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TRAVEL BEHAVIOUR SURVEY AND MODAL SPLIT ANALYSIS

CITY OF UHERSKÉ HRADIŠTĚ

More sustainable transport in Central European cities through improved integrated bicycle promotion and international networking

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

TRAVEL BEHAVIOUR SURVEY AND MODAL SPLIT ANALYSIS – CITY OF UHERSKÉ HRADIŠTĚ

This survey was implemented as Output 3.1.8 of the European project “Central MeetBike – More sustainable transport in Central European cities through improved integrated bicycle promotion and international networking”. This project is implemented through the CENTRAL EUROPE programme and co-financed by ERDF.

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1. INTRODUCTION

The European project Central MeetBike (More sustainable transport in Central European cities through improved integrated bicycle promotion and international networking) promotes sustainable transport policy and planning according to the state of the art. Important is the integration and preferred use of public transport, walking, cycling and new mobility services (e.g. car sharing, bicycle rental schemes). In this context Central MeetBike focusses on the questions of how to create better conditions for cycling in Central European countries and thus how to promote sustainable transport in general[1]. The project concentrates on exchange of knowledge and experiences among the project partners and to estimate effects of different measures.

Studies about the current situation of bicycle transport in Central MeetBike partner countries Czech Republic, Slovakia and Poland showed that there is a general lack of knowledge about mobility behaviour in these countries[2]. This often goes along with little expertise in implementing surveys that provide users with reliable results. Therefore the surveys are an important element of the project in order to provide partner cities with comparable findings about mobility behaviour of the inhabitants. At the same time this report is intended to give an insight for planners from municipalities on how to implement a survey that allows obtaining reliable and comparable results.

This report provides the reader with results of the household survey conducted in the Czech city Uherské Hradiště. The survey was also implemented in the cities of Žilina, Prešov, Pardubice, Gdańsk and Tczew (figure 1).

The survey provides the cities with statistics about e.g. number of trips, use of means of transport (modal split), kilometres travelled and access to vehicles. These numbers serve:

- for transport policy and internal administrative work (benchmarking)

[1] Further information: www.centralmeetbike.eu

[2] These studies were implemented in the course of Central MeetBike. Reports can be found at www.centralmeetbike.eu.

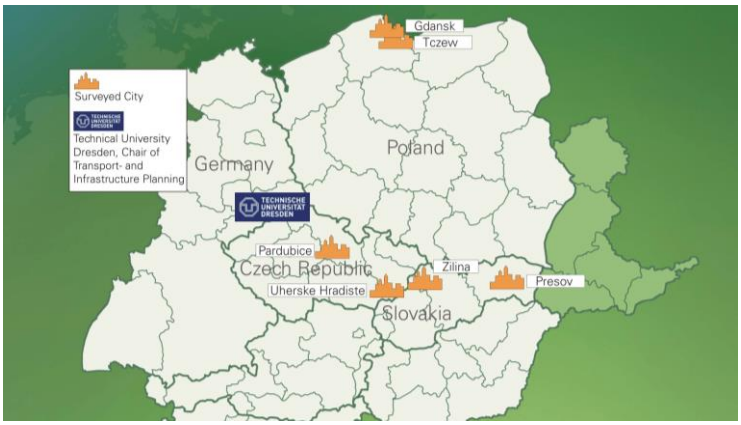


Figure 1: Surveyed cities in Central MeetBike

- as input data for transport modelling and continuous sustainable urban mobility planning (SUMP)
- for evaluation and quality management (monitoring)
- for information and public relations

Repeating the survey (e.g. every 5 years) is recommended in order to observe the development of mobility behaviour and its critical parameters.

The method "Mobility in Towns" [3] (SrV – System of representative surveys on mobility behaviour) that was established at the TU Dresden, served as the model[4]. In the framework of the Central MeetBike survey, TU Dresden (Chair of Transport and Infrastructure Planning) developed the method's adjustments for the city of Prešov, served as an advisor before and during the field time and did the evaluation of the data. The implementation of the survey was supervised in situ by members of the city of Uherské Hradiště.

Since the same survey method is used for each partner city of Central MeetBike, there are not only specific results for each city, but also results that arise by comparing the cities amongst each other and with results from last German survey from 2008[5].

[3] Ahrens et al., 2009

[4] "Mobility in towns" (SrV) is a travel behaviour survey that is regularly conducted in Germany. It was first implemented in 1972 in cities of the former German Democratic Republic. It has taken place eight more times: in 1977, 1982, 1987, 1991, 1994, 1998, 2003 and 2008.

[5] The next SrV-survey for 2013 is in progress. Results will be available in autumn 2014.

2. BASIC INFORMATION ABOUT THE SURVEY

2.1 FOCUS OF SURVEY

The focus of the survey is the mobility behaviour of inhabitants in each city. During interviews each person in a randomly selected household is asked numerous questions. The questionnaire is divided into three parts (see also Chapter 2.4): questions about household and vehicles, questions about every person registered in household, questions about every trip taken by every person. Thus the results are structured in a similar way:

- data about household- and vehicle-specific parameters (e.g. number of cars in household, annual vehicle kilometres driven)
- data about persons with parameters about sociodemographic and transport related aspects (e.g. drivers licence, education level)
- data about trips taken per person (e.g. number of trips, trip length, means of transport)

Population and surveyed trips

The survey population is comprised of all inhabitants of the city without any limitation of age, sex, nationality and primary or secondary place of residence. Mobility behaviour is surveyed for one particular test day (Tuesday – Thursday). These days represent a normal working day. All trips (definition of trip in chapter 2.2.1) for each person in the household are recorded without any limitation.

The survey analyses all trips taken by city inhabitants regardless where they originated or terminated. All trips done by persons that are not inhabitants of the particular city and trips of commercial traffic (e.g. freight delivery, craftsmen driving to customers) were not surveyed with the method used.

Since only inhabitants of the particular city were questioned, most trips that originate and terminate outside the municipality and through trips as well as commercial trips cannot be surveyed with the method (figure 2). Of all the trips in, to and from a city, results of this survey only include trips made by residents of the city. This is indicated in the following report and in diagrams and tables with the expression “all trips of inhabitants”.

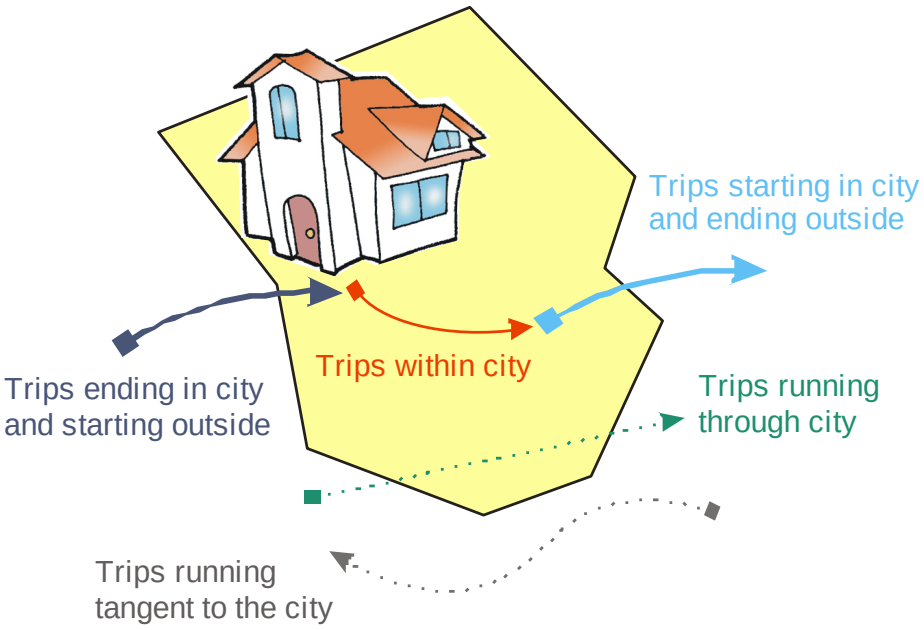


Figure 2: Spatial distribution of trips in relation to city boundaries[6]

2.2 DEFINITIONS

2.2.1 Trip/movement

For the purposes of this survey a trip is defined as a person’s change in location with an origin and/or destination, which lies beyond the property on which the participating person lives.

One trip is defined exactly by one purpose (see chapter 2.2.2) and two locations (origin, destination). One trip may include different stages with different means of transport (e.g. by bike to tram stop and by tram to workplace). As long as the purpose does not change the combi-

[6] Ahrens et al., 2009, S.6. Translated into English

nation of these stages is regarded as one trip[7]. The survey does not record different trip stages. The mode of one trip with several stages is assigned to the mode of the longest stage under consideration of a predefined decision hierarchy (see chapter 2.2.3). Also short trips (e.g. to put a letter in a mailbox) are likewise independent trips and have to be explicitly recorded.

Roundtrips (e.g. taking a walk), where the origin and destination are identical, are counted as two separate trips. Length and distance of the originally-specified trip are divided in half.

2.2.2 Purpose of trips

In general the purpose of a trip is defined by the activity at the destination. In the course of this survey the purpose of a trip is characterised with the type of the destination. Therefore trips home are assigned to the purpose “Home” which is not in accordance with the definition of trip purpose in the literature an of some other surveys. However, this approach makes it easier to use the results for modelling the great number of home trips in traffic models more accurately.

As part of this study, participants were questioned in detail about 17 purposes which were combined into six main purpose groups. The following table shows the classifications used.

[7] The purpose of the trip is changing when the person interviewed e.g. does some shopping on the way home from work. These are two trips: one for shopping and one back home.

Main purpose	Work	School/Kindergarten	Shopping	Leisure	Others	Home
Categories at questionnaire	Own workplace	Kindergarten	Shopping for daily needs	Bar, restaurant	Others	Trip back home
		Primary school	Other Shopping	Visiting friends	Other workplace	
		Secondary School (including University)	Public institution (Post, doctor…)	Recreation, sport outdoors		
		Other educational institution		Sports facility		
				Special event (concert…)		
				Other leisure activity		

Table 1: Main Purpose of trips and corresponding categories from "Mobility in towns"

In case the person interviewed had numerous work trips (e.g. as a craftsman), he/she was asked to only report the first and the last work trip of the day.

2.2.3 Means of transport

For analysing modal split the various means of transport had to be aggregated. The attribution of means of transport to four groups of main transport modes is given in table 2.

Main modes of transport	Private car use	Public Transport	Bicycle	Walking
Categories at questionnaire	Driver in car from household	Long-distance train	Bicycle	Walking
	Driver in other car	Regional train		Other (e.g. skate-board, inline skates)
	Passenger in car from household	S-Bahn (local train)		
	Passenger in other car	Underground train		
	Motorcycle	Tram		
		Bus		
		Others (e.g. air-plane, taxi, ferry)		

Table 2: Main modes of transport and corresponding categories at questionnaire

To determine the travel mode of a trip, the persons interviewed could choose from the categories shown above. When more than one means was used during one trip, a main means of transport with the largest stage length (distance) was assigned. The order of priority given below shows, to which means of transport usually the longest stage of a trip is assigned:

1. Long-distance train
2. Regional train
3. S-Bahn (local train)
4. Underground train
5. Tram

6. Bus
7. Passenger in other car
8. Passenger in car belonging to own household
9. Driver in other car
10. Driver in car belonging to own household
11. Motorcycle
12. Bicycle
13. Walking

In case the person interviewed answered with "other means of transport" for his/her trip the assignment of the main means of transport was done manually for this trip[8].

2.2.4 Statistical expressions

This chapter includes definitions of expressions from statistics that will be used in the following document.

Gross sample

The gross sample (n_{Gross}) describes the number of persons or households that have to be drawn at the very beginning of the survey. The gross sample size has to be big enough to ensure a defined net sample under the conditions of non-response and not usable interviews.

Net sample

The net sample (n_{Net}) of a survey is the amount of answers collected in the final interview database. Only those datasets will be used for analysis. This sample will differ from the gross sample due to incomplete or implausible datasets or non-response. Since the goal was to achieve a net sample size of about 1,000 interviews in this survey, the gross sample had to be larger[9].

[8] During interview the persons could specify their "other means of transport" in a free text field. When "other means of transport" could be categorised as a public means of transport (e.g. airplane, taxi, ferry…) this "other means of transport" was chosen as main means of transport. If "other means of transport" was specified as being an unmotorised means of transport (e.g. skateboard, inline skates …) this "other means of transport" was identified as having lowest priority.

[9] The factor to calculate the gross sample depends on the estimated response rate, average number of persons per household and a security factor (about 1.2).

Response rate

Response rate is defined as the proportion of usable interviews for the final analysis (net sample) to the sample size drawn at the beginning of the sample (gross sample). The response rate is often seen as an indicator for the quality of a survey[10].

2.3 SURVEY PERIOD AND TEST DAYS

The survey was originally supposed to take place in all cities of the Central MeetBike project simultaneously. Due to delays in drawing the sample as well as organisational and financing problems in several cities it was decided to use different survey periods. The comparability of the periods was maintained. Each of the survey periods was chosen such that the period closely represents the average annual values. In the case of the city of Uherské Hradiště the survey took place from April 4th to May 31st 2012. The survey was conducted on workdays in the middle of the week, on Tuesdays, Wednesdays and Thursdays. Days, which fell or bordered on holidays, were excluded.

2.4 RECORDED CHARACTERISTICS AND QUESTIONNAIRE

The survey was conducted as a household survey. Next to household and individual characteristics all members of randomly chosen households were questioned about their trips on test days. The collected characteristics can be accordingly divided into three categories.

2.4.1 Household characteristics

Household characteristics describe the situational conditions of those living in the household and help to classify the household according to transport-related factors. Therefore the following characteristics were collected for each household:

- number of persons in household
- number of vehicles in household

[10] A low response rate can correspond with a low reliability of the data, when the persons not responding are having different mobility behaviour. One can analyse the relationship between non-response and the accuracy of the survey statistic. Due to low budget for the surveys in the CMB project this was not done in the course of this survey.

- annual vehicle kilometres travelled for the most-used car and bicycle
- parking place for the most-used car and bicycle
- availability and amount of transferable public transport (PT) season passes in household
- walking time to the next PT stop
- monthly household net income

2.4.2 Characteristics of persons

Descriptive characteristics (e.g. a person's stage in life) of the persons surveyed are a necessary requirement for the causal analysis of mobility behaviour. Therefore the following individual characteristics of all persons in the household were collected as differentiated as possible:

- age
- sex
- occupation and type of profession
- professional training
- possession of drivers license
- availability of household vehicle on test day
- normalcy of test day
- predominately-used public transport ticket
- walking time to most-used PT stations
- potential mobility limitations

In addition general characteristics regarding mobility on the test day were collected for each person in the household. Specifically this concerns the following:

- weather on test day
- person`s presence in the city

- whether the place of residence was left
- if applicable the reason for non-mobility
- if applicable the type and place of departure of the first trip

2.4.3 Trip characteristics

The specific values regarding the mobility behaviour of a person can be determined through the sequence and manner of all trips (changes of location). For this reason the following characteristics were gathered for each person and each trip:

- time of trip start
- trip purpose and destination
- mode of transport used (can be more than one)
- number of accompanying persons (from household and other persons)
- number of people in vehicle
- location and type of destination
- arrival time
- trip length

2.4.4 Questionnaire

Particulars regarding the questions and requirements for answers along with the layout of the written survey can be found in appendix 1.

2.5 FURTHER INTERVIEW MATERIALS

In all cities of the Central MeetBike survey – except Prešov – each household received a letter in preparation for the interview. It includes the following parts:

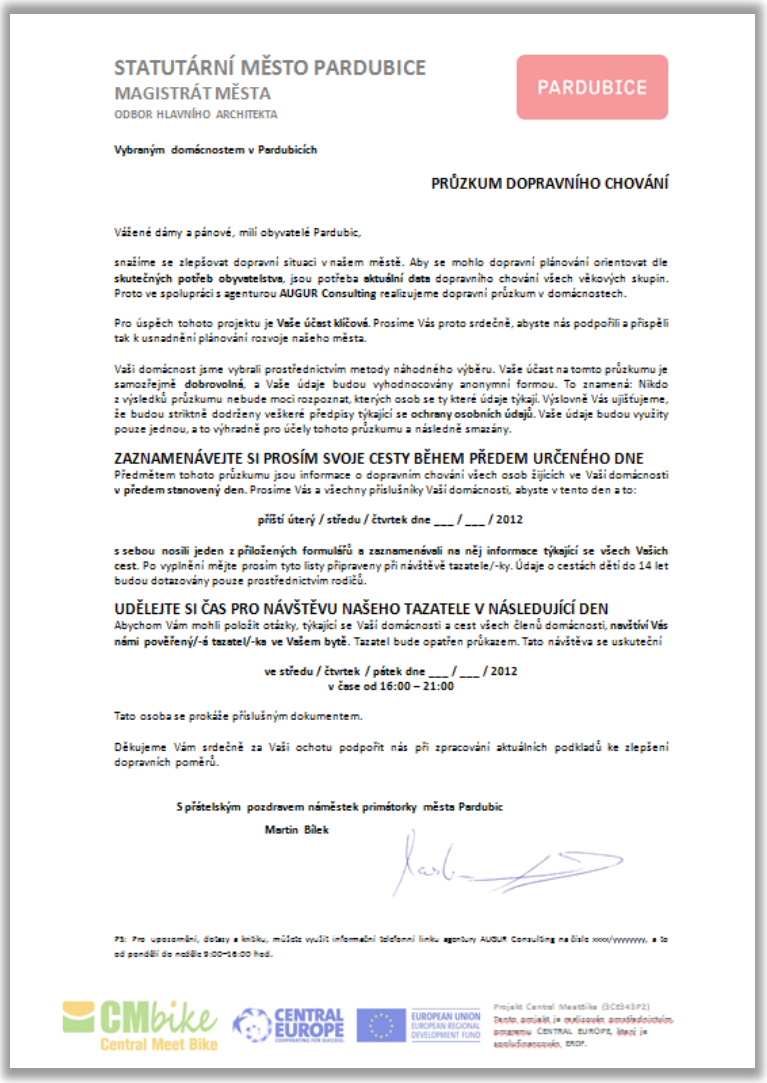
- Announcement letter (figure 3)
- Memory jogger (figure 4)

In Prešov, where there was no preliminary mailing of survey information, the survey was announced to residents through posters and informational pieces on the radio. So neither an announcement letter nor a memory jogger – as explained below – was sent out.

2.5.1 Announcement letter

The respective city or a representative of the city was in charge of mailing the letters. The accompanying letter was written by the cities while the TU Dresden ensured that the comparability was maintained. The announcement letter contains the following information (figure 3):

- information on the survey topic
- the exact date of the survey day
- instructions for filling out the memory jogger
- information and appointment for the home visit of the interviewer
- the number of the toll-free telephone hotline
- a thank you for their participation in the survey



STATUTÁRNÍ MĚSTO PARDUBICE
MAGISTRÁT MĚSTA
ODBOR HLAVNÍHO ARCHITEKTA

PARDUBICE

Vybraným domácnostem v Pardubicích

PRŮZKUM DOPRAVNÍHO CHOVÁNÍ

Vážené dámy a pánové, milí obyvatelé Pardubic,

snažíme se zlepšovat dopravní situaci v našem městě. Aby se mohlo dopravní plánování orientovat dle **skutečných potřeb obyvatelstva**, jsou potřeba **aktuální data** dopravního chování všech věkových skupin. Proto ve spolupráci s agenturou **AUGUR Consulting** realizujeme dopravní průzkum v domácnostech.

Pro úspěch tohoto projektu je **Vaše účast klíčová**. Prosíme Vás proto srdečně, abyste nás podpořili a přispěli tak k usnadnění plánování rozvoje našeho města.

Vaši domácnost jsme vybrali prostřednictvím metody náhodného výběru. Vaše účast na tomto průzkumu je samozřejmě **dobrovolná**, a Vaše údaje budou vyhodnocovány anonymní formou. To znamená: Nikdo z výsledků průzkumu nebude moci rozpoznat, kterých osob se ty které údaje týkají. Výslovně Vás ujišťujeme, že budou striktně dodrženy veškeré předpisy týkající se **ochrany osobních údajů**. Vaše údaje budou využity pouze jednou, a to výhradně pro účely tohoto průzkumu a následně smazány.

ZAZNAMENÁVEJTE SI PROSÍM SVOJE CESTY BĚHEM PŘEDEM URČENÉHO DNE
Předmětem tohoto průzkumu jsou informace o dopravním chování všech osob žijících ve Vaší domácnosti **v předem stanovený den**. Prosíme Vás a všechny příslušníky Vaší domácnosti, abyste v tento den a to:

příští úterý / středu / čtvrtek dne ___ / ___ / 2012

s sebou nosili jeden z přiložených formulářů a zaznamenávali na něj informace týkající se všech Vašich cest. Po vyplnění mějte prosím tyto listy připraveny při návštěvě tazatele/-ky. Údaje o cestách dětí do 14 let budou dotazovány pouze prostřednictvím rodičů.

UDĚLEJTE SI ČAS PRO NÁVŠTĚVU NAŠEHO TAZATELE V NÁSLEDUJÍCÍ DEN
Abychom Vám mohli položit otázky, týkající se Vaší domácnosti a cest všech členů domácnosti, **navštíví Vás námi pověřený/-á tazatel/-ka ve Vašem bytě**. Tazatel bude opatřen průkazem. Tato návštěva se uskuteční

ve středu / čtvrtek / pátek dne ___ / ___ / 2012
v čase od 16:00 – 21:00

Tato osoba se prokáže příslušným dokumentem.

Děkujeme Vám srdečně za Vaši ochotu podpořit nás při zpracování aktuálních podkladů ke zlepšení dopravních poměrů.

S přátelským pozdravem náměstek primátorky města Pardubic
Martin Bílek

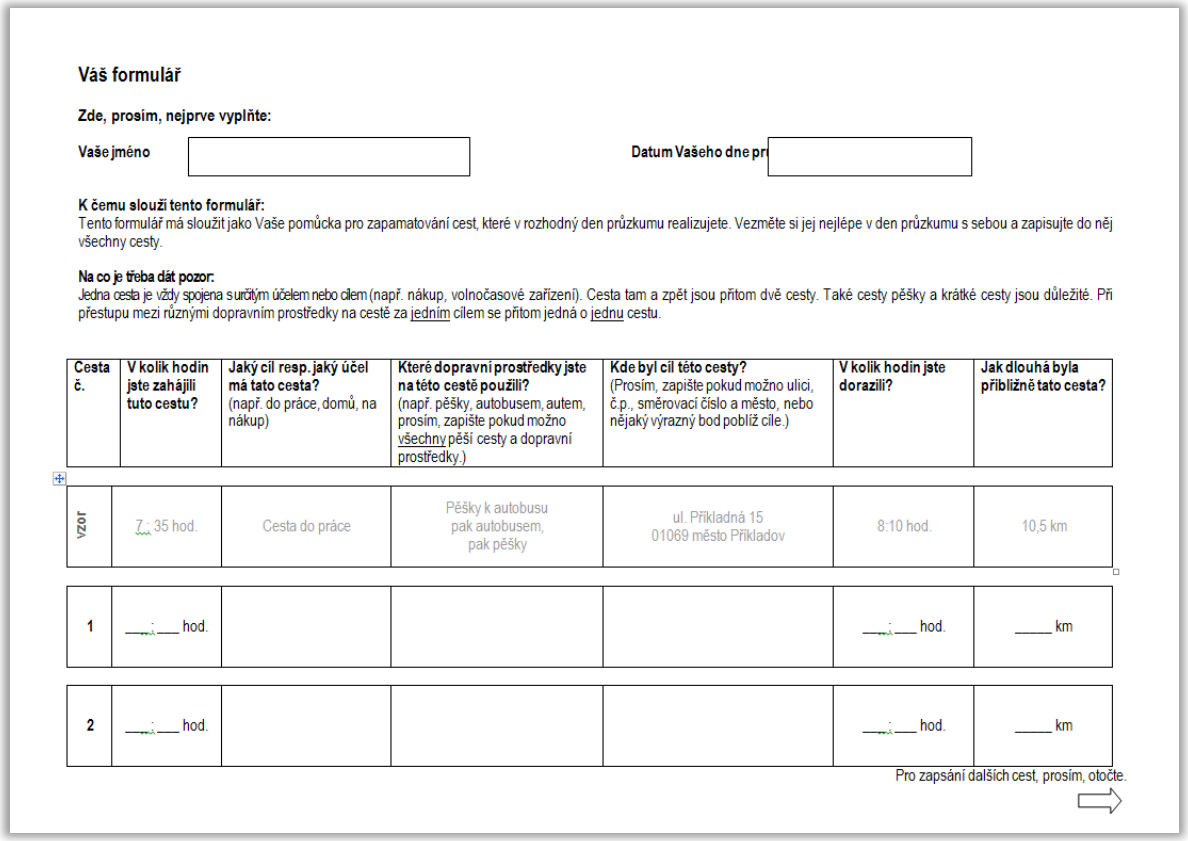
PS: Pro upozornění, dotazy a krátku, můžete využít informační telefonní linku agentury AUGUR Consulting na čísle xxxx/yyyyyy, a to od pondělí do neděle 9:00–16:00 hod.

CMbike Central Meet Bike
CENTRAL EUROPE COOPERATING FOR SUCCESS.
EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND
Projekt Central MeetBike (3CE343P2)
Tento projekt je realizován prostřednictvím programu CENTRAL EUROPE, který je spolufinancován ERDF.

Figure 3: Example of an announcement letter (Pardubice)

2.5.2 Memory jogger

Memory joggers help to make notes of the trips, which have to be recorded during the interviews on the next day (figure 4). These forms were sent to all households along with the announcement letter.



Váš formulář

Zde, prosím, nejprve vyplňte:

Vaše jméno **Datum Vašeho dne pr**

K čemu slouží tento formulář:
Tento formulář má sloužit jako Vaše pomůcka pro zapamatování cest, které v rozhodný den průzkumu realizujete. Vezměte si jej nejlépe v den průzkumu s sebou a zapisujte do něj všechny cesty.

Na co je třeba dát pozor:
Jedna cesta je vždy spojena určitým účelem nebo cílem (např. nákup, volnočasové zařízení). Cesta tam a zpět jsou přitom dvě cesty. Také cesty pěšky a krátké cesty jsou důležité. Při přestupu mezi různými dopravními prostředky na cestě za jedním cílem se přitom jedná o jednu cestu.

Cesta č.	V kolik hodin jste zahájili tuto cestu?	Jaký cíl resp. jaký účel má tato cesta? (např. do práce, domů, na nákup)	Které dopravní prostředky jste na této cestě použili? (např. pěšky, autobusem, autem, prosím, zapište pokud možno všechny pěší cesty a dopravní prostředky.)	Kde byl cíl této cesty? (Prosím, zapište pokud možno ulici, č.p., směrovací číslo a město, nebo nějaký výrazný bod poblíž cíle.)	V kolik hodin jste dorazili?	Jak dlouhá byla přibližně tato cesta?
vzor	7 : 35 hod.	Cesta do práce	Pěšky k autobusu pak autobusem, pak pěšky	ul. Příkladná 15 01069 město Příkladov	8:10 hod.	10,5 km
1	___ : ___ hod.				___ : ___ hod.	_____ km
2	___ : ___ hod.				___ : ___ hod.	_____ km

Pro zapsání dalších cest, prosím, otočte.

Figure 4: First page of Memory Jogger (Czech version)

3. IMPLEMENTATION OF THE SURVEY

3.1 SAMPLE CHARACTERISTICS AND DRAWING OF SAMPLE

3.1.1 Basics

The goal of the survey in each city is to reach a net survey of 1,000 persons. Therefore a random sampling had to be done as a first step. Depending on the availability of registers in the city, this random sample can be determined according to one of the following ways:

- drawing from a register of residents[11] (chapter 3.1.2)
- drawing from an address register[12] (chapter 3.1.3)
- using the random route method[13] (chapter 3.1.4)

In the course of the model method SrV the random sample is usually drawn from the register of residents. Thus every person independent from age, nationality and environment (city district, building structure) has the same probability to be drawn. This ensures that the sample is representative for these parameters of the population. Additionally the register of residents is usually easily available for the cities and contains all relevant information for sampling (for example name, age, address).

During the surveys of the Central MeetBike project this approach had to be changed, because not all the cities could provide such a register. Thus TU Dresden developed methods to draw a random sample also using two different ways (address register and random route).

If there was no register of inhabitants available, a register of addresses was used for random drawing. This register only provides the user with addresses of the particular city without any link to households at these addresses. Along with that come some problems to identify specific households, because a household is not equal to an address in e.g. multi apartment buildings. The solution of this problem is described in chapter 3.1.3.

[11] This is a database of registered inhabitants of the city. It contains each person as one dataset and (at least) his/her date of birth and address (chapter 3.1.2). This register usually is available at the statistical bureau of a city or at the civil registry office.

[12] This is a database including addresses that consists of street name, house number and city district (chapter 3.1.3). It may be available at the city administration or at municipal organisation such as local energy supplier.

[13] This is a method to identify households by walking through the city districts and choosing them respecting given rules (chapter 3.1.4).

In the city of Prešov neither a register of residents nor a register of addresses was available. In order to ensure that households were "drawn" randomly a third method was adopted: with the Random-Route-Method it is possible to randomly identify households while walking through the city. The method is described in chapter 3.1.4.

Table 3 shows which method was used in each Central MeetBike city.

City	Drawing from a register of residents (chapter 3.1.2)	Drawing from a register of addresses (chapter 3.1.3)	Random-Route method (chapter 3.1.4)
Gdańsk (PL)		X	
Tczew (PL)	X (planned)		
Pardubice (CZ)		X	
Uherské Hradiště (CZ)		X	
Žilina (SK)		X	
Prešov (SK)			X

Table 3: Method of drawing the sample in each city

TU Dresden supported the cities in putting together requirements for drawing a sample, which could be made available to the respective bureau for statistics or the company conducting the survey.

The goal is 1,000 surveyed individuals (n_{Net}[14]). The size of the sample population is determined based on experience gathered from earlier surveys. In larger cities 1,000 respondents are necessary when using a simple random sample in order to calculate the specific traffic volume for the entire city with 95 % confidence interval and a margin of error of +/- 4 % as well as for determining modal split (vehicle share) with a margin of error of +/- 2 percentage points. The sample size always is a compromise between accuracy and cost.

The sample size, relevant for drawing the sample, differs from the target size mentioned

[14] for definition see chapter 2.2.4

above. This is due to response deficiencies such as non-response or incomplete interviews. In order to counteract these discrepancies an oversized sample population (n_{Gross}[15]) was drawn so that, in the end, the number of usable interviews (n_{Net}) which could be analysed was about 1,000.

3.1.2 Drawing from register of residents

If a register of residents was available for the survey, drawing the sample from this register was the preferred method. This register lists all persons registered in the particular city with (at least) their date of birth and address.

The cities were able to choose between two methods of drawing the sample, both of which drew random samples.

- Method 1: Simple random sample: Each unit of the total population was assigned a random number. The total population was subsequently sorted according to the random number. Beginning with the first entry, all consecutive entries were selected until the required sample size was reached.

Population (not sorted)	
Number of person	Random number
1	0,24124007
2	0,04246308
3	0,27632941
4	0,18420375
5	0,99205507
6	0,49371558
7	0,61239002
8	0,11153661
9	0,54799921
10	0,60231511

Population (sorted by random number)	
Number of person	Random number
2	0,04246308
8	0,11153661
4	0,18420375
1	0,24124007
3	0,27632941
6	0,49371558
9	0,54799921
10	0,60231511
7	0,61239002
5	0,99205507

Table 4: Example how to identify 3 persons in a population of 10 persons with method 1

- Method 2: Random sample with fixed step size: The names in the register were sorted alphabetically by last name. Every i^{th} entry of the total population was selected for

[15] for definition see chapter 2.2.4

the sample, whereby "i" is the quotient of total number of residents and the required size of the selected sample.

The first method was to be preferred, because this method ensures unrestricted random sampling. However, if this was not technically possible, then the second method could be utilized. In both cases the resulting samples fulfilled the criterion that they are random. Both methods ensure that distribution of residents into districts of particular city and sociological parameters (for example age, sex) were respected, because each person had the same probability to be drawn.

It was a mayor goal of the survey to describe mobility behaviour of persons in a household context[16]. Therefore the sample of persons that was generated with the method described above, had to be transferred into a sample of households in a second step.

For this reason the address assigned to each person was defined as the address of a household. When sending survey documents, the household was contacted using the last name of the person drawn. Even if more than one person in a household was drawn, it was ensured that the household was entered only once into the household sample. Drawing persons and assigning households results in a PPS (Probability Proportional to Size) sample in which the probability of selection increases proportionally with household size. This effect is taken into account by applying weighting factors.

3.1.3 Drawing from register of addresses

If not a register of residents but an address register was available, the sample had to be won on this basis. In this case, the individual households (the decisive sampling unit) could not be drawn from the address register in a representative way, because several households can live in one building with the same address.

For this reasons, the sample drawing had to be carried out in multiple steps:

[16] Mobility behaviour of individual persons usually is a result of complex interactions of mobility decisions within the household. The availability of only one car for all household members and the necessity to accompany young children are only two examples of these household connected restrictions. Therefore households have been the analytical unit in German mobility surveys (for example "SrV-Mobility in towns") since more than 40 years (Hubrich/ Wittwer, 2011, p.2).

1) A number of addresses from the address register had to be calculated randomly (methods see chapter 3.1.2) for each city district separately.
2) Interviewers were then tasked with counting the number of households at each address drawn in step 1 and noting the names of the households in a field journal. The number of households per address then defines the address type (e.g. “Building with 5 flats”).
3) Distribution of address types was calculated for each district in the city.
4) A register including the following columns was prepared: city district, address, address type, household name.
5) Random drawing of households was done from the register prepared in step 4. It accounted for the distribution of address types in the district[17].

In the end there was a database available that includes not only addresses, but also corresponding names of households. Therefore preparatory survey documents could then be sent to selected households before the actual interviewing took place (see chapter 3.2 and after).

3.1.4 Drawing by “Random Route Method”

In Prešov there was neither a residential nor an address register available. Therefore the Random Route Method was used. The sample households selected using this method likewise fulfil the criterion for a random sample and are therefore representative for the entire city. In the course of the Random Route Method the sampling is done by staff walking through the city and collecting households following specific instructions (see descriptions below). In order to reduce costs by not sending out the staff twice for sampling and implementation of interviews, these two processes were combined into one process in Prešov.

The following steps had to be completed:

1. Calculating the net sample per district and week

The target sample size is divided amongst districts based on residential distribution and divided equally throughout the duration of the fieldwork.

[17] It was assumed that the type of the building has an influence on the mobility behaviour of the residents, because larger buildings are usually better connected to public transport systems, whereas single-family houses are not. Therefore it was necessary to interview households from each address type.

This sample is distributed across a total of 30 districts in the city of Prešov. The proportional number of residents for a district (i) was calculated as follows:

$$n_{Net,i} = n_{Net} \times \frac{residents_i}{residents}$$

The results for $n_{net,i}$ are rounded up to the next whole number.

2. Determining the start address

The interviewer receives a street name and house number in a district as a random starting point. Specified walking instructions were then given to the interviewers, which had to be respected while identifying the random households for the interviews.

The random choice of the starting address was based on a street directory. If a street directory was not available then one had to be created. The street directory had to contain the following information: street name, range of addresses and the district in which the street is located. If a street ran through multiple districts then a district could be matched to a section of street by means of the addresses. The directory was subsequently sorted by district.

The number of required starting addresses n_{Adr} was determined by the number of interviewers and survey days per district. Starting streets were chosen from the list of streets per district using a random selection process. The starting house numbers were then determined using random numbers. If a generated house number did not exist or was not in the district then the process was to be continued until an appropriate random number was generated.

3. Preparing the work schedule

Work schedules were completed based on the calculated net sample size per district and survey day. For interviews the time period from 4:00pm to 7:00pm (three hours) was available per interview day.

4. Carrying out the interviews

The interviews were carried out according to the general rules described in chapters 3.2.3 and 3.2.4. In the case of sampling using the random route method the interviewers were instructed to determine their walking route according to the description below[18]:

Street side: The interviewer walks along the side of the street on which the starting address is found.

Walking direction: If the starting house number is even, then the walking direction is ascending. If the starting house number is odd, then the walking direction is descending.

Increment: Every third household is stopped at. For single-family homes this means every third house, for multi-family buildings every third doorbell, in which case, the interviewer begins counting from left to right and top to bottom. Empty houses or doorbells with no name have to be counted. Non-private houses and doorbells are skipped. Households which have already been interviewed are not counted.

Change in direction and behaviour at intersections: At intersections the interviewer turns right on even days and left on odd days. If the required turn is not possible at a three-way intersection, then the interviewer continues walking straight.

New start after completing a street section: If a street section is completed without the interviewer having come to an intersection he or she returns to the last intersection and turns right on even days and left on odd days. At a three-way intersection the interviewer turns onto the street which branches off.

3.2 IMPLEMENTATION OF INTERVIEWS

3.2.1 Overview

In the survey “Mobility in Towns” (SrV), the standard means of collecting information is via telephone, mail or through an online questionnaire. Deviating from this, a face-to-face meth-

[18] Based on methods from Hoffmeyer-Zlotnik (2006, p.21), adapted to the given circumstances.

od was chosen for the Central MeetBike project in agreement with the project partners and with consideration for local factors. In this case the interviewer goes directly to the selected households in order to conduct the survey. Experience has shown that the quality of answers with this method is very high. In order to reach as many households as possible while they are at home, it is important to choose an appropriate time window for the survey. In coordination with the city of Uherské Hradiště, the time from 4:00p.m. to 8:00p.m. was determined to be particularly suitable.

3.2.2 Mailing of survey documents

In a face-to-face survey the complete questionnaire documents are not mailed. However, all households in every city participating – except in Prešov – received notice of the survey via mail. The respective test day was noted on the written announcement. Each household received information on data privacy with the written notice as well as a memory jogger for filling in information about trips of the test day. The interview always took place on the day following the travel day.

In Prešov, where the process of sampling and implementation of interviews was combined into one process, there was no preliminary mailing of survey information. The survey was announced to residents through posters and informational pieces on the radio. Households received privacy information directly from the interviewers. As in the other cities the interviews always took place on the day after the travel day.

3.2.3 Training of interviewers

Each interviewer was made familiar with the requirements of the interview during a training session that was implemented by the city or the data collection bureau. Training materials and guidelines were provided by TU Dresden. The following areas made up the training:

- general instructions on carrying out the interviews

- instructions on completing the questionnaires
- instructions on keeping the field journal
- handing out of the surveyor identification
- introductions for determining the walking route (only in case of Random-Route procedure)

The following information was given to the interviewer:

- documents from the interview training
- target number of respondents on interview day
- blank questionnaires
- interview field journal
- list of people already questioned (only in case of Random-Route procedure)
- starting address (only in case of Random-Route procedure)
- walking instructions (only in case of Random-Route procedure)

3.2.4 Face-to-face survey

Only households for which data was collected in full came into consideration for the final data analysis[19]. Information regarding households and persons was only to be given by persons of legal age. Answers for persons up to and including 17 years of age were given by a representative (e.g. parent or guardian). Information regarding trips was directly, i.e. personally, enquired only of persons over 14 years of age. For younger household members a representative could answer the questions. If a person who was to be questioned personally was not able to be reached on the survey day, a new interview appointment was to be made for this person. When possible, the appointment was rescheduled for within the same week. If that was not possible, a representative could answer the questions, if he or she was able to ensure that complete and correct answers would be given.

The interviews were carried out on each of the days following the test day (i.e. Wednesday, Thursday and Friday) between 4:00pm and 8:00pm. As soon as the interviewer reached his

[19] This regulation exists due to the aim to picture complex interactions in mobility behaviour of individuals in their household. Furthermore there is a risk to regularly miss persons with special mobility behaviour during the interviews (e.g. father of family with long working times). This might influence the results systematically.

or her target (number of respondents on interview day) the interviews were able to be ended for that day. If the target of interviewed persons per day was reached, but there still was a part of a household to be interviewed, the interviewer had to finish interviewing the entire household before ending the interview day.

3.2.5 Monitoring of field time

The progress of the interviews was continually and randomly monitored during the fieldwork in order to verify the correctness of the assumptions made and to check whether or not the interview procedures were observed. Adjustments to the work schedules were to be made in the case of any deviations (higher or lower response rates[20]), for which purpose the interviewer was to keep a field journal.

Evaluating the field journals helped the data collection office to adjust the work schedules of interviewer or target number of interviews per day according to actual response rates during the survey period. Additionally, the list of households, which have already been interviewed, was prepared based on the journals.

3.2.6 Computer data input

The questionnaires were fed into a computer-based databank according to guidelines from the TU Dresden and the journals were evaluated. The results of the journal evaluation made it possible to control the data collection on short notice.

3.2.7 Reminder activities

Reminders were not planned for the face-to-face surveys. If test persons were not reached, the household was contacted again on the following day at a different time. If a third visit to a household was without success, the interviewer had to later question a replacement household.

[20] see definitions chapter 2.2.4

3.2.8 Information, accompanying public relations

Public relations were coordinated by the cities. The TU Dresden did not provide any guidelines for this issue. In the city of Uherské Hradiště residents were informed about the survey through the announcement letter, articles in newsletters, magazines and on the internet as well as radio spots.

3.3 DATA ANALYSIS

3.3.1 Data preparation

The completed questionnaires and field journals were forwarded to the data collection office by the interviewers. The questionnaires were entered into a computer-supported database according to guidelines from the TU Dresden. The interviewers‘ field journals were analysed, the results were used to react to false assumptions (e.g. length of interview) and to guide the collection of data.

The database of digitised questionnaires was submitted to the TU Dresden for initial analysis. As part of the initial review of the raw data, the consistency of the three survey levels – household, person and trip – amongst each other was checked. It was additionally checked whether all mandatory questions were answered. In the case that problems should arise at this stage, the data collection office had the opportunity to make corrections to the database.

Studies involving data collection are inherently subject to various influences on the margin of error. As part of the data preparation, the effects of

Survey Collection Errors (knowingly or unknowingly providing false information when filling out questionnaires or during a telephone interview) and

Data Processing Errors (input and output errors, mistakes in programming, equations or tabulating)

need to be minimized. Data preparation serves the goal of providing consistent and credible data for evaluation. This ensures the quality of study results.

As part of the data preparation, not credible (i.e. inconsistent, unusual or missing) information was manually identified. In doing so, to the following key points particular attention was given to:

- Is there information, for each household, on the household, on all persons and on trips?
- Are there missing answers to individual questions?
- Have the ranges of values in the response fields been complied with? Of concern are not only logical associations (e.g. an unusually high number of bicycles in the household) but also specifications such as how, for example, a refused answer is to be coded by the surveying institute.
- Are the given answers compatible with each other (e.g. age of interviewed person and possession of driving license)?
- Is the stated destination really located within or outside of the place of residence? Survey participants had the opportunity to specify their trip destination. This information was optional, however afterwards it was possible to examine the categorisation of the trip according to spatial characteristics (internal traffic, originating traffic, destination traffic).
- Does the trip numbering correspond to the start and end times of the individual trips?

In processing potentially not credible data the following three options were available:

- correction of individual characteristics
- removal, addition or adjustment of trips
- acceptance as unusual but allowable data

The correction of characteristics and the removal, addition or adjustment of trips only took place if the relevant changes were able to be derived from the context of the household (and only then).

3.3.2 Weighting of data

The objective of weighting the data is to correct for or minimise the systematic bias in the sample. Factors were thus developed, which were put to use in all analyses. The factors were the result of a comparison of various distributions in the base population and the sample. Information about the base population was provided by the cities.

Accordingly, survey data was weighted at the level of persons with regard to the following explanatory variables:

- distribution of number of inhabitants in city districts
- age distribution
- distribution according to sex

Since there was no information about distribution of household size in the cities taking part in the survey – except the city of Pardubice – no weighting for this specific parameter was done (which is equal to weighting factor 1 for every household). However, weighting according to household size is the standard used in the model survey SrV. Therefore households were weighted in the city of Pardubice where the required information was available.

4 RESULTS IN TABLES AND DIAGRAMS

Using the methodology described in the previous chapters, an extensive data set was created containing mobility-related information concerning households, persons and trips for the city of Uherské Hradiště. On the following pages, tables and diagrams describing the travel behaviour of Uherské Hradiště residents have been put together based upon methods used in the SrV.

The results will be discussed with respect to results from other Central MeetBike cities[21].For several parameters the authors also provide a comparison to data collected during the SrV 2008 in Germany. This comparison serves to place the results from the CMB survey into context. In addition, the results from the SrV 2008 provide several indications of potential development paths for mobility in the Central MeetBike cities. The affluence and demographics of the Czech Republic, Poland and Slovakia are increasingly conforming to western European countries and mobility behaviour is experiencing lasting change. As a result, the comparative data from Germany take on relevance for transport planning in other Central European countries.

The results of the survey in Uherské Hradiště on the following pages are presented in four chapters:

4.1 Characteristics of the survey implementation and the sample
4.2 Household and vehicle-specific parameters
4.3 Mobility related facts about persons
4.4 Characteristics of trips

[21] Unfortunately survey in the Polish city of Tczew was not finished by the finalisation of this report. Therefore there is no comparison to results from Tczew available.

4.1 CHARACTERISTICS OF THE SURVEY IMPLEMENTATION AND THE SAMPLE

4.1.1 Parameters of the survey

Field Time	04.04.2012 - 31.05.2012
Response	55%
Households interviewed	424*
Persons interviewed	1215*
Trips gathered	2572*

* number may vary from number in diagrams on next pages due to selection of particular households/persons/trips

Table 5: Parameters of the survey implementation

Table 5 shows general characteristics of the survey in Uherské Hradiště. These are important for interpretation and comparison of the results. The survey was implemented in April and May 2012. This period was chosen because previous surveys implemented by the TU Dresden showed that mobility behaviour during this period (along with a period in autumn (September – November)) can be seen as representative for the whole year. Therefore, results of this survey represent mobility behaviour of Uherské Hradiště inhabitants on a normal working day (Tuesday – Thursday) for the whole year, which means these are mean values of winter and summer.

During implementation of the survey more than 1.000 persons were interviewed in Uherské Hradiště. This ensures statistical reliability for the results[22]. When more specific and complex combinations of parameters were analysed on demand of project partners (e.g. modal split based on trip length) reliability suffers. To what extent is indicated in the following chapters.

[22] See chapter 3.1.1 for more information

4.1.2 Sample structure according to age and sex

Sample structure				Official city statistics
Age	Male	Female	All persons	All persons
0 - 17 years	16%	18%	17%	19%
18 - 44 years	37%	36%	36%	37%
45 - 64 years	29%	27%	28%	27%
65 years and older	18%	19%	19%	17%
	573 Persons	631 Persons	1204 Persons	25.454 Persons

Table 6: Sample structure according to age and sex

Table 6 compares sample structure and official city statistics according to age. Unfortunately the official age statistics of Uherské Hradiště were not available for smaller groups. However, a comparison of age structure between the sample and the population shows very good conformability between both groups. Thus there should be no influences on the results from an unrepresentative age structure of the sample.

In comparison to German cities it is noticeable that there are many more children and teenagers under the age of 18 in the Uherské Hradiště sample (Germany: 9,8%[23]). In contrast the share of elderly people above 65 years is higher in German cities (Germany: 22,3%[24]).

[23] Ahrens et al., 2009, Table 3.1

[24] ibidem

4.1.3 Sample structure according to occupation and sex

Uherské Hradiště			
Occupation	Male	Female	All Persons
not employed (unemployed, retiree, small children)	29%	35%	32%
employed (full time, part time)	52%	43%	47%
education (pupil, student, trainee)	19%	22%	21%
	566 Persons	627 Persons	1193 Persons

German cities *			
Occupation	Male	Female	All Persons
not employed (unemployed, retiree, small children)	36%	42%	39%
employed (full time, part time)	46%	40%	43%
education (pupil, student, trainee)	18%	18%	18%
	8.190 Persons	8.710 Persons	16.900 Persons

* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Table 7: Sample structure according to occupation and sex

Table 7 compares the sample structure according to occupation and sex in Uherské Hradiště and in East German cities. Unfortunately there were no official statistics about occupation of Uherské Hradiště inhabitants available. Thus it cannot be validated if the sample structure fully represents the population according to occupation. However, there is a hint that there are no influences to be expected: The sample structure according to occupation fits with the results of the sample structure based on age group. The group of persons in education corresponds with the – compared to German cities – high share of persons under 18 years of age.

In German cities, analysed with SrV 2008, 18% of all persons questioned were in education, which is lower than in Uherské Hradiště. Additionally the share of persons not employed is lower than in German cities (Germany: 39%), due to the smaller number of retirees and unemployed persons in the Uherské Hradiště sample.

4.1.4 Sample structure according to household size

Household size	Uherské Hradiště	German cities*
1 Person	15%	47%
2 Persons	32%	33%
3 Persons	21%	13%
4 Persons	22%	7%
5 and more Persons	10%	
Average Household size in sample	2,87	1,82

* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Table 8: Sample structure according to household size

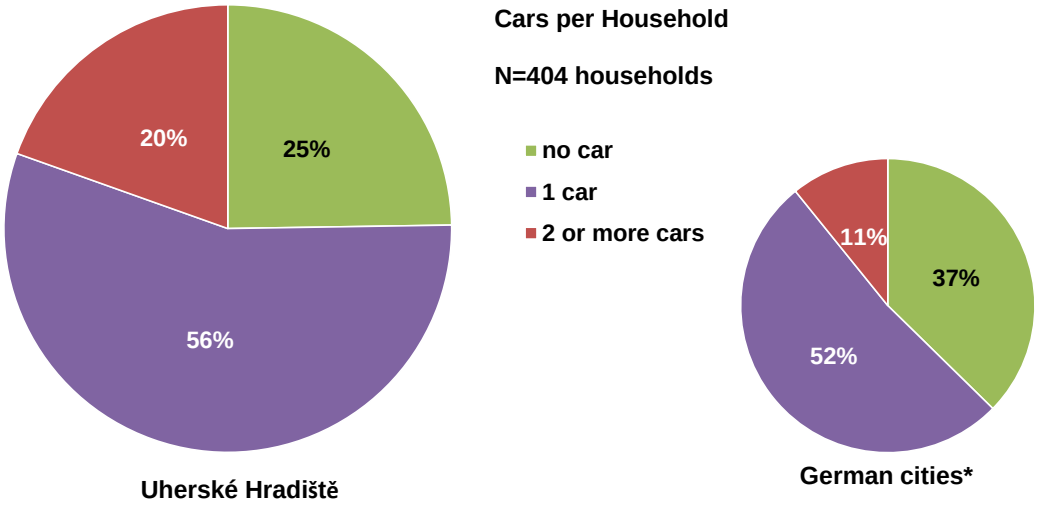
Table 8 indicates the sample structure according to household size in Uherské Hradiště and East German cities. There was no information available to validate whether the sample structure in Uherské Hradiště is representative also in respect of household size. However, since every household has the same probability to be drawn from the register of addresses, there should not be any major influences.

A comparison of the distribution of household size of the sample in Uherské Hradiště and German cities shows significant differences. The share of 1-person-households in German cities is approximately 3 times higher than in Uherské Hradiště. By contrast approx. one third of all households in the sample of Uherské Hradiště have more than 4 members. In German cities this number is much lower (7%).

A comparison of household size in cities, which were surveyed in Central MeetBike and in cities from Germany, reveals similar results for all CMB cities. Households still generally seem to be bigger in the surveyed cities from Czech Republic, Slovakia and Poland. But also here the trend towards smaller households can be expected.

4.2 HOUSEHOLD AND VEHICLE-SPECIFIC PARAMETERS

4.2.1 Household-specific parameters



* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Figure 5: Motorisation with cars of households

One quarter of all households do not own a car in Uherské Hradiště, while in Germany this number is much higher. In contrast to motorisation of persons, the availability of a car on household level is higher in Uherské Hradiště than in German cities. This is mainly due to the larger size of households in Uherské Hradiště.

Among the partner cities of the Central MeetBike survey, only the city of Gdańsk has a larger number of households without a car (46%) than in German cities. This might be mainly influenced by the fact that Gdańsk is the largest of all cities surveyed with the highest share of 1-person-households among all Polish, Czech and Slovak Central MeetBike cities. In all remaining cities this share of households without a car is about 24-31%, which is much lower than in German cities.

Household income	Cars per 1000 households	Number of households in sample*
below 21.799 CZK	143	21
21.800 - 36.399 CZK	729	59
36.400 - 48.499 CZK	1015	68
48.500 - 62.999 CZK	1310	29
63.000 - 87.299 CZK	1231	13
87.300 CZK and more	1714	7

* for groups with less than 30 households these numbers are not significant
A comparison with German cities is not possible, because SrV uses different household income classes.

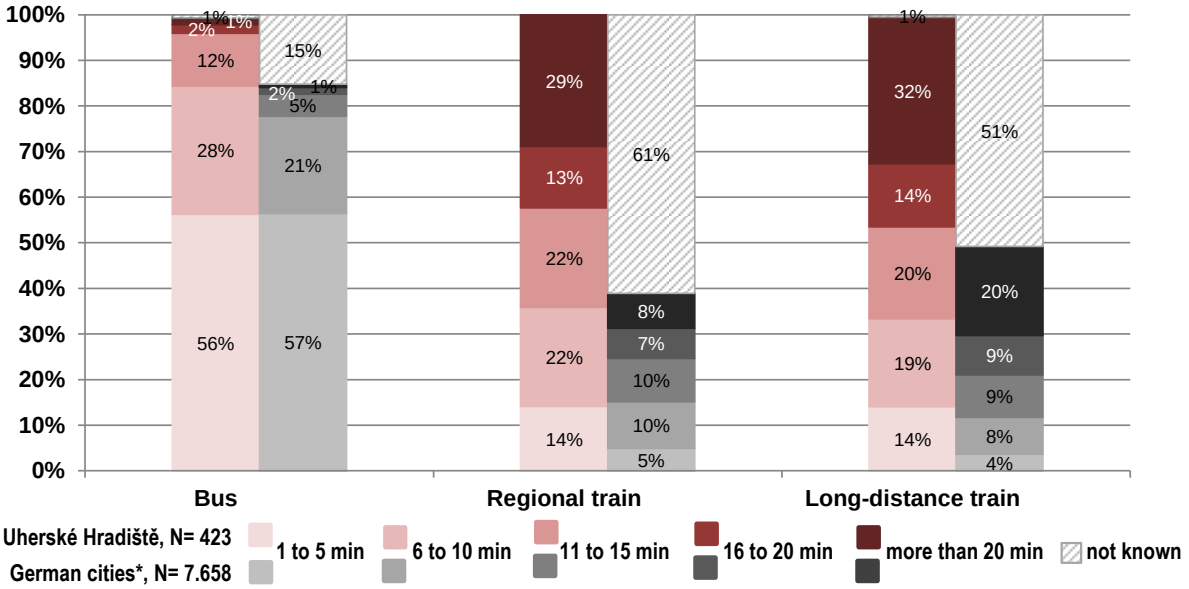
Table 9: Motorisation of households and household income

Table 9 shows the number of cars that are available per 1.000 households in different household income classes. Households with more than approx. 36.000 CZK monthly household incomes usually have one car available. 41% of all households of the sample had less than 36.000 CZK available per month.

Figure 6 (next page) compares walking time from households to the closest public transport stop in Uherské Hradiště and in German cities.

The city of Uherské Hradiště is well developed with public transport. 56% of all inhabitants live within a 5 minute walking distance to the next bus stop. 15% have to walk longer than 10 minutes.

In comparison to results from Germany it can be stated that the share of people that do not know where the next public transport stop is located, is very low. Inhabitants of Uherské Hradiště seem to be better informed about their public transport system. This can also be interpreted as a hint that they are more accustomed to the use of their public transport system.



* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Figure 6: Walking time to public transport stop that is closest one from household

4.2.2 Parameters describing use of vehicles

Parameter	Uherské Hradiště	German cities*	Unit
average number of persons in cars	1,3	1,3	persons/car
average annual distance travelled by most used car of household (2010)	15.761	13.800	km/year,car
average annual distance travelled by most used bicycle of household (2010)	1148	not analysed	km/year,bicycle

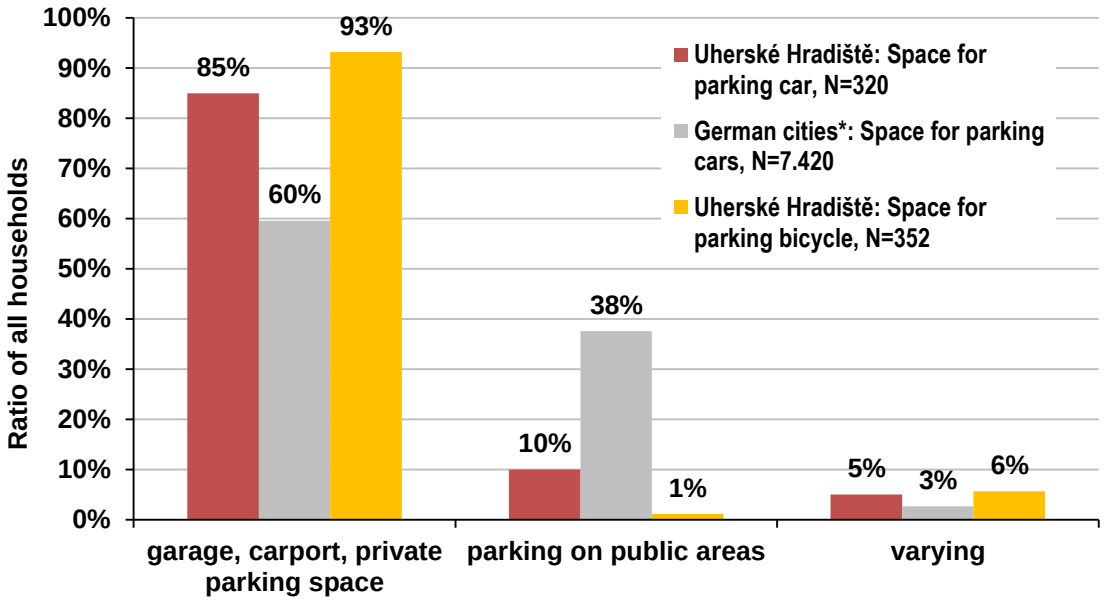
* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions.

Table 10: Basic parameters of vehicle use

Table 10 shows basic parameters to describe the use of vehicles in Uherské Hradiště and in German cities. It can be stated that there is no major difference between car use in German cities and Uherské Hradiště. As for bicycle use comparison is not possible, because annual kilometres ridden by bicycle were not analysed in SrV.

In comparison of all cities surveyed in Central MeetBike it became clear that the amount of kilometres ridden by bike significantly increases with increasing modal split of cycling. The annual distance travelled by bicycle ranges from approx. 500km in Žilina to 1.650km in Pardubice.

Figure 7 shows where inhabitants of Uherské Hradiště usually park their car or bicycle at their place of residence in comparison to East German cities. The results for parking the car differ significantly between both surveys, because it is much less common to park one's car on public areas in Uherské Hradiště than in German cities. It can be stated that it is also very uncommon to park bicycles on public areas in the surrounding of one's place of residence. Private storing possibilities such as a cellar are used for almost every bicycle. This result for bicycles can be observed in other cities surveyed in Central MeetBike as well.



* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.
** Parking space for bicycles was not analysed in SrV

Figure 7: Space for parking vehicles at place of residence

4.3 MOBILITY RELATED FACTS ABOUT PERSONS

Parameter	Uherské Hradiště	German cities**	Unit
Number of trips per person and day (all persons)	2,12	3,10	trips/day
Share of persons with trips*	74%	88%	
Number of trips per person and day (persons with trips)	3,03	3,50	trips/day
daily kilometres travelled	21,8	19,2	km/person,day
average time used for all trips per day	59,5	63,2	min/person,day

* Persons have not necessarily had trips on the test day. This number indicates how many persons did have trips on the test day.
** German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions.

Table 11: Basic parameters of mobility behaviour of inhabitants

Table 11 compares basic parameters of mobility behaviour of inhabitants of Uherské Hradiště and from East German cities. Every person that had a trip on the test day reported 3,0 trips as an average for the whole. This means that a person that left from home (e.g. to work) usually did one additional trip (e.g. shopping) before returning home. However, 3,0 trips per person and day is significantly lower than in East German cities. Therefore it can be assumed that some trips might have not been reported during the interviews. But since similar results also occur in other Central MeetBike cities (see graph below), the small number of trips per day might also be caused by cultural differences between Germany and other Central European countries (e.g. fewer leisure trips on a normal working day, see chapter 4.4.2). In comparison the other Central MeetBike cities, the number of trips per person and day is relatively high (see Figure 8, next page).

Additionally it is worth mentioning that the share of persons without any trips on the test day was the highest among all cities surveyed. One of four persons had no trips on the test day in Uherské Hradiště, whereas this share is usually about one out of eight to ten.

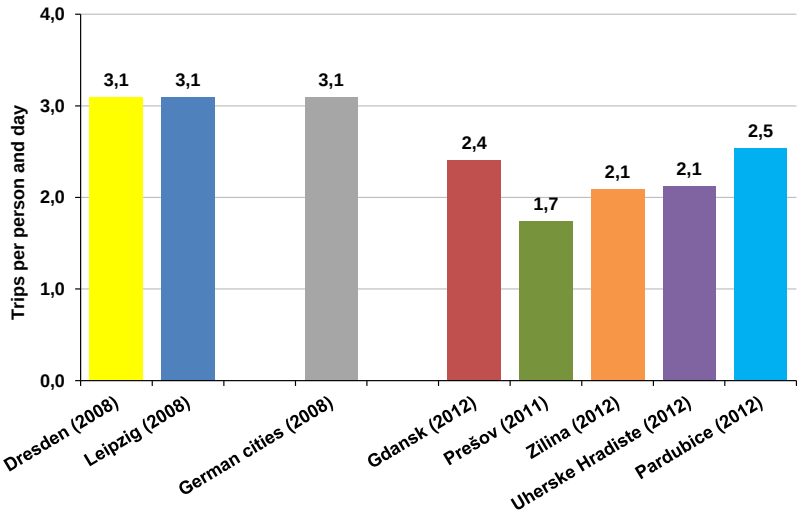
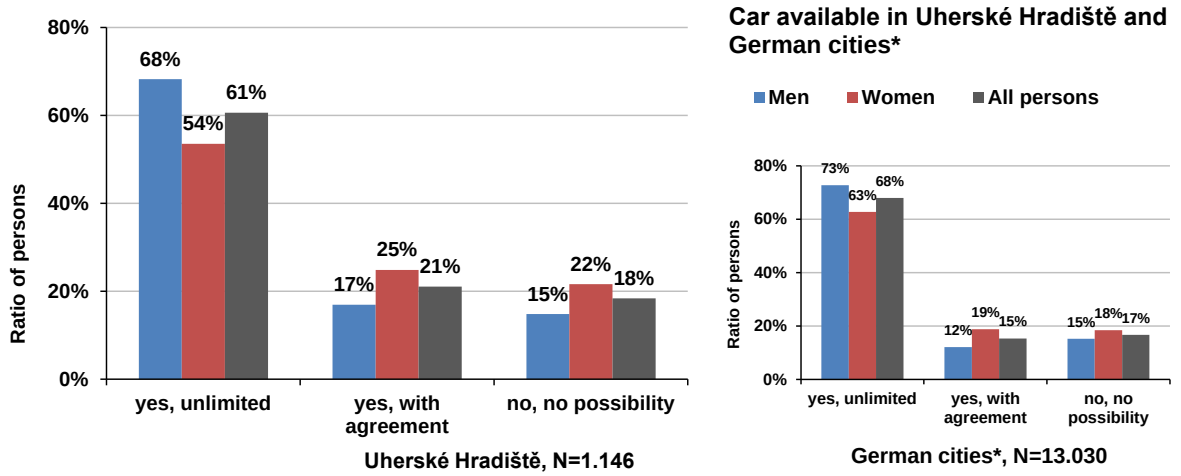


Figure 8: Number of trips per day in German cities and Central MeetBike cities

Car availability is an important factor for individuals in their transport mode choice. Studies have shown that persons that do have a car available make significantly more trips by car than those without permanent access to a private car[25]. In the course of the survey two relevant factors have been analysed:

Method 1: Direct question about availability of a private car at the test day: Persons interviewed could choose from three categories: „yes, unlimited“, „yes, with agreement“ and “no, no possibility”. This results in a subjective assessment of unlimited access to a private car of each individual. Figure 9 shows results of this analysis.

[25] Ahrens et al., 2013, S.66



* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Figure 9: Availability of car on test day - method 1

The availability of a car for inhabitants of Uherské Hradiště only differs slightly from German cities. The share of persons without access to a car on the test days is very similar in Uherské Hradiště and German cities. On the other hand the share of persons that had to make an agreement is a little bit higher, which points to a higher use of one vehicle by multiple persons in comparison to Germany. The situation with access to cars in the other Central MeetBike cities – except Prešov and Gdańsk – is, very similar to Uherské Hradiště and much more comparable to German cities. In Prešov and Gdańsk there are many more persons without access to a car on the particular test day.

Method 2: General access to a private car: In order to categorise inhabitants of a city it is relevant to differentiate between those who generally have access to a car and those who don't. General access to a private car was not asked directly in the questionnaire, but it could be analysed from the database afterwards. A person generally has access to a private car, if there is a private car at the household and if the person has a drivers licence. Figure 10 shows the result of the analysis.

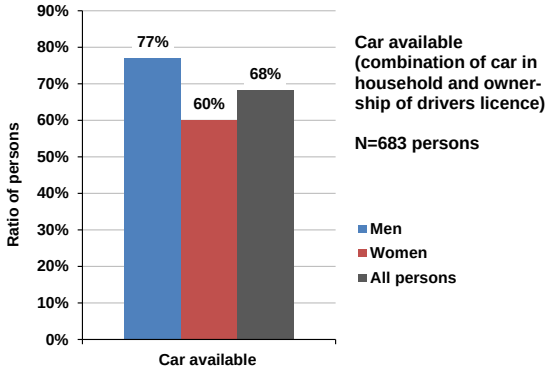


Figure 10: Availability of a car on test day - method 2

According to the definition of general access to a private car given on the last page, 68% of all inhabitants of Uherské Hradiště do generally have a car available for their daily trips. This is much more in comparison to the 57% surveyed in East German cities in 2008. Figure 9 shows that from these 68% in Uherské Hradiště approx. 34% can only use the car with an agreement with other users of the car (e.g. other household members).

Figure 11 shows possession of drivers licence for male and female persons of different ages. As in East German cities, fewer women have a drivers licence in Uherské Hradiště. However, in younger age classes below 45 years of age this slowly levels. In the Slovak city of Prešov rate of possession of drivers licence is the lowest among all Central MeetBike cities.

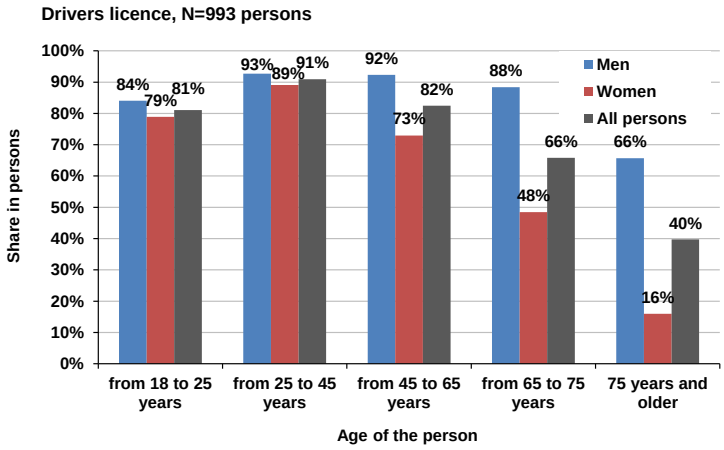
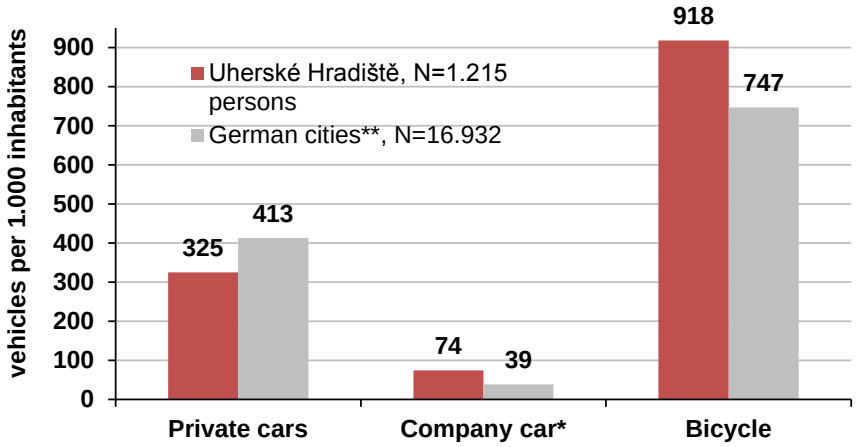


Figure 11: Possession of drivers licence according to age and sex

Figure 12 compares motorisation of inhabitants in Uherské Hradiště and in German cities. With 325 private cars per 1.000 inhabitants the motorisation for private cars is lower in Uherské Hradiště as compared to German cities. This is especially notable, because such a low level of motorisation was surveyed in Germany only in the capital of Berlin. According to experiences from German mobility surveys the motorisation is increasing in cities, while the number of inhabitants is decreasing. Therefore one would expect a higher motorisation in Uherské Hradiště. Low motorisation presents a favourable basis for sustainable mobility behaviour, because people without cars make significantly shorter trips and fewer trips by car[26].

At the same time the inhabitants of Uherské Hradiště seem to be well equipped with bicycles. The number of bicycles per 1.000 inhabitants is 23% higher compared to German cities.



* Campany cars are vehicles that are available at households also for private trips, but they are owned by companies

** German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Figure 12: Motorisation of inhabitants with cars and bicycles

After the political change in 1990, motorisation in East German cities doubled from about 200 to 400 cars per 1.000 inhabitants until 1998. Later, increase was only marginal. In Germany, the highest values of motorisation can be found in the countryside and in small cities. In Berlin the lowest motorisation was observed. It can be concluded that also in Uherské Hradiště motorisation will grow further.

[26] Ahrens et al., 2013, S.66

However, low motorisation is favourable for environmental reasons. People without cars make significantly shorter trips and fewer trips by car and therefore cause less pollution and CO_2 emissions[27].

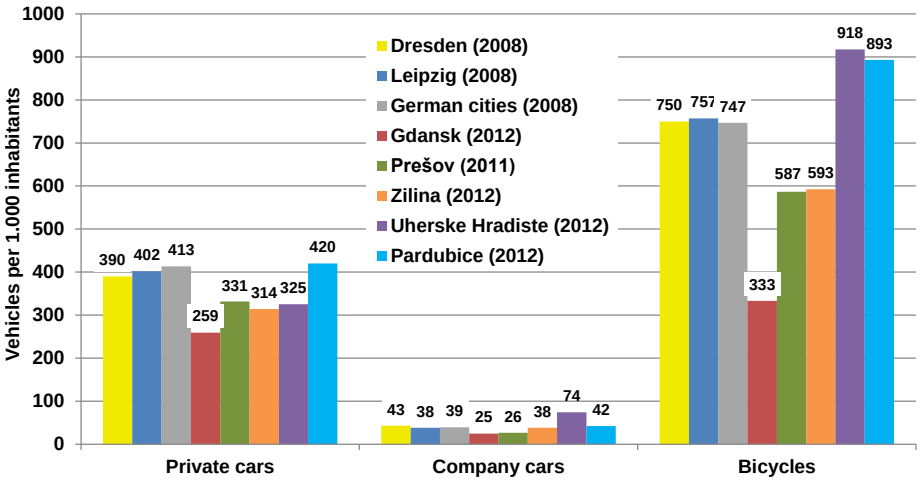


Figure 13: Motorisation of inhabitants with cars and bicycles in CMB and SrV cities

In comparison to other Central MeetBike cities, Uherské Hradiště has an average motorisation. With approx. 400 cars/1.000 inhabitants (private and company cars) this number is 12% lower than in German cities.

Gdańsk showed exceptionally low rates of motorisation both for cars and for bicycles. In contrast, Czech cities showed very high rates of bicycles per 1.000 inhabitants and the city of Pardubice also had a motorisation rate that was on the same level as German cities.

Due to the still lower motorisation rates, share of trips done by car in Uherské Hradiště is lower than in Germany (see chapter 4.4). However, it can be expected that car ownership might increase during the next years. With this, problems of space consumption for streets and car parking, emissions and accidents will increase as well. Whether this development is desired has to be discussed and decided in the partner cities.

[27] Ahrens et al., 2013, S.66

4.4 CHARACTERISTICS OF TRIPS

Parameter	Uherské Hradiště	German cities*	Unit
average duration of all trips	18,5	21,5	min/trip
average duration of all trips within the city	15,2	19,0	min/trip
average length of all trips	5,7	6,5	km/trip
average length of all trips within the city	2,3	4,2	km/trip

* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions.

Table 12: Duration and length of trips by inhabitants

Table 12 compares duration and length of trips in Uherské Hradiště and in East German cities. Trips are shorter in distance and time in Uherské Hradiště than in East German cities.

4.4.1 Modal split by inhabitants

Modal split of trips is the most common indicator to describe the mobility behaviour. In the course of this survey modal split was analysed for all trips by inhabitants (Figure 14) and for all trips within the city boundaries by inhabitants (Figure 16).

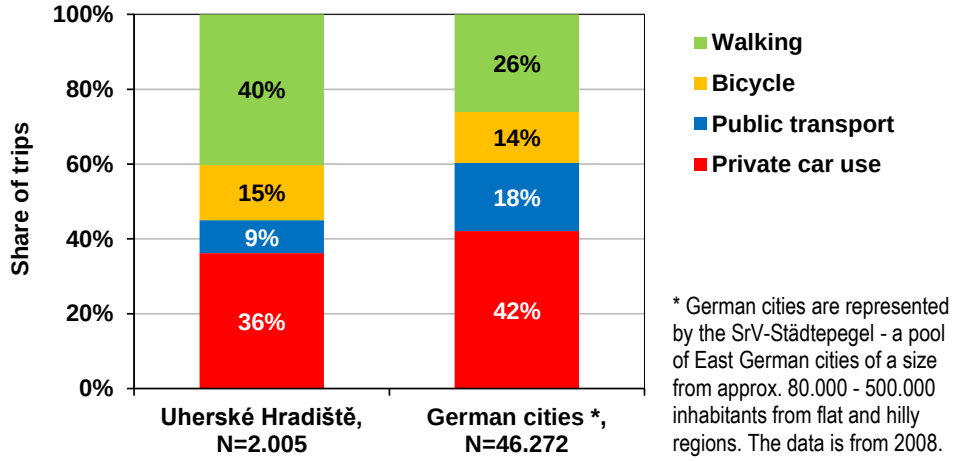


Figure 14: Modal split of all trips by inhabitants

Figure 14 indicates the modal split of all trips done by inhabitants of Uherské Hradiště in comparison to inhabitants of East German cities. The share of trips by car is lower in Uherské Hradiště (36%) than in German cities (42%). This results in a significantly higher share of trips taken by transport modes of the mobility coalition (walking, cycling and public transport). This is an indicator of a more sustainable mobility behaviour among the inhabitants of Uherské Hradiště compared with German cities. However, since the share of trips done by car will very likely increase over the next years in Uherské Hradiště, the development might lead to a similar situation as in Germany.

Uherské Hradiště is a rather small city among all the cities of the Central MeetBike project. The compact structure of the city might be one reason for the inhabitants of Uherské Hradiště to have such a high number of walking trips. Also cycling is very popular in Uherské Hradiště. The modal split of bicycle transport is higher than in average German cities. In contrast public transport is much less important. However, transport policy in Uherské Hradiště should merely focus on keeping the current state of mobility behaviour of its inhabitants and provide good and safe conditions for all transport modes.

As a result of the survey it became clear that inhabitants of Uherské Hradiště, along with those in other Central European cities, still have a more sustainable mobility behaviour than in many West European cities (Figure 15). The share of trips by car is relatively low and the coalition of walking, cycling and public transport is strong. In Uherské Hradiště this is mainly the result of a relatively high modal split for cycling in combination with many more walking trips. However, the partners of the Central MeetBike project see some potential for even more cycling in order to stop the increase of trips done by car. Cycling is a zero emission individual mode, which is healthy exercise at the same time.

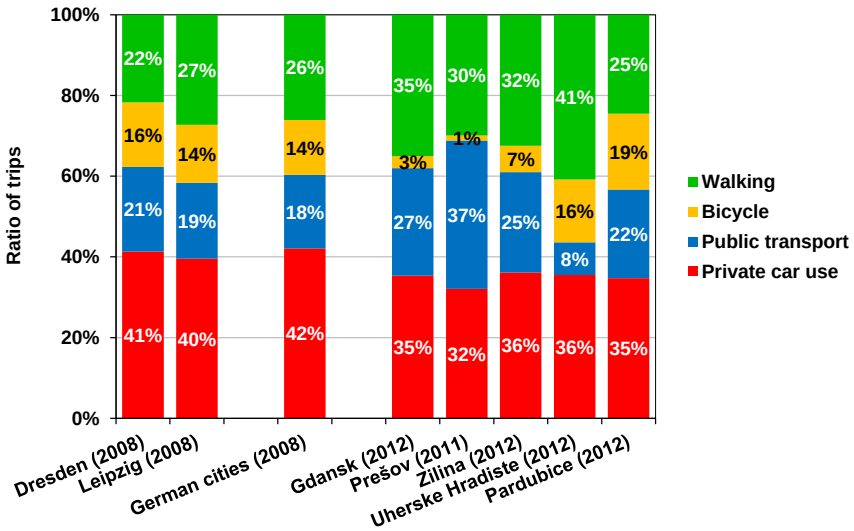


Figure 15: Modal split of inhabitants in CMB and SrV cities

71% of all trips analysed in the survey in Uherské Hradiště started and terminated within the city boundaries. This relatively low share is a hint that there are numerous transport connections between Uherské Hradiště and its surrounding cities.

Modal split of these “trips within the city” differs from the results presented above. It became clear that for trips within the city the car is used less whereas there are many more walking trips in comparison to all trips of inhabitants. Almost every second trip within the city of Uherské Hradiště is done by walking.

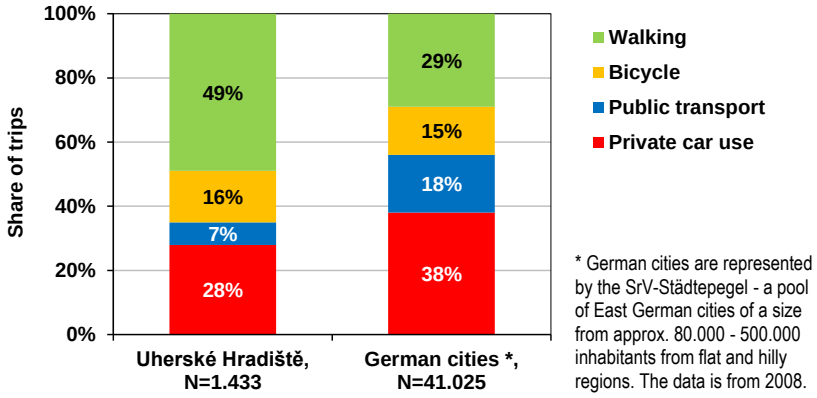


Figure 16: Modal split of trips within the city by inhabitants

Modal split varies with respect to several trip characteristics. On the following pages, modal split according to trip length (Figure 17) and by purpose of trip is analysed (Figure 19).

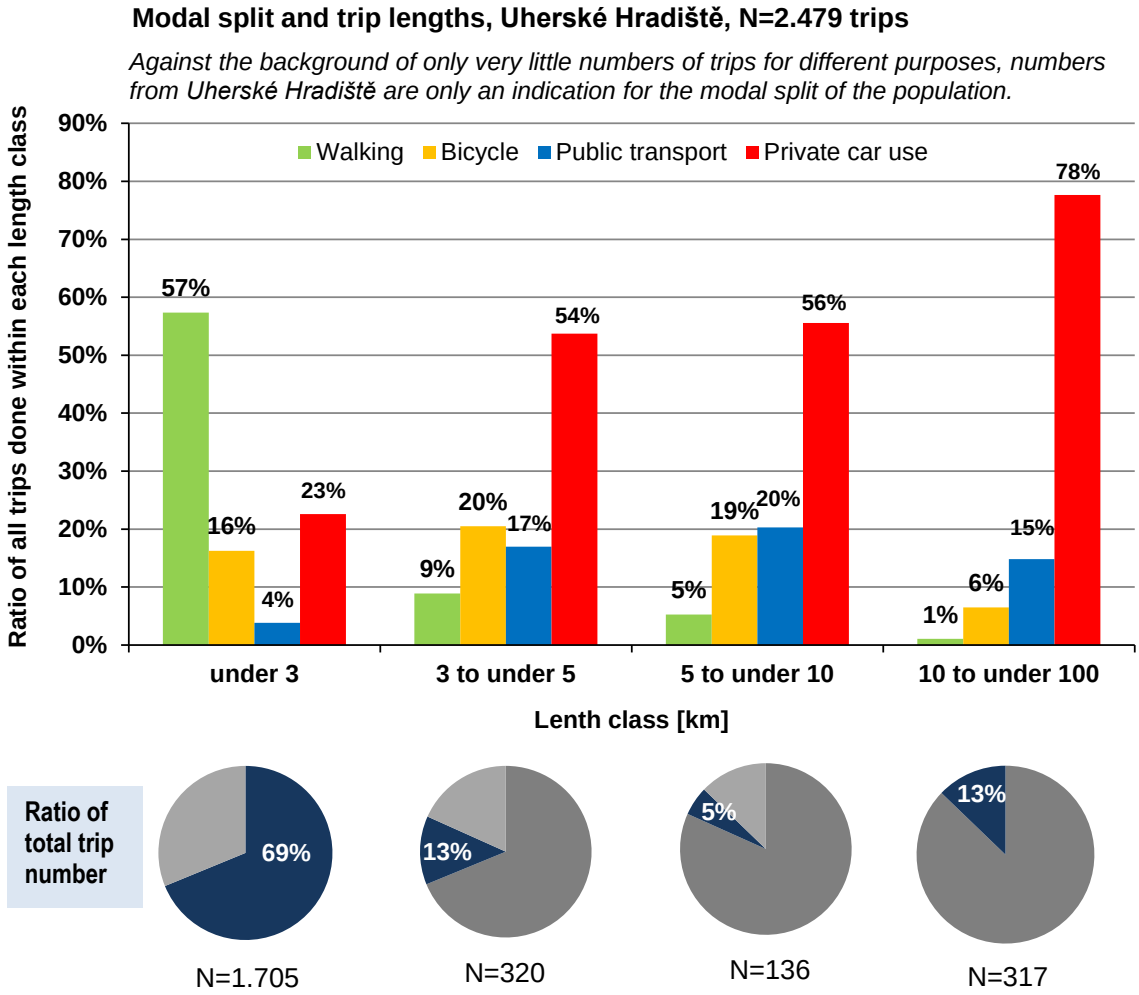


Figure 17: Modal split based on trip length

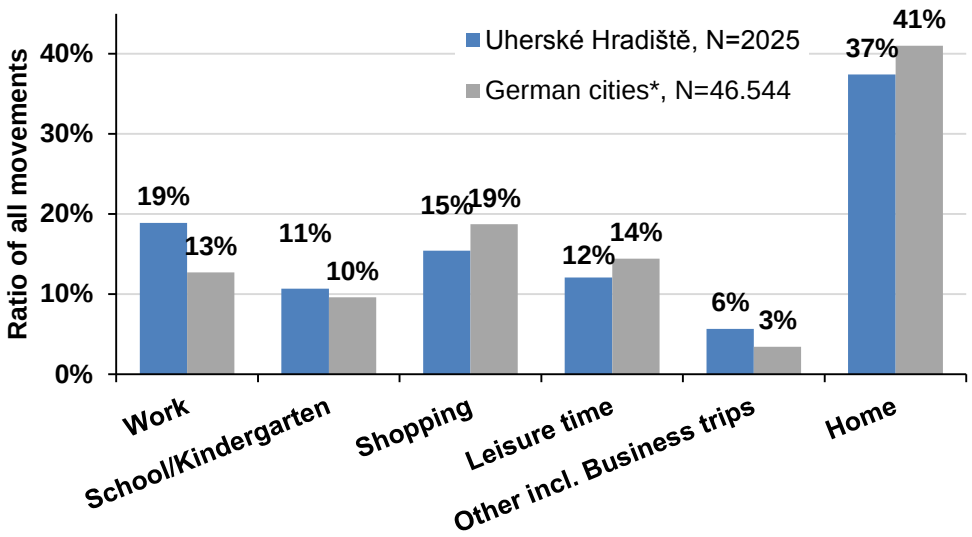
This graph shows modal split of inhabitants in Uherské Hradiště in four trip length classes. It is not surprising that the share of walking trips decreases with increasing trip length while the share of trips by car and public transport simultaneously increase. However, it is noticeable that the number of trips with distances below 5km is very high in Uherské Hradiště (82%). Trips from this length class are usually seen as very suitable for bicycle transport, because cycling is the fastest transport mode from door to door for trips below 5 to 6 km[28]. In German

[28] UBA, 2009, S.10

cities about 66% of all trips by inhabitants are shorter than 5 km. In Uherské Hradiště trips with a distance between 5 and 10 kilometres also have an above-average bicycle share.

Among the cities that were surveyed in the course of Central MeetBike only in the city of Gdańsk is this ratio of trips shorter than 5 km at the same level as in German cities. In the remaining cities 77 – 82% of all trips analysed were shorter than 5 km.

4.4.2 Purpose of trips



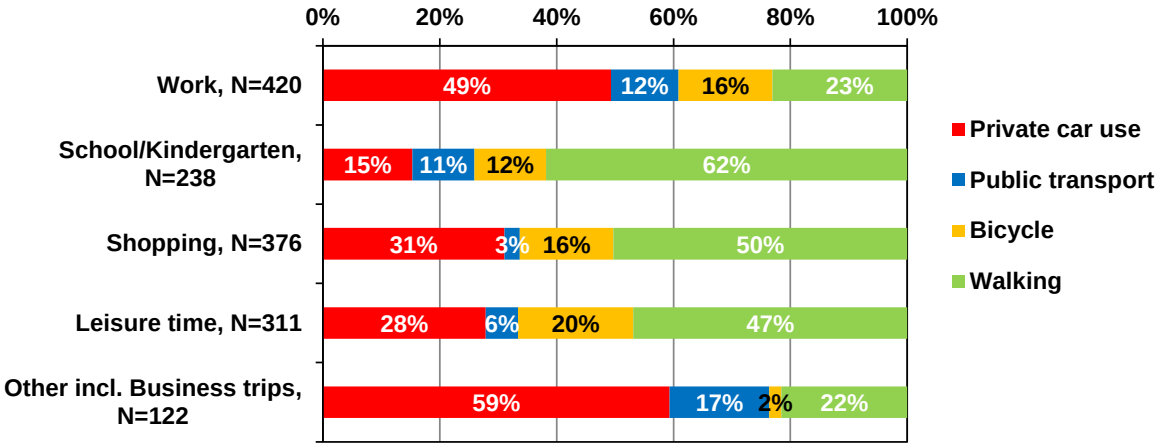
* German cities are represented by the SrV-Städtepegel - a pool of East German cities of a size from approx. 80.000 - 500.000 inhabitants from flat and hilly regions. The data is from 2008.

Figure 18: Purpose of trips

This graph shows the purpose of trips in Uherské Hradiště in comparison to German cities. With 37% of the trips having “home” as the destination[29] this number is at the same level as in East German cities (41%). Furthermore it can be analysed that, on working days, inhabitants of Uherské Hradiště focus on obligatory trips such as going to work or school than on occasional trips (e.g. shopping or leisure trips). In comparison to other Central MeetBike cities similar tendencies of more work trips and less shopping and leisure trips can be observed as well.

[29] For definition of trip purposes: p.12.

From former surveys implemented in Germany, the authors know about the fact that modal split not only differs according to trip length but also with respect to trip purpose. Results of this analysis are shown in Figure 19.



Against the background of only very little numbers of trips for different purposes, numbers from Uherské Hradiště are only an indication for the modal split of the population.

Figure 19: Modal split by purpose of trips

In comparison to German cities the use of the car for trips to school (German cities: 34%), shopping (German cities: 40%) and for leisure trips (German cities: 38%) is much lower in Uherské Hradiště. This mainly results from a significantly stronger use of walking for these purposes in Uherské Hradiště. As for work trips the share for cars (German cities: 55%) is only slightly lower in Uherské Hradiště. The modal split of bicycle transport for work trips is almost the same as in German cities (15%). There are more inhabitants walking to their place of work in Uherské Hradiště in comparison to German cities (11%). In contrast, public transport is less used in Uherské Hradiště (German cities: 20%).

5. SOURCES

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6. ABBREVIATIONS

CMB	Central MeetBike
e.g.	exempli gratia, for example
ERDF	European Regional Development Fund
ibidem	at the same place
i.e.	id est, in other words
inhab.	Inhabitants
PT	public transport
SrV	System of representative surveys on mobility behaviour

7. APPENDICES

Appendix 1 – Questionnaire Czech language

Questionnaire for household

Kód: ___/___ ___/___ ___/___ ___/___ ___/___ ___ (město/ městská část/ tazatel/ den průzkumu/ domácnost)	DOTAZNÍK PRO DOMÁCNOSTI K domácnosti náleží všechny osoby, které s Vámi žijí. *(Do této kategorie spadá také např. osoba Vašeho syna, který je hlášen u Vás doma, v týdnu se však nachází ve škole v jiném městě.)*	
VELIKOST DOMÁCNOSTI Kolik **osob** žije ve Vaší domácnosti, včetně Vás?	Počet osob celkem: ☐☐	
POČET VOZIDEL Kolik z následujících **druhů** vozidel je ve Vaší domácnosti? *Pokud není u dané kategorie žádné, vyplňte, prosím „0"!*	Soukromý automobil ☐☐ Služební automobil ☐☐ Provozuschopná jízdní kola ☐☐ Ostatní vozidla ☐☐, a sice: ☐	
PARAMETRY VOZIDEL *(prosím o vyplnění pouze u nejvyužívanějších vozidel)*	**Osobní automobil 1**	**Kolo**
Jaký byl **odhadovaný výkon (ujeté km)** Vašeho osobního vozu v roce 2010?	☐☐☐☐☐☐ km	☐☐☐☐☐☐ km
Kde obvykle v místě bydliště parkujete?	Garáž/parkoviště/soukromé stání: ☐ Na veřejné komunikaci: ☐ Různě: ☐	Garáž/parkoviště/soukromé stání: ☐ Na veřejné komunikaci: ☐ Různě: ☐
NEJBLIŽŠÍ ZASTÁVKA(-Y) Za jakou dobu lze pěšky dojít **z Vašeho bytu na nejbližší zastávku** veřejné dopravy? *Pokud na zastávku dojít nelze, příp. o žádné nevíte nebo veřejná doprava ve Vašem městě neexistuje, uveďte, prosím „0"!*	Docházková doba k autobusu ☐☐ min Docházková doba na vlak regionální dopravy / osobní vlak ☐☐ min Docházková doba k vlaku dálkové dopravy ☐☐ min	
PŘENOSNÁ JÍZDENKA Máte ve Vaší domácnosti přenosnou jízdenku na autobus či na dráhu? (např. přenosná měsíční jízdenka) Pokud ano, uveďte, prosím, jejich počet	Ano ☐ Počet přenosných jízdenek: ☐	Ne ☐
PŘÍJMY DOMÁCNOSTI Jak vysoký je přibližně **čistý příjem** Vaší domácnosti? (po odečtení daní a příspěvků na sociální pojištění, ale včetně služeb či příspěvků, jako jsou přídavky na dítě / na bydlení / dávky v nezaměstnanosti, anebo např. příjmy z pronájmu) *(Prosím zvolte pouze jednu z možností)* Tato otázka slouží pro analýzu vlivu příjmu na způsoby dopravy.	méně než 12.100 Kč měsíčně ☐ 12.100 CZK až 21.799 Kč měsíčně ☐ 21.800 CZK až 36.399 Kč měsíčně ☐ 36.400 CZK až 48.499 Kč měsíčně ☐ 48.500 CZK až 62.999 Kč měsíčně ☐ 63.000 CZK až 87.299 Kč měsíčně ☐ 87.300 Kč a víc měsíčně ☐ Žádný údaj ☐	

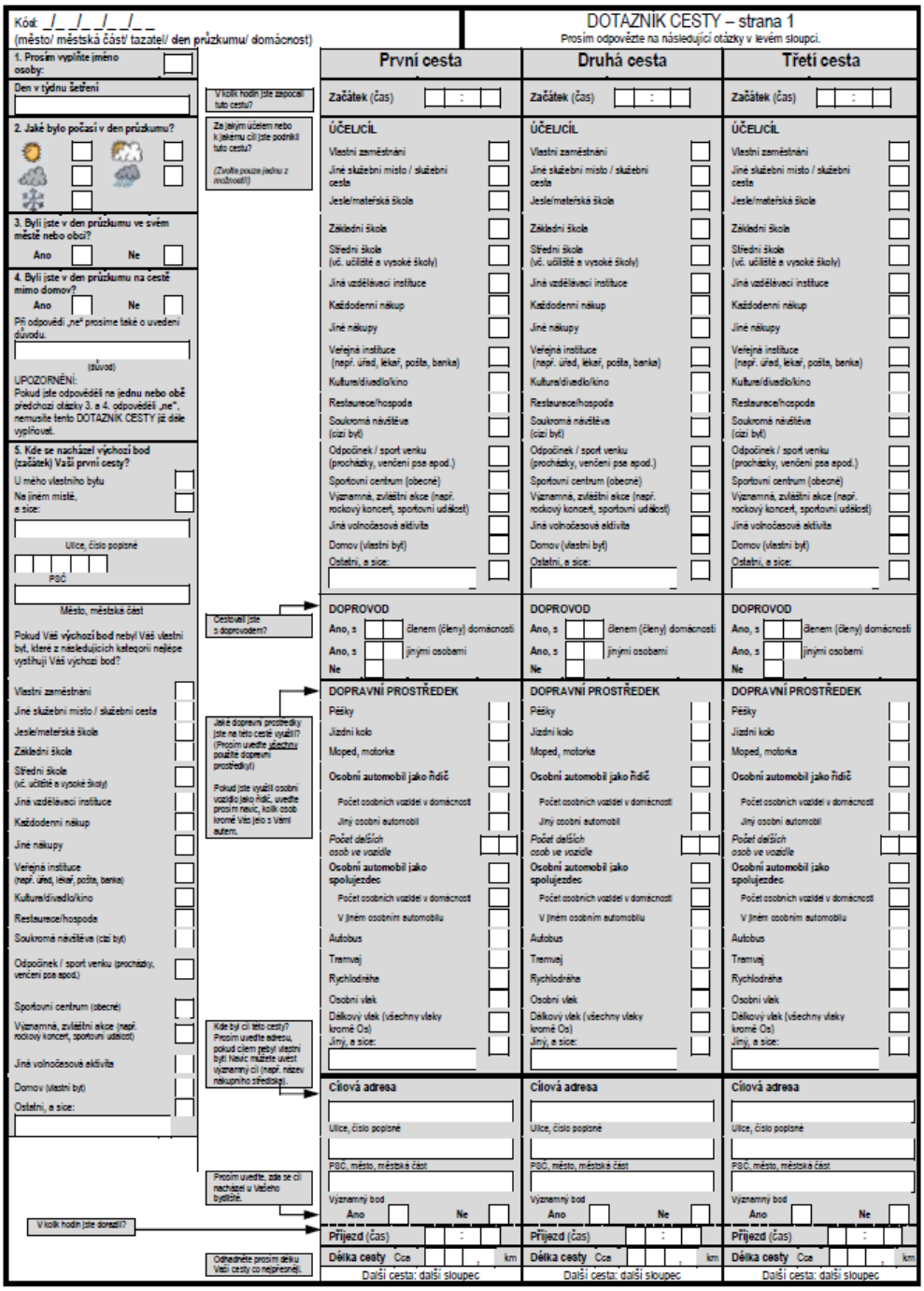
Questionnaire for person – page 1

Kód: ___/___ ___/___ ___/___ ___/___ ___ (město/ městská část/ tazatel/ den průzkumu/ domácnost)	OSOBNÍ DOTAZNÍK – strana 1 Prosíme všechny členy domácnosti o pokud možno samostatné zodpovězení následujících otázek.				
Číslo osoby:	Nejstarší osoba **1**	Druhá nejstarší osoba **2**	Třetí nejstarší osoba **3**	Čtvrtá nejstarší osoba **4**	Pátá nejstarš osoba **5**
Věk	☐☐	☐☐	☐☐	☐☐	☐☐
Pohlaví	m ☐ s ☐	m ☐ s ☐	m ☐ s ☐	m ☐ s ☐	m ☐ s ☐
OBVYKLOST PRŮBĚHU ROZHODNÉHO DNE PRŮZKUMU					
Odpovídá průběh sledovaného dne průzkumu obvyklému průběhu stejného dne v jiných týdnech?	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐
OMEZENÍ MOBILITY					
Jste **ze zdravotních důvodů trvale** omezen ve své mobilitě? *(Lze vybrat více odpovědí.)* — Ano, postižením chůze	☐	☐	☐	☐	☐
Ano, zrakovým postižením	☐	☐	☐	☐	☐
Ano, jiným (i) omezením (i)	☐	☐	☐	☐	☐
Ne	☐	☐	☐	☐	☐
Máte průkaz **těžce tělesně postiženého**?	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐
VÝDĚLEČNÁ ČINNOST *(Prosím zvolte pouze jednu z možností.)*					
ekonomicky neaktivní — Dítě (před zahájením školní docházky)	☐	☐	☐	☐	☐
Žena/muž v domácnosti	☐	☐	☐	☐	☐
Důchodce(-kyně), penzista(-ka), v předčasném důchodu	☐	☐	☐	☐	☐
t.č. nezaměstnaný	☐	☐	☐	☐	☐
Ve vzdělávacím procesu — Žák/žákyně	☐	☐	☐	☐	☐
Student/studentka	☐	☐	☐	☐	☐
Učeň/učnice, rekvalifikace	☐	☐	☐	☐	☐
Výdělečná činnost — Plný úvazek (týdně 35 hodin a více)	☐	☐	☐	☐	☐
Částečný úvazek (týdně méně než 35 hodin)	☐	☐	☐	☐	☐
Dočasně uvolněný/-á, nucená dovolená (např. mateřská/rodičovská dovolená nebo jiný druh dlouhodobějšího uvolnění ze zaměstnání)	☐	☐	☐	☐	☐
NEJVYŠŠÍ UKONČENÉ VZDĚLÁNÍ *(Prosím zvolte pouze jednu z možností.)*					
Bez vzdělání	☐	☐	☐	☐	☐
Ukončené základní vzdělání	☐	☐	☐	☐	☐
Vyučen(a) bez maturity	☐	☐	☐	☐	☐
Středoškolské s maturitou (včetně nástavby)	☐	☐	☐	☐	☐
Vyšší odborné vzdělání, VŠ do úrovně bakaláře	☐	☐	☐	☐	☐
Vysokoškolské (Mgr., Ing., atd.)	☐	☐	☐	☐	☐
NEJVYŠŠÍ UKONČENÉ PROFESNÍ VZDĚLÁVÁNÍ *(Prosím zvolte pouze jednu z možností.)*					
Učební obor, odborná škola, střední obchodní škola	☐	☐	☐	☐	☐
Mistrovská škola, technická škola, odborné učiliště, vyšší odborná škola, odborná akademie	☐	☐	☐	☐	☐
Vysoká škola nebo odborná vysoká škola	☐	☐	☐	☐	☐
Bez vzdělání	☐	☐	☐	☐	☐

Questionnaire for person – page 2

Kód: __/__ __/__ __/__ __/__ __ (město/ městská část/ tazatel/ den průzkumu/ domácnost)		OSOBNÍ DOTAZNÍK – strana 2 Prosíme všechny členy domácnosti o pokud možno samostatné zodpovězení následujících otázek.				
	Číslo osoby:	Nejstarší osoba 1	Druhá nejstarší osoba 2	Třetí nejstarší osoba 3	Čtvrtá nejstarší osoba 4	Pátá nejstarší osoba 5
VLASTNICTVÍ ŘIDIČSKÉHO PRŮKAZU Vlastníte v současné době pro uvedený druh motorového vozidla platný řidičský průkaz?	Osobní automobil (skupina B, resp. 3)	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐
MOŽNOST UŽÍVÁNÍ MOTOROVÉHO VOZIDLA Měl jste v rozhodný den průzkumu ve **Vaší domácnosti** k dispozici **motorové vozidlo (jako řidič nebo spolujezdec)**? *(Prosím zvolte pouze jednu z možností.)*	Ano, neomezená možnost užití (dispozice)	☐	☐	☐	☐	☐
	Ano, po dohodě	☐	☐	☐	☐	☐
	Ne, žádný přístup k motorovému vozidlu	☐	☐	☐	☐	☐
VYUŽÍVÁNÍ VEŘEJNÉ DOPRAVY Využil jste během uplynulých 12 měsíců prostředky místní veřejné dopravy? *Pokud na tuto otázku odpovíte záporně (**ne**), můžete přejít přímo k dotazníku Cesty*		Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐	Ano ☐ Ne ☐
DRUH JÍZDNÍHO DOKLADU Jaký druh **jízdenky** obvykle využíváte, pokud cestujete prostředky místní veřejné dopravy? *Pokud obvykle využíváte elektronické jízdenky, přiřaďte je pokud možno k uvedeným kategoriím!*	Jednotlivá jízdenka	☐	☐	☐	☐	☐
	Jednodenní jízdenka	☐	☐	☐	☐	☐
	Jízdenka pro více jízd	☐	☐	☐	☐	☐
	Týdenní jízdenka	☐	☐	☐	☐	☐
	Měsíční jízdenka	☐	☐	☐	☐	☐
	Roční jízdenka	☐	☐	☐	☐	☐
	Jobticket, semestrální jízdenka atd.	☐	☐	☐	☐	☐
	Jiná jízdenka, a sice	☐	☐	☐	☐	☐
NEJVYUŽÍVANĚJŠÍ ZASTÁVKY Za jakou dobu se dostanete pěšky z domova k Vámi nejčastěji využívané zastávce? *Pokud na zastávku dojít nelze, příp. o žádné nevíte nebo veřejná doprava ve Vašem městě neexistuje, uveďte, prosím „0"!*	Docházková doba k autobusu	☐☐ min	☐☐ min	☐☐ min	☐☐ min	☐☐ min
	Docházková doba na vlak regionální dopravy	☐☐ min	☐☐ min	☐☐ min	☐☐ min	☐☐ min
	Docházková doba k vlaku dálkové dopravy	☐☐ min	☐☐ min	☐☐ min	☐☐ min	☐☐ min

Questionnaire for trips – page 1



Kód: _/__/__/__/__
(město/ městská část/ tazatel/ den průzkumu/ domácnost)

DOTAZNÍK CESTY – strana 1
Prosím odpovězte na následující otázky v levém sloupci.

1. Prosím vyplňte jméno osoby:

Den v týdnu šetření

2. Jaké bylo počasí v den průzkumu?

3. Byli jste v den průzkumu ve svém městě nebo obci?
Ano Ne

4. Byli jste v den průzkumu na cestě mimo domov?
Ano Ne
Při odpovědi „ne" prosíme také o uvedení důvodu.
(důvod)

UPOZORNĚNÍ:
Pokud jste odpověděli na jednu nebo obě předchozí otázky 3. a 4. odpověděli „ne", nemusíte tento DOTAZNÍK CESTY již dále vyplňovat.

5. Kde se nacházel výchozí bod (začátek) Vaší první cesty?
U mého vlastního bytu
Na jiném místě, a sice:
Ulice, číslo popisné
PSČ
Město, městská část

Pokud Váš výchozí bod nebyl Váš vlastní byt, které z následujících kategorií nejlépe vystihuji Váš výchozí bod?
Vlastní zaměstnání
Jiné služební místo / služební cesta
Jesle/mateřská škola
Základní škola
Střední škola (vč. učiliště a vysoké školy)
Jiná vzdělávací instituce
Každodenní nákup
Jiné nákupy
Veřejná instituce (např. úřad, lékař, pošta, banka)
Kultura/divadlo/kino
Restaurace/hospoda
Soukromá návštěva (cizí byt)
Odpočinek / sport venku (procházky, venčení psa apod.)
Sportovní centrum (obecně)
Významná, zvláštní akce (např. rockový koncert, sportovní událost)
Jiná volnočasová aktivita
Domov (vlastní byt)
Ostatní, a sice:

V kolik hodin jste započali tuto cestu?

Za jakým účelem nebo k jakému cíli jste podnikli tuto cestu?
(Zvolte pouze jednu z možností)

Cestovali jste s doprovodem?

Jaké dopravní prostředky jste na této cestě využili? (Prosím uvedte všechny použité dopravní prostředky!)
Pokud jste využili osobní vozidlo jako řidič, uvedte prosím navíc, kolik osob kromě Vás jelo s Vámi autem.

Kde byl cíl této cesty? Prosím uvedte adresu, pokud cílem nebyl vlastní byt! Navíc můžete uvést významný cíl (např. název nákupního střediska).

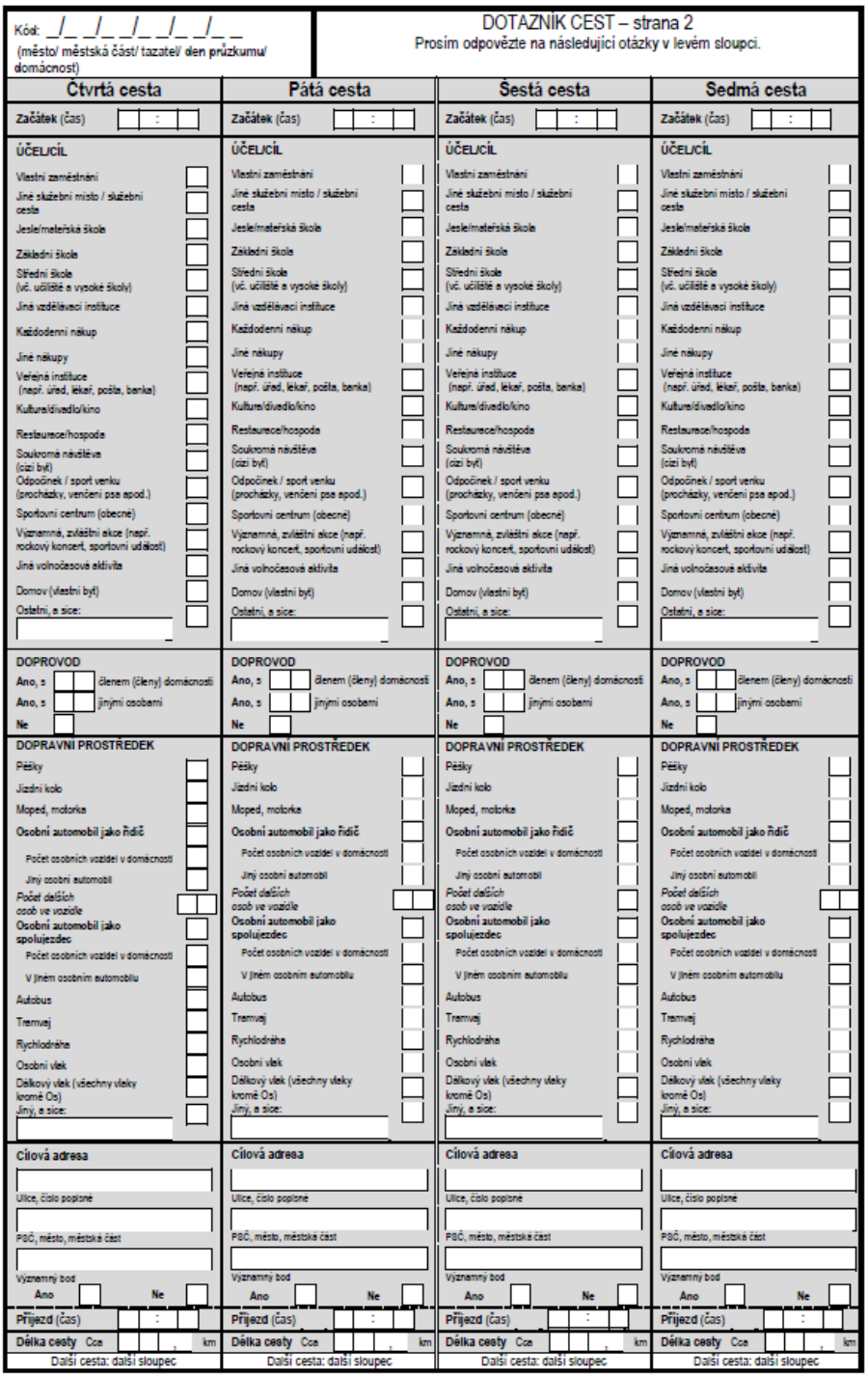
Prosím uvedte, zde se cíl nachází u Vašeho bydliště.

V kolik hodin jste dorazil?

Odhadněte prosím délku Vaší cesty co nejpřesněji.

	První cesta	Druhá cesta	Třetí cesta
Začátek (čas)	:	:	:
ÚČEL/CÍL			
Vlastní zaměstnání			
Jiné služební místo / služební cesta			
Jesle/mateřská škola			
Základní škola			
Střední škola (vč. učiliště a vysoké školy)			
Jiná vzdělávací instituce			
Každodenní nákup			
Jiné nákupy			
Veřejná instituce (např. úřad, lékař, pošta, banka)			
Kultura/divadlo/kino			
Restaurace/hospoda			
Soukromá návštěva (cizí byt)			
Odpočinek / sport venku (procházky, venčení psa apod.)			
Sportovní centrum (obecně)			
Významná, zvláštní akce (např. rockový koncert, sportovní událost)			
Jiná volnočasová aktivita			
Domov (vlastní byt)			
Ostatní, a sice:			
DOPROVOD			
Ano, s ... členem (členy) domácnosti			
Ano, s ... jinými osobami			
Ne			
DOPRAVNÍ PROSTŘEDEK			
Pěšky			
Jízdní kolo			
Moped, motorka			
Osobní automobil jako řidič			
Počet osobních vozidel v domácnosti			
Jiný osobní automobil			
Počet dalších osob ve vozidle			
Osobní automobil jako spolujezdec			
Počet osobních vozidel v domácnosti			
V jiném osobním automobilu			
Autobus			
Tramvaj			
Rychlodráha			
Osobní vlak			
Dálkový vlak (všechny vlaky kromě Os)			
Jiný, a sice:			
Cílová adresa			
Ulice, číslo popisné			
PSČ, město, městská část			
Významný bod			
Ano / Ne			
Příjezd (čas)	:	:	:
Délka cesty Cca ... , ... km			
Další cesta: další sloupec			

Questionnaire for trips – page 2



Kód: _/_ _/_ _/_ _/_ _/_ _/_ _
(město/ městská část/ tazatel/ den průzkumu/ domácnost)

DOTAZNÍK CEST – strana 2
Prosím odpovězte na následující otázky v levém sloupci.

Čtvrtá cesta	Pátá cesta	Šestá cesta	Sedmá cesta
Začátek (čas)	Začátek (čas)	Začátek (čas)	Začátek (čas)
ÚČEL/CÍL	**ÚČEL/CÍL**	**ÚČEL/CÍL**	**ÚČEL/CÍL**
Vlastní zaměstnání	Vlastní zaměstnání	Vlastní zaměstnání	Vlastní zaměstnání
Jiné služební místo / služební cesta	Jiné služební místo / služební cesta	Jiné služební místo / služební cesta	Jiné služební místo / služební cesta
Jesle/mateřská škola	Jesle/mateřská škola	Jesle/mateřská škola	Jesle/mateřská škola
Základní škola	Základní škola	Základní škola	Základní škola
Střední škola (vč. učiliště a vysoké školy)	Střední škola (vč. učiliště a vysoké školy)	Střední škola (vč. učiliště a vysoké školy)	Střední škola (vč. učiliště a vysoké školy)
Jiná vzdělávací instituce	Jiná vzdělávací instituce	Jiná vzdělávací instituce	Jiná vzdělávací instituce
Každodenní nákup	Každodenní nákup	Každodenní nákup	Každodenní nákup
Jiné nákupy	Jiné nákupy	Jiné nákupy	Jiné nákupy
Veřejná instituce (např. úřad, lékař, pošta, banka)	Veřejná instituce (např. úřad, lékař, pošta, banka)	Veřejná instituce (např. úřad, lékař, pošta, banka)	Veřejná instituce (např. úřad, lékař, pošta, banka)
Kultura/divadlo/kino	Kultura/divadlo/kino	Kultura/divadlo/kino	Kultura/divadlo/kino
Restaurace/hospoda	Restaurace/hospoda	Restaurace/hospoda	Restaurace/hospoda
Soukromá návštěva (cizí byt)	Soukromá návštěva (cizí byt)	Soukromá návštěva (cizí byt)	Soukromá návštěva (cizí byt)
Odpočinek / sport venku (procházky, venčení psa apod.)	Odpočinek / sport venku (procházky, venčení psa apod.)	Odpočinek / sport venku (procházky, venčení psa apod.)	Odpočinek / sport venku (procházky, venčení psa apod.)
Sportovní centrum (obecné)	Sportovní centrum (obecné)	Sportovní centrum (obecné)	Sportovní centrum (obecné)
Významná, zvláštní akce (např. rockový koncert, sportovní událost)	Významná, zvláštní akce (např. rockový koncert, sportovní událost)	Významná, zvláštní akce (např. rockový koncert, sportovní událost)	Významná, zvláštní akce (např. rockový koncert, sportovní událost)
Jiná volnočasová aktivita	Jiná volnočasová aktivita	Jiná volnočasová aktivita	Jiná volnočasová aktivita
Domov (vlastní byt)	Domov (vlastní byt)	Domov (vlastní byt)	Domov (vlastní byt)
Ostatní, a sice:	Ostatní, a sice:	Ostatní, a sice:	Ostatní, a sice:
DOPROVOD	**DOPROVOD**	**DOPROVOD**	**DOPROVOD**
Ano, s členem (členy) domácnosti	Ano, s členem (členy) domácnosti	Ano, s členem (členy) domácnosti	Ano, s členem (členy) domácnosti
Ano, s jinými osobami	Ano, s jinými osobami	Ano, s jinými osobami	Ano, s jinými osobami
Ne	Ne	Ne	Ne
DOPRAVNÍ PROSTŘEDEK	**DOPRAVNÍ PROSTŘEDEK**	**DOPRAVNÍ PROSTŘEDEK**	**DOPRAVNÍ PROSTŘEDEK**
Pěšky	Pěšky	Pěšky	Pěšky
Jízdní kolo	Jízdní kolo	Jízdní kolo	Jízdní kolo
Moped, motorka	Moped, motorka	Moped, motorka	Moped, motorka
Osobní automobil jako řidič	Osobní automobil jako řidič	Osobní automobil jako řidič	Osobní automobil jako řidič
Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti
Jiný osobní automobil	Jiný osobní automobil	Jiný osobní automobil	Jiný osobní automobil
Počet dalších osob ve vozidle	Počet dalších osob ve vozidle	Počet dalších osob ve vozidle	Počet dalších osob ve vozidle
Osobní automobil jako spolujezdec	Osobní automobil jako spolujezdec	Osobní automobil jako spolujezdec	Osobní automobil jako spolujezdec
Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti	Počet osobních vozidel v domácnosti
V jiném osobním automobilu	V jiném osobním automobilu	V jiném osobním automobilu	V jiném osobním automobilu
Autobus	Autobus	Autobus	Autobus
Tramvaj	Tramvaj	Tramvaj	Tramvaj
Rychlodráha	Rychlodráha	Rychlodráha	Rychlodráha
Osobní vlak	Osobní vlak	Osobní vlak	Osobní vlak
Dálkový vlak (všechny vlaky kromě Os)	Dálkový vlak (všechny vlaky kromě Os)	Dálkový vlak (všechny vlaky kromě Os)	Dálkový vlak (všechny vlaky kromě Os)
Jiný, a sice:	Jiný, a sice:	Jiný, a sice:	Jiný, a sice:
Cílová adresa	**Cílová adresa**	**Cílová adresa**	**Cílová adresa**
Ulice, číslo popisné	Ulice, číslo popisné	Ulice, číslo popisné	Ulice, číslo popisné
PSČ, město, městská část	PSČ, město, městská část	PSČ, město, městská část	PSČ, město, městská část
Významný bod	Významný bod	Významný bod	Významný bod
Ano Ne	Ano Ne	Ano Ne	Ano Ne
Příjezd (čas)	Příjezd (čas)	Příjezd (čas)	Příjezd (čas)
Délka cesty Cca km	Délka cesty Cca km	Délka cesty Cca km	Délka cesty Cca km
Další cesta: další sloupec	Další cesta: další sloupec	Další cesta: další sloupec	Další cesta: další sloupec