

# DETAILED STUDY ON MOBILITY NEEDS AND EXPECTATIONS

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**FINAL REPORT**

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## Document Information

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## Summary

The study on mobility needs and expectations aims at illustrating the findings of the analysis aimed to investigate the characteristics of flows and the needs of the users of mobility services, commuters, etc.

Information is expected to be gathered within the Living Labs meetings and complemented where necessary by specific in depth investigations via surveys, interviews and focus groups.

The first three living lab meetings conducted in the five regions provided only partial information, therefore the following first draft, building on the draft inputs provided so far and extrapolated from D.T1.2.3, will provide a methodological framework for the classification of the mobility needs and expectations emerged and the further developments.



# 1. Outputs from the Living Labs

## 1.1. Bergamo

### Needs:

- Introduction and/or improvement of on-demand services aimed at simplifying the connection of main mobility strategic nodes (railway stations, urban and suburban bus stops, exchange parking lots, ecc.) to university locations, especially in the Municipality of Dalmine;
- Development of free floating bike sharing services and university carpooling;
- Improvement of cycling infrastructures, with major attention to their continuity in the last mile;
- Balanced timetables between Public Transport Operators, in order to increase efficiency and effectiveness of trips with public means of transport and foster intermodality of trips;
- Improved cooperation between Public Transport operators;
- More guaranteed real time information about trips, especially related to the university carpooling service which will be implemented (predisposition of web platforms/apps able to match demand and offer of shared mobility, paths and timetables of carpoolers' lines, delays, issues on the road network, prices etc.);
- Extension of the "smart platform roofs" network, already existing for the electric line C (which was recently inaugurated), to the other Local Public Transport lines.

### Expectations:

- Reduction of the number of trips by private car for individual use, with consequent reduction of environmental and acoustic emissions;
- Development of a sustainable, integrated and intermodal system for trips between home-work and home-university;
- Reduction of parking spaces for private car and/or reconversion of some of these to exchange parking spaces;
- Development of a efficaciously connected exchange parking spaces;
- Availability of flexible mobility services;

Raising awareness among a large number of students and university employees about environmental issues and diffusion of virtuous behaviour in the way home-university.

## 1.2. Crema

Needs and expectations have been mapped according to the main relevant mobility patterns.

### I. Home to School/University

Needs: comfort, accessibility, safety, flexibility, better distribution in low peak hours, more services in peak hours;

Expectations: solutions to avoid over crowded buses, ticket validation at the stops, infrastructure for cycling, more frequency in peak hours.

### II. Home to Work

Needs: flexibility, accessibility, information;



Expectations: better integration between railway services and Miobus; shared e-bikes; ticket validation at the stops.

### III. Towards hospitals

Needs: flexibility (real time access, alternative services for short distances), accessibility;

Expectations: inclusiveness, services available for vulnerable groups; higher flexibility in booking of flexible services; shuttle services; collaboration with informal/volunteering services; better information, also on paper.

### IV. Between villages

Needs: flexibility, accessibility;

Expectations: more services, including sharing, and services organised between villages.

### IV. Leisure

Needs: flexibility, accessibility;

Expectations: demand responsive systems in weekends and evenings, biking options, integration bus and bike.

Further needs expectations address in general inclusiveness, with special relation to the accessibility to the services by disabled people, and the information, that seems to represent one of the main barriers to the use of the existing services.

## 1.3. Zalaegerszeg

### DRT system

There is a clear high demand for the service from the target group's side.

The goal is to create an optimal service, but as it is a test project, probably it will not be appropriate for everyone (in terms of timetables, routes, or stops). It is necessary to find an optimized solution and to make a reliable service. In order to reach this goal more effectively, on the site visit organized on 14 June 2018 the participated inhabitants could tell their opinion about the routes and the stops, and gave suggestions about the changes (small changes in the route of Gálafej and location of new stops). Except the small changes, all the inhabitants found the routes appropriate.

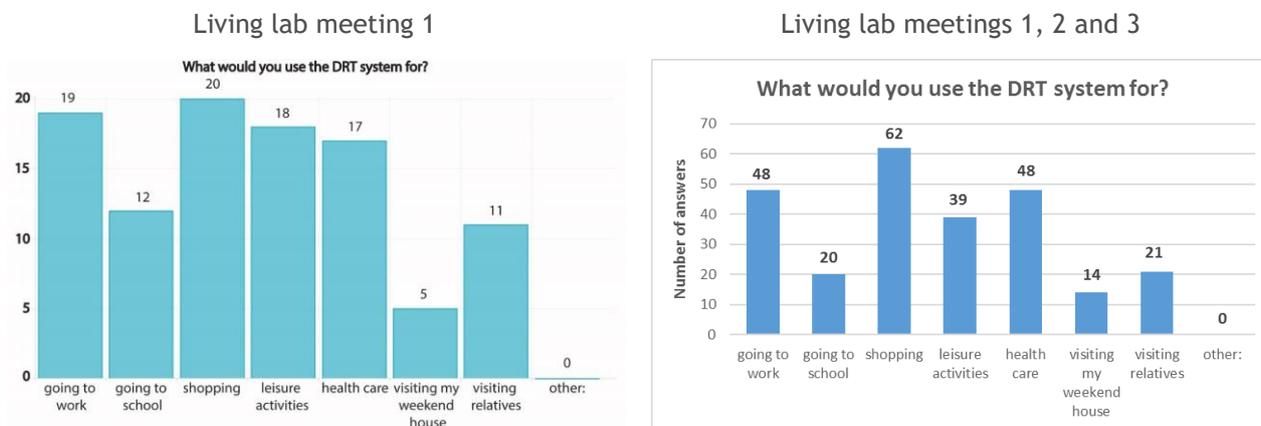
The representatives of the three DRT areas showed to the colleagues of ZMJV and Mobilissimus where the demand is high for the DRT service. As far as the needs are concerned, the high number of inhabitants who appeared to test the routes on the site visits shows the significant demand for the DRT system.

It appeared as an expectation to have minibuses that are allowed to carry standing passengers as well, so in the peak hours most likely people will not have to stay in the bus stop due to the lack of empty seats.

The questionnaire (both online and paper-based) provided results on main reasons for using the service. The following charts show the provided answers and their evolution.



Figure: DRT motivation



Source: Mobilissimus

The final results show that most people would use the system to reach the local shops, and on the second place both health care and going to work got the same number of answers.

### Carpooling system

The demand for the service is up to the motivation system/incentives the users will get. Mostly the employers have to convince their employees to use the carpooling system (by financial tools or by providing sort of advantages for them in case of using the system).

At some companies, the parking spaces are limited, it can appear as a need.

One of the expectations from the users' side is saving cost: getting the subsidy for the whole trip and consuming less fuel (more people share one car).

According to the common discussion on the third carpooling living lab, there are at least two potential focus groups interested in the carpooling system: those who use the public transport recently, but the service does not offer a good travel solution for them and those, who use cars alone for commuting to work. The main task is to find these employees.

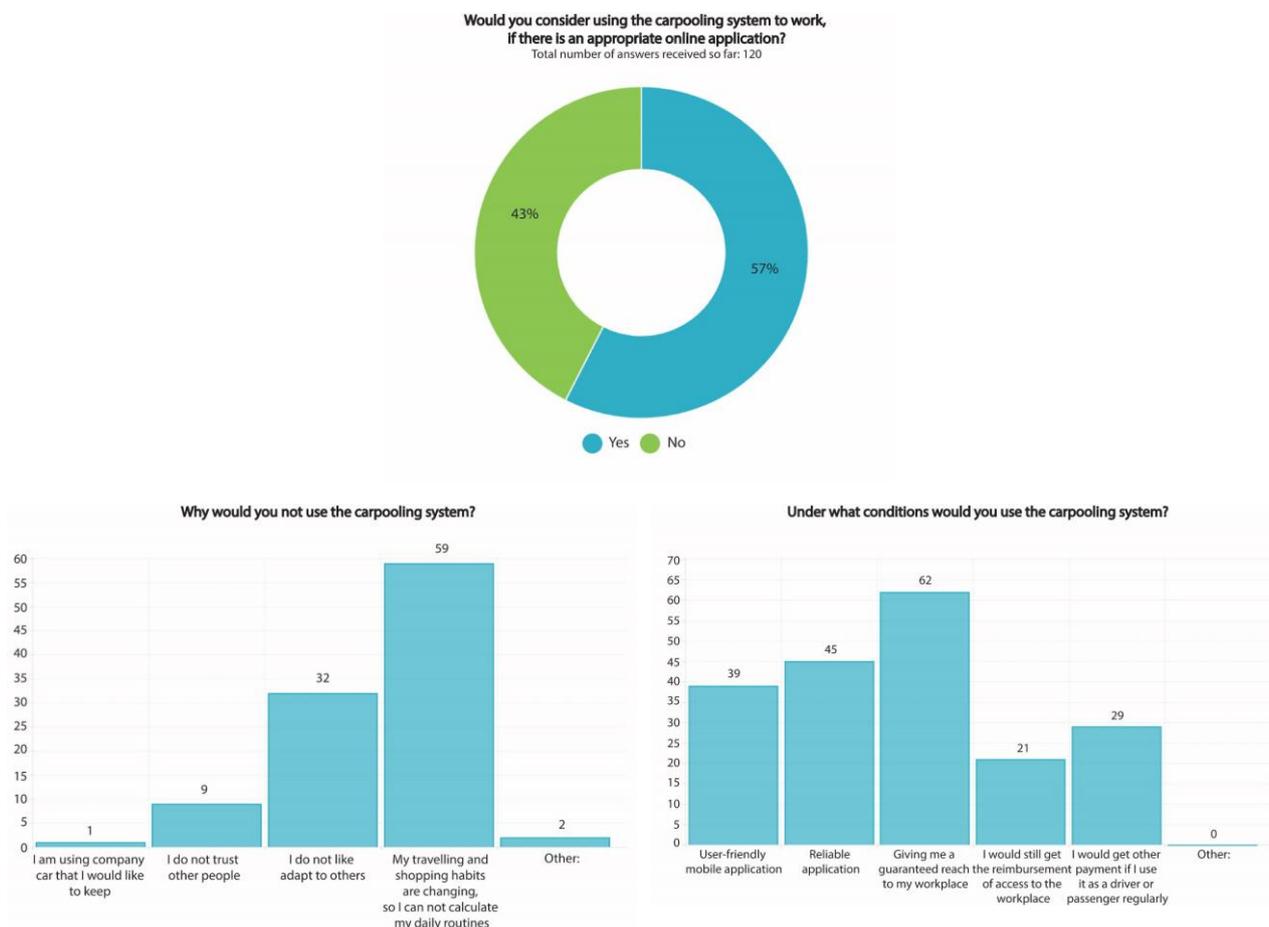
After finding the potential users, the next step is to find the match between passengers and drivers. The financial motivation is the most important motivation factor. We have to find the right solution that fits both the driver and passengers (if someone takes part always as a passenger without paying or sharing the travel cost for the driver, it is advantageous only for him/her, not for the driver). Therefore, the driver needs to be compensated.

It is necessary to make the application as an open system, so all of the companies located in Zalaegerszeg can join to it. In this case, it is easier to find another commuter/employee to share a drive. The more employees will be concerned and invited to the carpooling system, the more effective and successful the new system will be, also the more travels could be managed by the system.

The questionnaires we made (both online and paper-based) already have some results concerning the needs and expectations about the system. The carpooling questionnaire is still under process, some paper-based questionnaires from the employees' part are still missing (haven't been received so far). Comparing the results with the current state of the received answers (without the remaining paper-based ones), it can be said that the distribution of the answers remained the same, just the number of answers changed a bit.



Figure: carpooling motivation



Source: Mobilissimus

## 1.4. Osijek

### 1.4.1. Needs and expectations

Needs:

- Regular PT lines in all areas of agglomeration
- On-demand services for less densely populated areas
- Bike and car-sharing services
- Improved cycling infrastructure
- Harmonized schedules between PT operators
- Improved cooperation between PT operators
- Integrated ticketing
- Passenger information in real time (PT lines and free parking places)
- Affordable prices, good value for money
- Diversified mobility services



Expectations:

- Growth of PT patronage and cycling in daily local trips
- Decrease in the number of trips made by individual motorised vehicles
- Reduced number of parking places (cars) in the city centre
- Improved connectivity of less populated areas with the City of Osijek (currently depending on one bus operator/line)
- Availability of flexible mobility services
- Increased number of users (scheduled and flexible mobility services) in student population.

## 1.5. FUMO

Improving the quality of life for the residents of the region means changing the modal split by the creation new mobility systems. (e.g. integrated schedules for the public system, demand responsive transit systems, car and bike sharing, carpooling etc.)

Objectives are, according to the approved masterplan, the increase of walking and public transport on the modal split by 5%, and biking by at least 2% percentage points until 2022. Moreover, car traffic should be reduced by 5% through awareness and mobility management actions.



## 2. The tool (1): classification of mobility needs

In order to classify the needs and expectations emerging from the consultation with stakeholders, a framework has been elaborated.

The first part of the framework is summarized in the following table, where the mobility needs emerged within the Living Lab activities will be classified and analysed identifying the conditions for a shift from the current situation (where the need is not satisfied or satisfied by a second best solution).

n.	Type of need	Satisfied now by	Needed attributes	notes
(1)	<i>(examples)</i> <i>Commuting/work</i> <i>Commuting/school</i> <i>Access to services</i> <i>Business</i> <i>Family care</i> <i>Leisure</i> <i>etc.</i>	<i>Private car</i> <i>Public Transport</i> <i>Foot</i> <i>Bicycle</i> <i>Other</i> <i>NOT SATISFIED</i>	<i>(examples)</i> <i>Frequency</i> <i>Flexibility</i> <i>Comfort</i> <i>Safety</i> <i>Point to point accessibility</i> <i>etc.</i>	
(2)				
...				

## 3. The tool (2): Expectations and suggestions for new solutions

A second part of the framework, represented below, identifies the expectations in terms of improvements to the existing networks expected to fulfil efficiently and sustainably the mobility needs listed above. Expectations should preferably focus on flexible solutions, sharing options or digital technologies, but other fields of intervention are allowed. This step will lead to the elaboration of suggestions for the definition of innovative solutions, representing a possible starting point for the co-design process.

n.	Expected enhancement	Suggestions for new solutions
(1)	<i>Please describe the expectations reported by stakeholders with reference to the enhancement of the mobility network by:</i> <i>a) flexible solutions;</i> <i>b) shared options</i> <i>c) digital technologies (service hub)</i> <i>d) other</i>	<i>Please translate the expected enhancements in possible hints for the definition of new solutions: these hints can be used as a basis for the co-design process</i>



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(2)		
...		

## 4. Synthesis of Shareplace mobility needs and expectations

The last chapter provides a cross cutting analysis of needs and expectations, identifying the common elements emerged across the five pilot regions, and classifying them according to the relevance of the mobility network enhancement drivers (flexible solutions; shared options, digital technologies).

The analysis will be run at project level, in order to provide inputs for the definition of a comprehensive strategy.