

KNOW YOUR CUSTOMER: ENHANCED AWARENESS OF TRAVEL PATTERNS AND PREFERENCES

NOVEMBER | 2025

FOREWORD – MARKETING COMMITTEE CHAIR

Public transport is not just about moving people from A to B. It is about trust, experience, and connection. Behind every journey is the dedication of those who work in our sector – and at the heart of every decision is the satisfaction of our passengers. Listening to them, understanding their needs, and acting on their feedback is what makes our services relevant, resilient, and ready for the future.

This is why measuring customer satisfaction is so important. Going beyond the statistics, it tells us stories about how people experience public transport and what will make them choose it again tomorrow. Just as vital is understanding customers' expectations for mobility services, so that we can plan and deliver new solutions that truly meet their demands.

The UPPER project shows how far we can go when we put people at the centre of mobility. By combining innovative methods, citizen engagement, and shared learning across European cities, UPPER is strengthening public transport as the backbone of sustainable, climate-neutral, and smart urban living.

As UITP's Marketing Committee, we welcome and support this work. It reflects our shared commitment

to making public transport not only the most sustainable choice, but also the most attractive, comfortable, and trusted one.

Public transport is the future of mobility. Projects like UPPER remind us that this future starts with people.

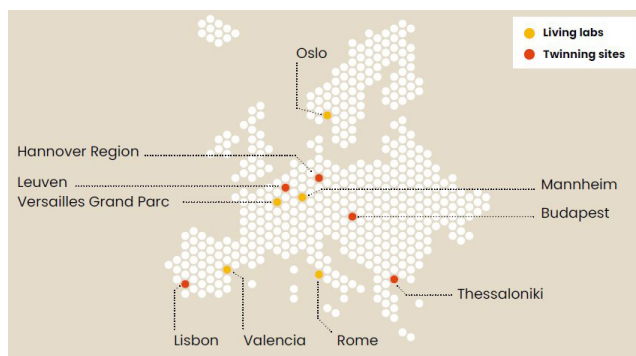
*Anne Bigand,
Passenger Experience Director, ALSTOM,
and Chair of UITP Marketing Committee*



▶ Anne Bigand

INTRODUCTION

It is a well-established practice among public transport operators (PTOs) of all sizes to regularly measure customer satisfaction with the services provided. Moreover, both public transport authorities (PTAs) and PTOs have ways of responding to this feedback from passengers within their metropolitan area. However, involving current or even potential users in public transport (PT) planning is still rare. User involvement is an innovative approach that UPPER partners have integrated into their activities, looking to add a bottom-up approach complementing top-down mobility planning at the urban and metropolitan level. The UPPER partners aim to learn from such approaches, tailoring them where needed and providing the lessons learned and outcomes to all other interested mobility stakeholders.



UPPER is coordinated by UITP and includes 41 partners. The project started in January 2023 and is scheduled for completion by the end of December 2026.

The project's goal is to significantly increase PT use and satisfaction with PT services, thus helping cities reach their carbon neutrality objectives under the EU's Smart and Sustainable Cities Mission. To reach these objectives, the 10 project sites are implementing a total of 80 measures that prioritise the use of public transport and sustainable mobility. These measures are grouped into five Innovation Axes, looking to influence travel behaviours through different mechanisms and at various timescales, through a combination of pushing people away from private car usage and pulling them towards public transport. The implementation of these measures is being supported by the development of a customised toolkit, U-TOOLS, which is taking advantage of the increased availability of reliable, high frequency data on mobility and PT services, allowing public transport authorities and service providers to better understand and cater to the mobility needs of residents and customers.

As all the UPPER sites are part of the EU-supported Mission for Climate-Neutral and Smart Cities, exchanges with the other cities and partners supporting the Mission's goals are a regular target of UPPER learning and dissemination activities.

The UPPER project is financed by the European Union's (EU's) Horizon Europe Research and Innovation programme under Grant Agreement number 101095904.

More information, as well as project publications, results, and achievements, is available at:

www.upperprojecteu.eu



► Figure 1: UPPER Innovation Axes

METHODOLOGICAL APPROACH AND INITIAL UNDERSTANDING

At the start of UPPER, several partners took a quantitative approach to understanding the mobility needs and motivations of different target groups, as well as what motivates them to use certain urban transport modes.

Several approaches were taken to gather insights on how residents of UPPER cities and countries are using the available mobility services and modes:

- **Netnography:** Analysed social media ratings and comments from users in five cities: Valencia, Paris, Rome, Oslo, and Mannheim.
- **Experience Notebook:** Collected information on daily mobility habits from citizens in eight EU countries, focusing on diverse user groups such as young, elderly, and low-income individuals.

NETNOGRAPHY

This is an online research method aimed at understanding social interaction in digital communication contexts. Netnography uses the assessments and comments made on social media platforms as data, substituting the traditional in-person observation techniques with interactions and experiences seen via digital communications channels. Data was scraped from platforms where customers can post comment on transport services. After gender and residence were determined (e.g. to differentiate between tourists and residents), the number of reviews per

year was established to determine the usage of the concerned transport mode. Furthermore, the content of the comments was analysed using natural language processing (NLP) techniques to get a sense of the sentiment/polarity towards a type of shared transport, as well as the intensity of the observed feeling. The following types of transport were analysed in five of the UPPER cities: bus, metro and/or tram, taxi, shared bike, shared low-emissions vehicle (LEV) (motorbike and/or electric scooter), and shared car.

Table 1 presents the results of the Netnography analysis.



► Copenhagen, Denmark

Table 1

Type of transport	Cities											
	Valencia (Spain)		Ile de France (France)		Rome (Italy)		Oslo (Norway)		Mannheim (Germany)		Total	
	N° Reviews	N° Comments	N° Reviews	N° Comments	N° Reviews	N° Comments	N° Reviews	N° Comments	N° Reviews	N° Comments	N° Reviews	N° Comments
a. Shared bike	387	292	1,194	1,049	-	-	49	49	32	19	1,662	1,409
b. Bus	623	363	952	512	1,087	835	251	140	44	18	2,957	1,868
c. Subway/ tram	847	847	2,923	2,923	2,377	942	459	336	187	101	6,793	5,149
d. Taxi	1,506	910	2,341	1,647	2,126	829	1,251	662	2,095	1,036	9,319	5,084
e. Shared lev	309	174	620	410	699	622	85	75	105	105	1,818	1,386
f. Shared car	93	64	237	191	133	127	608	371	109	105	1,180	858
Total	3,765	2,650	8,267	6,322	6,422	3,355	2,703	1,633	2,572	1,384	23,729	15,344

EXPERIENCE NOTEBOOK & MOBILITY MAPS

To further investigate the perceptions, mobility choices, and challenges faced by residents in UPPER cities and countries, a combination of both qualitative and quantitative research techniques was used. This resulted in the creation of a mobility map showing the average transport mode used and the reasons for using a certain mode. The technique is based on anthropological research and aims to provide a better understanding of people's requests and expectations regarding the mobility services in their cities. The ultimate goal is to enable both PTOs and PTAs to better meet the public's expectations.

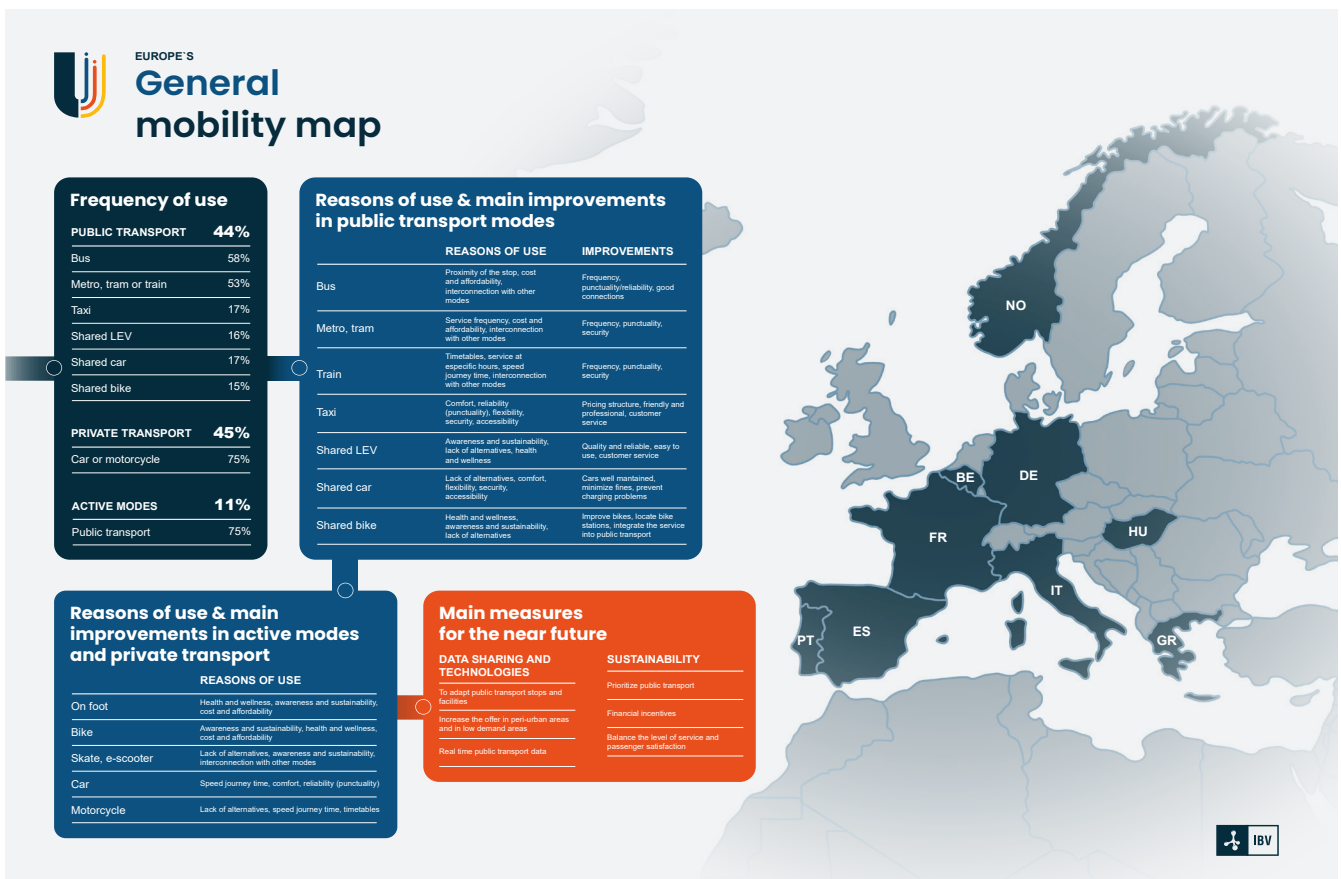
Transport user profiles were constructed according to various demographic variables and characteristics. These profiles were then linked to preferences for transport modes and reasons for using certain modes of transport within that group.

Mobility maps were built for each of the following groups:

- adults with children
- the elderly
- people with functional diversities
- low-income groups
- women
- young people

All the mobility maps developed in UPPER are included in the report on the related deliverable, available at:

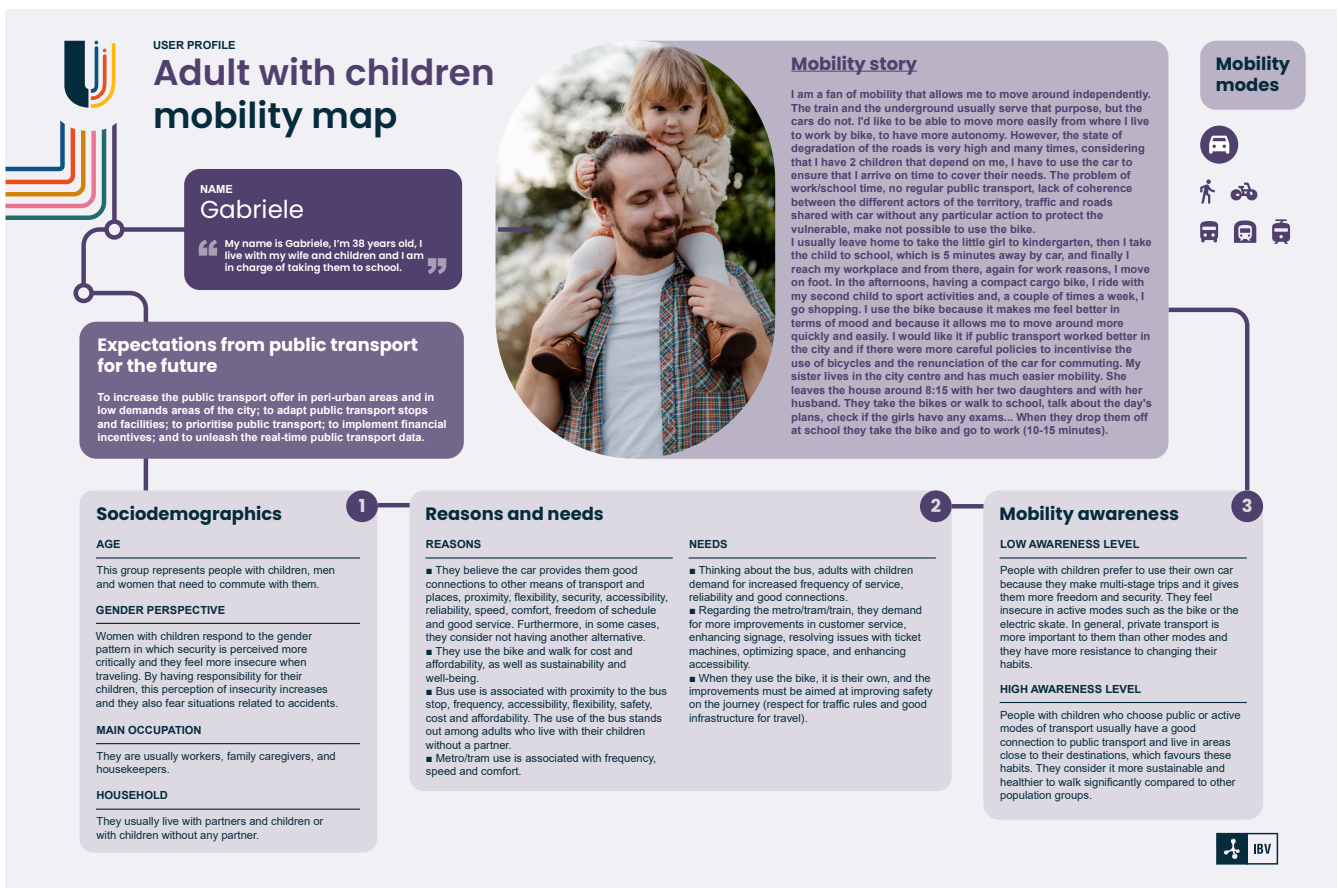
https://www.upperproject.eu/wp-content/uploads/2024/01/D2_1_UPPER_User_mobility_needs_V1_0.pdf



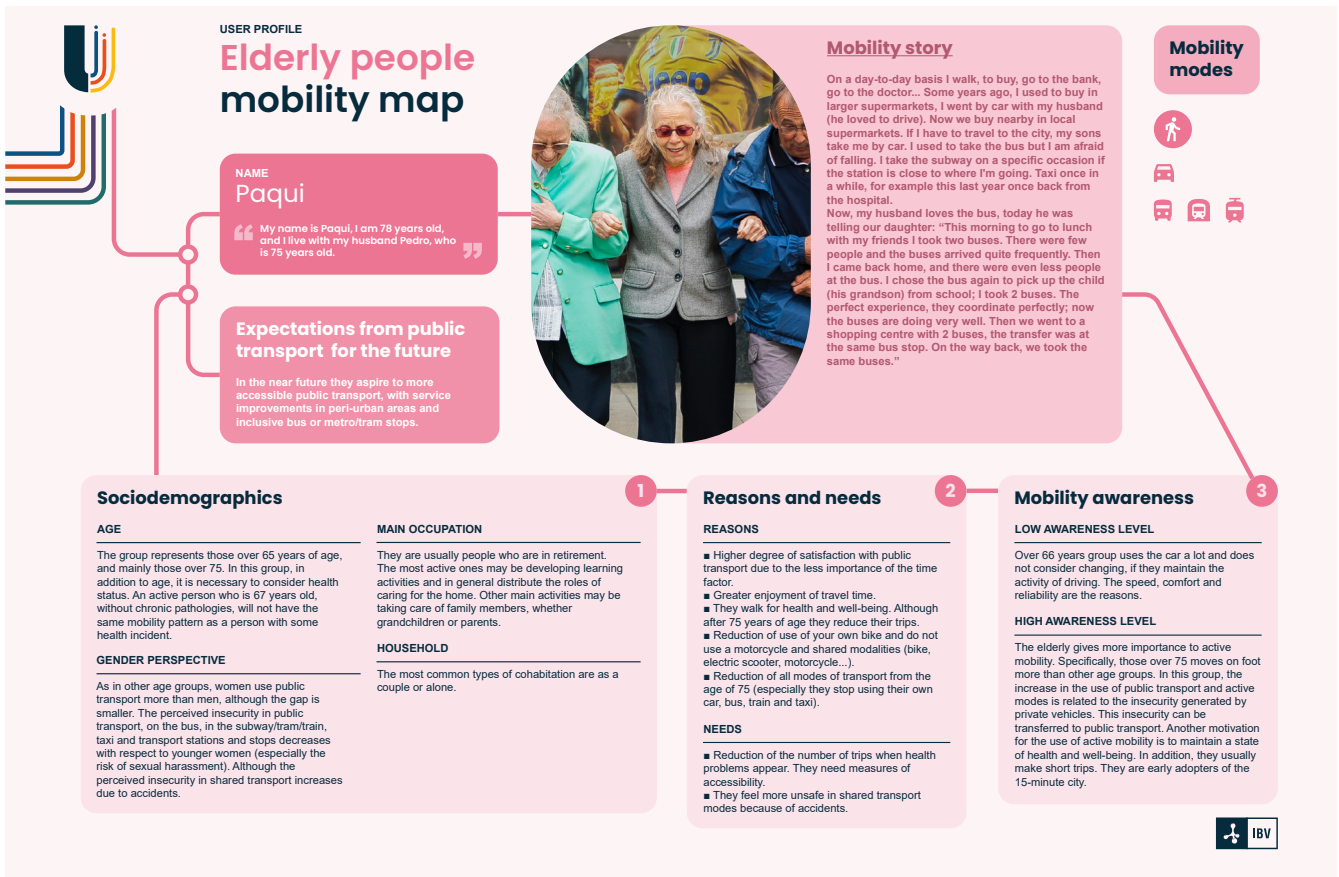
➤ Figure 4: Mobility map aggregating all user profiles



► Figure 5: Mobility map for young people



► Figure 6: Mobility map for adults with children



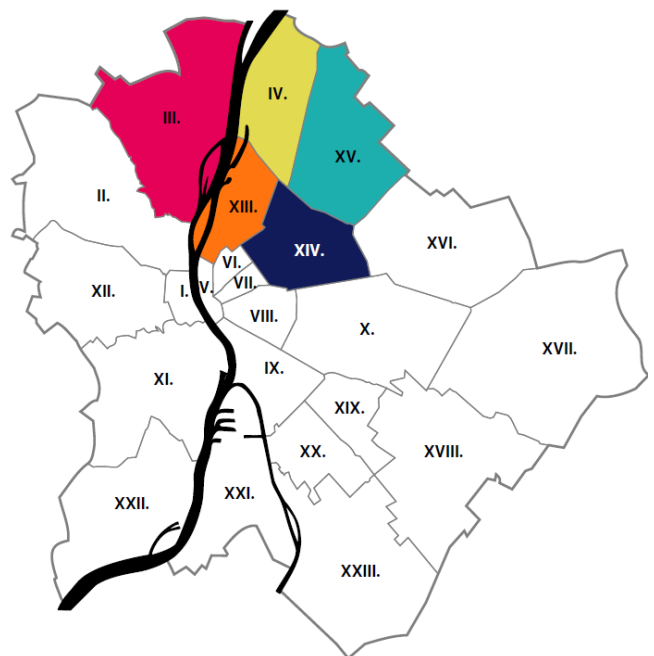
► Figure 7: Mobility map for elderly individuals

UPPER CITY-LEVEL MEASURES

Following the initial study described above, which was conducted during the first year of the project, each of the UPPER cities worked to better define their desired measures – particularly the target groups – followed by the development and implementation of interventions on the ground. As the overall project is due to finish in December 2026, the implementation stage is still ongoing.

BUDAPEST: NEIGHBOURHOOD TO NEIGHBOURHOOD TRAVEL PATTERNS

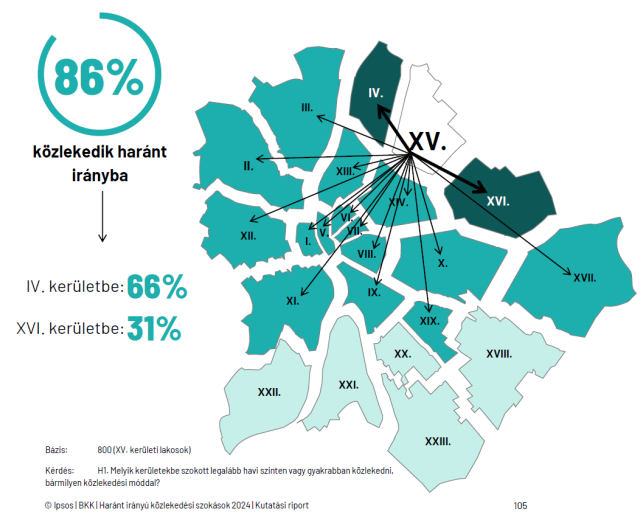
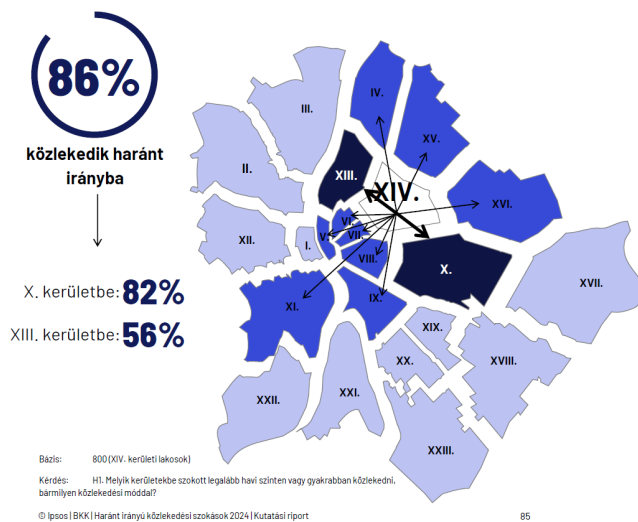
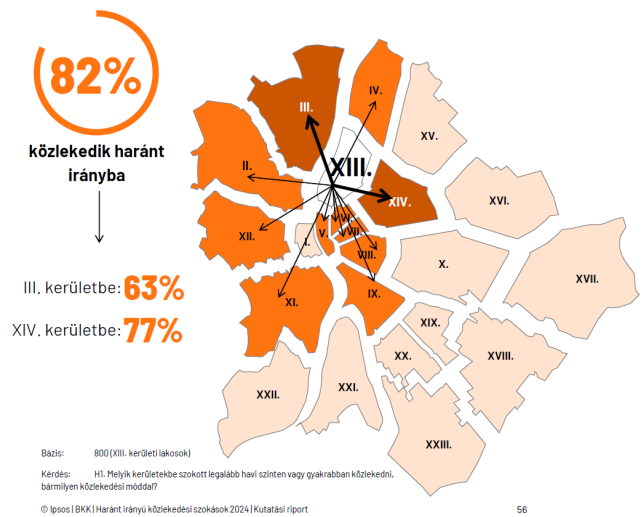
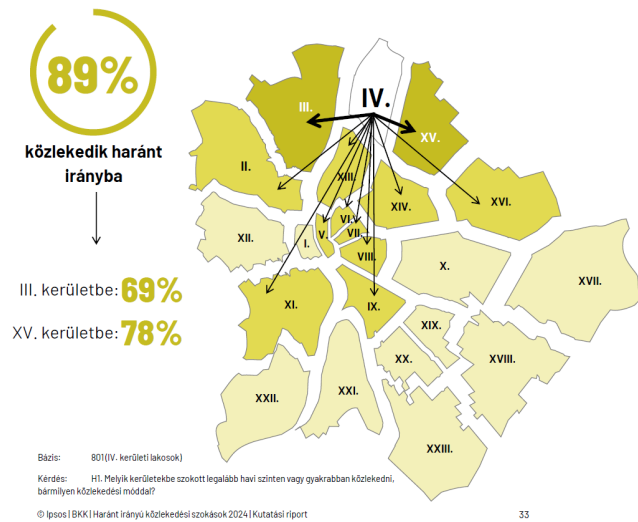
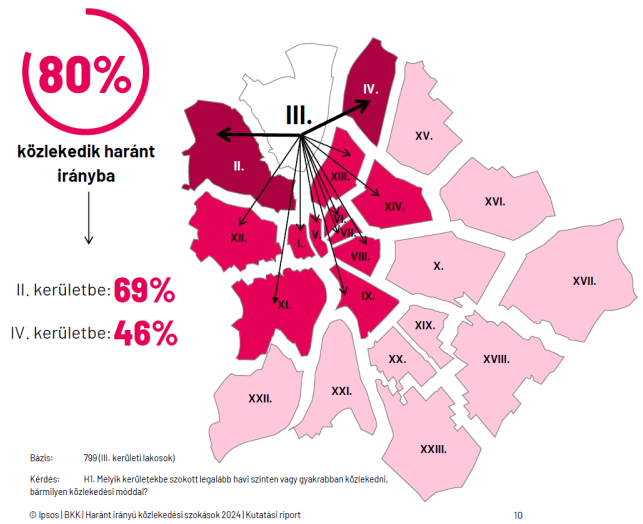
The public transport authority in Budapest, Hungary – BKK – is in charge of the development of the Budapest Public Transport Network Development Strategy. Within the framework of this strategy development, a survey was conducted in five selected areas of the city to assess tangential travel habits. Tangential travel refers to trips undertaken between districts without connections through the city centre.



► Figure 8: Map of Budapest: travels between the highlighted districts are considered tangential

Respondents from each of the five highlighted districts were asked to list the other districts of Budapest they usually travel to at least once a month and provide information on the reason for travel, the mode of transport used (including any transfers from one mode to others), the frequency of such travel, the trip duration, whether or not the trip passed through the city centre, reasons for the modal choice, and satisfaction levels.

The vast majority of respondents in the five districts said they were travelling frequently, at least once a month, to the immediately adjacent districts — e.g. residents in District III reported travelling most often to District II (69%) and District IV (46%). The reason for such travel was predominantly not linked to work, with leisure, shopping, and entertainment being the most often cited reasons for travel between adjacent districts. Especially in the context of changing work patterns, it is extremely important for the PT sector to cater to non-commuting trips.



► Figure 9: Map of Budapest: trips originating from a district

The majority of the trips identified did not pass through the city centre. However, even in cases where reported PT trips included transfers, the modal share of public transport was greater than that of private car travel. Public transport was the primary mode of transport for most of the pairs of districts studied. However, in the case of trips from District IV to III, IV to XV, and XV to XVI, private cars were the primary mode. Speed, reduced number of transfers, and proximity of stops to the destination were the top reasons for making a PT trip. When asked why public transport was not chosen for a trip, the top reasons were slowness, numerous transfers, and the need to transport heavy or bulky luggage.

It is important to note that Budapest is a city with a very high PT modal share in general, which is also reflected in the choices that residents make for their transversal travel between neighbouring districts. The majority of PT users stated that they were satisfied with the trips between adjacent neighbourhoods. In destination pairs where private cars were the most used mode, the share of passengers who said they were satisfied with public transport (overall) was significantly higher than the share of passengers who were 'very satisfied'.

The study on travel patterns for tangential trips is the main output of UPPER's BUD_03 measure, and the results are being used by BKK to identify new PT connections to respond to users' travel needs.

VERSAILLES GRAND PARC: PERCEIVED PUBLIC TRANSPORT QUALITY OF SERVICE

Versailles Grand Parc (VGP) conducted a survey of 'Communauté d'Agglomération' residents to get a better understanding of their perception of the quality of service (QoS) of the PT modes and services in their region. This qualitative public perception data complemented the quantitative indicators collected on a quarterly basis by Île-de-France Mobilité (IDFM), the regional transport authority. The collection of a combination of qualitative and quantitative data is deeply rooted in the belief that in order to shift people's mobility habits from private cars to PT, both the actual QoS and perceived QoS need to be at high levels.

During UPPER, an initial survey was conducted in 2023/2024 to establish the baseline values. A comparative survey will be conducted at the end of the project in 2026 to assess the effectiveness of any communication and other actions undertaken by the various mobility stakeholders during the project. The perception baseline survey focused on five elements of PT QoS — PT offer, information available, comfort and cleanliness, whether they needed any additional service, and security of service — with a further breakdown by transport mode used.

In terms of satisfaction with the range of PT services provided, satisfaction with the routes available was similar across the three modes in the VGP area — bus, tram, and suburban rail. On the other hand, respondents perceived trams as more reliable, i.e. suffering from fewer service interruptions, than both bus and suburban rail services. Moreover, the quantity of tram services was seen as superior to that of buses and suburban rail, during both peak and off-peak hours. In terms of information provision to travellers, the reliability of the information provided was seen as lower for buses than for both railway and tram. Looking at the cleanliness and comfort of facilities/stops and vehicles, trams were perceived as better than trains, which, in turn, were perceived as better than buses. Crowdedness at peak times was seen as having an impact on all three modes, as satisfaction with overall travel conditions was higher at off-peak times than peak times. In terms of perception of security, respondents reported feeling generally at low risk of aggression in vehicles, while waiting at stops, and after alighting the vehicle. The lowest reported fear of safety issues was on buses, potentially due to the proximity of stops to final destinations and comparatively shorter in-vehicle times. The results of this survey were shared with IDFM to give them a view of users' perception of their services, and the data is also being used by the VGP mobility department to determine what they need to focus on during their own mobility-related campaigns.



► Budapest, Hungary

LEUVEN: IMPROVING CITY-LEVEL PUBLIC TRANSPORT POLICIES

The backdrop of the UPPER interventions in Leuven is a major reorganisation of the public space in the city centre, coupled with a change in the bus network serving the city, as well as the surrounding area.

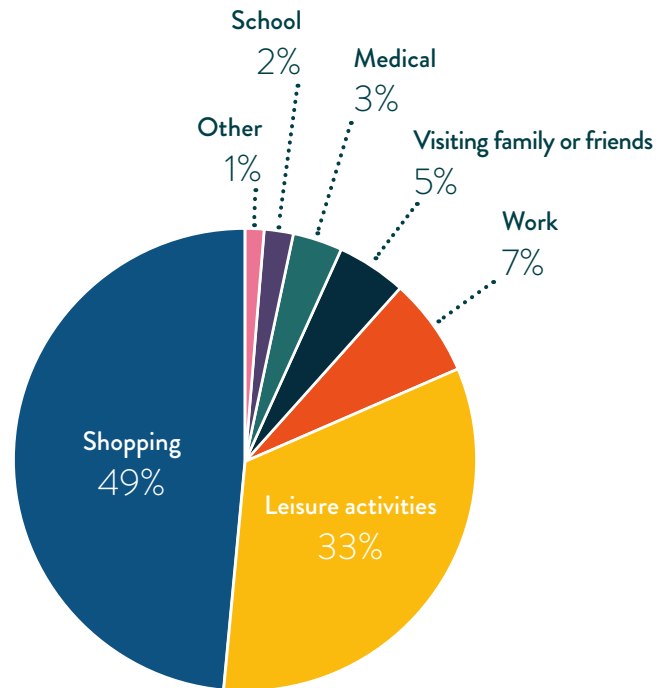
To this end, the City of Leuven conducted a number of street surveys with citizens on how they had travelled into the city centre, their motivation for travel, and the mode used for their trip. The current use of PT, peripheral parking lots, and mobility hubs was also covered. This qualitative data is being integrated into an improved process for mobility data management, visualisation, and reporting developed by the City of Leuven.

The survey highlighted the need to provide information on service disruptions to customers, thus allowing for alternative plans to be made. Interestingly, it was non-users who declared themselves dissatisfied with PT services. Declared satisfaction levels were high among PT users, regardless of frequency of use. This suggests that the major challenge is getting users to take the first step towards PT.

Regarding the use of Park and Ride (P&R) lots, i.e. where a free bus service is provided from the parking lot to the city centre, the survey showed that the P&R lots are used frequently by both commuters (daily use, work trips) and for recreational purposes (less frequent use, for shopping or free time). However, commuters preferred walking from the P&R lots to their final destination rather than taking the free bus, which underscores the importance of the P&R lots' location. Inner-city parking lots had a different user profile, with very few being frequented by the survey respondents on a daily basis and the reason for travel being mostly shopping or free time.

Overall, the survey results on P&R lot use reflect the need for balance and location proximity to the desired destination by trip purpose when designing parking policies.

The street survey data has already been used to inform citywide transport policies, with a new dashboard being created to visualise transport data within the city. Moreover, the city's transport portal is being updated to show information that was previously targeted at car drivers. As a next step in UPPER, a second street survey was conducted in the summer of 2025, with the aim of getting a better understanding of the public's knowledge of the most recent mobility developments in the city and gauging the level of satisfaction with planned and implemented initiatives.



► Figure 10: Use of Park and Ride lots by trip purpose

LISBON METROPOLITAN AREA: SUSTAINABLE URBAN MOBILITY PLAN DEVELOPMENT AND SERVICE ADAPTATION TO ALL USERS

Lisbon has implemented a range of innovative measures within the framework of the UPPER project, with gathering feedback from specific target groups being at the forefront of the activities undertaken by the project partners in the city. At the same time, the metropolitan authority, Transportes Metropolitanos de Lisboa (TML), is in the process of adopting and implementing a Sustainable Urban Mobility Plan (SUMP) for the entire region, covering 18 municipalities. The plan follows the four-phase approach described by the [European Commission's Urban Mobility Observatory](#): 1 – Preparation and analysis; 2 – Strategy development; 3 – Measure planning; and 4 – Implementation and monitoring.

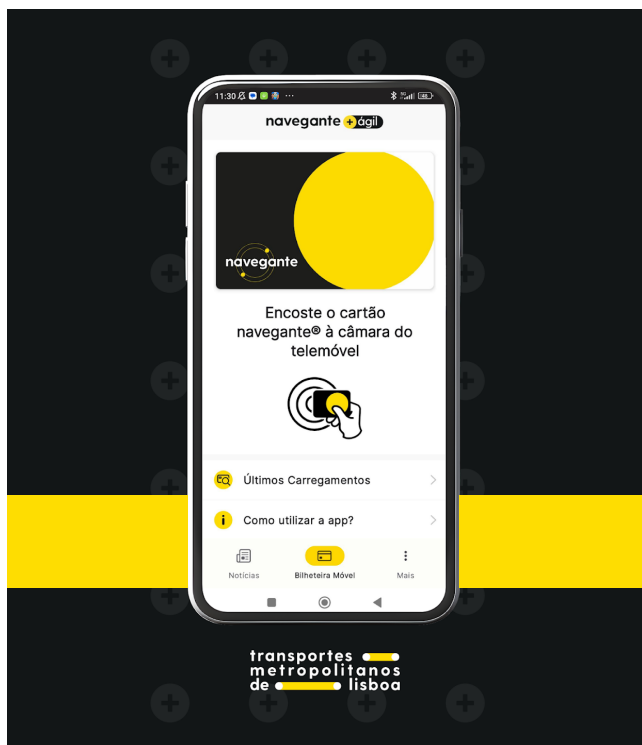
As the TML is moving into Phase 3 of the creation of the SUMP at the metropolitan level, a public consultation process has been put in place to ensure the representation and buy-in of local stakeholders in the actions and measures that will be included in the final plan. Five participative assembly sessions were conducted as part of the consultative process for the plan, with the goal of gathering views and potential co-creation actions from the different geographic areas of the AML. Moreover, the plan also underwent a strategic environmental assessment, with citizens and interested stakeholders in the area having the opportunity to submit their comments in May–July 2025.

For the same UPPER measure in Lisbon – LIS_03, with the goal of improving mobility planning, PTO CARRIS conducted

a perception study among its customers. As CARRIS operates bus and tram services in Lisbon, this study focused on PT within the municipality of Lisbon. The study on customer perceptions of CARRIS aimed to get insights on how different user profiles — including clients, non-clients, and employees — view the current service. Using a qualitative methodology that included focus groups and customer journey mapping, the study identified perceived strengths, such as network coverage, affordability, and sustainability, alongside challenges like lack of reliability and poor real-time information provision.

The findings highlight the need for a more efficient and better-integrated network and enhanced real-time passenger communication. Moreover, this exercise enabled the development of ‘personas’ reflecting key user groups and their specific mobility needs. Moving forward, these findings will inform CARRIS’s network redesign.

One of the requirements raised by customers, especially in metropolitan area journeys, was an integrated app allowing users to travel across the region. As part of their activity in UPPER measure LIS_07, Transportes Metropolitanos de Lisboa focused on enhancing the features of the new Navegante app, which allows PT customers to renew, check the validity period, and pay for their season pass for PT and sustainable mobility services in the entire metropolitan area. The objective of this campaign was to strengthen the brand’s presence — with PT users already being familiar with Navegante as the ticketing card support app in use within the city — and connection with users, as well as building trust between customers and app developers directly.



► Figure 11: Lisbon Navegante App APP Screenshot

MANNHEIM: NEW DIALOGUE FORMATS TO SUPPORT CITIZENS IN TRANSITIONING TO SUSTAINABLE TRANSPORT MODES

UPPER measure MAN_01 aims to provide citizens with tailored information to support them in switching from private cars to PT and other sustainable modes of transport. To do this, the residents of Mannheim and the Verkehrsverbund Rhein-Neckar (VRN) area were asked for their input in terms of service and information needs. To elicit participation from individuals who would otherwise be unlikely to participate in public consultation, a serious game¹ was selected as a public participation method in all UPPER sites — [additional information is available in the Resource section of the project website](#). Held in September 2023, the Mannheim Serious Game was conducted, focused on understanding the needs of various PT user groups at three pre-selected stops.



► Picture 1: UPPER serious game board from Mannheim

Second, during the Mobility Week 2024, a Data Walk was organised with citizens in the metropolitan area to highlight the various datapoints and sources that are being used by the authorities to monitor and plan services. This also provided an opportunity to extend cooperation beyond the UPPER project partnership, with the City of Mannheim, MobiData BW®, SmartCity Mannheim, Rhein-Neckar-Verkehr GmbH, and Rhein-Neckar Transport Association all being involved in the activity.



► Picture 2: UPPER Data walk, 2024

¹ The serious game is a format of public participation, similar to a focus group, designed to gather input from individuals who rely on public transport but are often unable or unlikely to participate in more standards types participatory formats.

UPPER TOOLKIT: U-GOV

An additional workstream of the UPPER project is focused on developing a suite of information technology (IT) tools that can be used by city authorities and PTOs to achieve objectives related to sustainable urban mobility. The seven U-TOOLS have been developed by the project's technical partners, responding to a set of requirements that the project partners collectively agreed on. Once a software solution has been developed to respond to these requirements, interested UPPER cities and partners are acting as 'beta-testers', using the U-TOOL in the implementation of their UPPER measures. The technical readiness level (TRL) of the final versions of the U-TOOLS is expected to be at 8-9; commercial release may be envisioned in the Exploitation Plan that will be drawn up for each U-TOOL.

Among the seven U-TOOLS developed, U-GOV focuses on citizen engagement, as targeted engagement and the co-creation of solutions play important roles at many of the UPPER sites. U-GOV aims to facilitate these activities by providing a platform for citizen interaction. It has been designed to foster participation at four distinct levels: information/sensitisation, consultation/dialogue, collaboration/co-creation, and alliance/decision-making. The objective of U-GOV is to serve as a conduit for addressing the expectations and aspirations of various citizen organisations seeking involvement in PT-related decision-making processes. The tool is currently being tested in local languages at six UPPER project sites. Starting in the autumn of 2025, U-GOV will be used to collect citizen feedback on the information provided and equipment installed for several UPPER measures implemented in Valencia. This includes information and guidance provided to citizens in and around stops, with reference to multimodal connections, as well as information delivery methods developed for people with physical disabilities.

NEXT STEPS

As seen in the description of the UPPER measures and activities, the work of using more comprehensive methods to respond to customer demands related to mobility services is ongoing. The role of UPPER is to demonstrate the benefits of these methods and bring them into mainstream mobility planning, for both PTOs and PTAs.

The UPPER project will continue until the end of 2026, allowing for the evaluation of the tools used, as well as the overall impact of the work done at the project sites. Cities that want to learn more about the project's methods, approaches, measures, and results are invited to join UPPER's replication programme. Ten selected cities will be given exclusive access to workshops with UPPER city representatives, who will discuss in detail their challenges and success factors in implementing their objectives in UPPER. Scan the QR code below for more information:



Project information is available [here](#) and on [LinkedIn](#) and [Youtube](#).

UPPER contributes to achieving the aims of the CIVITAS Initiative and the goals of the EU Mission: Climate-Neutral and Smart Cities.



This is an official Project Brief of UITP, the International Association of Public Transport. UITP represents the interests of key players in the public transport sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and industry. UITP addresses the economic, technical, organisational, and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101095904.

DIGITAL VERSION AVAILABLE ON
 MYLIBRARY



NOVEMBER | 2025
Rue Sainte-Marie 6, B-1080 Brussels, Belgium | Tel +32 (0)2 673 61 00 |
Fax +32 (0)2 660 10 72 | info@uitp.org | www.uitp.org