



## Mobility in Germany

# Short report

Transport volume – Structure – Trends

Dated: September 2019

A study by the



Bundesministerium  
für Verkehr und  
digitale Infrastruktur

Carried out by

**inf**as

In cooperation with



DLR



**inf**as 360



**Short report for/a study by the:**

Bundesministerium für Verkehr und digitale Infrastruktur  
Referat G 13 – Prognosen, Statistik und Sondererhebungen  
Robert-Schuman-Platz 1  
53175 Bonn  
FE project number 70.904/15



**Submitted by:**

infas Institut für angewandte Sozialwissenschaft GmbH  
Friedrich-Wilhelm-Straße 18  
53113 Bonn

**Contact:**

Robert Follmer  
Head of Department  
Tel. +49(0)228/38 22-419



**In cooperation with:**

Deutsches Zentrum für Luft- und Raumfahrt e. V.  
Institut für Verkehrsforschung  
Rutherfordstraße 2  
12489 Berlin



IVT Research GmbH  
M 4, 10  
68161 Mannheim



infas 360 GmbH  
Ollenhauerstraße 1  
53113 Bonn

**Project:**

5431  
Bonn, September 2019  
Version 4.0

This edition updates the versions published in 2018 and implements a methodical harmonisation of the time series 2002 – 2008 – 2017. A component of this is also an adjustment of the weighting and extrapolation to accommodate the census-related corrections of the population figures for 2002 and 2008.

The following citation formats are recommended:

Long form:

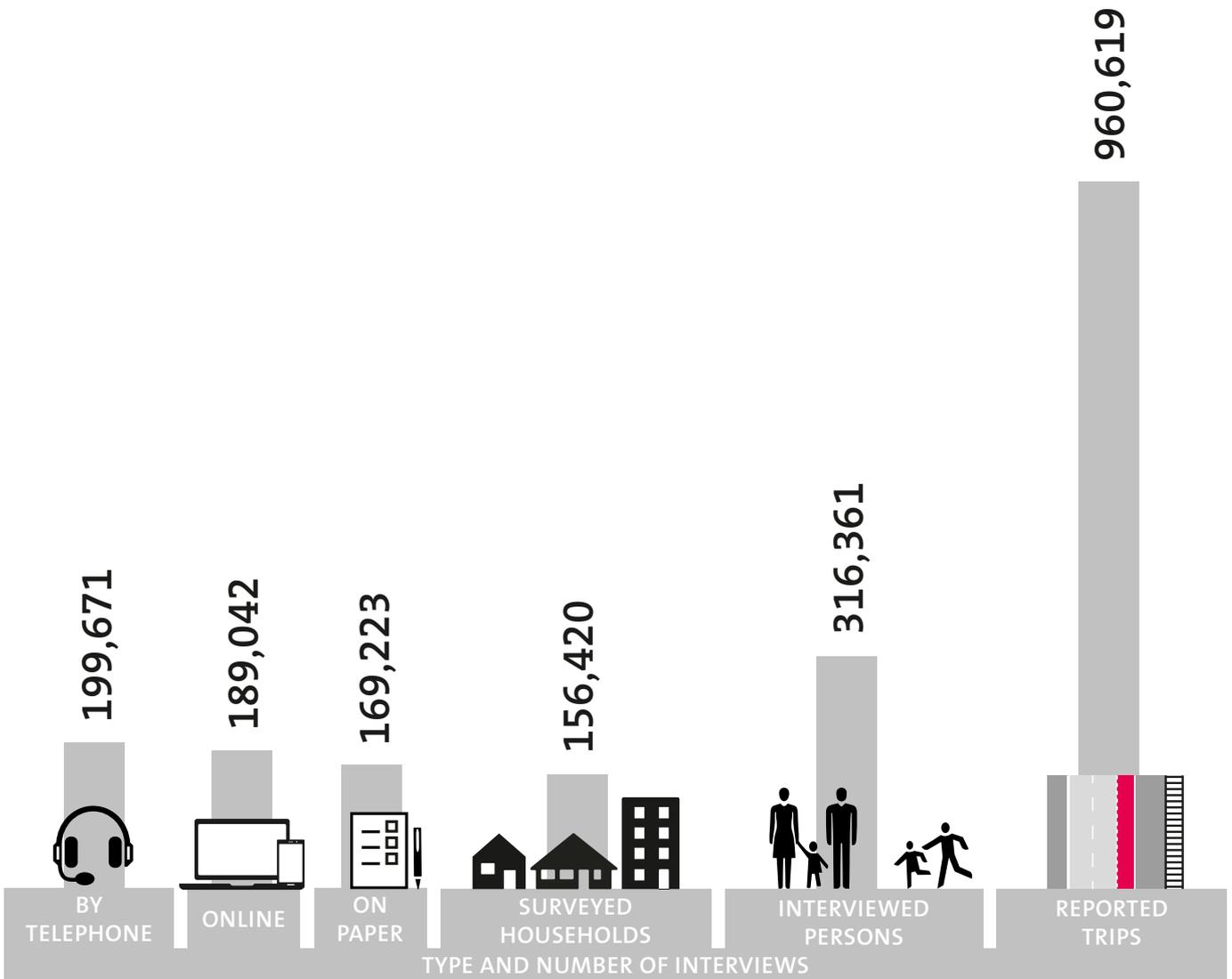
Follmer, Robert and Gruschwitz, Dana (2019): Mobility in Germany – short report. Edition 4.0 of the study by infas, DLR, IVT and infas 360 on behalf of the Federal Ministry of Transport and Digital Infrastructure (BMVI) (FE no. 70.904/15). Bonn, Berlin. [www.mobilitaet-in-deutschland.de](http://www.mobilitaet-in-deutschland.de)

Short form:

infas, DLR, IVT and infas 360 (2019): Mobility in Germany (on behalf of the BMVI)

## Contents

Mobility in Germany 2017 – what’s it about?	5
Results telegram	6
How often, how far and how long are we on the move?	8
What about access to car, bicycle, bus and rail as well as pedestrian traffic?	10
Which modes of transport do we use?	12
How are different user segments distributed?	14
What role is played by car sharing & co.?	16
Why do we travel?	18
Are we all shopping online?	20
Are there differences in the everyday mobility of certain population groups?	22
What about satisfaction in the transport services?	24
How are the results to be evaluated?	26
Notes on the further Mobility in Germany results 2002 to 2017	28
List of the regionally involved parties	29
Explanation of important terms	30



## Mobility in Germany 2017 – what's it about?

Travelling and mobility influence our day-to-day lives. They are a part of our social lives, to different degrees, during work and education, leisure activities and everyday personal business. Precise knowledge about these mobility requirements and everyday transport occurrences is a prerequisite to providing the required resources. While a constantly increasing growth in car mobility in recent decades was recorded, much effort now concentrates on once more promoting awareness of other transport services, such as public transport, cycling and walking. It is apparent, not only in Germany, that the continuous growth of car transport is reaching its limits. Despite this, it remains a formative component of transport and must be actively modelled.

But where are we at on this path? How do the citizens of Germany make use of the transport services? How has this changed in recent years? What about people with reduced mobility? Do we all have similar mobility habits or are there any differences?

These and other questions are looked at in detail by the Mobility in Germany (MiD) study. This report presents an overview of the core results for 2017. In addition to the extensive findings report of 2017 as well as an own time-series report, it is intended to provide insights into the most important benchmarks and relationships.

Further documentation has been written in addition to these short and also long reports. These are available at [www.mobilitaet-in-deutschland.de](http://www.mobilitaet-in-deutschland.de). All documentation on the earlier surveys by Mobility in Germany in the years 2002 and 2008 are also available there (only in German). Additional information on these and a list of all regional Mobility in Germany 2017 clients can be found at the end of this short report.

We hope you enjoy reading!

Your Mobility in Germany project team

### Data base

*After 2002 and 2008, the Federal Ministry of Transport and Digital Infrastructure commissioned the infas Institute for Applied Social Sciences to carry out the Mobility in Germany study for the third time in 2017. Involved on the part of the client were over 60 regional partners who had commissioned additional regional samples. As previously in 2008, processing was carried out together with the Institute of Transport Research at the German Aerospace Centre. In addition, the project team was extended to include IVT Research as well as infas 360.*

*The field phase of the current survey, with a reference survey date stretching for over twelve months, took place in the period between May 2016 and September 2017. The study participants were able to take part in a multistage procedure in writing, by telephone or online. Within the realised overall sample of 156,420 households, 33,389 households were allotted to the base sample for the whole of Germany and 123,031 to the additional regional samples. A total of 316,361 persons were interviewed who reported on 960,619 trips on their respective survey dates. The precise contents are documented in an overview at the end of this report.*

*The evaluation of the base sample as well as the regional additions are integrated. The extrapolation of the results provides extensive key values for the year 2017 on day-to-day mobility among Germany's residential population and refers to all the trips they made within Germany.*

*With this edition of the short report, a direct comparison with the earlier surveys of 2002 and 2008 is possible. This is guaranteed by the retrospective regionalised adjustment of the extrapolations to incorporate the census correction of the population figures carried out in 2011 as well as further methodological adjustments for 2002 and 2008 to the approach in 2017.*

## Results telegram

### Overall transport volume virtually stable, but regionally very different

- Seen as a whole, the total German passenger-transport volume (measured as number of trips) and as well the total passenger-kilometre performance (measured as the passenger kilometres travelled) in total have changed only a little compared to the last Mobility in Germany surveys from 2002 and 2008. The volume has reduced slightly compared to 2008 and now lies at almost 260 mio. trips per day. On the other hand, the transport distance has slightly increased to around 3.2 bn. passenger kilometres a day.
- This overall development is misleading in terms of regional differences. In particular in the major towns, both values increase significantly in some cases, not least because of the population growth there – with corresponding transport burdens in the conurbation areas on the one hand and benefits for public transport on the other.
- The so-called ‘rate of mobility’, which means the share of trip makers, has declined. While in 2008 an average of 90 per cent of the citizens were on the move on an average day, this value achieved only 85 per cent in 2017. This leads to a somewhat reduced average number of 3.1 trips per person and day. In 2008 the respective value was 3.4 trips. The above average decline for children and young people is striking as well as for households with lower economic status.
- The modal split across the whole of Germany in 2017 thus lies at 22 per cent for trips covered on foot alone, 11 per cent for the bicycle, 43 per cent for trips by the car driver as well as 14 per cent for those by the car passenger. Public transport including long-distance transport reached a proportion of 10 per cent of the transport volume. In this examination of the ‘Main travel mode’, trips for which different modes of transport were used are summarised according to a hierarchy and allocated to one of the above-mentioned modes of transport.
- The examination of passenger-kilometre performance, i.e. the covered passenger kilometres, shows a clear increase for the bicycle as well as public transport. The vehicle mileage of car drivers has increased to a lesser extent. The values for the car passengers have declined somewhat.

### Plus for the environmental alliance of bicycle, bus and rail, but minus for pedestrian traffic

### Still low growth in the proportion of cars

- The transport modal split, measured as share of mode of transport of all trips, shows a slight growth in private motorised transport and low proportional increases for the remaining modes of transport. The bicycle, bus and rail are among the winners, in particular in urban areas. On the other hand, the proportional value of trips covered on foot alone is declining in towns and the country. In Mobility in Germany, a ‘trip’ is understood to be a movement from origin to destination including possible stops and changes in modes of transport.
- The bicycle is on the rise, especially in the kilometres cycled. Thus, the bicycle is being ridden in particular for somewhat further distances. In total, the cycled passenger kilometres compared to 2002 have increased by around a quarter. Compared to 2008 this is more than a tenth.
- Public transport has grown proportionally and absolutely in volume, but in particular in kilometre performance. Here it has increased by a half compared to 2002 and by a tenth compared to 2008.
- It’s a different picture when it comes to pedestrian traffic: this has made losses, in particular in modal share of transport volume, and went down from 25 per cent in 2008 to 22 per cent in the year 2017.
- Even though local public transport has increased and has benefited from growing commuter transport it is the mode of transport with the comparably most unfavourable subjective assessment by the interviewees. In addition, it is the least gladly used. The favourite on both counts is the car.

### More and bigger cars

- The fleet of cars has now grown to a good 43 mio. vehicles in private households. Unlike in 2008, there is therefore now more than one car to each household. The fleet size has particularly grown in the eastern German states and rural regions. Outside the towns, 90 per cent of households now have at least one car at their disposal. When looking at Germany as a whole, 23 per cent of households continue to be without a car. However, households with more than one car have recorded a slight rise.
- Within the fleet, SUVs, off-road vehicles and vans have doubled their proportion in the surveyed households compared to 2008 from around ten to now around 20 per cent.
- The average occupancy rate of cars has hardly changed. It lies at around 1.5 persons for both 2002 and 2008.
- Overall, possession of a car driving licence has increased slightly. In 2017, 87 per cent of 17 year-olds and older have a car driving licence – one per cent more than in 2008. As always, a differentiated view is required here too. The proportion declines, particularly in the age-group of under 30 year-olds. In the case of senior citizens however, it has now exceeded the 80 per cent mark.

### Less activity among children, continued growth in car preference among senior citizens

- Young adults in major towns are less car-orientated than their peers were in previous years. This can also be seen in the declining quotas of driving licence possession. It's a different picture among the older age groups. For example the day-to-day mobility of 30-60 year-olds is only slightly different to that of this age group in the Mobility in Germany surveys of 2002 and 2008.
- The level of mobility among children and young people has changed. They are less on the move than the same age groups in 2002 and 2008. However, this differs according to household situation and economic status.
- As was the case between 2002 and 2008, automobility among senior citizens grew quite significantly, in particular in the older age groups. The background to this is primarily more older women who are sitting at the wheel themselves and more often have a car at their disposal than previous female senior citizens.

- Car sharing organisations are finding their members in the major towns where more than every tenth household already has at least one membership. However, the actual utilisation does not keep the same pace. Four out of ten car sharers almost never make use of the service. Even the remaining car sharing customers only use these vehicles mainly sporadically. Shared cars are therefore most likely to represent an occasional option with low proportion of vehicle mileage.

### Beginnings of a transport turnaround are visible but not nearly completed

- The frequently discussed transport turnaround is only recognisable in urban areas, but even there, is not yet achieving the desired overall dynamic. Overall and primarily outside the towns the car remains by far the number one mode of transport, in particular when looking at passenger kilometres. In addition, changes are currently being driven, sometimes more through structural effects such as (re-)urbanisation and the growth in employment than through transport improvements.
- The developments to be ascertained in terms of a somewhat reduced rate of mobility and the number of day-to-day trips can also be identified in a similar form in the current national mobility surveys in Great Britain and the USA. This suggests, despite all differences, parallel developments in the western industrial societies.
- However, under the surface of average values for events in passenger transport, different and sometimes opposing developments can be recorded. These run along the age limits and show so-called 'cohort effects'. While day-to-day mobility is no longer so clearly influenced by the car in particular among the younger generations, its importance among the older generations is growing. A further divide runs between town and country, also with a more diverse mobility in the towns and a continuously growing automobility in the rural areas. A third complex comprises aspects of social participation. Thus, the level of mobility reduces in economically weak households while it stays the same at the other end of this scale or even goes against the trend in some segments.

## How often, how far and how long are we on the move?

### Share of trip-makers

On average during the course of a year, 85 per cent of citizens are out of the house on any one randomly selected day. This value is somewhat higher at 88 per cent on working days, lies at 82 per cent on Saturdays and at 73 per cent on Sundays. These values have fallen slightly compared to the last survey in the year 2008. At that point in time they lay at an overall 90 per cent compared to 87 per cent on Saturdays and 82 per cent on Sundays. Thus, the declines are greater at the weekends than on working days. A lower rate of mobility is decisive for these changes, above all among children and young people and in households which lie in the lower groups from an economic point of view.

### 3.1 trips and 85 minutes a day

These activity quotas lead to an average daily number of 3.1 trips which each of us cover. This value has also fallen somewhat compared to the result of 3.4 in the year 2008. In comparison, the distance covered each day has risen slightly. This lay at 39 kilometres in 2017. In 2008 it amounted to 38 kilometres and 33 kilometres in 2002. Accompanying this is a slight rise in day-to-day time on the move. In 2002 this lay at just below the 80 minute limit, and now amounts to 85 minutes – each including commercial transport.

### Daily transport volume and travelled kilometres

When extrapolated, these values lead to a daily transport volume of almost 260 mio. trips and 3.2 bn. passenger kilometres. The volume declined slightly in 2017, however the distance travelled rose slightly. We are thus covering less trips on average per day. However, these are on average somewhat longer and take up more time than they did several years ago. In order to be able to reliably compare the current extrapolated values with the results of the surveys from 2002 and 2008, the values for 2002 and 2008 were newly determined according to the census correction which has been available since 2011. Likewise, plausibility checks developed in Mobility in Germany 2017 were applied in the trip evaluation in order to ensure the direct comparability of all three points in time.

The correction necessitated by the earlier census leads to somewhat lower population figures for both points in time than were taken as basis at that time,

particularly in the larger towns. Therefore, for both 2002 as well as 2008, this results in an overall population of almost 81 mio. This rises to almost 83 mio. citizens in 2017.

As will be demonstrated in one of the following chapters of this short report, there are differences in these key mobility values over the whole of Germany and, above all, in their development within the individual population groups. But also when considered from a regional perspective, the trends in the extrapolated results on volume and performance are not the same. Population growth, in particular in the very large towns and their conurbation areas, lead, when considered absolutely, to an increase in transport demand and thus also to a greater utilisation of the existing infrastructure which does not usually grow to the same extent. The transport demand situation is more relaxed away from the conurbation areas.

In order to demonstrate this differentiation, the Mobility in Germany figures for this report are differentiated according to seven area categories of a consolidated regional statistical spatial type. This is a building block of the new spatial typology (RegioStaR) by BMVI. The results for the daily transport volume as well as the transport distance and other selected core parameters on the three points in time 2002, 2008 and 2017 are presented in the table on the right-hand side.

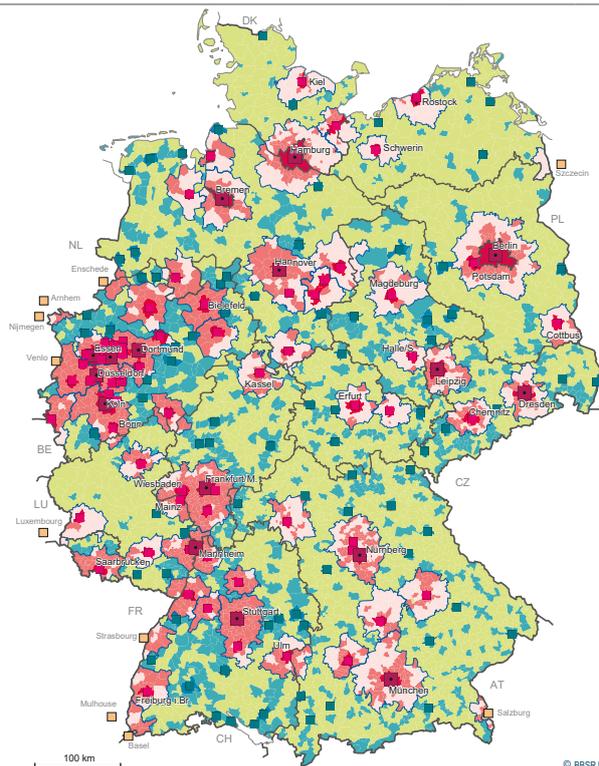
### Notes on the updated time comparison

*It is intended that Mobility in Germany 2017 should also enable a time comparison with the earlier surveys from 2002 and 2008. To this end, further developments in the data plausibility checks as well as the weighting carried out in 2017 were transferred to the 2002 and 2008 data bases. In addition, the extrapolation which was newly generated for these two points in time now take into account the census correction of the population figures which was carried out in 2011 on a smaller-scale level (municipalities). Detailed depictions of the working steps carried out with this data harmonisation are included in the time-series report which is available separately.*

General key values and transport volume according to regional statistical spatial type (RegioStaR7)

	2002	2008	2017	
<b>Population</b>	81.6	80.7	<b>82.2*</b>	<i>Number in mio.</i>
<b>Proportion of mobile persons all days</b>	87	90	<b>85</b>	<i>%</i>
Proportion of mobile persons weekdays	90	92	<b>88</b>	<i>%</i>
Proportion of mobile persons Saturday	83	87	<b>82</b>	<i>%</i>
Proportion of mobile persons Sunday	76	83	<b>73</b>	<i>%</i>
<b>Trips per person and day</b>	3.3	3.4	<b>3.1</b>	<i>Number</i>
<b>Daily distance per person and day</b>	33	38	<b>39</b>	<i>km</i>
<b>Travelling time per person</b>	01:16	01:22	<b>01:25</b>	<i>h:min</i>
<b>Transport volume (trips) per day</b>	270	275	<b>257</b>	<i>Number in mio.</i>
Urban region – metropolis	38	45	<b>48</b>	<i>Number in mio.</i>
Urban region – regiopolis and large city	46	37	<b>39</b>	<i>Number in mio.</i>
Urban region – medium-sized city, urban area	74	62	<b>64</b>	<i>Number in mio.</i>
Urban region – small-town area, village area	20	15	<b>16</b>	<i>Number in mio.</i>
Rural region – central city	19	18	<b>15</b>	<i>Number in mio.</i>
Rural region – medium-sized city, urban area	37	46	<b>37</b>	<i>Number in mio.</i>
Rural region – small-town area, village area	36	52	<b>40</b>	<i>Number in mio.</i>
<b>Transport distance (passenger kilometres) per day</b>	2,717	3,080	<b>3,214</b>	<i>in mio.</i>
Urban region – metropolis	346	455	<b>558</b>	<i>in mio. .</i>
Urban region – regiopolis and large city	417	402	<b>434</b>	<i>in mio.</i>
Urban region – medium-sized city, urban area	769	683	<b>820</b>	<i>in mio.</i>
Urban region – small-town area, village area	242	189	<b>222</b>	<i>in mio.</i>
Rural region – central city	164	182	<b>174</b>	<i>in mio. .</i>
Rural region – medium-sized city, urban area	363	500	<b>437</b>	<i>in mio.</i>
Rural region – small-town area, village area	416	669	<b>569</b>	<i>in mio.</i>

\*At the end of the year 2015 (regional differentiation of this evaluation is only available for this point in time), in 2017 already approx. 82.7 mio. according to Destatis Absolute values for 2002 and 2008 recalculated according to a smaller scale (on a municipality level), census-related correction of the population figures



Consolidated regional statistical spatial type (RegioStaR 7)

The regional statistical spatial type (RegioStaR 7) displayed on the map was developed by the Federal Ministry of Transport and Digital Infrastructure and the Federal Institute for Research on Building, Urban Affairs and Spatial Development. This typification was only developed in 2018 and was not a part of the sample concept in any of the three Mobility in Germany surveys. The interviewees' municipalities of residence were retrospectively allocated to a RegioStaR type for the years 2002 and 2008. While the development of average values and relative shares can be depicted relatively well in this way, values extrapolated to absolute figures provide only an approximate orientation and are therefore to be interpreted with caution. These values are therefore shown in italics in the table.

Urban regions

- Metropolis
- Regiopolis and large city
- Medium-sized city, urban area
- Small-town area, village area

Rural regions

- Central city
- Medium-sized city, urban area
- Small-town area, village area

— Urban region border

■ Major town close to the border with urban regional interconnection to Germany

Data basis: Ongoing spatial observation by the BBSR  
 Geometric basis: Uniform community and municipal associations (generalised), 31.12.2015 © GeoBasis-DE/BKG  
 Basic concept: BMVI  
 Processed by: A. Milbert

## What about access to car, bicycle, bus and rail as well as pedestrian traffic?

### More than one car per household

The number of private households in 2017 lay at around 41 mio. In 2002 around two mio. households less were recorded. In 2008 the number was around 40 mio. The number of households is rising. At the same time the average household size is declining slightly and currently lies at around two persons per household.

In private households a good 43 mio. cars were available in 2017, with a recorded overall number of around 46 mio. of such vehicles which are, however, not all available in private households. The fleet figures have continued to increase in recent years. In 2002 and 2008 the privately available fleet of cars stood at just below the number of recorded households. In 2017 it lay over this number and on average more than one privately available car is related to every household. Nevertheless, similarly to in 2008, a good one in five households does not own a car.

As the diagram shows, the ownership of more than one car increases slightly as time progresses. In 2017, despite the increasing number of households, every fourth household owns two or more cars. This car ownership level depends to a large extent on a household's residential region. In the metropolises for example, four in ten households have no car. Hamburg and Munich are, for instance, included in this category. In contrast, in the most rural regions, at least one car per household continues to be considered a basic provision. In such areas more than 90 per cent of households have a minimum of one car at their disposal. Almost 40 per cent even have access to two or more cars. The growths to be ascertained in the overall number do not always turn out the same. While the results of number of cars in private households are different according to federal states, growth in the four sparsely populated eastern German states particularly stands out. The backlog in demand in these areas was apparently not satisfied in both 2002 and 2008. In particular the size of the group of households with one available car has aligned with the rest of the country.

### Around 75 mio. (electric) bicycles

The number of available bicycles is also determined by Mobility in Germany. Since 2017 it is possible to differentiate between 'conventional' and electric bicycles. Only in every fifth household in 2017 is there no 'functioning' bicycle. 78 per cent of the households therefore have at least one roadworthy bicycle to call their own. In eight per cent of households this even includes at least one electric bicycle. Similarly to 2002 and 2008, almost four in five interviewed persons stated that they have at least one bicycle at their disposal. When extrapolated, this results in an overall fleet of around 75 mio. bicycles, more than 4 mio. of which are electrically supported. The overall fleet number has grown by over 5 mio. since 2002.

### Access to public transport

Unlike with the bicycle and car, the approach of Mobility in Germany 2017 is different to that in 2002/2008 when it comes to public transport. Ongoing spatial analyses will, in further reports, offer the possibility of classifying the surveyed households according to the objective quality of connection to the place of residence. All persons aged 14 and over were asked about the transport tickets they normally use. 26 per cent of them stated that they did not make use of buses or rail transport. A further 52 per cent usually decide on a single or stripe (multiple single) ticket. The remaining 22 per cent carry some kind of season ticket with them. They therefore have easier access to local public transport, at least in terms of the hurdle of obtaining a ticket. Compared to 2008 the number of non-users has dropped somewhat and the share of season ticket owners has grown somewhat.

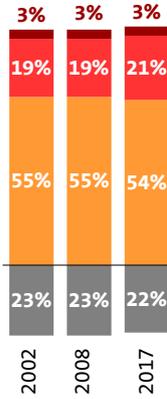
### Going by foot is important

The following chapter looks at the specific proportion of public transport in the travelled trips, as well as the trips managed purely on foot. Walking is often a very underestimated mobility option. Even though this proportion is sinking, every fifth trip is still being covered on foot alone. 33 per cent of the interviewees aged 14 and over stated that they very much enjoyed walking, 41 per cent cover individual distances every day on foot alone.

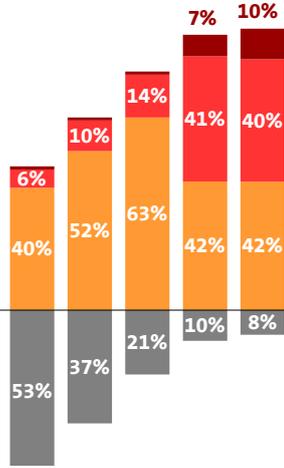
Households

Car ownership, ownership of a bicycle according to status and region, usual use of ticket types in public transport

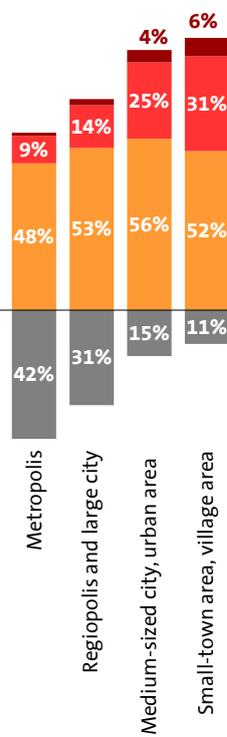
Car ownership



Economic status of the household



Urban region



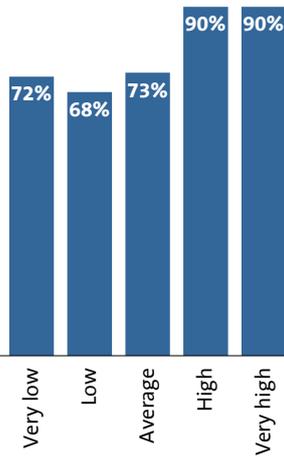
Rural region



In the household...

- Three cars and more
- Two cars
- One car
- No car

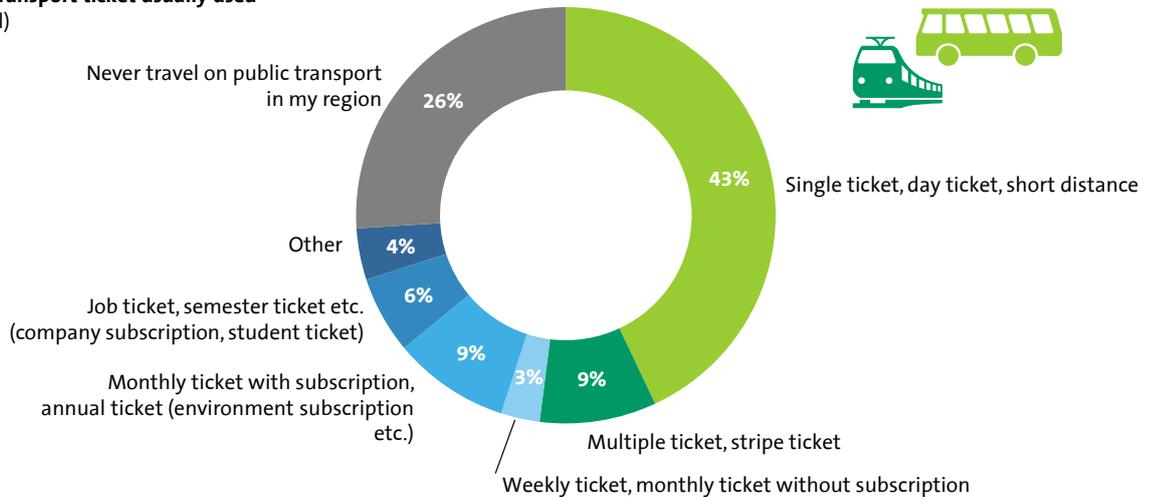
Ownership of bicycles/ electric bicycles/ pedelecs in the household



Household distribution, dated 12/2018

Persons aged 14 and over

Type of public transport ticket usually used (Passenger level)



## Which modes of transport do we use?

### Modal split as important indicator – slight plus for public transport and the bicycle, no decline in car transport

One of the most important key values for Mobility in Germany is the so-called 'modal split'. It expresses the proportional share of the modes of transport over the entire transport volume and thus over all trips covered. As in the years 2002 and 2008, almost 60 per cent of the nationwide average is related to private motorised transport. This includes the use of a car, but also 25 km/h and 45 km/h mopeds and motorcycles as well as utility vehicles. In the 2017 survey the use of car sharing is also included (for details on this, see the separate section in this short report). 43 per cent were private motorised vehicle drivers and 14 per cent were passengers. In this examination, slight growth is recorded by the bicycle and public transport (in Mobility in Germany, public transport is defined as including long-distance transport and taxis, whereby the by far largest proportion within public transport is related to local passenger transport). The proportion of bicycles rose from 9 per cent in the year 2002 to almost 11 per cent in the year 2008 and a good 11 per cent in the year 2017. The proportion of public transport grew from 9 to now 10 per cent. The proportion of trips covered on foot alone declined slightly from 24 and 25 per cent in the first two surveys in 2002 and 2008 to currently 22 per cent.

These modal shares can be examined not only in terms of the trips covered, but also for the passenger kilometre performance. As the average distances between the two modes of transport vary considerably, a very different distribution results from this perspective. Thus, in 2017, drivers in private motorised transport account for 55 per cent and passengers in private motorised transport account for 20 per cent of all passenger kilometres. This means that private motorised transport accounts for over three quarters of all passenger kilometres. Therefore, over three quarters of all passenger kilometres are managed together with private transport. At second place is public transport with almost a fifth, followed by the bicycle with 4 per cent, and trips on foot still at a respectable kilometre share of 3 per cent.

### Absolute values as important benchmark

This proportional examination can be extended by

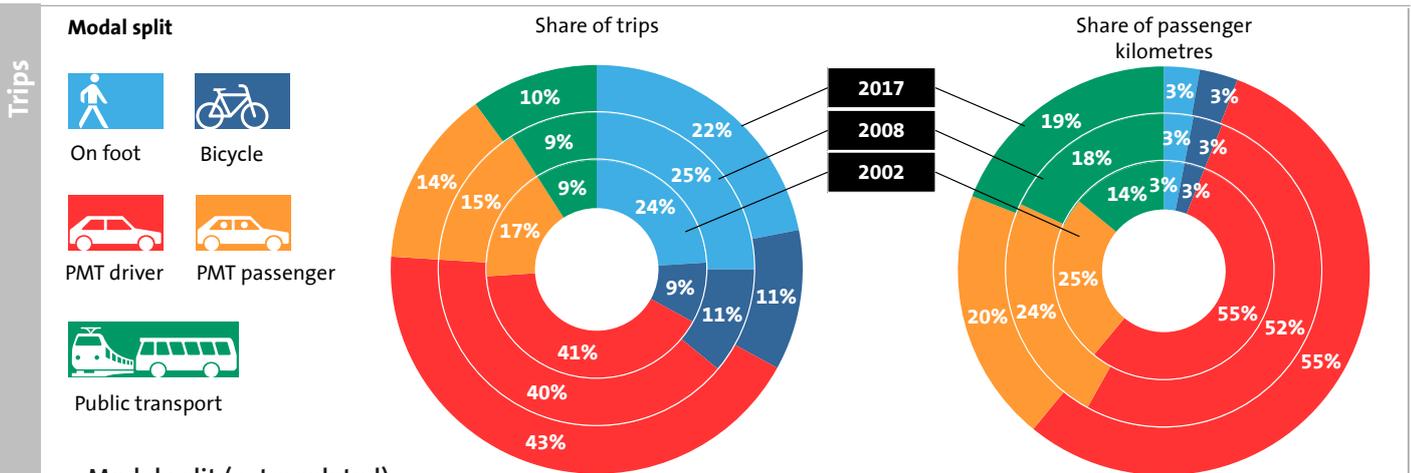
analysing the extrapolated absolute values. Due to the fact that the number of trips per person and day have reduced overall – as has already been demonstrated – and the average distances have also changed somewhat, this presents an important addition, in particular on a kilometre level. Of the measured daily transport distance of overall around 3,200 mio. passenger kilometres, around 2,400 mio. are related to private motorised transport. This lies slightly over the range of 2008 and significantly over the level of 2002. If only the car drivers are examined here – i.e. the vehicle movements – the car vehicle mileage continuously increases from 2002 to 2017.

This result of a rising absolute transport distance applies to the bicycle to a much more significant extent. Its values have increased from 96 mio. daily 'pedalled' kilometres in the year 2008 to a current 112 mio. This increase comes about from the twofold effect of a somewhat higher trip share in the decimal figure and, in 2017, an on average somewhat longer individual distance of trips ridden on the bicycle – also displayed in the accompanying summary on the following page.

### Modal split in the federal states with significant differences

All things considered however, the reported changes turn out to be only relatively low despite a recognisable trend towards the bicycle and public transport. The car remains by far the number one mode of transport. This relativisation particularly applies against the backdrop of the almost decade long time span from 2008 to 2017.

All the more important then, is the differentiated look at the individual results for the federal states as well as the differentiation according to the spatial types applied by Mobility in Germany. The two modal split results displayed on the right show clear differences between urban and rural regions as well as their further differentiations. In particular the city states of Hamburg, Bremen and Berlin show higher proportions of bicycle and public transport. It is a similar picture for the accompanying category of metropolises. In this case – as the extensive Mobility in Germany reporting shows in detail at a different point – in particular the proportion of public transport but also the proportion of bicycles has risen more intensely than the national average.



**Modal split (extrapolated)**

	Trips in mio. per day			Passenger kilometres in mio. per day			Trip lengths in km 2017	
	2002	2008	2017	2002	2008	2017	Average value	Median*
On foot	64	69	56	88	98	93	1.7	1.0
Bicycle	25	29	28	82	96	112	3.9	2.0
PMT driver	111	110	111	1,496	1,598	1,754	15.8	6.7
PMT passenger	45	41	36	665	735	650	18.0	5.7
Public transport	25	26	26	387	554	605	23.1	8.1
<b>Total</b>	<b>270</b>	<b>275</b>	<b>257</b>	<b>2,717</b>	<b>3,080</b>	<b>3,214</b>	12.5	3.8

\*This value represents the average of each available distribution and assists in allocating an average value which is often influenced by high individual values. Legend, trip length for trips on foot: The median lies at 1.0 km. Therefore, 50 per cent of the reported trips on foot are up to a distance of 1.0 km and 50 per cent exceed this value. Columns 2017: Data inventory 12/2018

**Main form of transport 2017 according to federal state and regional statistical spatial type (RegioStaR7)**

Rows-%	On foot	Bicycle	PMT driver	PMT passenger	Public transport
Schleswig-Holstein	21%	13%	45%	14%	7%
Hamburg	27%	15%	26%	10%	22%
Lower Saxony	17%	15%	47%	14%	7%
Bremen	26%	21%	29%	10%	14%
North Rhine-Westphalia	22%	11%	43%	14%	10%
Hesse	24%	8%	43%	14%	11%
Rhineland-Palatinate	21%	8%	47%	16%	8%
Baden-Württemberg	21%	10%	44%	15%	10%
Bavaria	20%	11%	45%	14%	10%
Saarland	19%	2%	55%	16%	8%
Berlin	27%	15%	23%	10%	25%
Brandenburg	19%	11%	46%	13%	11%
Mecklenburg-West Pomerania	24%	14%	42%	14%	6%
Saxony	23%	8%	46%	14%	9%
Saxony-Anhalt	22%	11%	44%	14%	9%
Thuringia	26%	6%	46%	14%	8%
Urban region – metropolis	27%	15%	28%	10%	20%
Urban region – regiopolis and large city	24%	14%	37%	13%	12%
Urban region – medium-sized city, urban area	21%	10%	46%	15%	8%
Urban region – small-town area, village area	18%	8%	52%	15%	7%
Rural region – central city	24%	13%	41%	15%	7%
Rural region – medium-sized city, urban area	20%	9%	49%	16%	6%
Rural region – small-town area, village area	17%	7%	56%	15%	5%

## How are different user segments distributed?

### Usual day-to-day use of transport modes and in longer holiday transport

In addition to the results on transport volume and the transport distance, Mobility in Germany also enables an examination of the usual modes of transport since 2002. For this purpose, all persons aged 14 and over were asked about their usual utilisation of different transport services. Since 2017 this also includes long-distance buses and trips taken on foot alone. Likewise, questions were also asked in the same way about the use of car sharing as well as cycling using a rental bicycle. These replies enable conclusions to be drawn on the general pattern of use, unlike the details provided on the use of modes of transport on a randomly selected survey date. When combined, they additionally enable an informative segmentation.

In a time comparison, the information provided in 2017 leads to a slightly declining usual use of the car while the utilisation of the bicycle and public transport is rising. The share of persons who regularly take seat in a car is reduced in 2017 compared to the other two reporting times from over four fifths to around three quarters of the interviewees at the age of 14. On the other hand, in terms of travelling by bus or rail or on a bicycle, it is rather the proportion of those who never or only rarely entrust themselves onto public transport or swing their legs over a bicycle which has declined. Both modes of transport therefore are gaining users who at least occasionally travel in this way. This is true of the bicycle to a particular extent.

The 'new' modes of transport are still at a low level. Two per cent of the included interviewees who are aged 14 and over are to be counted among the at least sporadically regular car sharing users here – not to be confused with car sharing members, more about this in the next section. This group is somewhat larger when related to a shared bicycle. It even reaches a size of 4 per cent – whereby the questions here asked specifically about every-day use and not leisure use, for example on holiday. An option which is by no means new but is often underestimated is that of going by foot. Here the results show that four in ten citizens completely cover at least individual trips daily or almost daily on the soles of their feet alone.

The two depicted forms of long-distance transport also lead to different user quotas. In long-distance transport by rail from a distance of 100 kilometres results in a non-user proportion of around six in ten interviewees. In long-distance buses this lies at nine in ten and by aeroplane at seven in ten persons.

### High car-orientation away from the towns is the rule

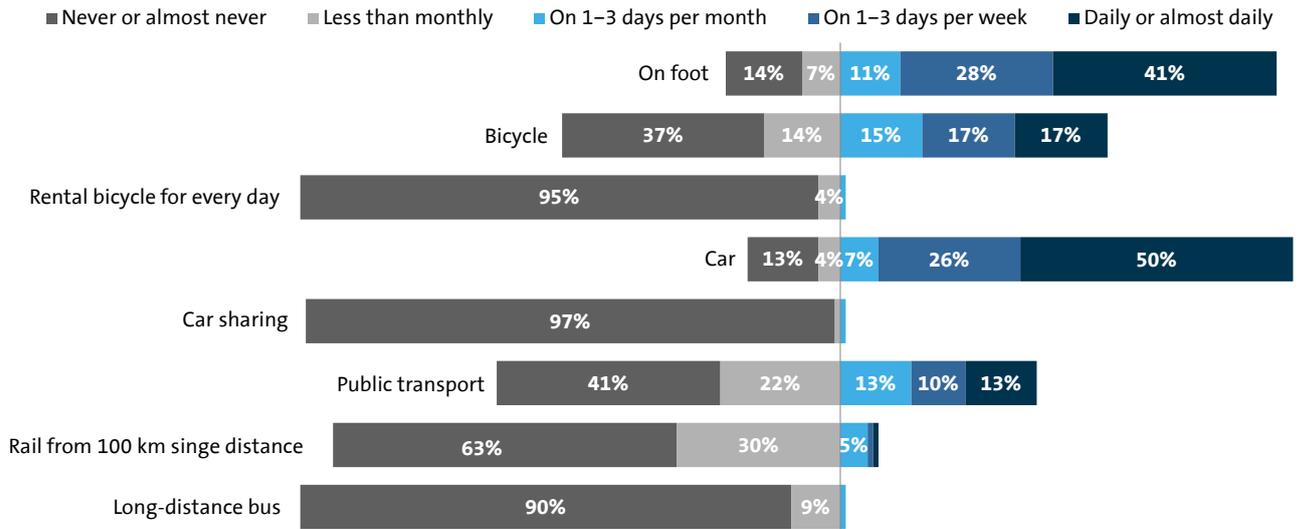
The details on the individual modes of transport can be considered in relation to each other. Based on every-day and occasional uses, nine groups were formed and displayed in the graphics. These range from the less mobile who hardly travel at all during the course of the week to those who travel almost solely by car every day and almost never make use of other services. Likewise, an examination of the 'regular multiple users' is possible, here with the definition that they go by car, public transport and also bicycle as a rule at least once during the course of the week.

An examination over time from 2002, 2008 and 2017 shows an unchanged share of multiple users of 7 to 8 per cent. It's a different picture for the 'daily car-orientated'. They continue to represent the largest group. Their share rose slightly in 2017 and reached 44 per cent. On the other hand, similarly to the share of bicycle-orientated, the size of the segment of public transport users has hardly changed. The share of 'mixed users with car driving licence' has declined slightly in the nationwide average. Here, in particular persons can be found who use both the car as well as public transport or the bicycle, in contrast to the 'multiple user' however they do not regularly use all three services.

The undertaken subdivision enables further differentiations, for example according to urban or more rural situations as depicted here. Likewise, the socio-demographic profile of the segments can also be examined. The in-depth Mobility in Germany report presents more specific analyses on this.

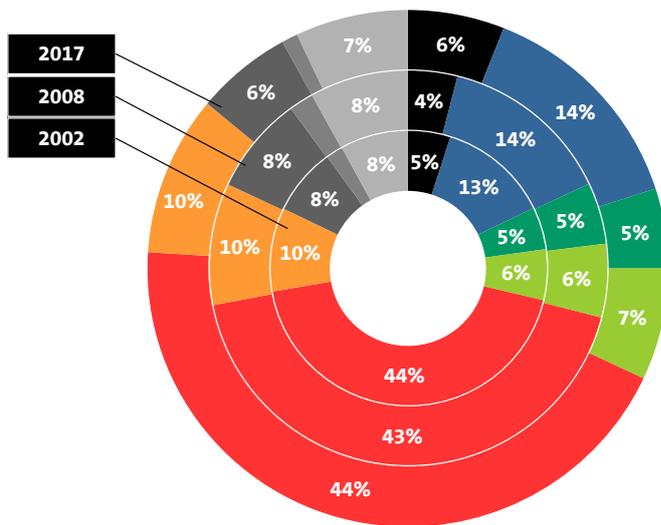
Persons aged 14 and over

**Frequency of the usual use of transport modes**



Discrepancies of 100%: Rounding differences

**Mobility segments according to usual use of transport modes**



Columns-%, rounding-related discrepancies of '100' possible

	Urban region				Rural region		
	Metropolis	Regiopols and large city	Medium-sized city, urban area	Small-town area, village area	Central city	Medium-sized city, urban area	Small-town area, village area
Less mobile	6%	6%	5%	4%	7%	6%	5%
Bicycle-orientated	18%	17%	12%	9%	18%	12%	9%
PT-orientated without car driving licence	10%	7%	3%	2%	4%	2%	2%
PT-orientated with car driving licence	19%	11%	5%	3%	5%	2%	1%
Daily car-orientated	26%	37%	50%	58%	43%	53%	59%
More rarely car-orientated	5%	8%	11%	11%	10%	12%	13%
Mixed users with car driving licence	6%	5%	7%	6%	5%	5%	5%
Mixed users without car driving licence	1%	1%	1%	1%	1%	1%	1%
Regular multiple users	8%	7%	7%	6%	7%	6%	6%

## What role is played by car sharing & co.?

### Car sharing and rental bicycles as new questionnaire topic

The aspect of car sharing has been discussed a lot in recent years. The debate centres around the assumption that it holds a great potential as a solution to a more environmentally compatible everyday mobility. But where are we at on this path? Mobility in Germany will also address these questions as part of the in-depth evaluation. For the time being, this short report presents the most important benchmarks relating to this. This additionally includes a look at the use of rental bicycles which has also been included in Mobility in Germany 2017 as a new topic. High expectations are also often being held for these bicycles in the urban environment.

In the analysis of the empirically measured benchmarks on car sharing use, it is not sufficient to superficially examine the actual use of car sharing. Due to the many different services throughout the landscape and the accompanying varying conditions of the provider, a differentiation must be initially made between the membership of a car sharing organisation, i.e. the ownership of a customer card on the one hand, and the actual utilisation of car sharing vehicles on the other. In addition to this, there is the question of individual or multiple memberships with different providers. These kinds of differentiations can be carried out with the Mobility in Germany results. However, Mobility in Germany did not ask about the different models of providers, for example the station-related or free floating variations.

### Car sharing membership vs. car sharing usage

In 2017, four per cent of all households are already registered with one or more car sharing provider. This means that at least one household member has access to a customer account. This proportion is divided at a ratio of 3:1 across households with only one and such with several memberships. Today however, one quarter of car sharing households already has access to several providers.

Around half of the membership households additionally own their own car. For these, the car sharing service is likely to be a kind of optional second car. In addition, usage is by no means limited to young adults, as is often assumed. More than 90 per cent of

car sharing customers are older than 24 according to the Mobility in Germany results.

The car sharing range is significantly different depending on the size of the town. While these services record hardly any customers outside the major towns – of course, often due to a lack of service – saturation in the metropolises has already reached 14 per cent. Here, 10 per cent are a member of one and a further 4 per cent are a member of several providers.

### Very low share of transport but an introduction to more independence from the car

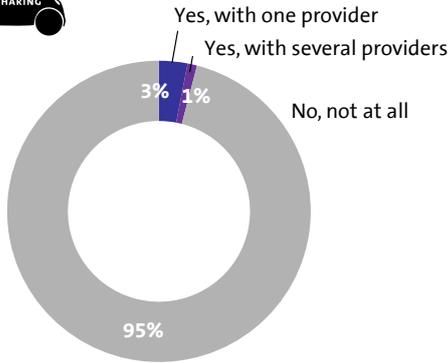
This impressive value however stands in contrast to a relatively low level of actual utilisation. More than a quarter of persons with only one car sharing membership hardly ever make use of such a vehicle, so are only members. Although, of the persons with several memberships, this share is still 12 per cent. Only a minority of 6 per cent of all car sharing members – independent of the number of customer accounts – uses a shared car at least weekly, 27 per cent do this monthly, 44 per cent even more rarely and 22 per cent never. The car sharing option is therefore becoming a kind of option for when needed and not a regularly used service. Individual everyday mobility however functions mainly without a car. This could quite probably be an understandable pattern of usage. However, it only leads to a very low proportion of the car sharing feet in the actual daily transport distance. Mobility in Germany will also look in detail at these relationships and a possible evaluation.

### On the saddle of a rented bicycle

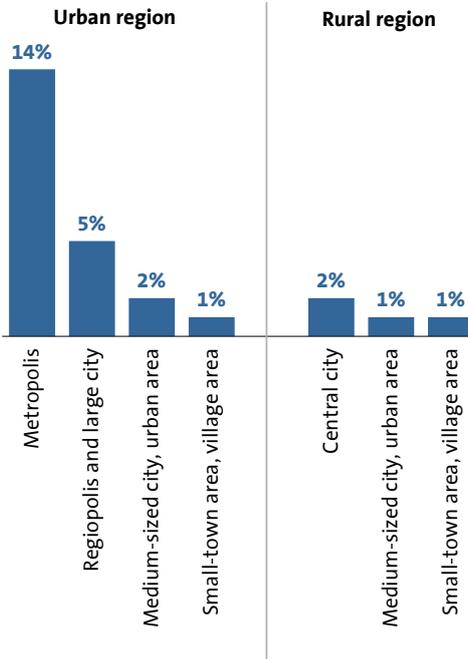
Likewise, the use of rental bicycles will be analysed in more detail in the evaluations which are still to be carried out. At this moment in time, it suffices to state that this is also an occasional business from a demand point of view which reaches primarily customers in the major towns. In the metropolises, around 10 per cent of interviewees are among the regular, if not necessarily the daily or weekly users. The rental bicycle service reaches primarily the under 40 year-olds.

Households

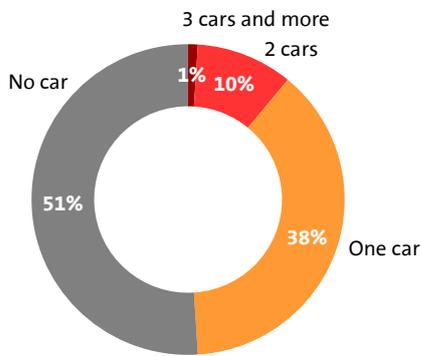
**Car sharing membership**



**With one or more providers**

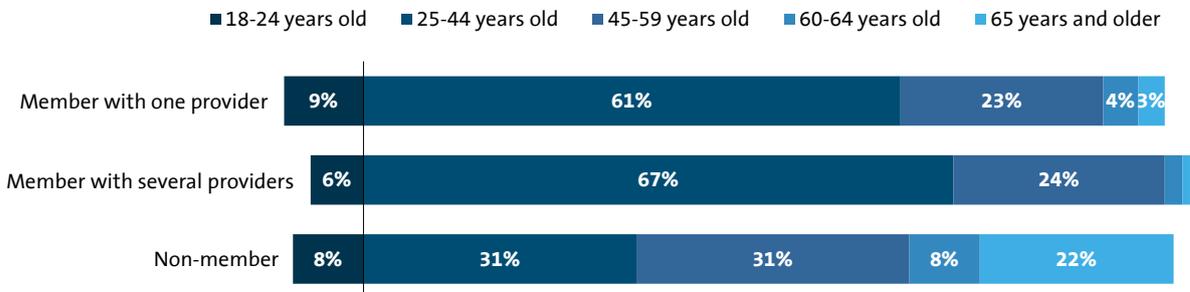


**Car ownership in car sharing households**

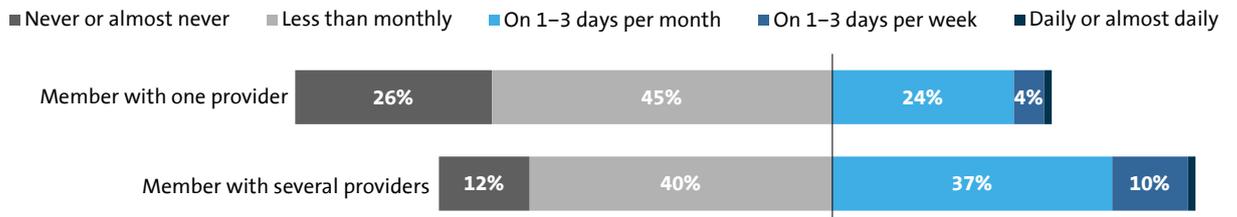


Persons aged 14 and over

**Age of car sharing members**



**Frequency of use of a car sharing vehicle by individual customers**



Discrepancies of 100%: Rounding differences

## Why do we travel?

Mobility and travelling are only rarely an end to themselves. Trips are mostly taken for certain reasons. Mobility in Germany has recorded these trip purposes and provides them for analysis. This also includes start and arrival times of the reported trips, with whose help the volume during the course of the day can be depicted.

### Plus in work-related transport

As in the previous surveys, seven different trip purposes are defined. Here, one block consisting of work-related trips in a wider sense stands in contrast to reasons in the service and leisure sector. In this classification, the sum of all trips relating to work in any kind of form is smaller than the combined remaining reasons. This is also the case in 2017. However, the actual commuter transport, i.e. the trips from or to work, record a slight increase compared to 2002 and 2008 – as do the trips which are covered during working hours for professional or business purposes. The proportion of the two mentioned work-related purposes rose in 2017 to 16 and 11 per cent compared to 15 and 6 per cent still in 2008. The background to this is, on the one hand, a higher level of employment at a comparably consistent population size – with a rise of 40 mio. employed persons in the year 2008 to around 44 mio. in the year 2017. On the other hand, the Mobility in Germany results show that work-related trips, for example distribution operations and supply traffic have increased significantly. So in total then, all work-related trips have grown to a proportion of around one third of all trips. In 2008 this total lay significantly under the 30 per cent mark. This is expressed in the number of daily passenger kilometres. This professional proportion rises here, including trips to vocational training, from 39 per cent in the year 2008 to currently 42 per cent. This growth can also be seen in the absolute distance values, also displayed tabularly on the right.

When viewed in terms of percentages, these gains must cause losses to the proportions of the remaining trip reasons. This can be clearly seen in the 'leisure' sector. Its proportion sinks from a volume level of 31 per cent in the year 2008 to now 28 per cent. Likewise, the proportion for the segment 'shopping' declines – from 20 to 16 per cent, while the 'slice of cake' of trips for

personal business grows from 13 to 14 per cent. This can also be seen in the development of the transport distance.

### More in-depth analyses possible with Mobility in Germany 2017

The possibilities of evaluation with Mobility in Germany are not exhausted with this examination. As in 2002 and 2008, the 2017 survey provides over 30 additional purpose categories with which the purchase, personal business and leisure transport can be categorised. Completely new is the precise local allocation of the trips' origins and destinations which was carried out in 2017. They were geocoded using the precise details provided by the interviewees and made available in a compressed form which is compliant with data-protection regulations. This makes analyses possible, for example also with a view to transport reasons and trip chains, which had previously been excluded.

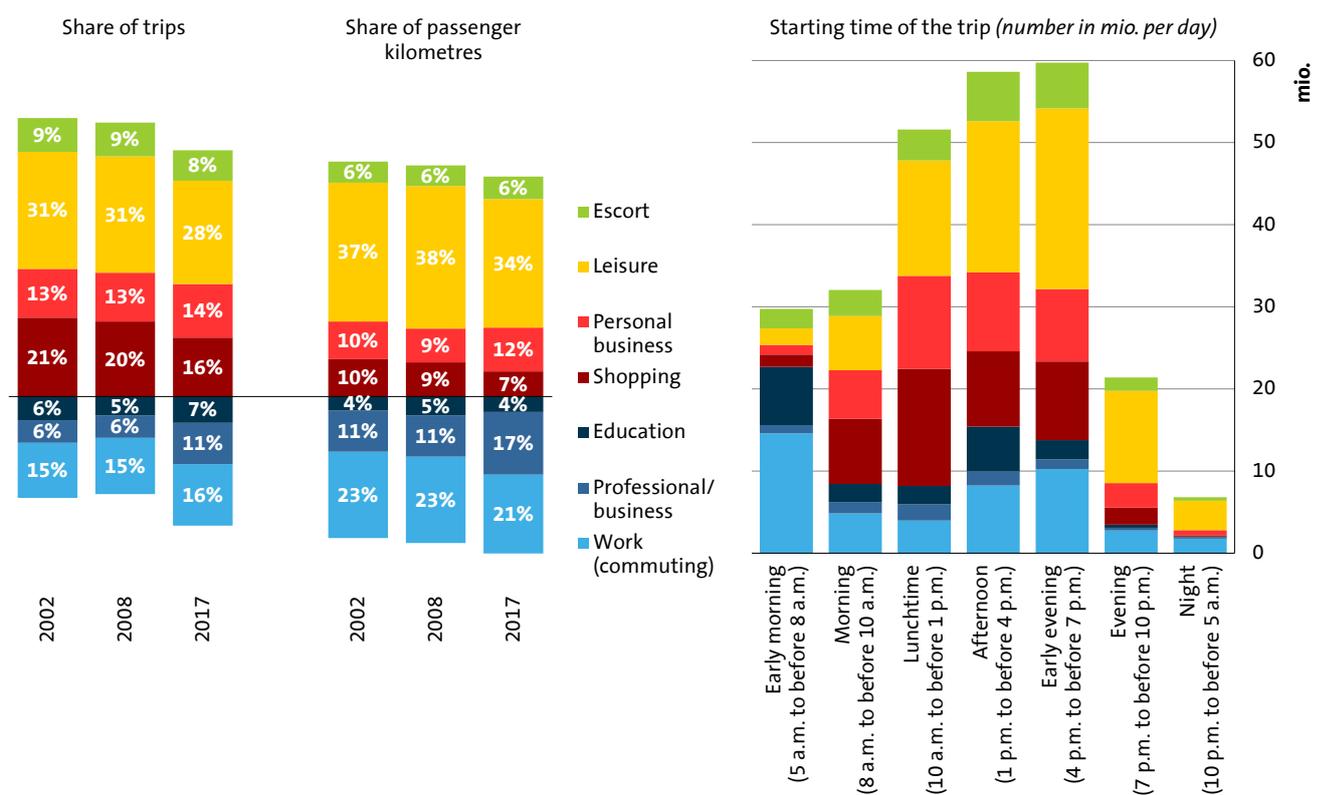
### Transport volume and transport distance during the course of the day

As the reported start and arrival times of the reported trips are surveyed in Mobility in Germany, a distribution of the volume over time can be observed. This depiction shares the daily number of around 260 mio. trips across the different times of day and at the same time differentiates them according to the stated trip purposes. For commuter transport, the recognisable morning peak continues to be evident. Seen as a whole however, the highest levels of volume can be seen during the afternoon and early evening when work-related (return) trips are combined with other reasons being carried out at this time. This information will also be differentiated in the more in-depth Mobility in Germany analyses. Here, in particular the distinctions according to spatial categories as well as modes of transport are informative.

Analyses are also planned which will carry out a new categorisation of reasons as well as an examination of trip chains during the course of the day, for example a differentiation between routine and non-routine trips dependent on the length. These are expected to lead to a better understanding of decision-making in the choice of modes of transport.

Trips

**Trip purpose in annual comparison according to starting time of the trip**



Discrepancies of 100%: Rounding differences

	Trips <i>in mio. per day</i>			Passenger kilometres <i>in mio. per day</i>			Trip duration <i>in min. 2017</i>		Trip lengths <i>in km 2017</i>	
	2002	2008	2017	2002	2008	2017	Average value	Median*	Average value	Median*
Work	41	41	42	620	694	674	28.6	20.0	16.0	8.1
Professional	16	17	28	300	345	539	27.4	17.0	19.0	5.7
Education	17	19	18	111	147	131	22.3	15.0	7.3	2.9
Shopping	56	55	41	268	264	217	17.3	10.0	5.3	2.0
Personal business	34	35	37	256	268	376	24.5	15.0	10.2	3.6
Leisure	83	84	71	1,005	1,186	1,098	36.5	20.0	15.5	3.9
Escort	23	24	21	158	186	179	18.9	12.0	8.6	2.9
<b>Total</b>	<b>270</b>	<b>275</b>	<b>257</b>	<b>2,717</b>	<b>3,080</b>	<b>3,214</b>	<b>27.0</b>	<b>15.0</b>	<b>12.5</b>	<b>3.8</b>

\*This value represents the average of each available distribution and assists in allocating an average value which is often influenced by high individual values. Legend, trip length for trips to work: The median lies at 8.1 km. Therefore, 50 per cent of the reported trips to work are up to a distance of 8.1 km and 50 per cent exceed this value.

## Are we all shopping online?

Mobility in Germany 2017 offers a content-related in-depth focus on different questions. These are based on extensions to questionnaires which were presented to randomly selected subsamples. One of these modules is concerned with purchasing and service habits, for example including online shopping and is already introduced here in this short report. Others will follow in a more in-depth reporting. There are no comparable figures from the survey time periods 2002 and 2008 for this range of topics.

### Online shopping instead of visiting stores?

At first glance, the topic of online shopping is very simple. Its importance is quite obviously increasing, so the usual purchasing behaviour of the online shoppers is declining accordingly. The results suggest that it's not all quite so simple and clear-cut. On the one hand, online shopping now belongs within the world of experience of over 70 per cent of the 'employed' population at an age of 14 onwards and only almost 30 per cent are (still) abstinent here, however online purchasers are not necessarily doing away with other purchase trips. Those who order goods online weekly or daily, cover around 17 per cent of their daily trips for the purpose of shopping. In the population as a whole, this is almost 20 per cent. Thus, there is a slight connection, but these have to be examined in more detail in further analyses in terms of the available time budgets and the respective living conditions.

In contrast however, the results on online purchasing habits confirm the obvious assumption that this practice is carried out more by younger than older interviewees. So, the proportion of online shoppers in the age groups up to 59 years of age lie at 10 to 20 percentage points over the respective value of higher age groups. It reaches its highest point at over 90 per cent among the 20 to 29 year-olds.

However, the assumption that online shopping is more frequently made use of in non-urban regions than in the major towns with a good and often close local supply cannot be confirmed. The proportion of the more 'established' online purchasers lies nationwide at a tenth for the frequent online shoppers (daily or weekly) as well as a third with still a respectable monthly rhythm. A glance at the online purchase abstainers

even reveals the opposite of this assumption. Their proportion in the rural regions lies somewhat higher than in the conurbation areas.

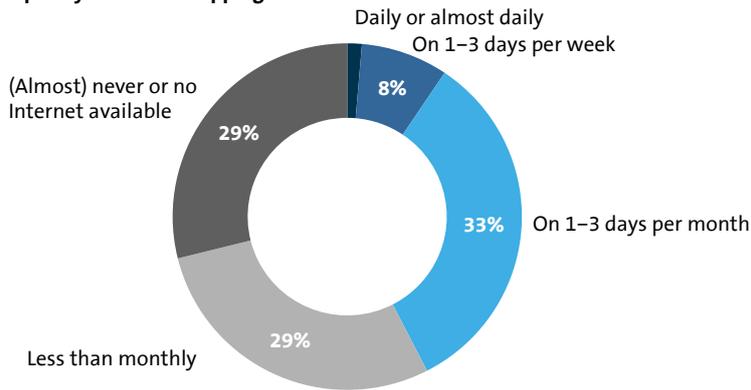
### Now well established, but multilayered

How established these shopping possibilities already are, is shown in the distinction of which goods are being ordered online. After all, 7 per cent of the interviewees stated that they normally also bought necessities via the Internet. In the case of items required only occasionally and durable goods, the proportion for which online ordering has already become a firm part of everyday life rises to a good quarter each.

However, behind these patterns lie individually different habits, different age distributions and living conditions in the towns and country and partly even a different level of digital service. Whether this actually saves trips, or whether purchases carried out online create time margins for other mobility activities, must be looked at in more detail. The Mobility in Germany results relating to this indicate that this is not the case – probably in relation to stages of life: the frequent online shoppers show higher trip activities, more kilometres covered daily and more time spent travelling than the analogue purchasers. However, even at this stage in the evaluation, it should be noted that online shopping commands a majority and firmly belongs within the purchasing behaviour of a major part of the population.

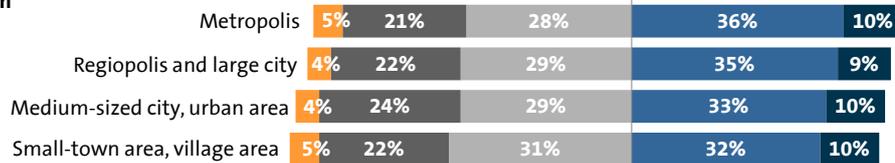
Persons aged 14 and over

**Frequency of online shopping**



■ Have no Internet 
 ■ (Almost) never 
 ■ Less than monthly 
 ■ On 1-3 days per month 
 ■ Daily or on 1-3 days per week

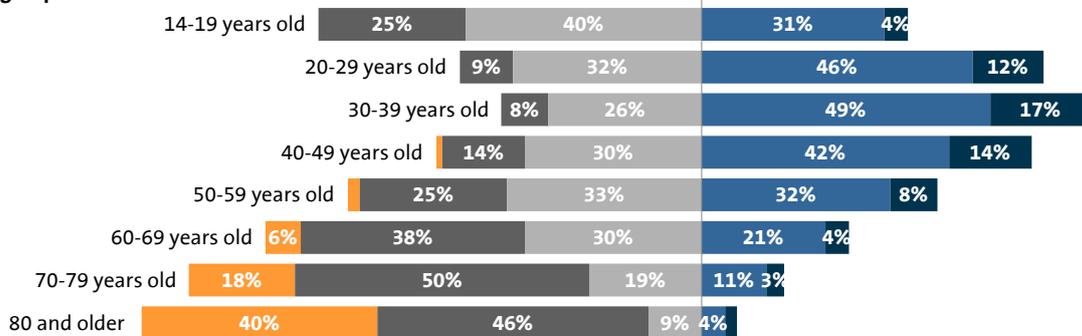
**Urban region**



**Rural region**



**Age groups**



Rounding-related discrepancies of '100' possible

## Are there differences in the everyday mobility of certain population groups?

### Differences in three dimensions

Even the analyses which were presented on the Mobility in Germany surveys 2002 and 2008 show differences in the use of modes of transport between different age groups. Structural variables in the background have primarily proven to be strong explanations here. These are mainly three characteristic groups

- the settlement area in which a household or a person lives,
- their current living conditions or stage in life
- and their economic situation.

Individual preferences and attitude patterns also play a role, for example how comfortable a certain mode of transport is expected to be. However, these kinds of characteristics were not a part of the previous Mobility in Germany surveys and also in the current survey, only a small and not sufficiently comprehensive amount of variables was surveyed on this subject – for example the subjective evaluation of different transport services. These will be briefly presented on this double page.

Less significant are individual variables such as gender or age groups. On the one hand, there are very obvious differences, also in terms of these characteristics, but only as an expression of such a characteristic, for example for a stage in life or in combination with the living environment. For example the mobility behaviour of a woman working in full-time employment will be less different than that of a male colleague who is employed in the same way, and will differ more to someone of the same gender and same age who is not employed. In the same way, the differences between a 25-year-old father of primary school children and a 35-year-old in a similar situation will possibly be less clear than between these two age groups in general.

### Young, urban and with less affinity to cars, older and socialised with cars

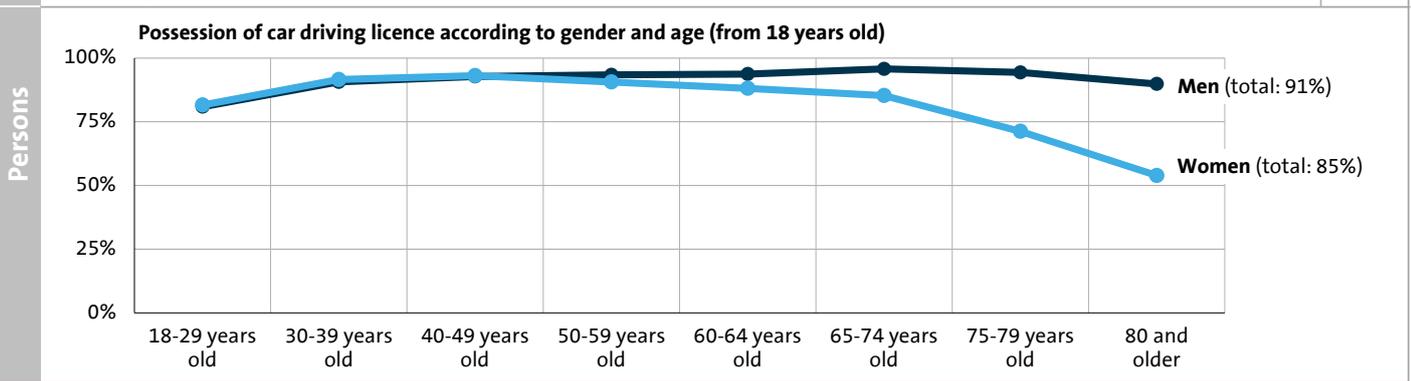
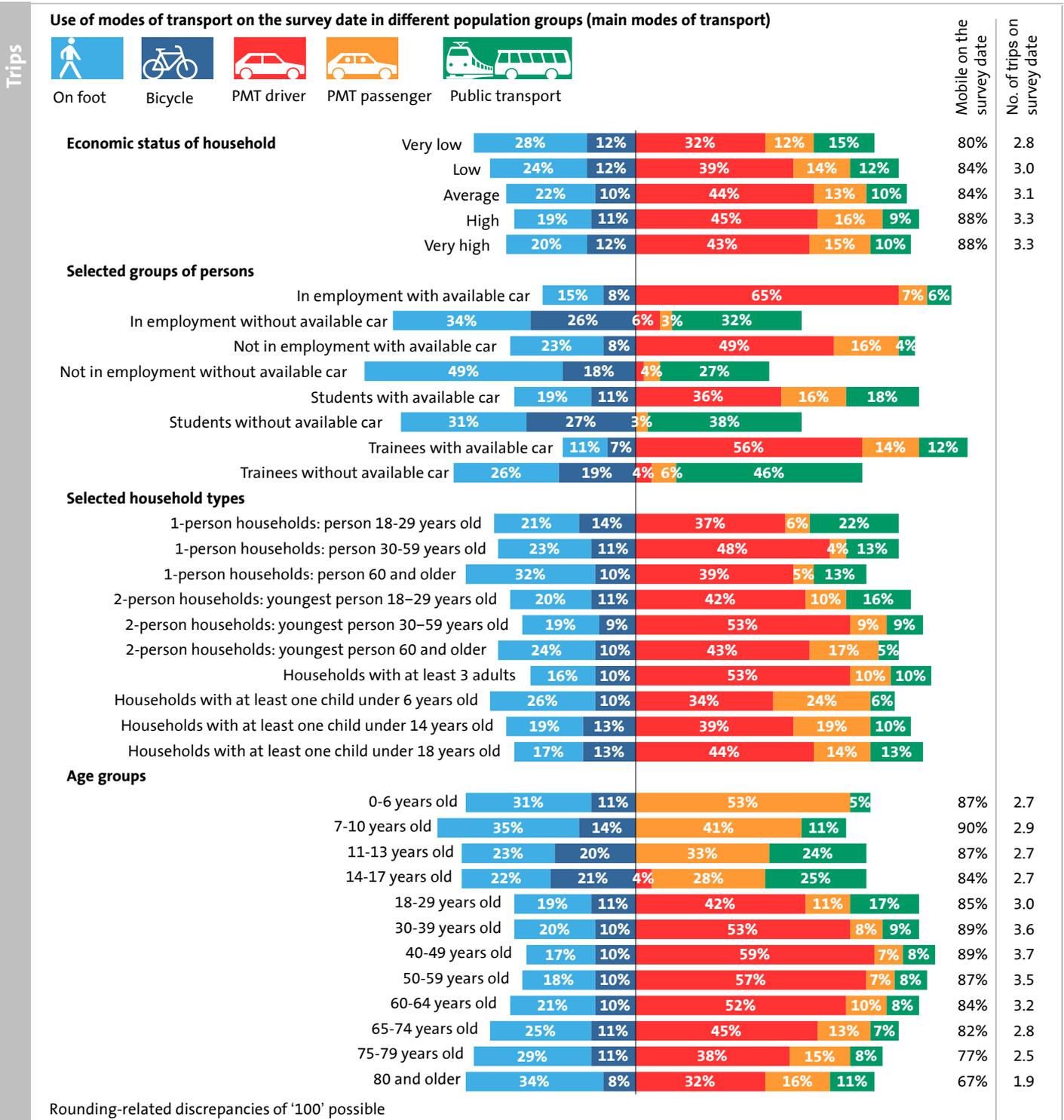
The current Mobility in Germany survey shows, however, that primarily two effects are continuing and are intensifying compared to the development observed from 2002 to 2008. This is, on the one hand, the growing affinity to cars among seniors, which has

already been ascertained for a while now, as well as the opposing development among young adults on the other. Both have continued since 2008. In particular older citizens from an age of mid 70 are more active and use the car more frequently than corresponding age groups 10 or 20 years ago. Responsible for this is the continuing rise in the quota of driving licence ownerships, in particular among older women, but often also good living conditions into old age as well as belonging to the 'car generation' influencing those growing up since the 1950s.

The positions are different among young adults. These have less affinity with the car than their peers in the same stage of life one or two decades ago. This assessment, however, concentrates on an urban environment which offers alternatives to the car, and whether they will also continue this somewhat larger car abstinence into the further stages of their lives is not yet determined. One indication that this might partly be the case, is a somewhat declining connection to the car among today's middle age groups compared to comparable groups in 2002 and 2008 – a further aspect on which the in-depth analyses by Mobility in Germany 2017, which are still to follow, will be concentrating on.

### Level of mobility and economic status

Unlike the described effects in relation to the stages of life and age have been suggesting for some time now, there were hardly any changes from 2002 to 2008 in terms of a differentiation according to the economic living conditions. On the one hand, mobility rates in 2017, in particular among children and young people, are lower and the choice of modes of transport is less influenced by the car in less well economically situated households, yet these differences had not been intensified between 2002 and 2008. The development from 2008 to 2017 is different – it reveals a growing gap, primarily arising through the decline in activity in financially below-average or badly situated households. Therefore, this also represents a field for further analyses in the more in-depth report which goes beyond this short report.



## What about satisfaction in the transport services?

A new perspective is opened by Mobility in Germany 2017 with the question concerning the subjective evaluation of different transport services as well as the individual affinity to use. Both are available for a subsample of all interviewees and, before an initial evaluation of the presented results as a whole, will form the conclusion of this short report. The car, public transport, cycling, as well as walking will each be taken into account here.

### Evaluation for the use of the car, bicycle, public transport or walking

The car comes off best under the 'proper' modes of transport. 18 per cent of the interviewees from the age of 14 are very satisfied with the conditions and 49 per cent are, at least, satisfied – together a value of almost 70 per cent. This turns out somewhat lower in the metropolises due to the often more strained transport conditions there, but still achieves the 50 per cent mark. In the smaller towns and village communities, the 80 per cent threshold is reached or exceeded.

The bicycle lies below this with a respectable average of 50 per cent very good and good evaluations. Here the somewhat better evaluations are related to the medium-sized towns. In the major towns the situation is also seen somewhat more critically here.

Local public transport has to face the overall most critical evaluations. In total, it is assessed by the interviewees as 'very good' in only one in ten cases and only by a third as 'good'. On the other hand, more than half of the interviewees selected an evaluation level of 'satisfactory' or worse here. Only in the major metropolises does its (very) good proportion of evaluations exceed the 70 per cent mark. As a rule, in all remaining regions, there is more or less clear demand for improvement.

Nor should the evaluation of the 'pedestrian traffic' be forgotten here. After all, around every fifth trip continues to be covered on foot alone. Problems are seen by only a minority of the interviewees and four in five select an evaluation of very good or good. Apart from regions in village areas with somewhat worse evaluations, this number turns out to be relatively

unanimously good. It remains to be seen whether or not improvements will still be possible and may perhaps encourage walking.

### Scale of popularity of all transport services

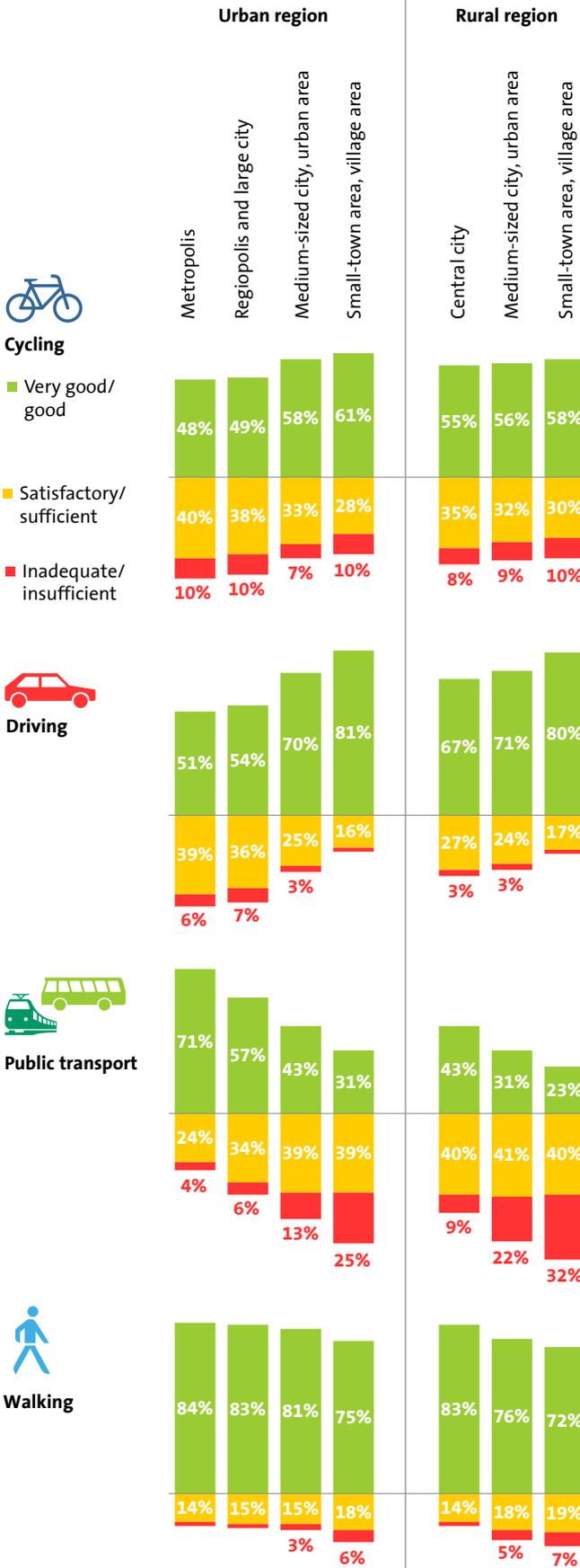
A very similar picture emerges with the question as to how much people generally enjoy using the services – therefore at least partly independent of the current evaluation. Here too, the car is proven to be by far the most favourite among the actual modes of transport. In this case, almost 80 per cent of citizens either fully agree or agree in principle. These rates of agreement run through all age groups, with a slight plus among the middle-aged generations who are the most influenced by cars in their everyday lives. The arduous car transport in many places every day can therefore not affect this fundamental orientation.

Again, the bicycle can be found at second place with an average of a good 60 per cent agreement – with the highest values among young people and the largest restraint among senior citizens. The same, in terms of age, applies to walking. Nevertheless, a large majority judge favourably here too, similarly to in terms of the respective level of satisfaction.

Also in agreement – however with reversed positions – are all age groups in terms of dislike of public transport. Overall, only a good third state that they enjoy travelling by bus or rail. This agreement reaches its highest level among the under 30 year-olds. Here, similarly to the older senior citizens, it can exceed the 40 per cent threshold. However, when asked about bus and rail, in particular the middle age groups judged very cautiously. Only around 30 per cent here count as convinced of public transport – again a signal for a certain discomfort and the necessity for improved services in public transport if it is to contribute to a transport turnaround with a continued increasing proportion.

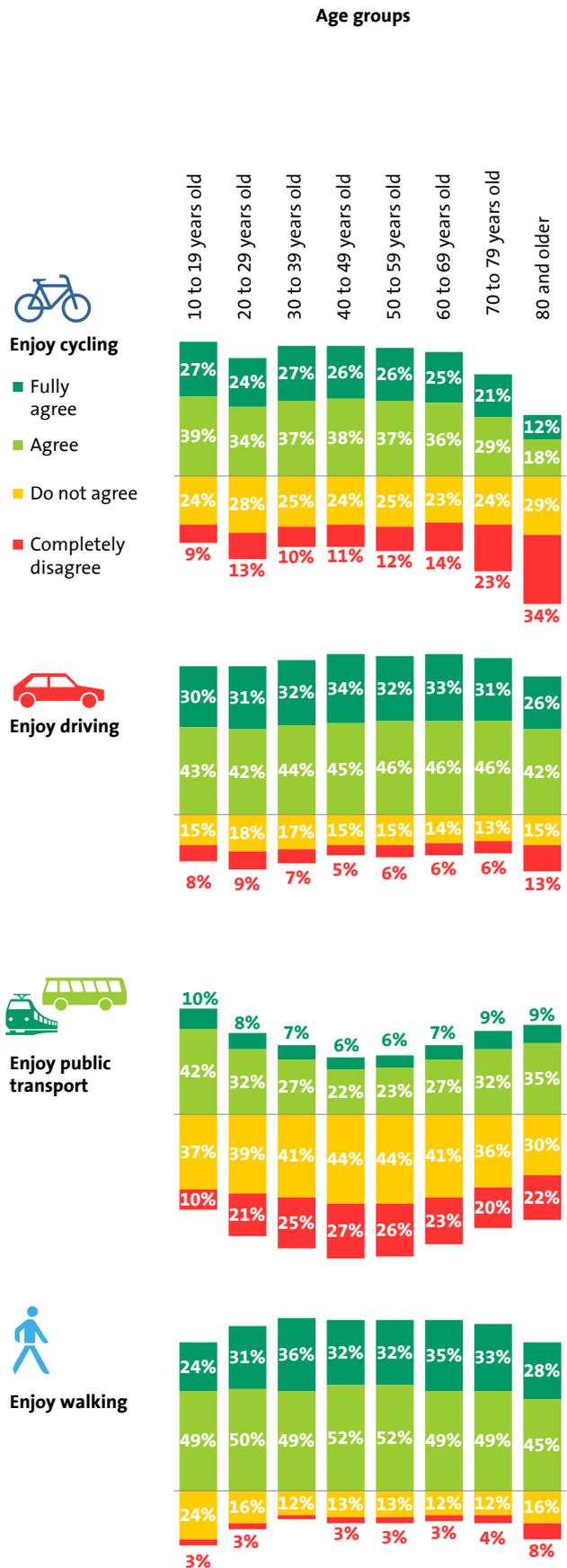
Persons aged 14 and over

Satisfaction with the transport situation at place of residence



Missing from 100%:  
Cannot say

Attitude to everyday use of transport modes according to age groups



Missing from 100%:  
Cannot say

## How are the results to be evaluated?

### The car continues to dominate

The results presented in *Mobility in Germany 2017* show that the car continues to define day-to-day transport. This applies on the level of transport volume – i.e. the trips covered – but becomes even clearer when the managed distances are observed. Thus, the annually growing fleet of cars in Germany is continuing to make an impact. Despite this unaltered dominance, the results show some changes. This applies to the gains in public transport, but also the bicycle. However, both are concentrated within the towns. This plus might have turned out lower than sometimes expected or hoped for, but the significant growth in private motorised transport, which has been regularly recorded in recent decades, no longer exists in this clear form. Nevertheless, it will remain the most extensive volume for the foreseeable future. The fleet of cars continues to grow and, in the Federal Republic of Germany, there are now more cars than households. Progress in efficiency, the environmental compatibility of car transport and a different way of dealing with the car in the larger towns are essential and urgent.

### A quick glance is not enough

However, even the evaluations in this short report reveal that for an overall balance in almost all points a quick glance is not enough and a closer look is required. This concerns regional differences between the town and country as well as differences in the various population groups. The regional differences suggest that the evaluations on a regionally more in-depth focus, which are still to be carried out, will show a very wide spectrum. In relation to the modal split which is often used here – i.e. the percentage distribution of the modes of transport, including pedestrian traffic, over the entire transport volume – demonstrates, for example with a glance at bicycle transport, that some German towns record proportions of around 30 per cent, others however, remain in the lower one digit range. As a rule, reasons for this are the different designs of the local bicycle infrastructure.

In places where there is a good bicycle infrastructure and a wide range of services available for cyclists, this is also made use of by the citizens. The same applies

for the services of bus and rail and even the situation in pedestrian traffic. Therefore, active efforts for improvement are having an effect.

### Background factors shape what is happening in mobility more than the optimisation of the transport services themselves

The results, however, also highlight that the design of everyday mobility is, as a rule, a consequence of its framework conditions. The structure of the settlement is the most decisive factor in defining the demand for mobility, equally the situation on the residential and working market. If a more environmentally compatible everyday mobility is the goal, solutions must be found, in particular with such determining factors. They are often only achievable in the medium to long term, however make a major contribution in relation to the goal in the field of mobility. While urbanisation and suburbanisation primarily benefit public transport, the tendency, for example, towards shopping opportunities on the much abused 'green field' work to the advantage of the private car in regions outside the conurbation areas.

New mobility services, for example car sharing and bicycle sharing, are now achieving significant saturation, as already shown by the observation in this short report, in particular in the metropolises. But they still seem to be more of an option and perhaps also as an increase of awareness in the sense of an emerging new mobility structure. But its absolute contribution to a more environmentally compatible transport, measured in terms of trips, is currently very small. This applies to the major towns and even more distinctively to all further regions. A different effect is gained by technical developments which are connected to making life easier, such as the pedelec. Its proportion in bicycle transport has grown to a significant volume in a short period of time. However, even more important will be quantitative and qualitative improvements to the service in local public transport if the dominance of the car is to be further reduced.

### **Mobility and participation as new focus of evaluation**

In relation to mobility demand, particularly apparent are the differences between generations as well as the different levels in economically better situated households in relation to households which stand more at the lower end of the income scale. These are calling for more attention than the obvious differences between town and country. The current Mobility in Germany results indicate that since 2002 and 2008, differences dependent on the economic situation in relation to other more stable developments have intensified. The weaker the economic situation of a private household is, the lower the volume of everyday mobility among its members is, and the more rarely the car is used. This suggests a possible restriction in participation which is to be pursued in future evaluations. But the declining affinity to cars by the young adults, at least in the metropolises, as well as the continued very obvious rise in the use of cars, in particular among older senior citizens, also demand further analysis. Which crucial factors can be used and which further developments are to be expected here? The lower level of mobility among children and young people also counts towards this aspect. These developments also demand additional analyses.

### **Similar trends in Great Britain and the USA**

The reported trends on a reduced mobility rate and an associated somewhat lower average number of day-to-day trips can also be identified in a similar form in the current national mobility surveys in Great Britain and the USA. This suggests, despite all differences, parallel developments in the western industrial societies.

### **The next comprehensive analysis step: a complex impact model**

In relation to the situation in Germany, it should, not least, be indicated that additional external factors affect what is happening in mobility. These include, for example, the increase of populations in major towns through influx compared to 2008 as well as the different level of employment with a growth of around 4 million employed persons. This change expresses itself, not least, in a higher proportion of commuter transport and as a result, in the increasing proportion of public transport. Such effects outside the transport and infrastructure services, among which settlement structures and land usage are to be counted, are potentially more effective than changes within the transport system. Only with a quantification of the interconnecting effects can recommendations on the further design of everyday mobility be reliably derived. The further evaluations as part of Mobility in Germany 2017 will make a major contribution to this.

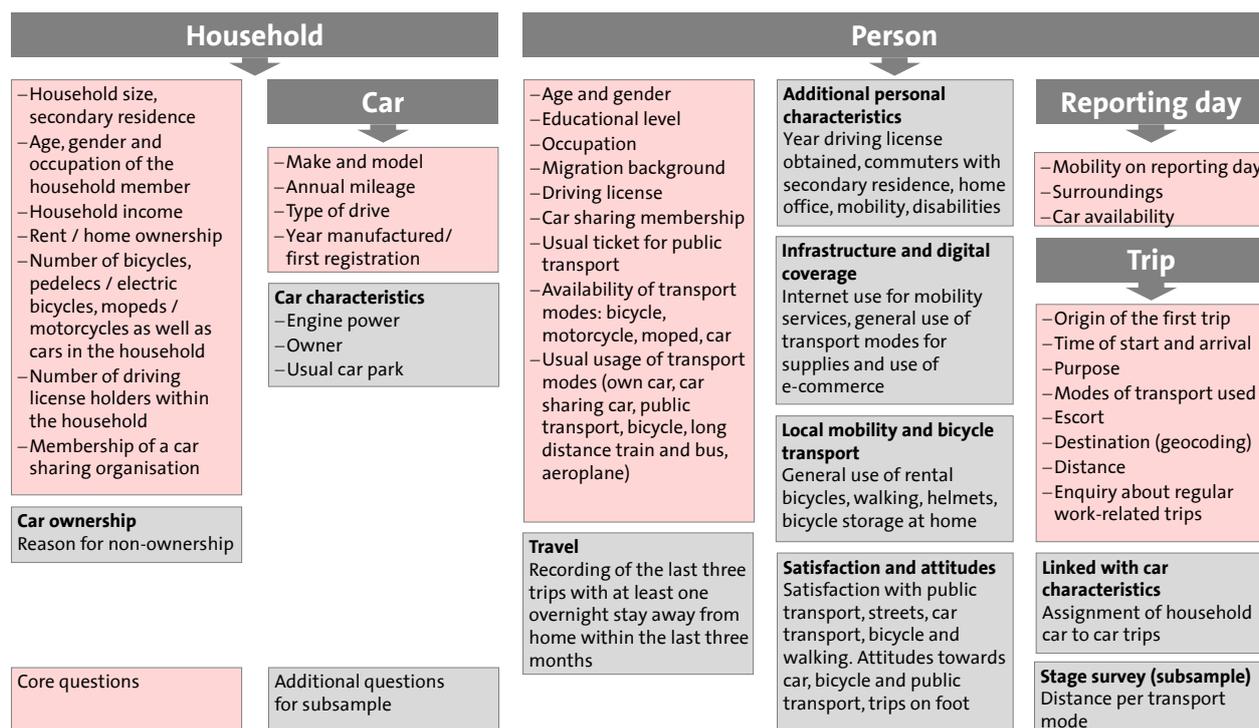
## Notes on the further Mobility in Germany results 2002 to 2017

Mobility in Germany 2017 provides numerous further analysis approaches concerning the contents presented in this short report. Some of them will be taken up in the extensive findings report (only available in German). The overview of the modules in the Mobility in Germany questionnaire displayed in the diagram on this page provides an insight into the surveyed contents. This had a modular structure in order to not burden individual interviewees with too lengthy interviews. In addition to fixed contents, which were mandatory for all study participants, there were some elements which were aimed only at randomly selected subsamples. In addition, every client of an additional regional sample was able to select two of these modules.

Thus, additional contents are available, which go beyond the spectrum of the previous 2002 and 2008 surveys. These include differentiated details on the cars available in the survey households, aspects of local supply, satisfaction with certain modes of transport as well as public transport and bicycle transport. They enable more in-depth evaluations and derivations,

for example on the CO<sub>2</sub> emissions of car transport and public transport. Furthermore, background variables can be highlighted and used as explanation for the observed transport behaviour. In addition to this short report, differentiated spatial information on the location of the surveyed households as well as the origins and destinations of the recorded trips will be available. These results will also be taken up in the extensive findings report. Finally, model calculations on the modal split are planned as part of the statistical procedures, in order to be able to estimate results for the whole of Germany, district by district.

In addition, the anonymised Mobility in Germany 2017 data records will be made available for science as well as other interested parties. Alternatively, access can be enabled to a tabulation tool which is available online. In addition, reports and presentations are available to download at [www.mobilitaet-in-deutschland.de](http://www.mobilitaet-in-deutschland.de). These continue to be completely available for the 2002 and 2008 surveys. The online offer there will be gradually broadened for the 2017 edition.



## List of the regionally involved parties

### Federal states

- Baden-Württemberg
- Freistaat Bayern
- Brandenburg
- Freie Hansestadt Bremen
- Freie und Hansestadt Hamburg
- Hessen
- Mecklenburg-Vorpommern
- Nordrhein-Westfalen
- Rheinland-Pfalz
- Freistaat Thüringen

### Transport associations and transport companies

- Aachener Verkehrsverbund GmbH (AVV)
- Hamburger Verkehrsverbund GmbH (HVV)
- Nordhessischer Verkehrsverbund GmbH (NVV)
- Kasseler Verkehrs-Gesellschaft AG (KVG)
- Münchner Verkehrs- und Tarifverbund GmbH (MVV)
- Münchner Verkehrsgesellschaft mbH (MVG)
- Stuttgarter Straßenbahnen AG (SSB)
- Verkehrsverbund Berlin-Brandenburg GmbH (VBB)
- Verkehrsverbund Bremen/Niedersachsen GmbH (VBN)
- Verkehrsverbund Rhein-Neckar GmbH (VRN)
- Rhein-Main-Verkehrsverbund GmbH (RMV)
- Verkehrsverbund Rhein-Ruhr GmbH (VRR)
- Verkehrsverbund Rhein-Sieg GmbH (VRS)
- Verkehrsverbund Vogtland (VVV)
- WSW mobil GmbH

### National associations and greater areas

- Verband Region Rhein-Neckar (VRRN)
- Regionalverband Ruhr (RVR)
- Metropolregion Hamburg
- Metropolregion Rhein-Neckar (MRN)
- Region Westmecklenburg
- StädteRegion Aachen
- Region Hannover
- Hessen Mobil
- ivm GmbH
- Planungsregion Nordschwarzwald
- Planungsregion Schwarzwald-Baar-Heuberg
- Regionalverband FrankfurtRheinMain (RVFRM)
- Zweckverband Nahverkehr Westfalen-Lippe (NWL)

### Districts

- Landkreis Ansbach
- Landkreis Bamberg
- Bodenseekreis
- Landkreis Cuxhaven
- Landkreis Darmstadt-Dieburg
- Landkreis Erlangen-Höchstadt
- Landkreis Forchheim
- Landkreis Fürth
- Landkreis Kitzingen
- Landkreis Lichtenfels
- Landkreis Lörrach
- Landkreis Ludwigslust-Parchim
- Landkreis München
- Landkreis Neumarkt i. d. OPf.
- Landkreis Neustadt-Aisch-Bad Windsheim
- Landkreis Nordwestmecklenburg
- Landkreis Nürnberger Land
- Rhein-Sieg-Kreis
- Landkreis Roth
- Landkreis Tübingen
- Landkreis Uelzen
- Landkreis Weißenburg-Gunzenhausen

### Towns and municipalities

- Stadt Aachen
- Stadt Ansbach
- Bundesstadt Bonn
- Stadt Brühl
- Stadt Darmstadt
- Stadt Frankfurt am Main
- Stadt Fürstenfeldbruck
- Stadt Fulda
- Stadt Koblenz
- Stadt Köln
- Hansestadt Lübeck
- Stadt Ludwigsburg
- Landeshauptstadt München
- Stadt Neuwied
- Stadt Nürnberg
- Stadt Offenbach am Main
- Stadt Schwabach
- Landeshauptstadt Schwerin
- Stadt Stein

We would like to thank all regionally involved parties, the BMVI project team and, in particular, more than 300,000 citizens for their cooperative participation in Mobility in Germany 2017.

## Explanation of important terms

The following section summarises the main terms used in this short report. The focus lies particularly on the meaning in passenger transport.

<b>Trip</b>	In Mobility in Germany, the interviewees are asked to specify all trips which they undertook on a certain day. A trip is understood to be the movement from a point of origin to a point of destination for a certain purpose. Any stops or changes in modes of transport are still considered one trip. In the case of interruptions or longer stops, these count as two trips (for example from work to home with a stop for the purpose of shopping).
<b>Main mode of transport</b>	If several modes of transport are used on one trip, these are summarised under the main mode of transport according to a hierarchy and the highest ranking mode of transport is applied. The order of priority is public transport, private motorised transport, bicycle, walking.
<b>Modal split</b>	This forms the distribution of the main modes of transport according to trips or according to passenger kilometres in proportional shares or also in absolute details.
<b>Private motorised transport (PMT)</b>	This is understood to include the car, motorised two-wheel vehicles (however not electric bicycles), trucks and other motorised vehicles.
<b>Passenger kilometre</b>	This is a measurement unit of the transport performance and comprises all the kilometres covered by one or all persons on a trip or within a unit of time unit.
<b>Passenger-kilometre performance</b>	This represents the absolute number or the percentage distribution of all passenger kilometres covered by the population in a certain time period (e.g. per day or year).
<b>Public transport (PT)</b>	Includes all modes of public transport, also covering longer distances (local public transport buses, all rail services, long distance buses and coaches, aeroplanes and taxis).
<b>Reference date/ reporting date</b>	Every interviewee receives a survey date which has been selected using random statistical procedures. All trips on this date should be specified. Overall, the survey dates are distributed over 12 months and comprise all days from Monday to Sunday.
<b>Transport volume</b>	This represents the absolute number or the percentage distribution of all trips covered by the population in a certain time period (e.g. per day or year).
<b>Usual use of transport modes</b>	Unlike in the calculation of the modal split, which contains the choice of mode of transport on a trip level, the usual use of transport modes expresses the average behaviour of a person over a longer period of time. While the modal split represents a statistical parameter for the description of the transport volume, questions about the usual use of transport modes enable individual mobility patterns to be described.

**Implementation and evaluation of the study:**

Folkert Aust	Michael Herter
Marcus Bäumer	Zafirios Kiatipis
Marco Berg	Katja Köhler
Kerstin von der Burg	Brigitte Krämer
Christian Dickmann	Tobias Kuhnimhof
Johannes Eggs	Karen Marwinski
Markus Eichhorn	Claudia Nobis
Bernd Ermes	Manfred Pfeiffer
Robert Follmer	Christian Prinz
Reiner Gilberg	Martina Roggendorf
Dana Gruschwitz	Menno Smid
Seline Günther	Manuel Trittel
Heinz Hautzinger	Barbara Wawrzyniak

**Text:**

Robert Follmer

**Layout and graphics:**

Astrid Blome  
Sigrid Phiesel

**Translation:**

Christine Hokamp, Red Letterbox, Karlsruhe

