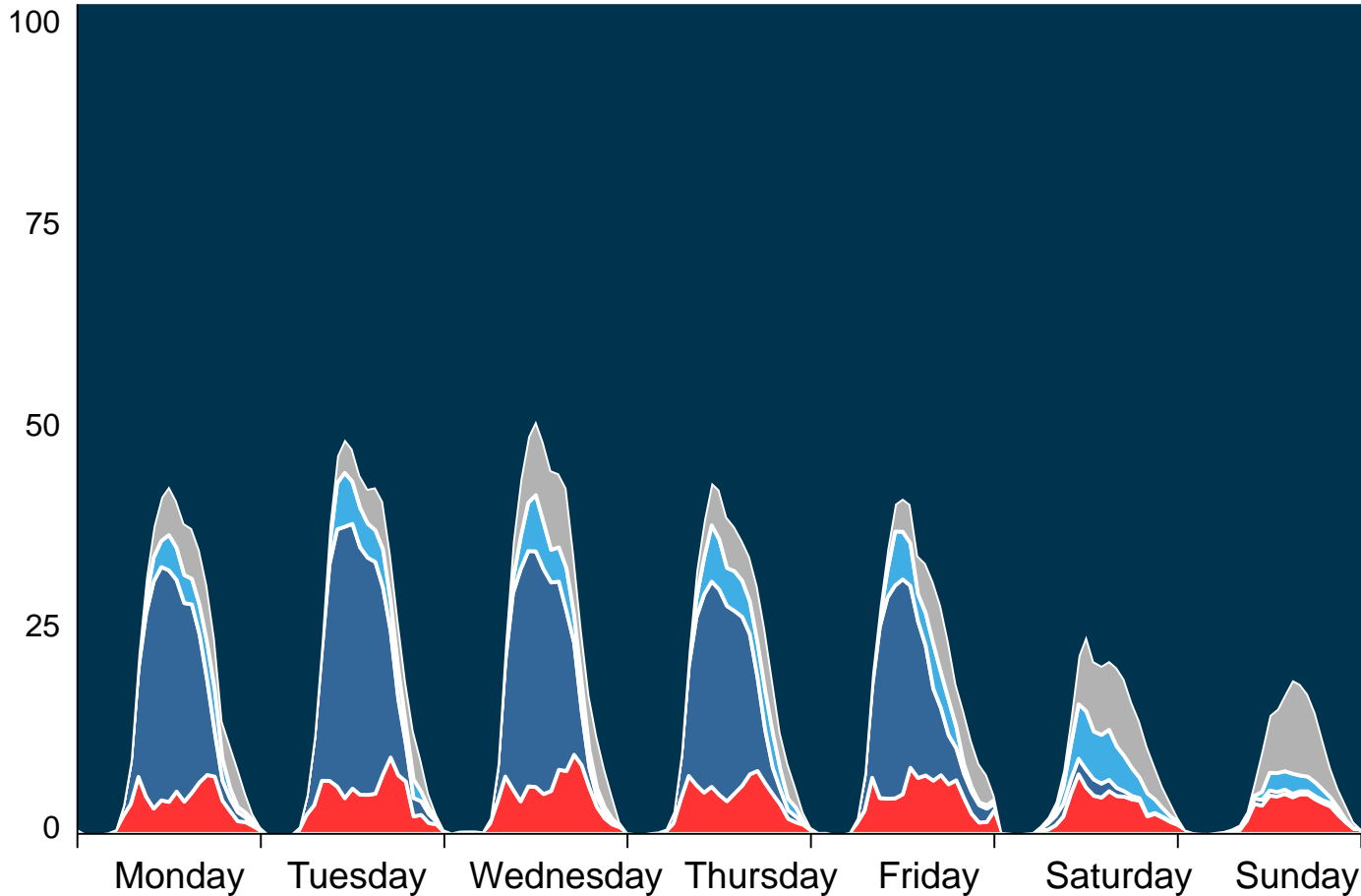
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# Trips - Regional Share of Public Transport
(Small Area Estimation)

- 5,0 bis unter 7,5%
- 7,5 bis unter 10,0%
- 10,0 bis unter 12,5%
- 12,5 bis unter 15,0%
- >15,0%

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Digital Infrastructure**
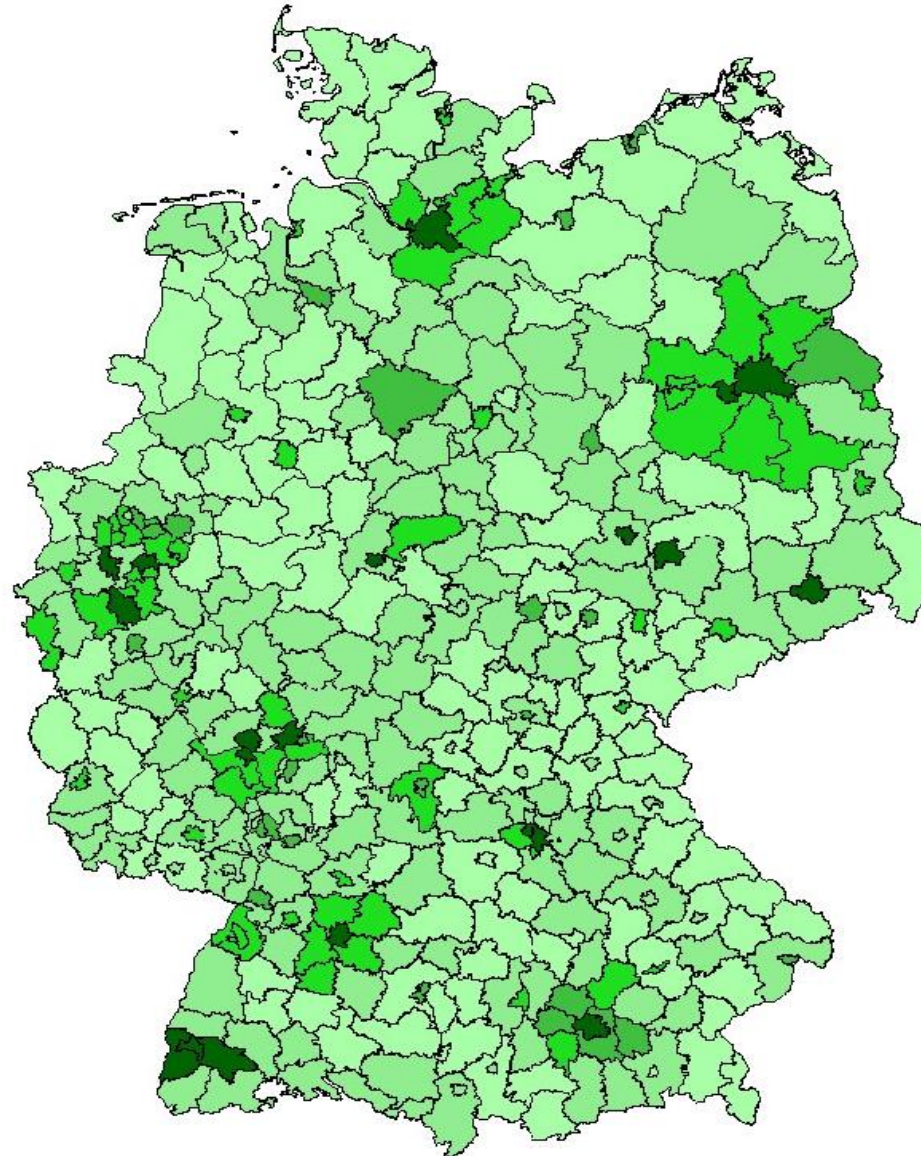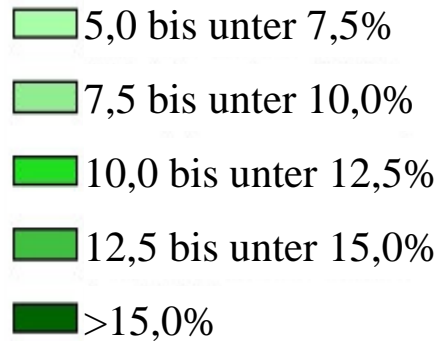
Trips - Regional
Share of Cycling
(Small Area Estimation)

- < 5,0%
- 5,0 bis unter 7,5%
- 7,5 bis unter 10,0%
- 10,0 bis unter 12,5%
- 12,5 bis unter 15,0%
- >15,0%
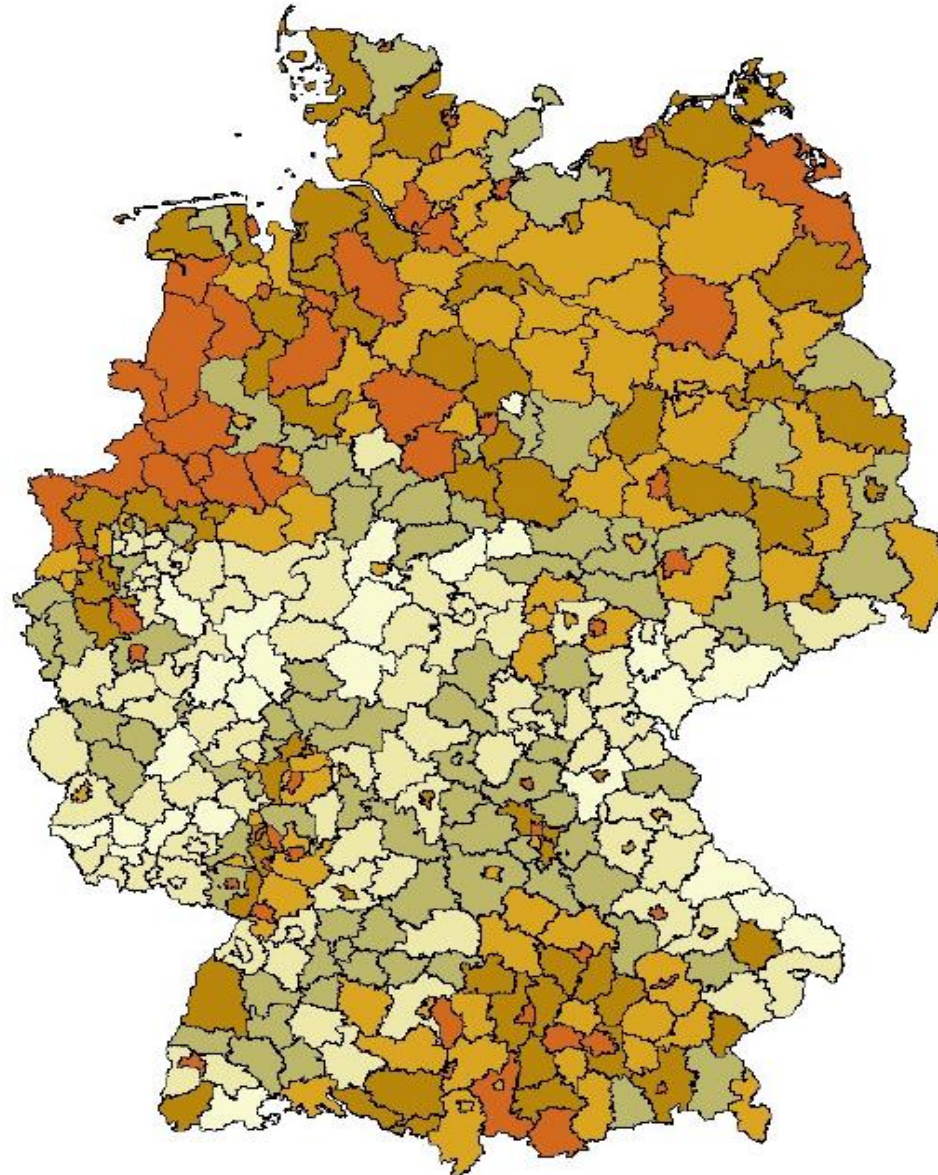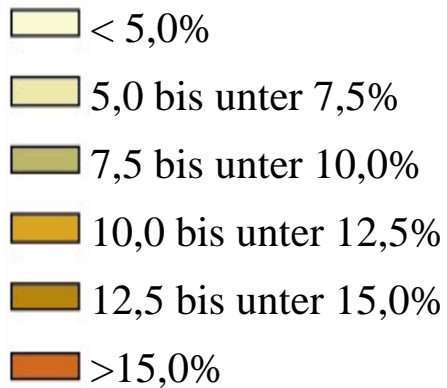
**Federal Ministry
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Daily Travelled Distance
(Small Area Estimation)

- < 38 km
- 38 to under 41 km
- 41 to under 44 km
- >44 km
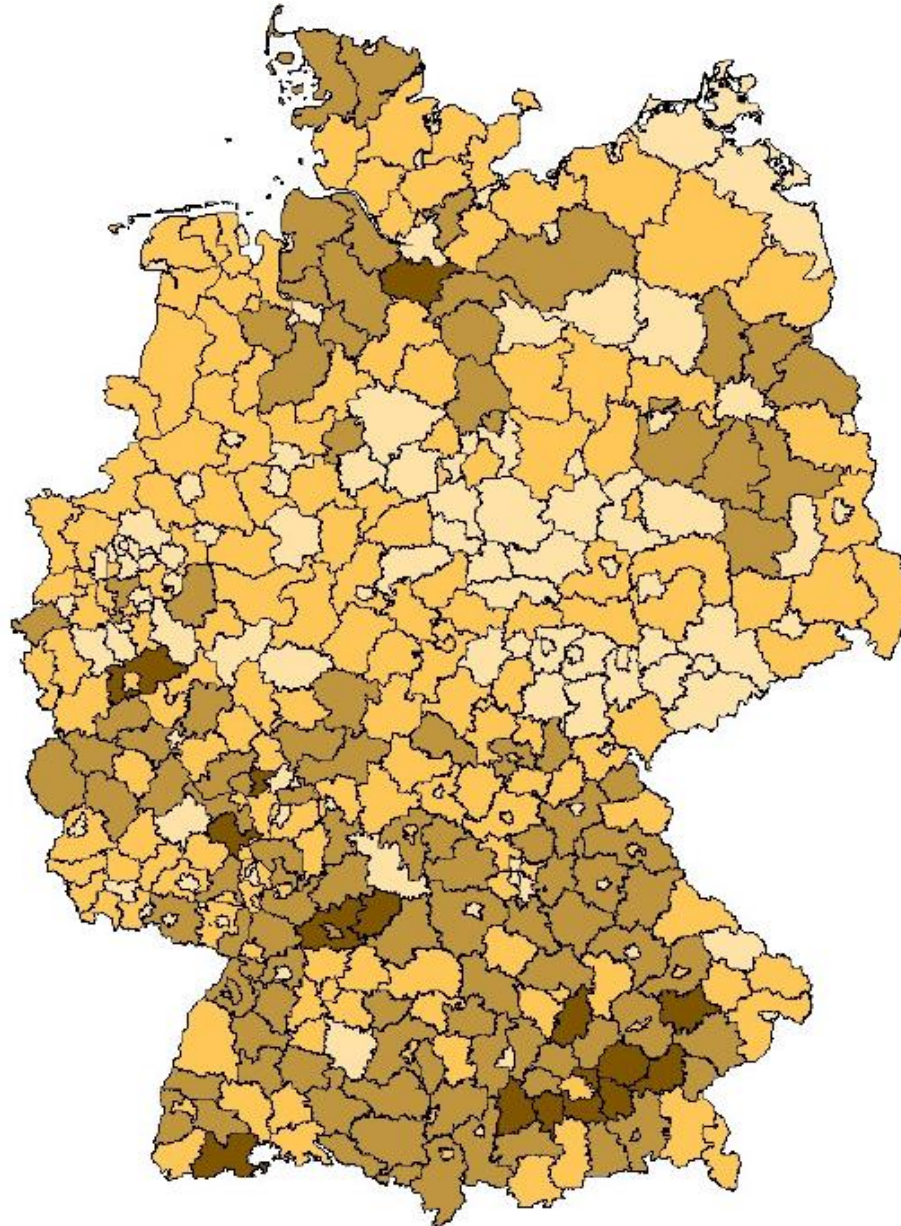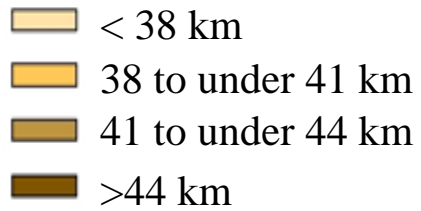
- www.bmvi.de/mid or www.mobilitaet-in-deutschland.de

- Classic:
  ⇨ Reports
    – Result report
    – Method report
    – User manual

  ⇨ Volume of tables

- Innovative

  ⇨ Internet based online analysis tool: www.mobilitaet-in-tabellen.de

  ⇨ Micro data use files:
    – Scientific-use files with a cascading system of spatial resolution and
      aggregation level of characteristics (see next slide) Micro data use files
      (to order at: https://www.dlr.de/cs/) > restricted access (public interest, science)
    – Public-use files

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Differentiated System of Data Provision

data set	spatial resolution	characteristics	data user / requirements of data protection
A public use file (completely anomised)	Territorial typologies (≥200.000 inh)	Aggregated sozio-demografic and economic data (e.g. age groups, vehicle segments)	public

B scientific use files / factually anonymised

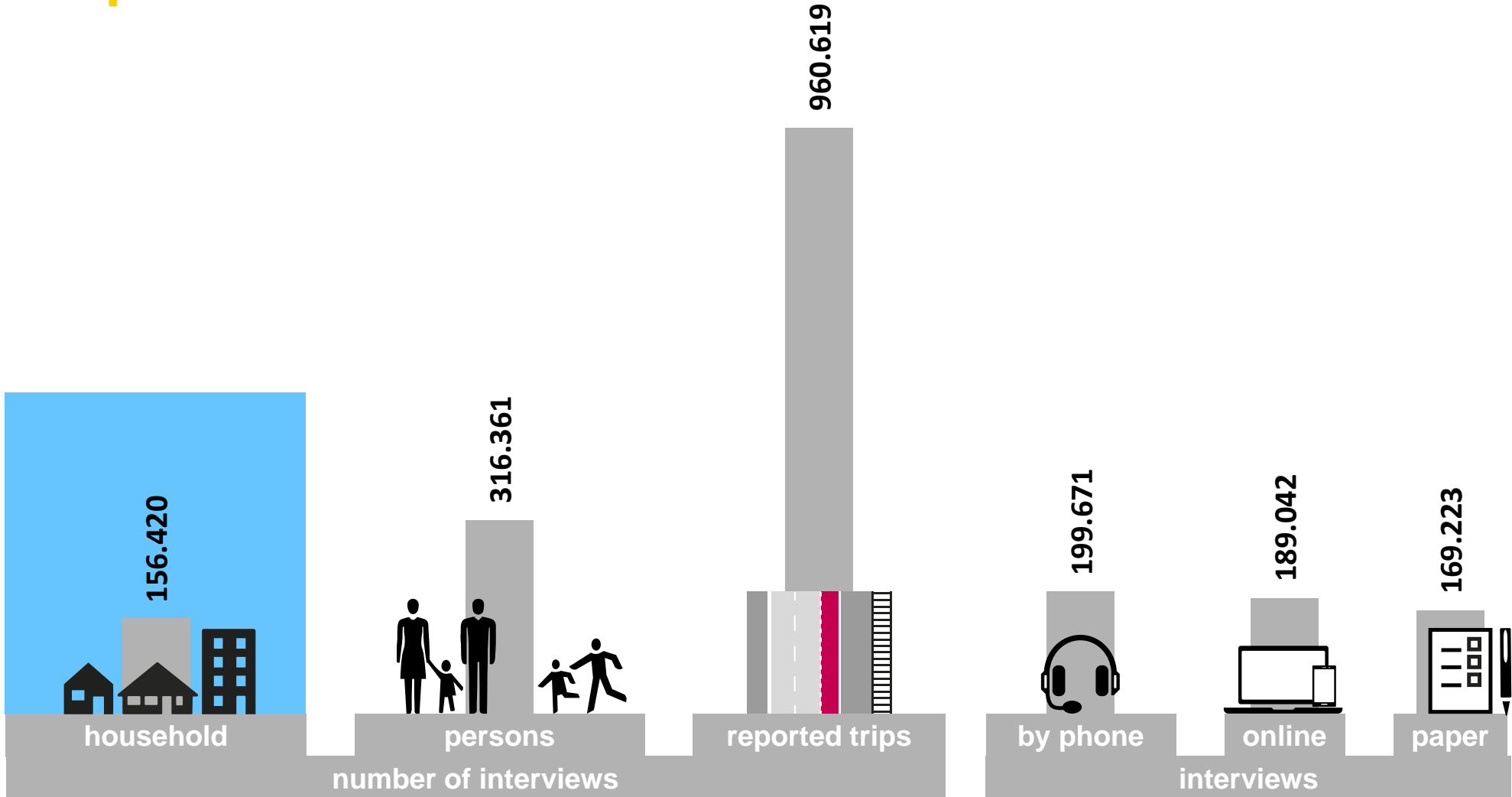|			
B3 local data	grid (≥500 m x 500 m and ≥ 500 inh)	Highly aggregated socio-demographic data, no sensitive data	scientist, authority with a small scaled data request - high standards of data protection *
B2 regional data	official territorial units e.g. NUTS3, LAU (≥5.000 inh)	Sozio-demografic and economic data (e.g. income classes, vehicle segments)	scientist, authority *
B1 data by territorial typologies	Territorial typologies (≥200.000 inh)	Differentiated socio-demografic and econmic data (e.g. year of age, income, detailed vehicle informatione)	scientist, authority, economy *

* who signed a data distribution contract

Annex

basic information on
- sample size
- sampling frame
- the survey programme
- modes of transport

MiD 2017 – Sample and Interview Modes

Federal Ministry of Transport and Digital Infrastructure

156.420 — household

316.361 — persons

960.619 — reported trips

number of interviews

199.671 — by phone

189.042 — online

169.223 — paper

interviews

MiD 2017 – Overview on the Sample and Methods

- Rough Concept and commissoned by the Federal Ministry of Transport and Digital Infrastructure (BMVI)

- Net nationwide sample
  - ⇨ 35.000 households on behalf the BMVI
  - ⇨ 125.000 on behalf 60 regional partners

- All modes CATI, CAWI and PAPI on all levels (households, persons, trips, cars)

- Triple frame sample
  - ⇨ Register: + same chance for selection, - spatial cluster effects
  - ⇨ Dual frame telephone (landline and cellular RDD telephone numbers)

- Stratification, weighting, results: new regional types and small scaled spatial data

- Core and additional topics

- Contractors: infas, DLR, IVT Research, infas360

Questionnaire Program

- Conflict of objectives

  ⇨ Reduce the response burden

  ⇨ Demand for more topics (carsharing, e-mobility, …)

- Division in :

core topics (CATI, CAWI <u>+ PAPI</u>)
important for transport infrastructure planning
> high precision of the key variables
> reliable differentiations
> acceptance of PAPI

modules: additional topics (CATI, CAWI)
important, but
> sub-sample are sufficient
> no high interests in regional data
   (e.g. wearing of helmets)

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household

- household size, secondary residence
- age, sex, occupational status of all of the household members
- net household income
- tenant, owner
- number of bicycles, pedelecs / e-bikes, mopeds, motorbikes and cars in the household
- number of driving licenses in the household
- car sharing membership of at least one person in the household

car module
- car ownership
- reasons for having no car

core themes

cars

- producer and model
- annual mileage
- type of drive
- year of producing
- initial registration

car module
- engine power
- car holder
- usual parking space

additional modules for certain subsamples

persons

- age and sex
- educational attainment
- employment
- background of migration
- type of license
- carsharing membership
- usual used ticket in public transport
- availability of transport modes bicycle, pedelec/e-bike, car
- usual usage of transport mode (own car, carsharing, public transport, bicycle, train, remote bus, airplane)

travelling module
reporting of the last 3 yourneys with at least 1 overnight stay within the last 3 months

module additional personal characteristics
year of receiving driving license, commuter with secondary residence, homeoffice, reduced mobility

module (digital) infrastructure
use of digital devices to support mobilty, modes of transport for shopping, online shopping

modul short-range mobility and cycling
usage of bikesharing, only walking, helmet, parking bicycle at home

module satisfaction and attitudes
satisfaction with public transport, car and bicycle traffic, walking, attitudes car, bicycle, public transport, walking

record day

- mobility
- surrounding
- car availability

trips

- source first trips
- time of starting and arrival
- purpose
- transport modes
- companion
- destination (adress / geocode)
- distance
- regular professional trips

combined with car module
assignment of cars of the household to trips

interviews on all stage for a subsample

Thank you for your attention!

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Division G 13 Forecast, Statistics and special surveys

Federal Ministry of Transport
and Digital Infrastructure