

# LAirA

## D.T1.4.8

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Vienna FUA report on airports employees  
mobility needs and behaviours

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Version 0.1  
01 2018

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## 1. Introduction

This report on the Vienna Airport system employee's mobility gives an overview on the identified satisfaction level with the transport supply and hints on possible behavioural changes towards low carbon mobility in the FUA. The report is based on survey data from 2012/13 and in accordance with the Airport of Vienna the decision was made to choose this reference for the employee's mobility report of the Vienna FUA.

In 2012/13 the LEADER region 'Römerland-Carnuntum' which is home to many employees of the Vienna Airport engaged a market research institution to survey the mobility needs and behaviour of the airport's employees. Besides the Airport of Vienna also the transport association of the eastern Austrian region ('Verkehrsverbund Ostregion - VOR') were supporters of the survey and beneficiaries of the survey results.

In this report a compact introduction to the methodology of the survey and major results that are relevant to the LAirA project (in accordance with the methodology from D.T1.4.1) are provided. Besides the quantitative data, also qualitative data covering ideas and suggestions for improving the transportation system in the Vienna FUA is available in the report.

## 2. Methodology/Approach

The aim of the study was to investigate the mobility behaviour of a random sample of 2,300 employees from the fifteen biggest companies at the Vienna Airport by written surveys.<sup>1</sup> In total 965 people answered and returned the questionnaire, whereas the biggest share of the employees belonged to the Airport of Vienna and Austrian Airlines.<sup>2</sup> 61 % of survey participants were men and 39 % were women and approximately two thirds of the respondents were between 30 and 50 years old.<sup>3</sup>

The following (from German to English) translated questions were included in the survey design<sup>4</sup>:

- When did you start working today (at the airport)? → % per defined time periods
- When will you end working today (at the airport)? → % per defined time periods
- Which kind of working model do you have? → % per working model types
- On which days of the week are you commuting to work? → % per day of the week
- From which place of residence are you commuting to the airport?
- Which mode of transport did you use for commuting to the airport today?
- Did you also use other modes of transport on the same trip?
- Which mode of transport will you use for commuting back home?
- Do you use the Airport Shuttle that is available at the Airport of Vienna?
- For what reason did you use the chosen mode of transport today?
- Does your employer provide free or discounted transport options?
- Does your employer provide you with a free parking space?
- Does your employer provide you with a reserved parking space?
- What annoys you when commuting to work?

<sup>1</sup> Erler et al. 2013, p.5

<sup>2</sup> Erler et al. 2013, p.7

<sup>3</sup> Erler et al. 2013, p.7

<sup>4</sup> Erler et al. 2013



- Please rate the following characteristics of modes of transport accordingly to the scale
- How do you rate the available modes of transport at your place of residence?
- Do you use public transport modes when commuting to work?
- How long does it take when commuting to work by public transport?
- Are you commuting partly by car?
- How much time do you need when walking from the public transport station at the airport to our workplace?
- Do you think the travel time with public transport is acceptable?
- What kind of ticket do you use?
- How often do you change your mode of transport during one trip?
- In case you switch modes/vehicles/lines, do you think the waiting time is acceptable?
- In case you switch from one mode to another which public transport stations do you choose for the interchange?
- In case you use park & ride, which exactly do you use?
- Do you use an individual car when commuting to or from the airport?
- How long does it take when commuting to the airport by car?
- How many minutes does it take when walking from your parking space to your workplace?
- How do you rate the parking possibilities at the airport?
- Under which circumstances would you use public transport instead of the private car?
- In which company do you work?
- General questions: Fields of activity, gender, age, highest educational level
- In general: Which suggestions do you have regarding this topic?

Statistical data about the survey participants can be retrieved from the report starting from page 67.<sup>5</sup> The following statistical aspects were covered by the survey: employer, type of employment, gender, age, and highest educational level.

### 3. Travel needs FUA Vienna

The travel needs of the employees can be identified on the basis of some survey results such as the given working hour models (incl. starting and ending hours of work), the residential location of the employees (in combination with the available transport offers) and other personal preferences or issues of this target group (employees of the Airport of Vienna).

#### (1) Working hour models<sup>6</sup>

Survey results show that 44 % have flexible working hours, 30 % are shift workers and 13 % of the participants have fixed working hours. 40 % of the respondents indicated that their working days vary, however most of them responded that they work on weekdays.

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<sup>5</sup> Erler et al. 2013, p.67 ff

<sup>6</sup> Erler et al. 2013, p.20 f.



## **(2) Residential location<sup>7</sup>**

Approximately half of the respondents indicated that they commute from Vienna, followed by the LEADER region Römerland-Carnuntum, the south-western area next to Vienna (called ‘Wiener Becken’) and the northern part of the province of Burgenland. Besides these locations another little amount of participants stated that they commute from other parts of Austria or even neighbouring countries such as Slovakia or Hungary. Often, such as in this case, survey data was weighted (taking into account the total number of employees of 12,900) and results show that around 6,000 employees commuted from Vienna, around 2,500 from the districts of Baden, Mödling and Wr Neustadt, approximately 2,500 from east and south of Vienna (incl. districts of Burgenland, Hungary and Slovakia) in 2013. Fewer employees commuted from the north (meaning the province of Lower Austria) and the City respectively the district of Schwechat (where the airport is located).

## **(3) Available transport supply and other incentives (e.g. job ticket)**

Employees of the Vienna Airport (or other companies located at the airport) reported that they can enjoy various monetary incentives for commuting to and from work. Incentives are for example discounts on public transport or free parking spaces at the airport. 60 % of the respondents indicated that they can make use of a free parking space at the airport and every fifth respondent indicated to have a (personal) reserved parking space.<sup>8</sup> However, also two thirds of the respondents replied that they can make use of the City Airport Train or the bus lines by enjoying discounts provided by their employer (though this also varies from company to company).<sup>9</sup>

Survey participants were asked about the public transport supply at their residential location. Results show that around 42 % of respondents were satisfied with the public transport offers in 2013. However, in this context it has to be mentioned that 47 % of the involved employees lived in Vienna at that time.<sup>10</sup> Around 33 % of respondents rated the supply with public transport as ‘poor’ or ‘very poor’.<sup>11</sup>

At this point it has to be noted that at the time of the survey, in 2013, there the airport was not connected to the long-distance railway network, neither was the suburban train between the airport and the City of Vienna operating every 15-20 minutes during peak hours.

## **(4) Personal preferences and issues**

Survey participants were asked about negative aspects when commuting to and from work, especially considering what they are annoyed of. Both, car users and public transport users, indicated to be annoyed of long travel times and traffic disruptions.<sup>12</sup> Public transport users furthermore complained about long waiting times (35 %) and car users responded to be annoyed by reckless car drivers. Figure 1 shows the share of respondents evaluating disturbing factors when commuting to and from their work at the Vienna airport.

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<sup>7</sup> Erler et al. 2013, p.22 ff

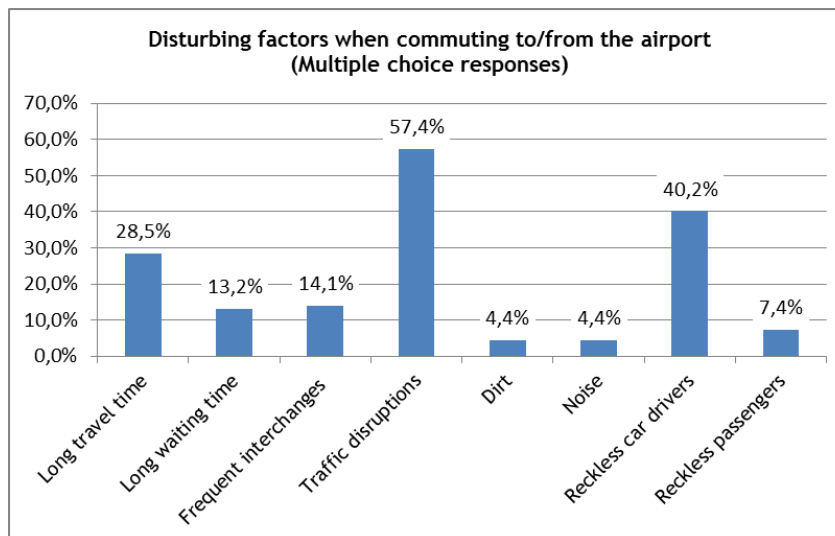
<sup>8</sup> Erler et al. 2013, p.37

<sup>9</sup> Ibid.

<sup>10</sup> Erler et al. 2013, p.44

<sup>11</sup> Ibid.

<sup>12</sup> Erler et al. 2013, p.96f.



**Figure 1: Disturbing factors during commuting, 2013;**  
**Source: Erler et al., 2013, p.39**

28.8 % of survey participants replied that they are dissatisfied with the travel time when commuting to the airport (see Figure 1). Most of the respondents (37.6 %) mentioned that they need 46-60 minutes for traveling to the airport, 20.9 % of respondents needed around 61-90 minutes and another 20 % needed 31-45 minutes for commuting to the airport.<sup>13</sup> Two thirds of the people commuting by public transport were satisfied with the travel time from their residential location to the airport.<sup>14</sup> The share of those who commuted 16-30 minutes by car was 51.4 %, another 23 % needed 31-45 minutes and 18.4 % needed up to 15 minutes of travel time (to and from the airport). Car drivers indicated to be very satisfied with the parking spaces that are available at the airport.<sup>15</sup>

## 4. Travel behavior FUA Vienna

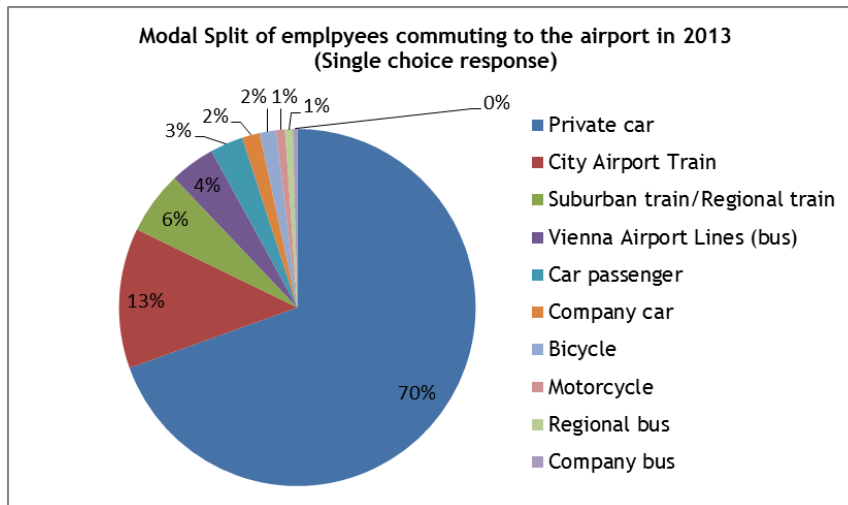
Most of the airport employees (taking into account the weighted data) commuted by car - either private as driver or as passenger in a private car or taxi - to (and from) the airport in 2013. Figure 2 shows the modal split of the employees whereas they were able to make a single choice response in this case.

As shown in this Figure 2, nearly 70 % commuted by private car (as driver), and 12.7 % used the City Airport Train (CAT), another 5.7 % used the suburban train and 4 % commuted by the Vienna Airport (bus) Lines. Other minimal shares travelled as car passenger, by company car, bicycle, motorcycle and regional or company busses.

<sup>13</sup> Erler et al. 2013, p.47

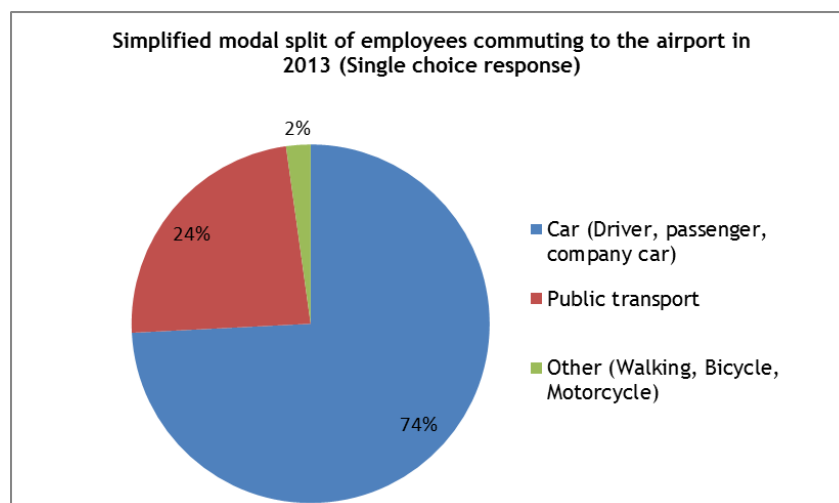
<sup>14</sup> Erler et al. 2013, p.51

<sup>15</sup> Erler et al. 2013, p.61



**Figure 2: Modal Split of employees in 2013; Source: Erler et al., 2013, p.26**

Figure 3 illustrates the same data on the modal split; however, the different modes are grouped in ‘car’, ‘public transport’ and ‘others’ (such as walking, bicycling and motorcycling). Around 24 % of the respondents used public transport, around 74 % commuted by car and other 2 % commuted by another mode of transport.



**Figure 3: Simplified modal split of employees in 2013; Source: Erler et al., 2013, p.26**

As stated in the report, survey results show a significant link between the chosen mode of transport and the residential location: whereas the employees commuting from the inner districts of Vienna rather decided for the public transport, more than 80 % of employees commuting from the surrounding - rather rural - areas chose the car.<sup>16</sup>

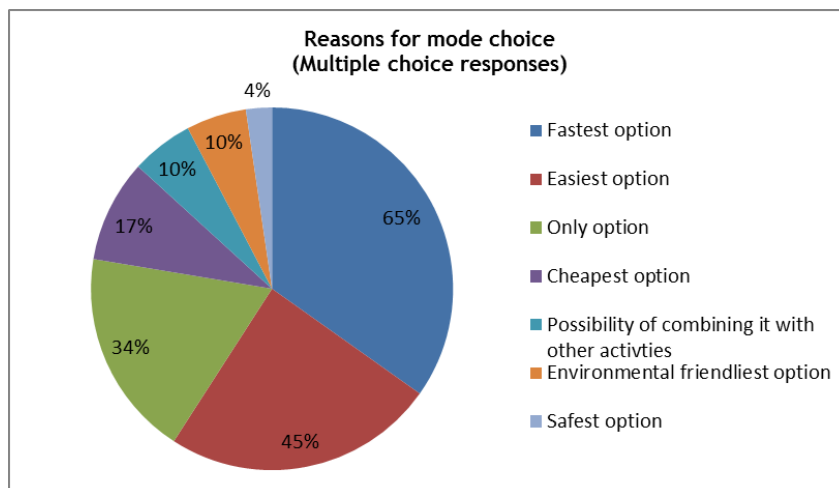
Obviously, also the working hour’s model significantly influenced the mode choice: of those who worked between 0 and 5 o’clock in the night, only 8 % commuted by public transport and the share of car trips rose up to 88 %.<sup>17</sup>

<sup>16</sup> Erler et al. 2013, p.27

<sup>17</sup> Erler et al. 2013, p.28



Survey participants were also asked for their motivation respectively the reason for choosing specific modes of transport. This survey section included certain response options such as: fastest option, easiest option, only option, cheapest option, possibility of combining it with other activities, environmental friendliest option and safest option.<sup>18</sup> When having a look at the weighted survey results the following reasons were decisive for the mode choice (see Figure 4):



**Figure 4: Reasons for mode choice when commuting to the airport, 2013;**  
**Source: Erler et al., 2013, p.33**

When expanding this figure by combining it with the three different modes of ‘car’, ‘public transport’ and ‘others’, results show that 39 % of the respondents that chose the private car used it because it was their only option.<sup>19</sup> In total approximately 72 % of car users chose for that mode because it was the fastest option from their personal point of view.<sup>20</sup> On the contrary, ca. 54 % of public transport users indicated that they use this mode because it was the cheapest option, 45 % indicated to use it because it was the fastest option and 34 % responded that they used it because it is possible also pursuing other activities during a ride.<sup>21</sup>

In a separate part of the questionnaire car drivers were asked to indicate conditions that would enable the shift from car to public transport. The following aspects were chosen by the respondents and shown as weighted results in chronological order: more dense intervals (ca. 52 %), shorter travel times (ca. 46 %), cheaper tickets (ca. 39 %), less interchanges (ca. 39 %), closer public transport stops (ca. 26 %) and longer operating hours (ca. 25 %).<sup>22</sup>

Furthermore, the study authors concluded, that the missing public transport connection between the airport and its surrounding area could be one decisive reason for the employees’ car-focused travel behaviour.

<sup>18</sup> Erler et al. 2013, p.34

<sup>19</sup> Erler et al. 2013, p.34

<sup>20</sup> Erler et al. 2013, p.91

<sup>21</sup> Erler et al. 2013, p.91 f.

<sup>22</sup> Erler et al. 2013, p.63





## 5. Need for improvements

In the last section of the survey, respondents were asked about general suggestions for improving the transport connection to the Airport of Vienna. The following table includes the (pre-defined) suggestions in chronological order by their frequency of occurrence:

**Table 1: Suggestions for improving the commuting to/from the airport**

Suggestions grouped in categories	Frequency of occurrence	Status in 2018
Better connection to the city's borders and the suburban areas	57	Airport connection to the ÖBB long-distance railway network and connection to the central train station of Vienna available
Shorter intervals and longer operating hours for the CAT (City Airport Train)	37	n/a
Shorter intervals/more connections in general	35	Intervals of 15-20 minutes for the S7 (suburban train) in peak hours as of fall 2017
"Others"	27	n/a
Shorter travel times when using public transport	19	n/a
Cheaper tickets for public transport	19	n/a
More/better (car) parking options	16	Parking facilities at the airport are constantly adapted to the user's needs
Shorter intervals and longer operating hours for the suburban train ('S-Bahn')	14	Intervals of 15-20 minutes for the S7 (suburban train) in peak hours since fall 2017
Shorter intervals for the Airport Shuttle	14	n/a
Shorter intervals for the Vienna Airport Lines	13	n/a
Better facilities for bicyclists and improvement of bicycle storages/parking spaces	11	Construction of bicycle path directly connecting the airport with the city centre
Adaption of the public transport to the working hour models of the employees	11	n/a
Incentives (transportation allowance) for employees for using public transport	10	(Still) Available
Expansion of motorized individual transport facilities in direction airport	10	Expansion of the A4 motorway starting in 2018
More direct connections	8	n/a
Better options for interchanging between modes/vehicles	8	n/a
Higher punctuality regarding the public transport	6	n/a
Integration of the Vienna Airport in the core tariff zone '100' of Vienna	6	No



More stops for the CAT	5	No
Modernisation of the suburban train facilities	4	n/a
Better information in case of delays or disruptions	4	n/a
Connection of the airport to the railway network of the 'ÖBB'	4	Happened in the course of the launch of the new central railway station in Vienna
Higher punctuality regarding the Airport Shuttle	3	n/a
Own lane for (dedicated) Airport busses	3	No
Platform for ride-sharing	3	'DRIVE2VIE' is available for airport employees
Enhancement of cleanliness/better quality of the public transport (vehicles)	2	n/a
'Airportservice' as an additional transport supply when public transport is not operating	2	n/a

*n/a ... not available*

Besides these suggestions for improving the transport supply/connection, also more concrete statements on improvement potentials were collected and published within the study. Respondents were also asked to give suggestion for future enhancements regarding the transport offers; these were clustered per mode:<sup>23</sup>

Public transport	Individual transport	Alternative transport concepts
<ul style="list-style-type: none"> <li>Better connection/accessibility to the suburban areas of Vienna and surrounding municipalities</li> <li>Shorter travel times and better connection between modes/options of interchanges</li> <li>Expansion of the infrastructure and enhancement of the network quality (e.g. 24-hours operation of trains, metro and busses)</li> <li>Cheaper prices/conditions for airport employees for public transport and integration of the airport in the Vienna core zone (for public transport)</li> <li>Better and more modern equipment of public transport vehicles</li> <li>Better information and customer service, especially in case of disruptions</li> <li>Optimisation of an intermodal transport supply for the airport employees</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of the highways in direction airport</li> <li>Better conditions for long-term parkers</li> <li>Enhancement of the short-term parking possibilities</li> <li>Free parking for employees</li> <li>Expansion of the park &amp; ride system</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of platform for carpools and taxi on-demand services</li> <li>Better bicycle options (expansion of bicycle paths, enhancement of safety at bicycle paths, safe parking areas e.g. at the train station "Wien Mitte" or directly at the airport)</li> </ul>

<sup>23</sup> Erler et al. 2013, p.10



Within the framework of another European project, ‘PUMAS’, funded under the Interreg programme ALPINE SPACE, further suggestions for enhancing the accessibility to the airport of Vienna were collected. One aim of the PUMAS project was to set the framework for a Sustainable Urban Mobility Plan (SUMP) for the area of Schwechat, where the airport is located. In the course of these SUMP developments, potential ideas for further activities in the mobility corridor Vienna-Schwechat-Vienna Airport were collected and could be retrieved from the web.<sup>24</sup>

One aim stated in a study report of the project was to strengthening the group of environmental friendlier transport modes - public transport, bicycling and walking - by 5 % (from 2014) when it comes to the commuting/traveling to and from the airport. Suggestions for enabling a modal shift when it comes to transport modes were:<sup>25</sup>

- Micro public transport connections between the airport, Fischamend, Enzersdorf and Rauchenwarth
- Long-distance Bicycle path between the City of Vienna and the Airport
- Availability of dynamic travel information and (multimodal) transport hubs at the airport
- Ride-sharing platform
- Active advertisement of alternative transport modes
- More dense intervals for the suburban train ‘S7’
- Connection to the long-distance railway network
- Extension of the ‘A4’ motorway
- Simplification of the taxi regulations regarding the Vienna Airport and the City of Vienna

These suggestions hardly differ from the suggestions covered by the ‘Römerland-Carnuntum’ survey but additionally reflect the needs of the target group.

## 6. Summary

The majority of people commuting to and from the airport of Vienna use the car, followed by public transport and other modes such as motorcycles, bicycles or walking. The reasons why car users rather stick to this mode than shift to public transport are because it is a fast, easy to handle and often the only transport supply that is available. People may shift to public transport in case the connections - especially to the surrounding rural area - would be improved (in terms of operating hours, intervals and availability in general). It seems as if there is a need for enhancing the intermodal aspects by the means of infrastructure but also timetable alignment across transport supplies.

However, the study results also indicate that there is a lack of flexibility when it comes to behavioural change. Complaints and needs for improvements refer to infrastructure adaptations (public transport terminals at the airport, expansion of motorway), timetable adaptations and organisational improvements regarding public transport (e.g. tariff models), ride-sharing and taxi regulations.

Other factors seem to be the missing connection between the airport and the immediate surrounding area/municipalities; others are not willing to switch because they also use their car for business trips;

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<sup>24</sup> Urban Planning Institute of the Republic of Slovenia, 2014 <http://www.pumas-asc.eu/discussions/18>

<sup>25</sup> PUMAS PP4 - Stadt Wien, MA18 & PUMAS PP9 - CEIT Alanova, 2014, p.9



especially shift workers mentioned that using public transport would only be an options if the operating hours would be better adapted to the requirements of all airport employees.

Concrete measurements for improving the transport situation at the airport (for employees) are mentioned in the report from page 78 of the 'Römerland-Carnuntum' study. However, probably not all of them are ready for implementation. Measurements would need to be subject to an impact analysis or even a benefit-cos- analysis - especially from a long-term perspective.

## 7. References

- Erler, I., Gruber-Rotheneder, B., Diesenreiter, C., 2013. Mobilitätsbefragung für den Flughafen Wien, Ergebnisse und Analysen. The study was conducted on behalf of the LEADER Region Römerland Carnuntum for the Airport of Vienna, financed within the LEADER programme, which is co-financed by the state, the province and the European Union.
- PUMAS PP4 - Stadt Wien, MA18 & PUMAS PP9 - CEIT Alanova, 2014. PUMAS Projekt Pilotaktivität, Regionales Mobilitätskonzept Korridor Schwechat-Wien-Flughafenregion, Ergebnis der 1. Phase: Zielpapier und Konzept für die weitere Zusammenarbeit. Published on 25.02.2014, Vienna.
- Urban Planning Institute of the Republic of Slovenia, 2014. PUMAS - Planning Sustainable Regional-Urban Mobility in the Alpine Space. URL: <http://www.pumas-asc.eu/discussions/18>, retrieved on 23.01.2018.