

TEXTE

69/2018

# Mobility Survey of the German Environment Agency 2017

Summary Report



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# **Mobility Survey of the German Environment Agency 2017**

Summary Report

by


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On behalf of the German Environment Agency

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## List of Abbreviations

<b>CO<sub>2</sub></b>	Carbon dioxide
<b>g/pkm</b>	Grams per passenger-kilometer
<b>n</b>	(net) sample: return, subset of the poulation
<b>pp</b>	Percentage point
<b>UBA</b>	Umweltbundesamt (German Environment Agency)

## 1 Mobility Survey of the German Environment Agency 2017

This report summarizes the key findings of the 2017 Mobility Survey, which was conducted for the fourth time at the German Environment Agency (*Umweltbundesamt* – UBA). Between September and October 2017 a large number of employees answered an extensive online questionnaire about their commuting behavior, the arrangement of business trips and their knowledge and use of the mobility management measures offered by the UBA.

The main objective of the 2017 survey was to determine the status quo of the work-related mobility of the employees at all UBA locations and to point out the changes in their mobility behavior in comparison to earlier surveys.

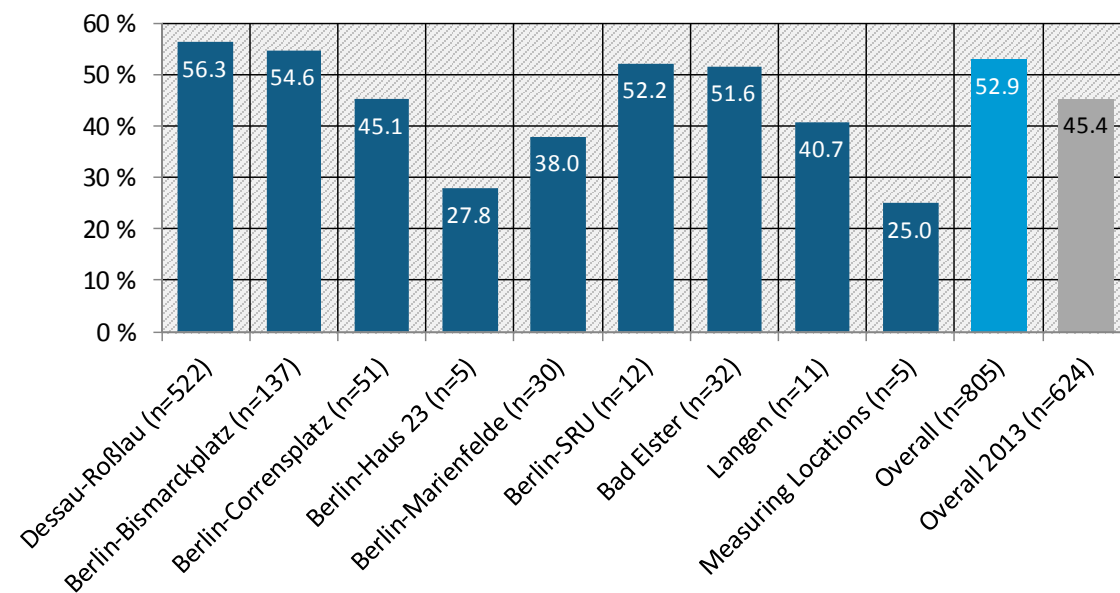
Very good participation in the Mobility Survey 2017 and a predominantly positive assessment of the UBA's mobility management measures show the employees' uninterrupted interest in and support for the Agency's sustainable and environmentally conscious corporate mobility concept.

## 2 Participation and Sample Size

As in previous years, the Mobility Survey 2017 was designed as a full survey of all 1,521 UBA employees. 821 employees took part in the poll, 805 of which fully completed the questionnaire.<sup>1</sup> This equals a return rate of 52.9% in 2017, which is 7.5 percentage points (pp) above the participation in the last survey in 2013 (45.4%)<sup>2</sup> and almost identical to the rate in 2009 (52.8%).<sup>3</sup>

When comparing the different UBA locations separately, there are notable differences in participation. While more than half of all employees at the locations *Dessau-Roßlau* (56.3%), *Berlin-Bismarckplatz* (54.6%), *Berlin-SRU* (52.2%) and *Bad Elster* (51.6%) returned the questionnaire, the lowest participation rates were achieved at the location *Berlin-Haus 23* (27.8%) and at the *Messstellen* (Measuring Facilities) (25.0%) (cf. Figure 1).

Figure 1: Participation Rate Overall and by Work Location (in Percent)



<sup>1</sup> (net) sample size „n“: evaluable subset of the surveyed population

<sup>2</sup> cf. Summary Report Mobility Survey UBA 2013, p. 10

<sup>3</sup> cf. Summary Report Mobility Survey UBA 2009; p. 1

Sample size: n=805 persons

Source: Own illustration LK Argus

The obtained sample portrays a representative cross-section of the German Environment Agency's personnel and therefore to a certain degree allows transferable conclusions regarding the mobility behavior of the entirety of UBA employees. Due to the relatively small sample sizes of the locations *Berlin-Haus 23* (n=5)<sup>4</sup>, *Berlin-Marienfelde* (n=30), *Langen* (n=11) and at the Measuring Facilities (n=5), statistically reliable assumptions about these are only possible to a limited extent.

### 3 Preconditions for Mobility

A number of preconditions play a key role in the employees' choice of transportation for their commute. Besides the possession of a driver's license or a *BahnCard* and the availability of a vehicle, the individual family situation is another crucial mobility factor for many interviewees.

#### 3.1 Possession of a Driver's License and Availability of a Car

96% of all respondents possess a driver's license. Of these, more than half (55.2%) have a car at disposal for their commute at all times, 8.6% regularly and 8.1% only occasionally.

Compared to the results of the 2013 survey, the possession of a driver's license among employees increased slightly by 2.5 percentage points. Availability of a car also increased by 7.0 pp.

#### 3.2 Possession of a *BahnCard*

More than half of the respondents (52.7%) own at least one *BahnCard* (railway discount program by the *Deutsche Bahn*), 1% have a *BahnCard 100*. In comparison to 2013 the share of employees who use a *Bahncard* has decreased by 1 percentage point.

#### 3.3 Employees with dependent Persons in their Household

42.8% of all respondents stated that they live in a household with at least one minor (under the age of 18). Furthermore, 7.6% reported that they had to take care of dependent relatives at home or in another household. Overall, this corresponds to a share of 47.6% of employees who are responsible for a dependent person, with no significant difference between female (47.5%) and male (47.9%) respondents.

## 4 Employees' Commutes and Choice of Transportation

One of the primal goals of the Mobility Survey was to determine the volume, distance, and duration of employees work-related trips as well as the choice of principal mode of transportation<sup>5</sup> during a typical work week at the UBA.

#### 4.1 Distance and Duration of Commutes

During a typical week 7,343 commutes are completed by the respondents, which equals an average of 9.1 trips per employee or 91% of the possible 10 commutes in one week.<sup>6</sup> The remaining 9% result from non-required trips: 11% of employees have a day-off on Mondays and 19% on Fridays, or they

<sup>4</sup> Because of their proximity, the locations *Berlin-Haus 23* and *Berlin-Corrensplatz* hereafter will be referred to as combined location *Berlin-Dahlem*.

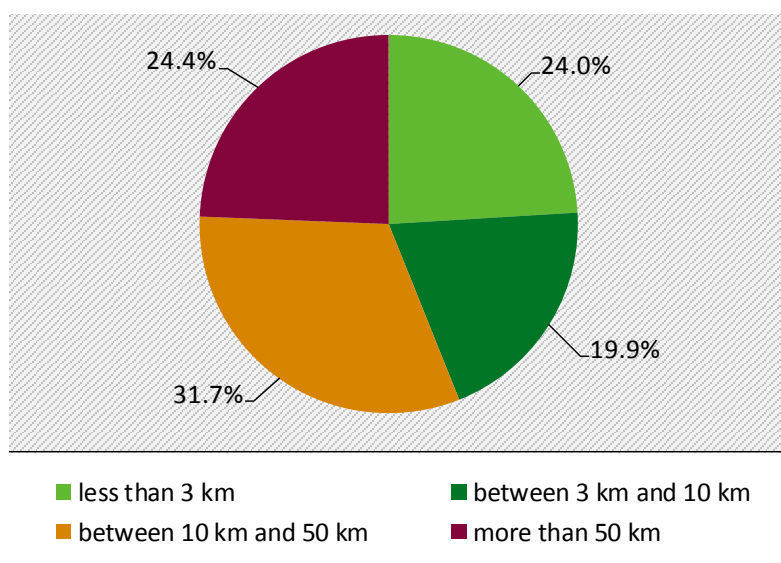
<sup>5</sup> When using more than one means of transportation, the principal mode of transportation is defined as the one which had the largest share in the total distance.

<sup>6</sup> A daily commute between home and work sums up to 10 trips during a regular 5-day week.

use these days for telework or mobile work. 5% of respondents are not at work on other days of the week for the same reasons.

On average, an employee of the German Environment Agency commutes a daily mean distance of 33.3 kilometers each way, which is exactly consistent with the results from 2013. Most work routes have a distance between 10 and 50 kilometers (31.7%). Nearly a quarter (24.4%) of all routes is longer than 50 kilometers, thus constituting the second largest distance class. Another quarter is comprised of short routes under 3 kilometers (24.0%). Work routes between 3 and 10 kilometers fall in the least common distance class (19.9%) (cf. Figure 2).

Figure 2: Distance Classes of the UBA employees' Work Routes, Shares of Overall Trips (in Percent)

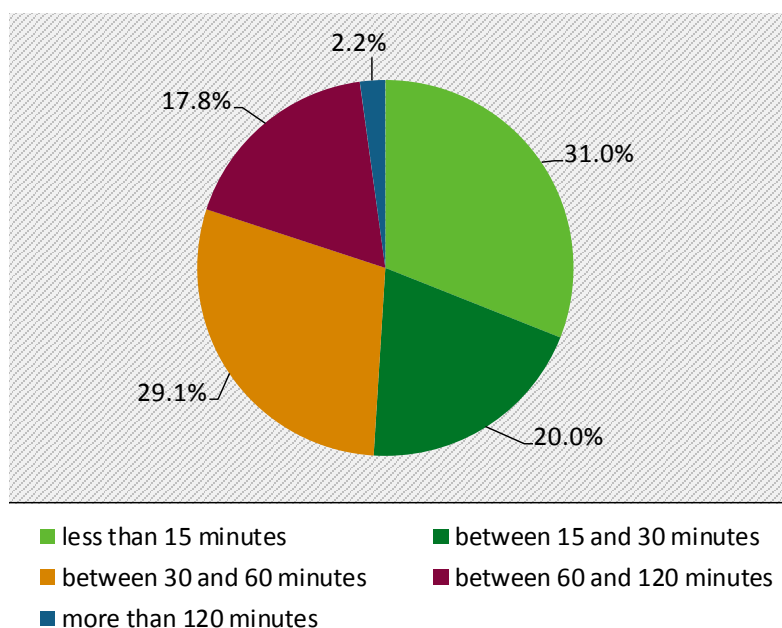


Sample size: n=7,343 trips

Source: Own illustration LK Argus

The average daily commute lasts 43 minutes and therefore has decreased by 2 minutes compared to 2013. The majority of UBA employees need less than 15 minutes for their way to work (31.0%). The second largest class is made up of employees with journeys between 30 and 60 minutes (29.1%). 20% of all respondents travel between 15 and 30 minutes or more than 60 minutes, respectively (cf. Figure 3).

Figure 3: Duration Classes of the UBA employees' Commutes, Shares of Overall Trips (in Percent)



Sample size: n=7,343 trips

Source: Own illustration LK Argus

## 4.2 Choice of Transportation for Commuting

The distribution of travelers using a particular means of transportation is called modal split. The modal split is a key reference value for all assertions regarding the mobility behavior of the employees of the German Environment Agency.

The calculation of the modal split is based on the entirety of the 7,343 evaluated work trips undertaken by the respondents during one week and on the means of transportation used.

Public transport has the largest share in the modal split, accounting for 34.1% of all trips. Regional public transport (*Regionalbahn* or *Regional-Express*) is used for 16.6%, local public transport (bus, urban rail transit (tram, metro, *S-Bahn*)) for 15.5%, and long-distance public transport (*InterCity* or *InterCityExpress*) for 2.1% of all trips.

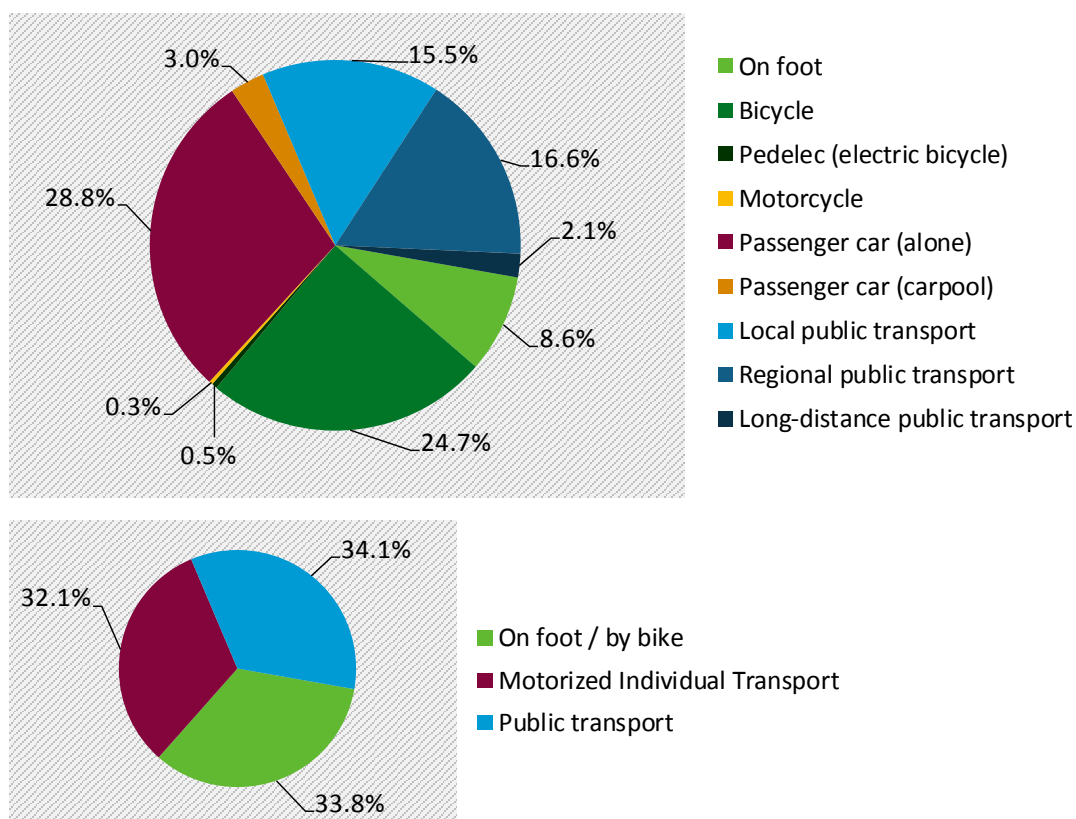
With a share of 33.8% of all trips, non-motorized transport accounts for the second largest share of the modal split; 25.2% of all trips are undertaken by bicycle (including 0.5 percentage points by pedelecs/e-bikes) and 8.6% on foot.

Motorized individual transport has the smallest share in the modal split with 32.1%. 28.8% of all trips are undertaken in single-occupancy vehicles, 3.0% car-pooling, and 0.5% on motorcycles (cf. Figure 4).

Compared with the results from 2013, there is a slight increase in the shares of public transport (+1.7 pp), motorized individual transport (+1.4 pp) and bicycle travel (+1.0 pp). On the other hand, foot traffic has dropped by 4.0 pp.<sup>7</sup>

<sup>7</sup> The discrepancy of 0.1 percentage points in the total amount is due to rounding.

Figure 4: Modal Split for all Commutes by UBA employees within one week (in Percent)



Sample size: n=7,343 trips

Source: Own illustration LK Argus

Gender-specific analysis of the mobility habits at the UBA shows that female employees are more likely to use motorized individual transport for their work routes (35.9%) than their male colleagues (27.9%). The difference is even greater when comparing women who are taking care of dependent persons<sup>8</sup> (44.1%) to men who are in the same situation (31.5%). In contrast, male employees more often cycle or walk to work (39.6%) than females (29.3%). Concerning the use of public transport for commuting, the results show no significant gender difference (female employees 34.8%, male employees 32.5%).

In comparison with the results from the 2013 survey, several changes to the modal split are evident for some UBA locations.

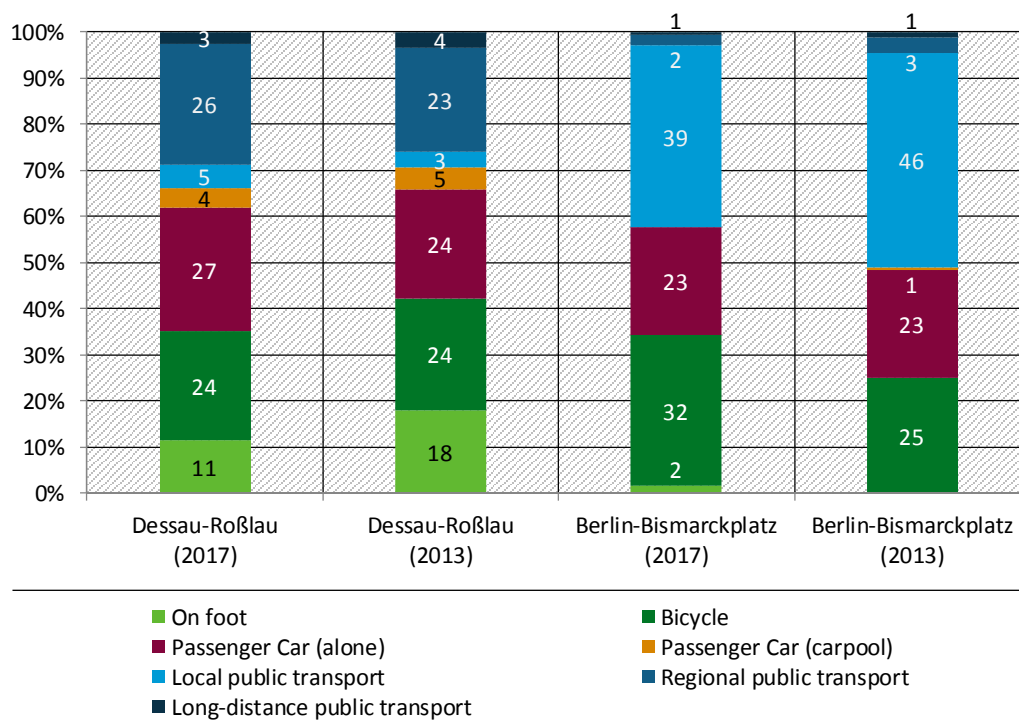
While the share of bicycle traffic at the *Dessau-Roßlau* location remains the same, there were significant changes in the area of foot traffic with a minus of 7 percentage points. This drop in the share of pedestrians as well as in long-distance public transport (-1 pp) is balanced by an increase of the shares of motorized individual transport, regional public transport (+3 pp respectively) and local public transport (+2 pp).

In *Dessau-Roßlau* the share of bicycle travel is consistent, however there has been a significant drop of minus 7 pp in foot traffic. While the usage rate of long-distance public transport has also fallen by 1 pp, there was growth in motorized individual transport, regional public transport (+3 pp each), and local public transport (+2 pp).

<sup>8</sup> Minors under 18 or other persons in need of care living in the own or another household

At the *Berlin-Bismarckplatz* location there occurred a notable shift away from local public transport and towards bicycle travel (-7 pp and +7 pp respectively), while there are no significant changes to the other modes of transportation (cf. Figure 5).

Figure 5: Modal Split for the UBA Locations Dessau-Roßlau and Berlin-Bismarckplatz (in Percent, 2017 and 2013 in Comparison)

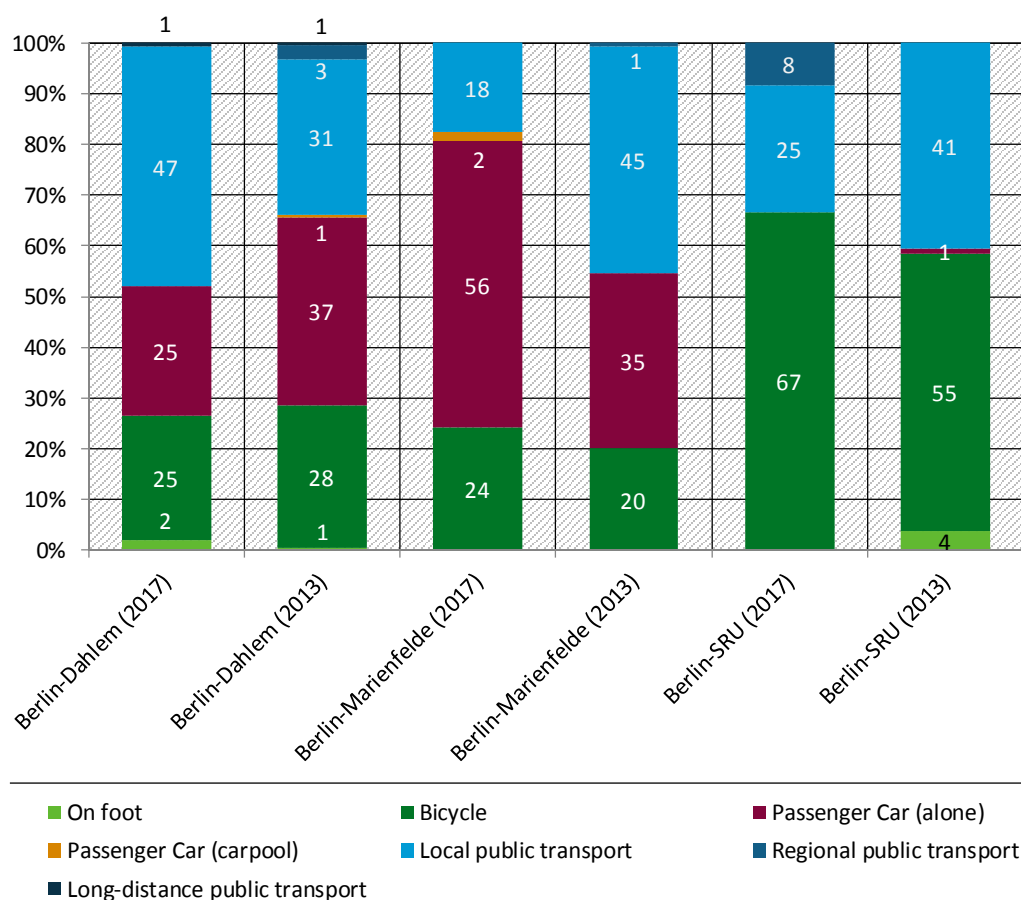


Sample size 2017: n=5,932 trips; 2013: n=4,495 trips

Source: Own illustration LK Argus

The *Berlin-Dahlem* location has encountered a shift towards public transport (+16 pp) at the expense of individual car travel (-13 pp). Foot and bicycle traffic have decreased slightly by 2 pp in comparison to 2013. In *Berlin-Marienfelde*, however, a contrary trend is evident: While local public transport encountered a steep drop of 27 pp, individual car travel has risen by 23 pp (and bicycle traffic by 4 pp). The numbers for the location *Berlin-SRU* show that its employees tend to cycle to work more often today than they did in 2013 (cf. Figure 6).

Figure 6: Modal Split for the UBA Locations Berlin-Dahlem, Berlin-Marienfelde, and Berlin-SRU (in Percent, 2017 and 2013 in Comparison)<sup>9</sup>



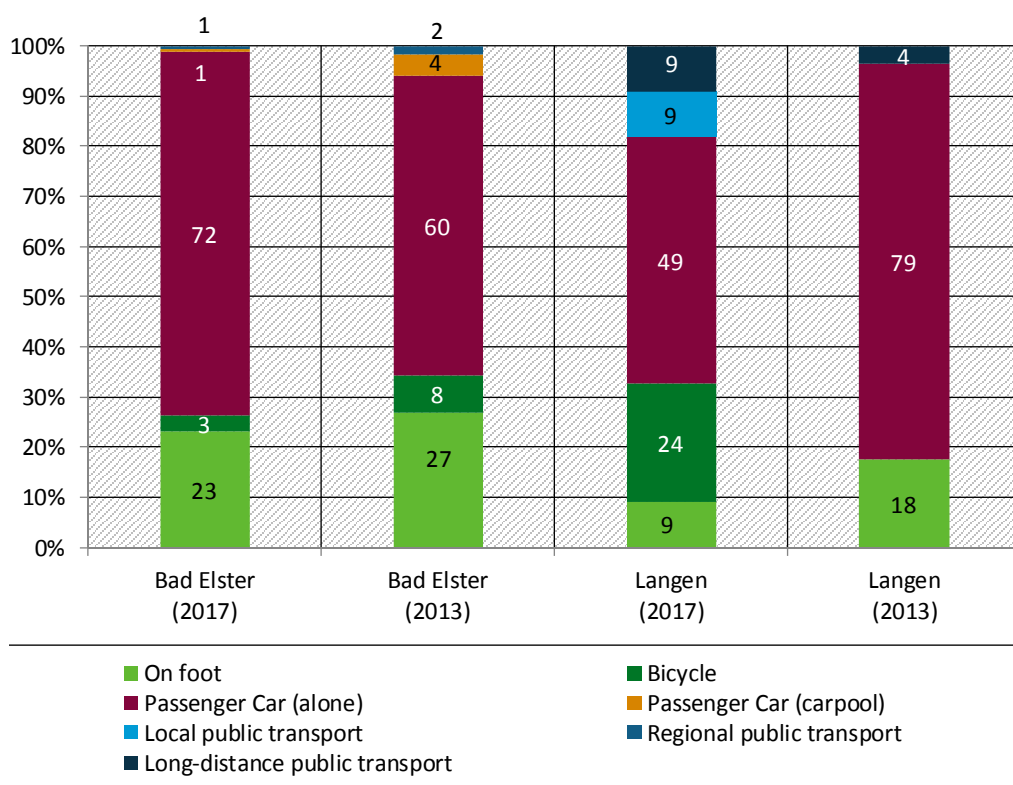
Sample size 2017: n=945 trips; 2013: n=758 trips

Source: Own illustration LK Argus

In *Bad Elster* foot and bicycle travel decreased by 4 pp and 5 pp respectively, while individual car travel went up by 8 pp. For the UBA location in *Bad Langen* it is difficult to make conclusive statements due to the small sample size. In the 2013 survey none of the respondents stated the use of a bicycle or local public transport for their commutes, while in 2017 both of these means of transportation appear in the modal split. These increases go along with a drop in individual car and foot traffic (cf. Figure 7).

<sup>9</sup> The small sample size at the Measuring Facilities (n=48 trips) does not allow statistically sound assertions within the comparison of locations, therefore they are omitted here. The results of the locations *Berlin, Marienfelde* (n=273 trips) und *Berlin, SRU* (n=120 trips) merely yield a general tendency due to their small sample sizes. The results of the aforementioned locations are not transferable to the entirety of the UBA's employees.

Figure 7: Modal Split for the UBA Locations Bad Elster and Langen (in Percent, 2017 and 2013 in Comparison)<sup>10</sup>



Sample size 2017: n=418 trips; 2013: n=254 trips

Source: Own illustration LK Argus

#### 4.2.1 Reasons for Modal Choices

The two main reasons for using a private car are for 71.1% of all respondents the shorter travel time and for 63.3% the advantage of being able to combine the commute with private purposes. Other reasons include the ability to give rides to other persons (29.8%), stress-free mobility (29.5%), and the ability to transport luggage or other objects (25.6%). The three main arguments against the use of public transportation are its time-consuming nature (mentioned by 75.2%), the lack of flexibility (41.7%), and an “insufficient connection at the place of residence” (39.2%).

A closer look at the employees who use public transportation for their commutes shows that 76.6% of those appreciate it as a low-stress mode of transportation. 72.1% state environmental aspects as the main reason for their modal choice, while other statements include good accessibility of bus or train stations (42.1%), affordable fares (33.8%), and convenience/habit (31.2%).

Of those employees who commute either on foot or by bike 72.7% stated health or fitness benefits as the main reason for their modal choice. Another 68.4% make their modal choice based on environmental reasons. For more than half of the respondents, stress-free travel (55.9%), shorter travel time (55.6%), and lower travel expenses (51.6%) played an important role respectively.

15.5% of all respondents base their choice of transportation on current weather conditions. Employees who commute exclusively by bicycle or on foot are most likely to make a modal change due to

<sup>10</sup> The small sample size at the Measuring Facilities (n=48 trips) does not allow statistically sound assertions within the comparison of locations, therefore they are omitted here. The results of the location *Langen* (n=110 trips) merely yield a general tendency due to the small sample size. The results of the aforementioned location are not transferable to the entirety of the UBA's employees.

weather conditions (31.6%). 68.4% of the employees who always walk or cycle to work maintain this practice in bad weather and in winter.

## 5 Residential Location and Commuting Practices

The employees' principal place of residence has a significant impact on commuting behavior and thus affects the distance, duration, and frequency of commutes as well as the choice of transportation on all necessary routes.

### 5.1 Principal Place of Residence of the UBA employees

Half of all UBA employees (50.2%) live in the *Berlin-Brandenburg* region. Another 32.3% live in *Saxony-Anhalt*, the federal state where the headquarters of the German Environmental Agency are situated, and 12.8% live in *Saxony*. The remaining 4.7% are spread over the entire federal territory. With the exception of the employees at the *Dessau-Roßlau* location, the majority of all UBA employees live in the region where their jobs are located.

At the headquarters of the German Environmental Agency in *Dessau*, on the other hand, the regional origin of the respondents shows a wide dispersion. While just over half of all employees (52%) are resident in *Saxony-Anhalt* and thus in the vicinity of their work location, 16% live in the nearby state of *Saxony* and 29% in the relatively remote *Berlin-Brandenburg* region.

When comparing the 2017 results with those from 2009 and 2013 in regard to the place of residence of the employees at the *Dessau-Roßlau* location, there is a clear trend of relocation from the *Berlin-Brandenburg* region towards *Dessau-Roßlau*. In addition to a steady decline in the share of respondents living in the *Berlin* region (-11.2 percentage points since 2009), there has been an equally steady increase in the share of respondents with primary residence in *Saxony* and *Saxony-Anhalt* (+13.7 pp since 2009), which are closer to *Dessau-Roßlau* (cf. Table 1).

Table 1: Principal Place of Residence of the Employees of the UBA Location *Dessau-Roßlau* (in Percent, 2009, 2013, and 2017 in Comparison)<sup>11</sup>

Year	Sample size	Brandenburg	Berlin	Lower-Saxony	Saxony	Saxony-Anhalt	Thuringia	Mentioned less than 3 times	Overall
Survey 2009	494	8.7	31.6	1.4	9.3	45.1	1.2	2.7	100.0
Survey 2013	395	8.9	27.8	1.0	11.1	49.1	1.0	1.1	100.0
Survey 2017	504	6.9	22.2	0.6	16.1	52.0	1.0	1.2	100.0

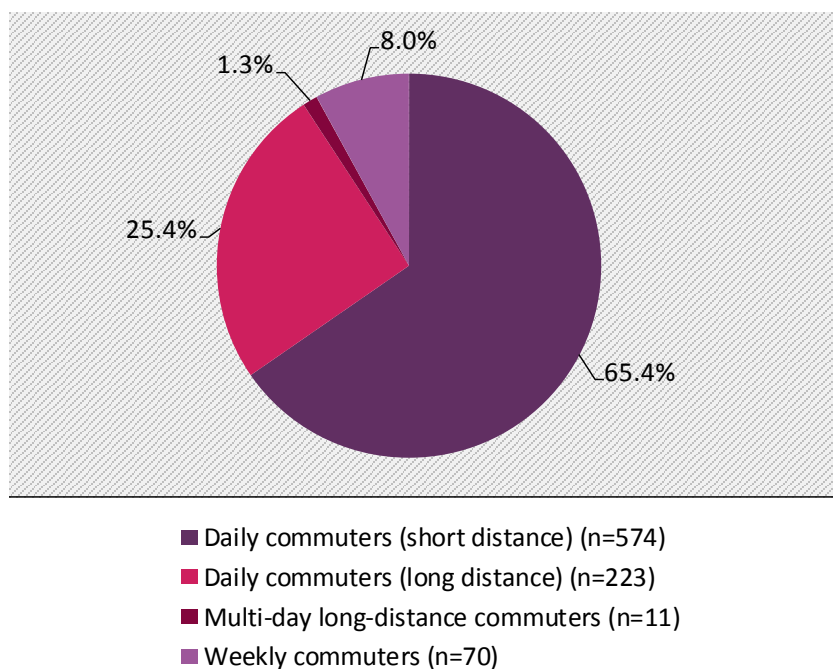
<sup>11</sup> Due to reasons of data protection, regions which were mentioned less than three times are not depicted. 31.3% of the respondents at the *Dessau-Roßlau* location are locals.

## 5.2 Commuter Types and Commuting Practices

Based on their mobility behavior, four characteristic commuter types can be defined. Short-distance daily commuters live less than 50 kilometers from their work site and travel daily between home and work, whereas long-distance daily commuters tackle distances of more than 50 kilometers each way. Weekly commuters travel between their place of residence and work location once a week and stay there during the week. Multi-day long-distance commuters travel several times a week between home and work where they spend at least one night.

At 65.4%, the short-distance daily commuters account for the largest share of commuter types. A quarter of all employees (25.4%) can be assigned to the group of long-distance day commuters. The group of weekly commuters accounts for 8.0%, and the group of multi-day long-distance commuters plays a relatively minor role with a share of only 1.3% (cf. Figure 8).

Figure 8: Commuter Types at the UBA Overall (Multiple Assignments Possible<sup>12</sup>, Shares of all Commuters, in Percent)



Sample size: n=878 commuters

Source: Own illustration LK Argus

Compared to 2013, the share of weekly commuters fell by 8 percentage points. The share of long-distance daily commuters has increased by 5 pp and the share of short-distance daily commuters by 3 pp. The *Dessau-Roßlau* location shows the biggest changes in commuter behavior. The share of weekly commuters at this location fell by 11 percentage points while the share of long-distance daily commuters increased by 12 pp.

## 5.3 CO<sub>2</sub> Emissions

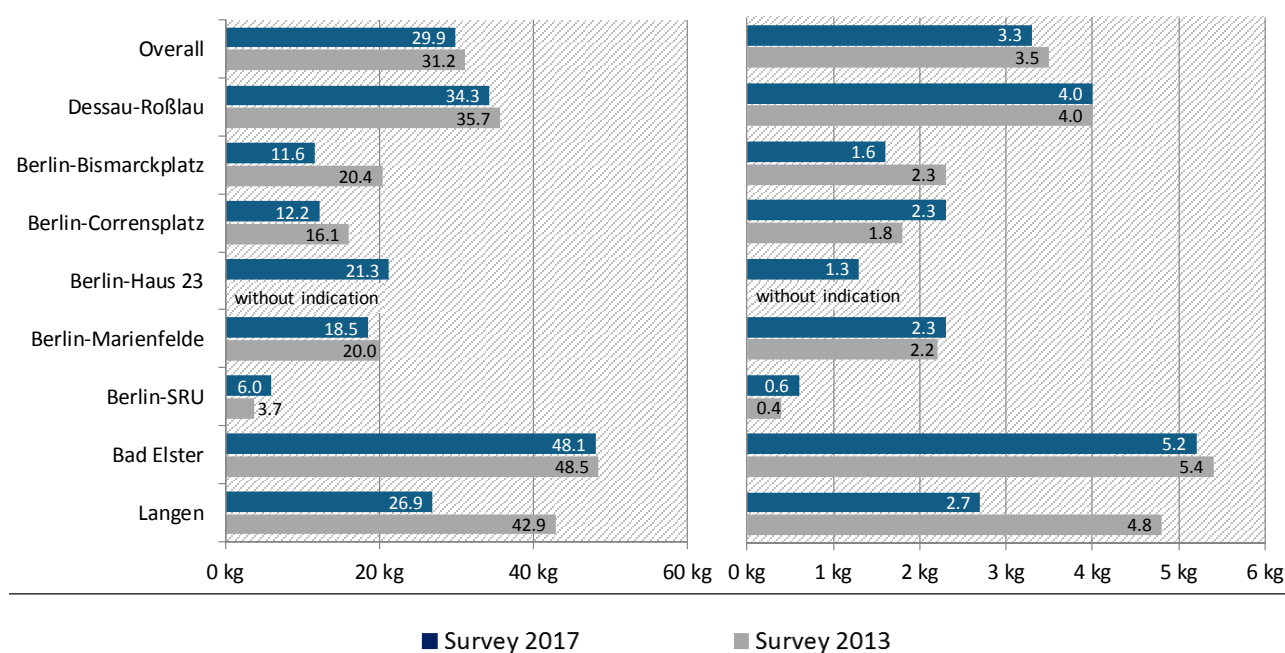
The average CO<sub>2</sub> emissions of the employees of the *German Environment Agency* can be calculated on the basis of the evaluated modal split and the distances traveled.

<sup>12</sup> Employees who are assigned to more than one UBA location

For the calculation, the means of transport used and the distances covered are multiplied with the current values<sup>13</sup> of the carbon dioxide emissions for the respective modes of transport (in grams per passenger-kilometer).

During a typical working week, one UBA employee causes an average CO<sub>2</sub> emission of 29.9 kilograms on his work-related routes. With an average of 9.1 work-related trips per week, this amounts to a CO<sub>2</sub> emission of 3.3 kilograms per single way to work (cf. Figure 9).

Figure 9: Average CO<sub>2</sub> Emission of one Employee per Week and per Trip (2017 and 2013 in Comparison, in Kilograms)<sup>14</sup>



Sample size 2017: n=7,343 trips; 2013: n=5,589 trips

Source: Own illustration LK Argus

Compared to 2013, the average weekly CO<sub>2</sub> emissions of one UBA employee have declined by 1.3 kilograms (4.2%) and the average CO<sub>2</sub> emissions for a single trip by 0.2 kilograms (5.7%).

When looking at CO<sub>2</sub> emissions split by commuter types, it shows that the lowest environmental impact comes from the short-distance daily commuters, who cause on average 14.1 kilograms of CO<sub>2</sub> emissions per week with their work-related trips. The average CO<sub>2</sub> balance of a weekly commuter, at 36.7 kilograms per week, is well below that of a long-distance daily commuter (56.6 kg/week) and that of a multi-day long-distance commuter (68.5 kg/week).

## 6 Volume of Business Trips and Choice of Transportation Mode

As in 2013, the Mobility Survey 2017 collected data on the UBA employees' travel habits in the context of business trips. For this purpose the nature and number of business trips (domestic as well as

<sup>13</sup> TREMOD 5.72 for the reference year 2016, German Environment Agency 2017: passenger car (alone) 201 g/pkm (grams per passenger-kilometer), motorcycle 103 g/pkm, passenger car (carpool, 2.6 persons per car) 77 g/pkm, local public transport 68 g/pkm, regional public transport 60 g/pkm, long-distance public transport 36 g/pkm.

<sup>14</sup> The small sample size at the Measuring Facilities (n=5 persons) does not allow statistically sound assertions within the comparison of locations, therefore they are omitted here. The results of the Berlin-Marienfelde location (n=30 persons) and the Berlin-SRU location (n=12 persons) merely yield a general tendency due to their small sample sizes. The results of the aforementioned locations are not transferable to the entirety of the UBA's employees.

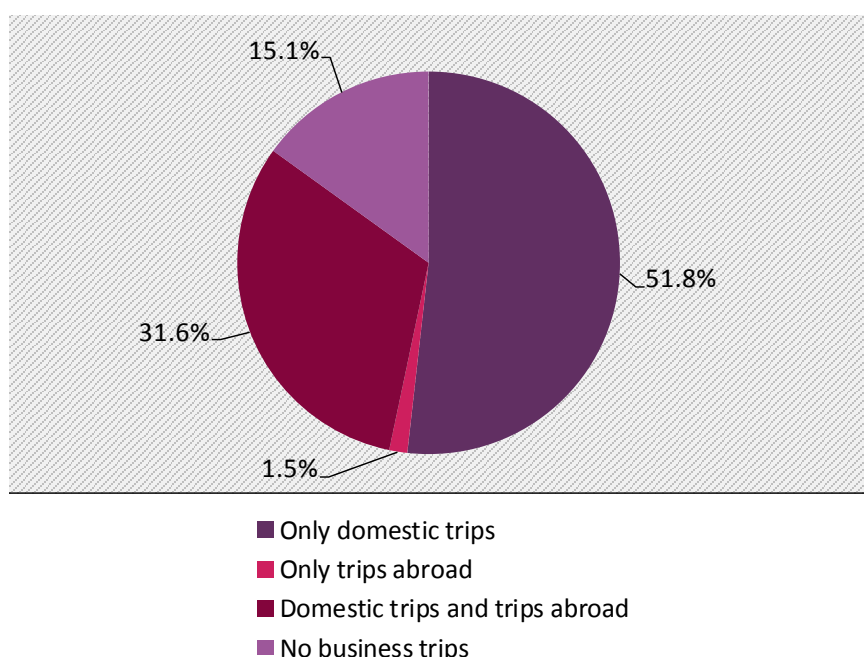
abroad) within the last 12 months were identified. In addition, employees were asked to share key information on their most recent official trip.

## 6.1 Volume of Business Trips at the German Environment Agency

A total of 84.9% of all respondents have undertaken at least one business trip during the last 12 months. Slightly more than half of all employees (51.8%) undertook business trips only within German borders; 31.6% traveled to both domestic and foreign destinations and only 1.5% of those surveyed solely travelled abroad (cf. Figure 10).

The share of UBA employees who went on business trips remained almost constant compared to the prior survey from 2013; 86.1% of the respondents conducted official travel, which represents an insignificant drop of 1.2 percentage points.

Figure 10: Business Trips of all UBA Employees in the past 12 Months (In Percent)



Sample size: n=784 persons

Source: Own illustration LK Argus

## 6.2 Domestic Business Trips

While 16.7% of all respondents did not go on domestic business trips in the past year, almost two-thirds (61.7%) undertook up to 10 trips within Germany. 21.6% of all interviewees have made more than 10 domestic work trips and 2.4% have traveled more than 30 times. Of the 797 respondents who provided information on their business travel activities 664 have accumulated 4,861 domestic trips within the last 12 months, which corresponds to an average of 6.1 domestic business trips per person per year.

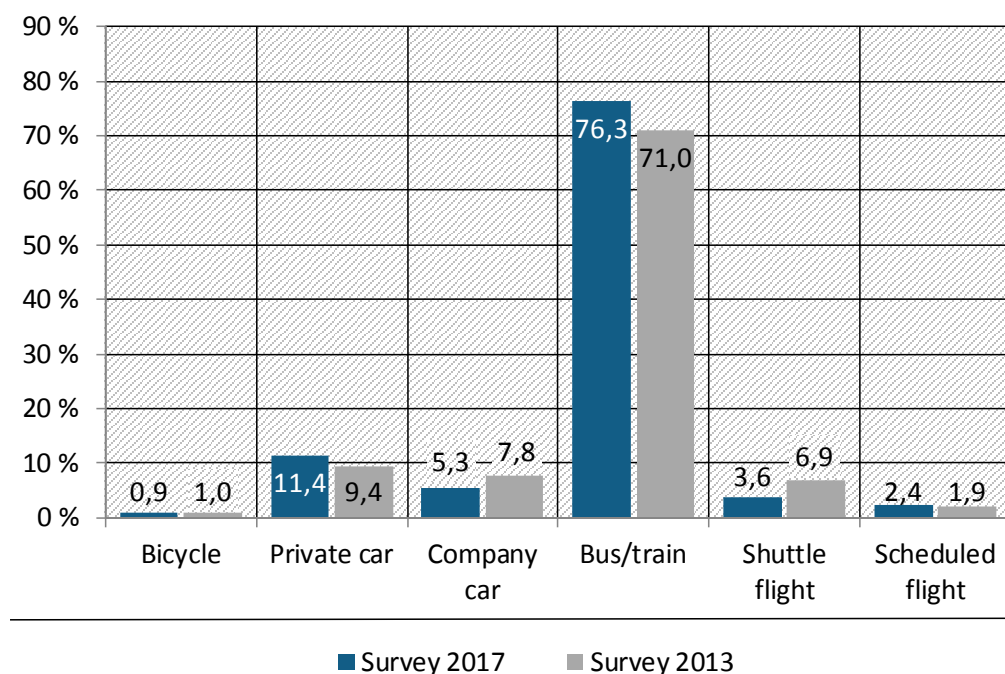
58.3% of all domestic business trips were one-day trips and the most common destination were other UBA locations (26.9%).

When asked about the choice of transportation, three-quarters (76.3%) of respondents said they used public transport on their last domestic service trip. 11.4% used a private and 5.3% a company car, 3.6% a shuttle flight and 2.4% a scheduled flight, and 0.9% used a bicycle for their official travel.

Compared with the results of 2013, an especially significant increase of 5.3 percentage points is apparent in the use of public transport (bus/train). While the use of shuttle flights on domestic business

trips declined by 3.3 pp, the use of other aircraft increased by 0.5 pp. The use of motorized individual vehicles (-0.5 pp) and of the bicycle (-0.1 pp) remained roughly the same (cf. Figure 11).

Figure 11: Choice of Transportation for the most recent Domestic Business Trip (all UBA Employees, 2017 and 2013 in Comparison, in Percent)



Sample size 2017: n=659 persons; 2013: n=524 persons Source: Own illustration LK Argus

### 6.3 Business Trips Abroad

One in five interviewees (19.5%) has been on international business trips once or twice within the past 12 months. More than 2 trips abroad were undertaken by 13.6% of all respondents, with some of them (0.3%) having made as many as 15 or more trips abroad over the past year. Of the 784 respondents who provided information on their overseas travel 260 employees made a total of 819 trips within the last 12 months, which corresponds to an average of roughly one trip abroad per person per year.

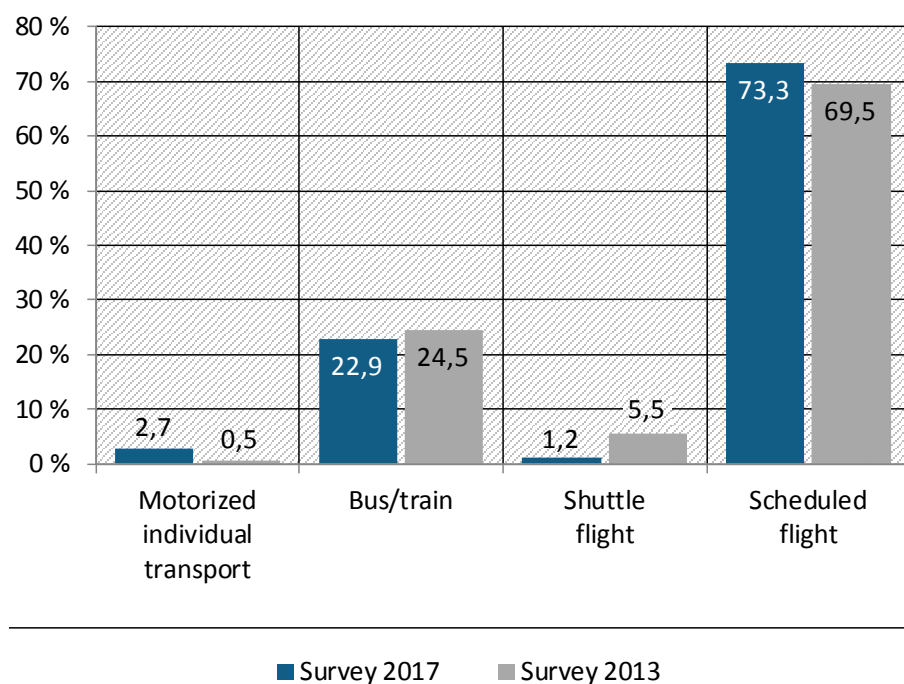
For 54.3% of all employees the duration of the most recent international business trip was 2 to 3 days. The most common destination was Brussels with 21.3%.

A closer look at the choice of transportation for international business travel shows that three-quarters (74.4%) of all trips were done by aircraft (73.3% scheduled flights and 1.2% shuttle flights<sup>15</sup>). While public transport does play a comparatively significant role for international business trips with a share of 22.9%, the use of motorized individual transport proves to be not relevant (2.7%).

When comparing the results of the recent survey with those from 2013, the choice of transportation for international business travel has remained mainly unchanged. However, a noteworthy shift occurred in the employees' use of air travel: While the use of shuttle flights has decreased by 4.3 pp, those of scheduled flights went up by 3.8 pp. (cf. Figure 12).

<sup>15</sup> Shuttle flights with destination Brussels

Figure 12: Choice of Transportation for the most recent International Business Trip (all UBA Employees, 2017 and 2013 in Comparison, in Percent)



Sample size 2017: n=258 persons; 2013: n=220 persons

Source: Own illustration LK Argus

## 7 Knowledge, Usage and Assessment of Existing Mobility Management Measures

The UBA strives to promote alternatives to the traditional use of private motor vehicles among its employees and therefore offers various mobility management measures. For the purpose of a critical reflection of the ongoing efforts, the recent survey contained questions about the employees' knowledge and acceptance of existing measures as well as their assessment of those. The information received can help with further development, optimization, and possibly extension of the measures.

Most mobility management measures offered by the UBA enjoy a high level of awareness among its employees: 7 out of 9 measures are known by 80+% of respondents. Among the lesser known measures are the job ticket discount (62.4%) and the rental of company-owned folding bikes (59.4%).

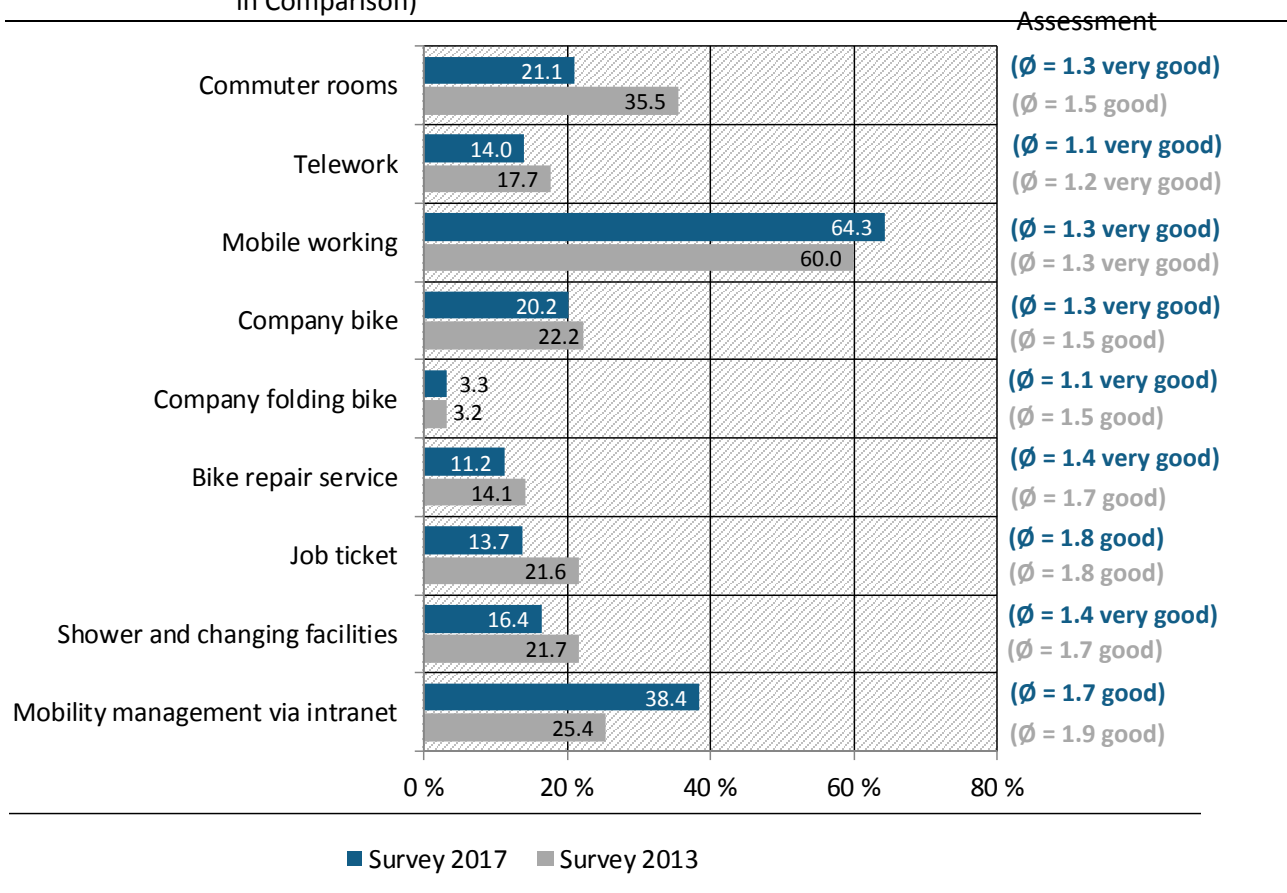
With regard to the actual use of measures, mobile working has achieved the highest degree of utilization in the last two years (64.3%). Furthermore, information on mobility management on the intranet or via e-mail was also frequently used with a share of 38.4%. Among the less frequently used measures are the job ticket discount (13.7%), the bike repair service (11.4%) and the folding bike rental (3.3%).

In comparison with the results of 2013, there is a slight overall decrease in the usage of measures, with a few exceptions.<sup>16</sup> Especially striking is the drop in demand of commuter rooms which were used 14.4 pp less often. Conversely, mobile working (+4.3 pp) and information on mobility management via e-mail or intranet (+13.0 pp) have witnessed an upturn in popularity (cf. Figure 13). The employees'

<sup>16</sup> It should be noted that the current survey inquired about the usage of mobility measures during the past two years while the 2013 survey aimed at the general usage without temporal limitations.

average grade of all mobility measures has improved from 1.6 (good) in 2013 to 1.4 (very good) in 2017.

Figure 13: Use of the UBA's Mobility Management Measures in the past two Years (2017 and 2013 in Comparison)<sup>17</sup>



Source: Own illustration LK Argus

## 8 Areas with Potential for Improvement

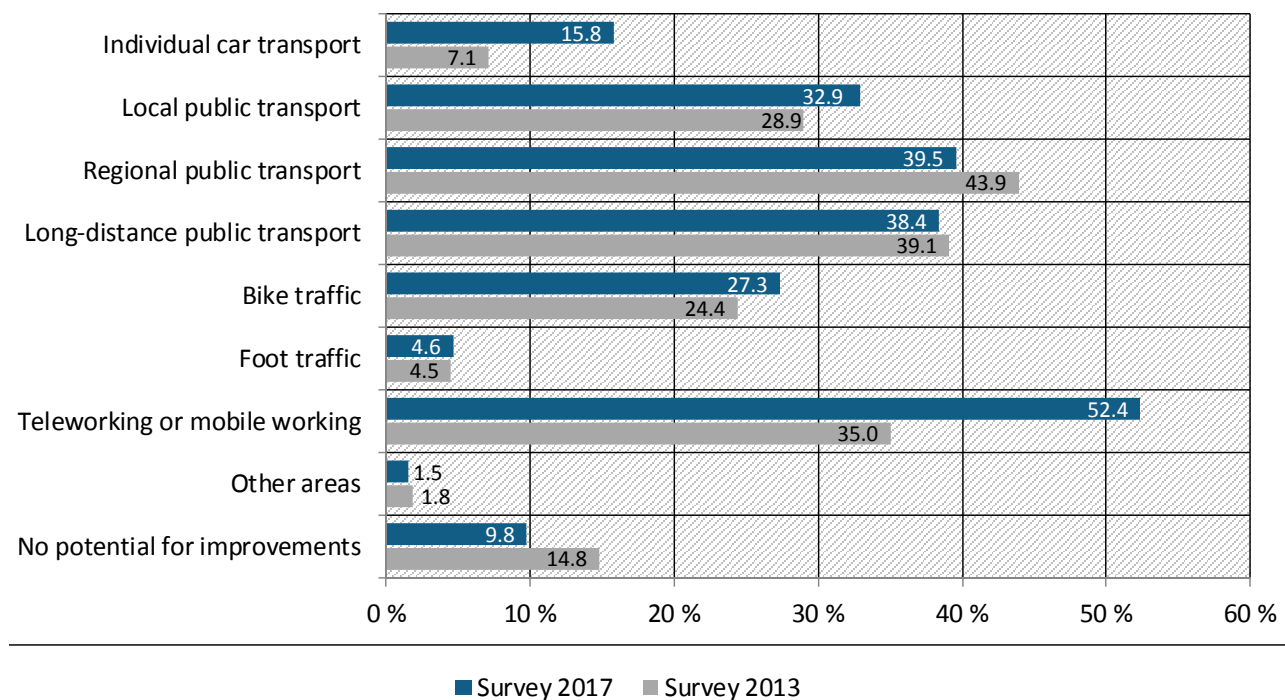
In order to gain a better understanding of the employees' work-related mobility needs as well as the traffic situation around the various UBA locations, the questionnaire listed 7 areas in which the respondents could specify required improvements.

More than half of all respondents see the greatest need for action in the area of teleworking or mobile working (52.4 %). Another field with a high need for improvement is public transport, according to UBA employees: nearly 40% consider regional public transport worthy of improvement (39.5%), 38.4% say the same about long-distance public transport and 32.9% about local public transport. With a share of 27.3%, more than a quarter of all respondents see room for improvement in bike traffic and 15.8% in car traffic. The least need for action is seen in pedestrian traffic (4.6%). 1.5% of the respondents stated improvement needs that went beyond the given categories and 9.8% do not see any need for improvements.

<sup>17</sup> When comparing the results of the 2017 survey with those from 2013, it should be noted that the 2013 survey did not limit the relevant period for this question to the last two years.

Compared with the survey results from 2013, the area of teleworking or mobile working stands out in particular. With an increase of 17 percentage points, significantly more employees see room for improvement in this area than in 2013. The ratings in the area of motorized individual transport more than doubled in comparison to the results of the last mobility survey (7.1%) by gaining 8.7 pp. The mentions of all other areas with room for improvement are consistent with the 2013 results (cf. Figure 14).

Figure 14: Areas with Potential for Improvement for the UBA (Multiple Assignments Possible, 2017 and 2013 in Comparison, shares of all respondents in Percent)



Sample size 2017: n=779 persons; 2013: n=603 persons

Source: Own illustration LK Argus

## 9 Areas of Action and Recommendations

Based on the results of the 2017 survey, areas of action and recommendations for the further improvement of the UBA's mobility management measures are presented below.

### Commuter Rooms

Since the last Mobility Survey 2013, more commuter rooms have been made available, some rooms have been renovated and (technical) office equipment has been further improved. These efforts are also reflected in the very good grade the commuter rooms have received. However, the respondents also see deficits regarding the frequent lack of available rooms, especially on Mondays and Fridays.

It should be checked whether additional commuter rooms can be set up. It should also be considered whether the capacity of particular rooms can be increased by equipping them with additional workplaces and opening them for shared use. In addition, the possibility of desk sharing<sup>18</sup> in the commuter

<sup>18</sup> Desk sharing means that a permanent workspace is shared by a number of employees.

rooms at the *Berlin-Bismarckplatz* location should be considered in general, since many employees have a day-off on the aforementioned weekdays.

### **Teleworking, Mobile Working**

Many employees acknowledge teleworking and mobile working as a good way to balance private and professional life. At the same time, the recent survey revealed the employee's desire for simplified access requirements. In addition to a lack of availability of laptop computers for mobile work, many respondents criticize inadequately equipped hardware and problems accessing the UBA server. Another oft-mentioned concern among staff is that teleworking or mobile working might be viewed critically or even rejected by some supervisors.

Therefore, teleworking and mobile working should be regulated in a transparent way and universal rules should apply to all UBA employees. Additionally, it should also be considered whether a permit can be extended to employees with high mobility requirements such as weekly commuters. To facilitate work efficiency, easy access to the UBA servers should be ensured. In order to prevent a shortage of availability, the possibility of further purchase of laptops should be examined. Attention should be paid to high-quality technical equipment (high-performance processors, large screens).

### **Company Bikes**

When purchasing new company bicycles the UBA pays attention to a good quality and first-class equipment. In the spring of 2018, the pool of company bicycles was expanded by five pedelecs for the locations in *Berlin*, *Dessau* and *Bad Elster*. Despite a very good overall rating of the company bicycles, many respondents criticized a poor maintenance as well as inferior equipment. Furthermore, the expansion of the bike pool as well as an overnight bike rental are discussed. However, the latter is not possible for insurance reasons.

In order to maintain the high level of interest in company bicycles, regular maintenance of the bicycles should be ensured by a specifically assigned technician. Setting up an e-mail address which can be used to report deficiencies could also be very helpful in this context.

### **Shower and Changing Facilities**

Despite clear criticism of the lack of equipment and insufficient cleanliness, the shower and changing facilities have received a good rating, which indicates a strong interest of the employees in this measure.

According to the comments, there is obviously a great need for action. In addition to the already planned renovation of the showers at the *Berlin-Bismarckplatz* location, the equipment of the shower and changing facilities of all locations should be checked and, if necessary, replenished with hair dryers and additional lockers. In addition to regular checks and the basic cleaning of facilities, clear rules of conduct should be defined and made visible; this etiquette has to be communicated properly and compliance has to be monitored.

### **Job Ticket Discount**

The use of the job ticket has fallen significantly since the last mobility survey in 2013. Points of criticism regarding the job ticket are mainly its non-transferability, non-existing discounts when taking along bicycles and generally too little discount. For many employees this makes it too expensive compared to other annual passes. On the other hand, some respondents criticize a lack of basic information about the job ticket

To increase the use of the job ticket, it should be advertised purposefully and made more attractive for employees. For this purpose, the possibility of greater discounts, unlimited ticket transferability and free bicycle transport should be negotiated with the responsible representatives of the *Deutsche Bahn AG* and all involved transport associations.

### **Information on Mobility Management via Intranet or E-mail**

The mobility management information network provided by the UBA is enjoying increasing popularity. Nevertheless, there is criticism regarding its comprehensibility and clarity as well as the lacking up-to-dateness of the carpool network information.

Accordingly, it is recommended to check the extensive content for comprehensibility and clarity and to make revisions if necessary. Furthermore, the carpool network should be updated and reviewed with a focus on easy and intuitive usability.

### **Recommendations on Individual Motorized Transport**

More than two-thirds of the employees' improvement requests concerning car traffic are aimed at the expansion of the parking facilities. However, it is the declared goal of the UBA to point out alternatives to motorized individual transport and to promote environmentally friendly mobility. A further expansion of parking space would counteract this endeavor.

The survey results show that the UBA employees are very interested in the promotion of e-mobility, which signifies a clear need for action. The installation of charging stations already in planning at some *Berlin* locations and in *Dessau* should be implemented in a timely manner, and the possibility of an expansion at other locations should be examined. In addition, it should be examined at which locations the establishment of additional privileged parking spots for carpooling is possible.

### **Recommendations on Public Transport**

In the rail sector, the employees request above all a higher reliability in train connections, the improvement of timetables and cheaper fares. The long-standing desire for the *Dessau* location to be connected to long-distance transport was reiterated as well. In this context, several successes have already been achieved by the UBA over the past ten years through continuous lobbying. Noteworthy are the reintroduction of hourly connections with modern trains to *Berlin* and of hourly connections to *Leipzig* and *Magdeburg*. A connection of *Dessau* to the long-distance train network was as yet rejected by the *Deutsche Bahn AG* due to low demand.

In addition to the above-mentioned negotiations on better job ticket conditions, a further intensification of lobbying activities for the long-distance connection of *Dessau* as well as for an express connection in regional traffic at rush hours is recommended. In this context, collaboration with representatives of other local companies could be useful to generate an increase in demand and attract more attention for the employees' needs.

### **Recommendations on Bicycle Traffic**

In the area of bicycle traffic, numerous measures have already been implemented since the last survey in 2013. The further installation of sheltered bicycle parking facilities has made significant progress and their maintenance as well as the removal of abandoned bicycles have since been taken care of regularly. In addition, parking spots equipped with charging stations for pedelecs are being planned.

Nevertheless, two-thirds of all employees who stated a wish for improvement in the area of bicycle traffic see room for improvement in the further expansion of bicycle parking facilities as well as in their quality and maintenance.

The greatest need for action exists in the further expansion of bicycle parking facilities. Attention should be paid to high quality and a modern standard with roofing, security against theft, and integrated charging stations for pedelecs. In addition, regular maintenance of the facilities including the removal of abandoned bicycles should be guaranteed.

In addition, the popularity of cycling could be increased further by an expansion of bicycle-related community activities such as for example an informal bicycle season opening event, possibly in combination with a free security check for bicycles.

## **Conclusion**

The results of the Mobility Survey 2017 show that most of the UBA's mobility management measures enjoy a high profile among employees. In order to further increase awareness of the lesser-known measures, it would be advisable to create an information brochure in addition to the existing information portal on the intranet, in which essential information on the individual areas of mobility management is compiled. Especially for new employees, a comprehensive guide would simplify the access to environmentally friendly mobility at the German Environment Agency.

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