Design Your City's Net Zero Strategy: Online Planning Lab

NetZeroCities online course for all cities

September 16th- December 11th 2025

Funded by
the European Union

11/11/2025

Module nº4 – Spotlight Session nº4

From cars to collective mobility

Behavioural change and digital tools to boost public transport use

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Design Your City's Net Zero Strategy
Online Planning Lab

https://netzerocities.app/resource-4501

MODULE 1	**Core** The NetZeroCities program, service offering, systemic approach, what works for Mission Cities	**Spotlight 1** NetZeroCities Orientation	**Spotlight 2** Shaping Climate Narratives	**Spotlight 3** Climate City Contracts		
MODULE 2	**Core** Developing a transition team, mapping and activating the ecosystem	**Spotlight 1** Transition team & climate leadership	**Spotlight 2** Engaging the private sector	**Spotlight 3** Citizen engagement for systemic climate action		
MODULE 3	**Core** Developing the city's action plan for climate neutrality	**Spotlight 1** Reporting and MEL	**Spotlight 2** Co-Designing a Climate Portfolio	**Spotlight 3** Using NetZeroPlanner to Support Climate Planning, MEL, and Implementation Management to Achieve Net Zero Goals		
MODULE 4	**Core** Levers of change: Technical solutions, social innovation and multi-actor collaborations	**Spotlight 1** Passive solutions to reduce energy demand in buildings	**Spotlight 2** Systemic energy transition at buildings, districts and city level	**Spotlight 3** Data-driven approaches to energy transition in buildings and districts	**Spotlight 4** Mobility: Behavioural change and digital solutions	**Spotlight 5** Scope 3 and other emission domains
MODULE 5	**Core** Increase finance knowledge of the public administration & learn about options to finance projects	**Spotlight 1** Preparing a pipeline of projects for external financing	**Spotlight 2** Different investor groups and the key priorities and returns profiles for each and instruments	**Spotlight 3** Financing the ambition: Learning from Mission Cities		
MODULE 6	**Core** Multilevel governance, national platforms and policy strategies	**Spotlight 1** Policy and regulations innovation	**Spotlight 2** Public procurement – national specificities	**Spotlight 3** Just transition		

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Housekeeping

Stay muted unless you are invited to speak.

Use the chat for questions and to introduce yourself.

Raise your hand before speaking.

Change your Zoom name to include your city.

Stay engaged: We invite you to keep your camera on.

Activate Closed Captions to keep up with the speakers.

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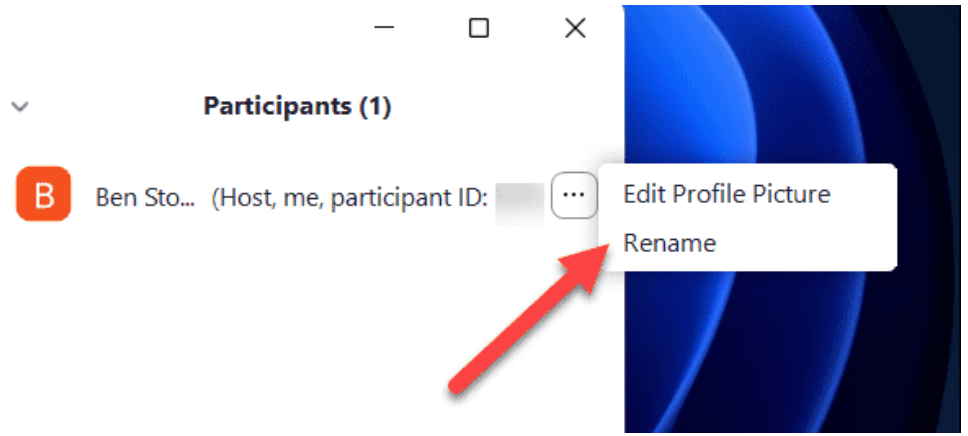
Renaming

- In the meeting controls toolbar, click on **Participants**.
- Hover your mouse over your name, then click **More** or the **ellipsis icon**.(•••)
- Click **Rename.** A pop-up box will appear.
- In the pop-up box, enter your name and city.
- Click **Change**.



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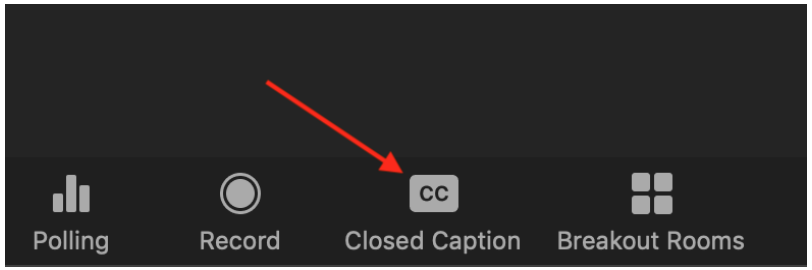
Activating Closed Captions

- In the meeting controls toolbar, click the **Show captions** icon. (CC)
- Captions will automatically appear above the meeting controls toolbar.

*__Caption language__: Please do not change the spoken language of the meeting, as captions will change for everyone.



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Participation

This course is intended for all EU (and Horizon affiliated countries) cities that do not yet have (or aim to improve) a climate Action Plan for the city

- It's open to any municipality as well as to consultants, experts, regional authorities, etc.
- The course guides cities into developing a climate action plan | No funding available for participating cities
- This course is NOT for students
- After each session, facilitators remain online for Q&A

26 online sessions
of which 6 are core sessions

Tuesday 9.15-11.00 and
Thursday 13.15-15.00

Participation is **free**

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Certification

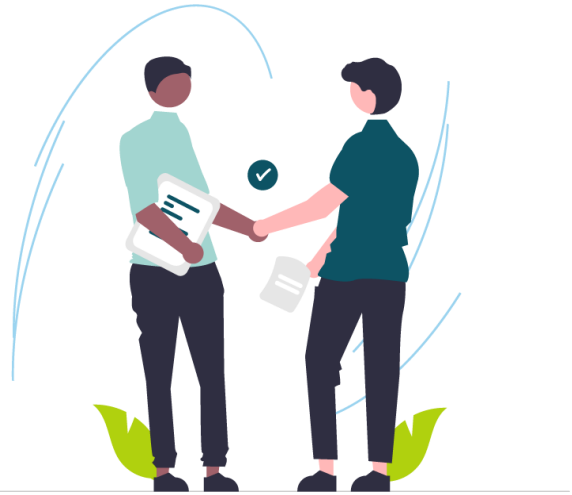
Free

Municipalities that **attend all 6 core sessions** will obtain a certificate of attendance for the city issued by the NetZeroCities project

30€

Participants who **attend all 6 core sessions can obtain** a certificate of attendance issued by **Universidad Politecnica de Madrid**

Online ceremony on December 11th 2025
In-person ceremony at the Cities Mission Conference in Turin May 2026



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Recordings and activities

- All participants who sign up for the program receive an email **after each module with the video recording** of the sessions and additional useful information.
- Before joining each session, you will be requested to agree with the course privacy policy, provide **permission for recording** and details of your municipality or profile to be able to issue the attendance certificates.
- The program is structured into **six modules**, each offering 4-6 hands-on sessions led by expert practitioners and cities. Each session will have an interactive component, in which you can share your questions and experiences.

Q: Can you participate in single sessions?

A: Yes! If you sign up for the course, you will receive communications and links to all the sessions. All sessions are held on Zoom (online). All participants who sign up for the program receive an email after each module with the video recording of the session and additional useful information.

Q: What is the level of English proficiency required?

A: Participants can ask questions in their own (European) language in the chat.

DISCLAIMER: Before joining each session, you will be requested to agree with the course privacy policy, provide **permission for recording** and details of your municipality or profile to be able to issue the attendance certificates.

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Sign-up and Portal Group

What should you do now?

There is **no deadline** for applying to the course. All sessions are held on Zoom, and you can join the Zoom meeting through the link provided in this email or in the course program page on the NetZeroCities portal.

1. **SIGN UP NOW for Zoom sessions and ADD them to your CALENDAR**
2. **Read carefully the** online pages for each session and **register in advance for each of the sessions on the Zoom platform**.
3. **Join the dedicated group for this course to interact with other participants: Design Your City's Net Zero Strategy: Online Planning Lab**

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Faculty

Scientific Directors

Sabrina Bresciani, Ph.D.

Jaime Moreno

Executive Director

Angelica Gomez

Certification and Technical Support

Beatriz Martínez

Hamid Yammine

Lecturers

Eugenia Mansutti

Maria Giorda

Alicia Puig

Daniela Amann

Aurora González

Francesco Palmia

Dr. Silvia Gugu

Sean Murray

Dr.-Ing. Mira Conci

Dr. Gabriella Doci

David Brito

Anette Olovborn

Metadel Mengestu

Alex Anghel

Maria Klint

Paul Barton

Nikhil Chaudhary

Carolina García Madruga

Julia Kantorovitch

Mari Hukkalainen

Marzia Mortati

Georgia Cameron

Meline González Piloyan

Nupur Prothi

Vaneshree Naidoo

Cristina Robledano

Apurva Singh

Janne Rinne

Alexandru Buftic

Marcial Silva

Ignatius But

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1. Welcome and check-in
2. Framing: Why mobility matters for climate neutrality?
3. Tools for change: behaviour and digital enablers
4. Mission Cities best practices: Modal shift in action (Kranj & Valladolid)
5. Q&A
6. Interactive workshop
7. Sharing and reflecting
8. Wrap up

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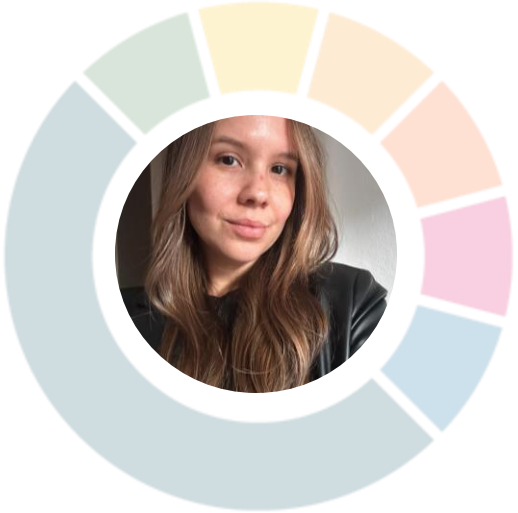
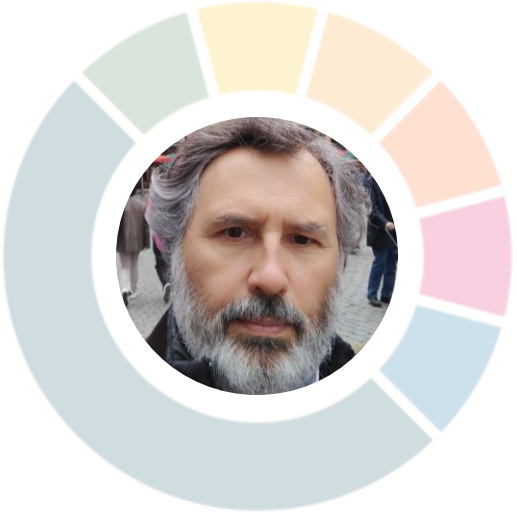
Lecturers



Mayra García-Blásquez

EIT Urban Mobility



Juan Gímenez

Instituto Biomecánico de Valencia

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Learning Objectives

- Understand how behavioural change approaches can accelerate modal shift and support more sustainable transport habits
- Understand the role of digital solutions (e.g. Mobility-as-a-Service, nudging, gamification) in encouraging a shift from private cars to shared, public and active modes
- Explore how European cities are increasing public transport use through behavioural interventions, service improvements and stakeholder engagement

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Why mobility matters for climate neutrality?

- Transport accounts for approximately 29% of the EU's total GHG emissions
- Within the transport sector, road transport accounts for more than 70% of GHG in 2022
- Passenger cars are a major contributor, accounting for 61% of total CO_2 emissions from EU road transport
- Over 70% of EU citizens live in urban areas, which generate 23% of all transport GHG emissions

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Why mobility matters for climate neutrality?

- Unlike other sectors, emissions from transport have increased by 23% between 1990 and 2022 due to rising travel demand and car dependence.
- Tackling transport emissions is therefore key to attain the EU's goal of achievieng a 90% reduction in GHG emissions from transport by 2050

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Private cars dominate modal share

- In most European cities, **private cars represent over half of all trips**, even for short distances under 5 km.
- This results in **congestion, air pollution, noise, and loss of public space**, affecting both climate and quality of life.
- **Behavioural** and cultural factors—such as convenience, habits, and social norms—often sustain car dependence more than pure need.

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Public and active transport are key for net zero

- Shifting to **public transport, walking, and cycling** can cut urban transport emissions by up to **60–70%** when paired with electrification.
- Public and active modes use space and energy **far more efficiently**, enabling more inclusive and liveable cities.
- Cities that prioritise collective mobility benefit from **cleaner air, healthier citizens, and more vibrant public spaces**.

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The role of behavioural change and digital tools

- Technical solutions alone (e.g., EVs) are not enough — **behavioural change** is critical to reduce car trips altogether.
- **Digital tools** (like MaaS platforms, gamification, and nudging apps) can make sustainable travel **easier, more attractive, and automatic**.
- Engaging citizens through data-driven and human-centred approaches helps cities **scale up modal shift** effectively and equitably.

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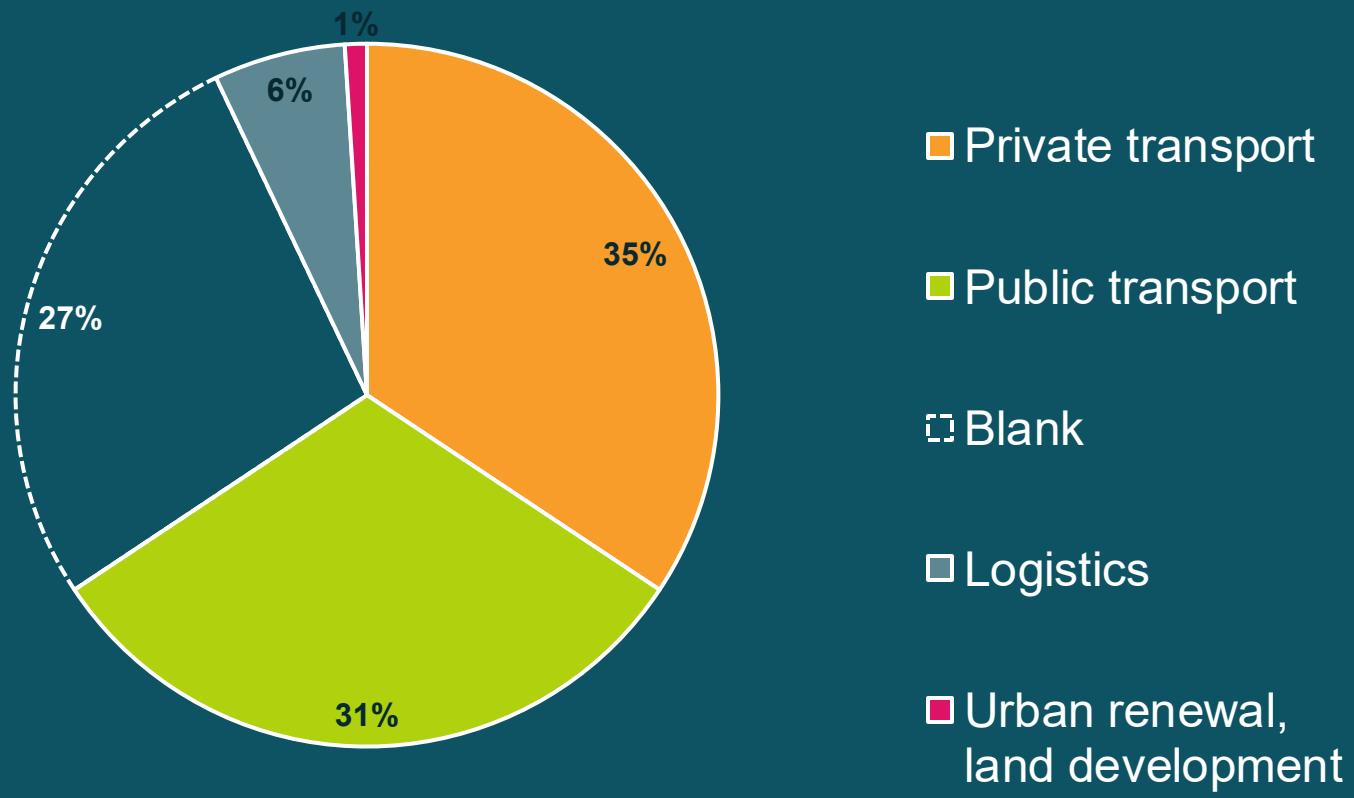
What the Mission Cities say about the barriers they face for a modal shift towards sustainable mobility*

*Analysis of 21 Mission City Climate City Contract (CCCs) Action Plans by Viable Cities, ICLEI & UPM as part of the 'CCC Trend Report' – SGA1 - D1.1, informal review of data by EIT Urban Mobility

NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

Transport barriers by subsector

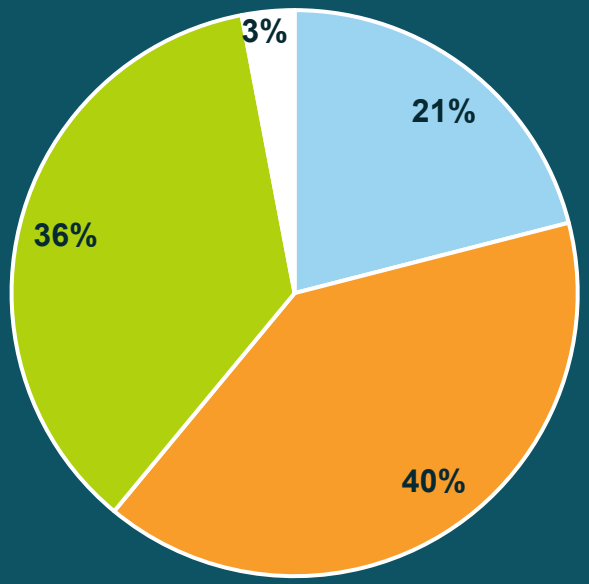
Cities have highlighted **barriers** that pertained to **private transport and public transport** far more than any other area.



NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

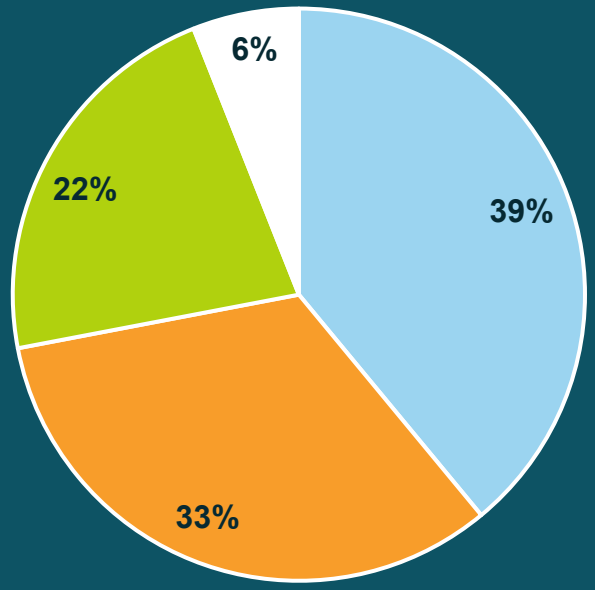
City transport-related barriers – type

Barrier per **public sector** transport



Behavioural
Infrastructural/tech
Institutional
Other barriers

Barrier per **private sector** transport



Behavioural
Infrastructural/tech
Institutional
Other barriers

NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

City transport-related barriers cont...

Cities say they strike most **barriers** when it comes to **public transport i**n the realms of **infrastructure/tech** followed by **institutional** arrangements

In contrast, most barriers cities face in relation to **private transport** are around **behavioural change, followed by infrastructure/tech**.

"… society and all relevant actors are often stubborn and don't have the **urgently needed open mindset**."

"… the **deep-seated reliance on private vehicles** and the **underdeveloped culture of using public transport** are major barriers to achieving neutrality, compounded by infrastructural constraints due to urban sprawl."

NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

How to participate?

1. Go to wooclap.com
2. Enter the event code in the top banner

Event code
GLDXOP

Copy participation link

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Tools for change – Behavioural and digital enablers

Juan Gímenez – Instituto Biomecánico de Valencia (UPPER)

NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

UPPER
Unleashing the Potential of Public Transport in Europe

J. Giménez – A. López – C. Soriano

IBV

Behavioural change in the context of the UPPER project: Mobility measures and U-GOV

NetZeroCities - Mobility Spotlight Session.
November 11th 2025

This project has received funding from the Horizon Europe research and innovation programme under grant agreement No 101095904

The UPPER project (i)

UPPER aims to spearhead a public transport revolution that will strengthen its role as the cornerstone of sustainable mobility and innovation in cities, ultimately leading the transition towards a future of zero-emission mobility.

Unleashing the potential of Public Transport in Europe

OBJECTIVES:

- Put public transport at the centre of the mobility ecosystem.
- Optimise the public transport offer in line with user needs.
- Trigger the behavioural change in favour of public transport.
- Involve the users in the overall mobility decision chain.
- Create an attractive, efficient, reliable, safe, inclusive and affordable public transport system, in line with the concept of Mobility as a Right, leaving no one behind!

10 CITIES & REGIONS

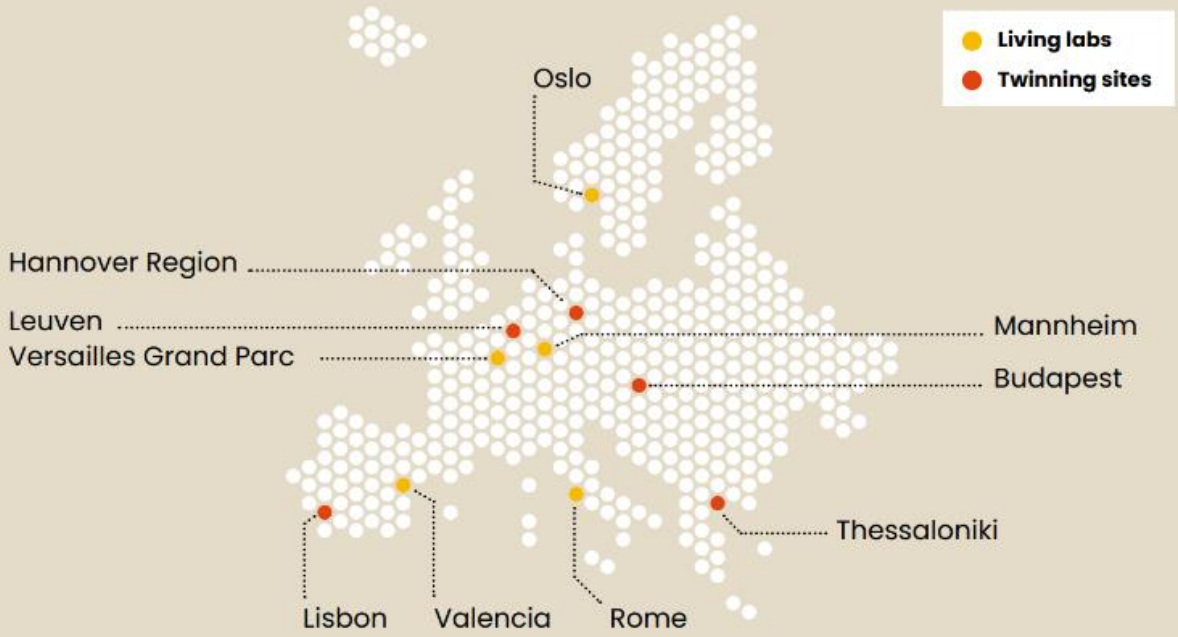
5 INNOVATION AXES

PUSH & PULL MEASURES

UPPER TOOLKIT

The UPPER project (ii)

OUR LIVING LABS & TWINNING SITES:



Facts and figures:

> 40 partners

> 48 months (January 2023 – December 2026)

> 19 993 346 € budget

> Coordinated by UITP (International Association of Public Transport)

upperprojecteu.eu

#UPPERprojectEU

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CIVITAS

EU MISSIONS CLIMATE-NEUTRAL & SMART CITIES

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

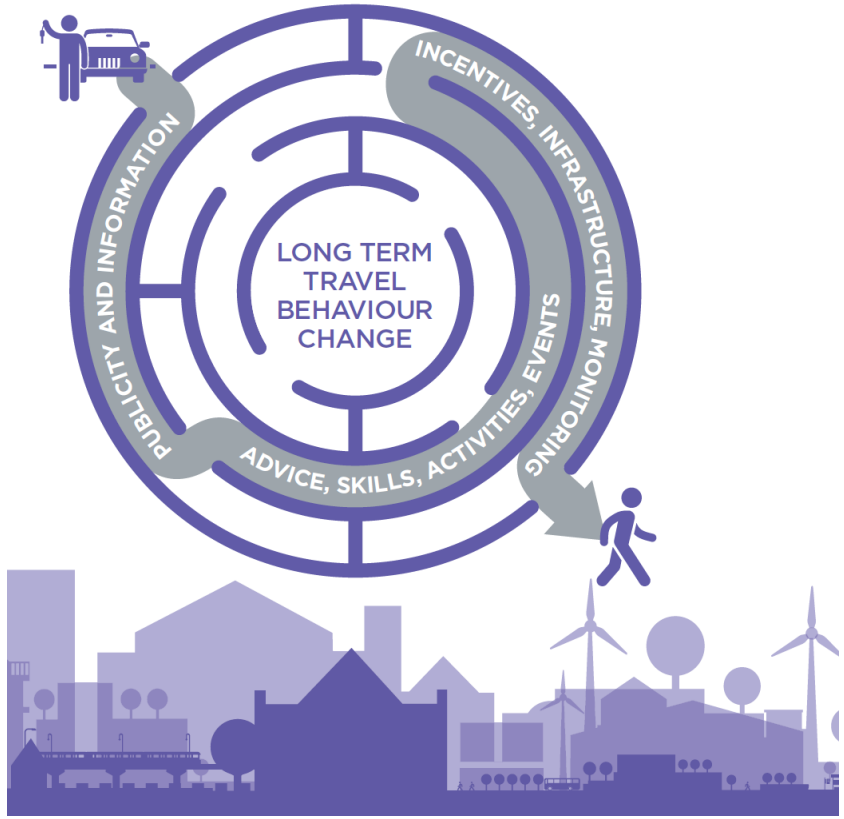
PUSH & PULL MEASURES

PUSH & PULL measures for a BEHAVIOURAL CHANGE, increasing PT uptake

- **PUSH measures: Communication campaigns**
- **PULL measures: Participative governance**

The MaxSumo approach for the Behavioural change

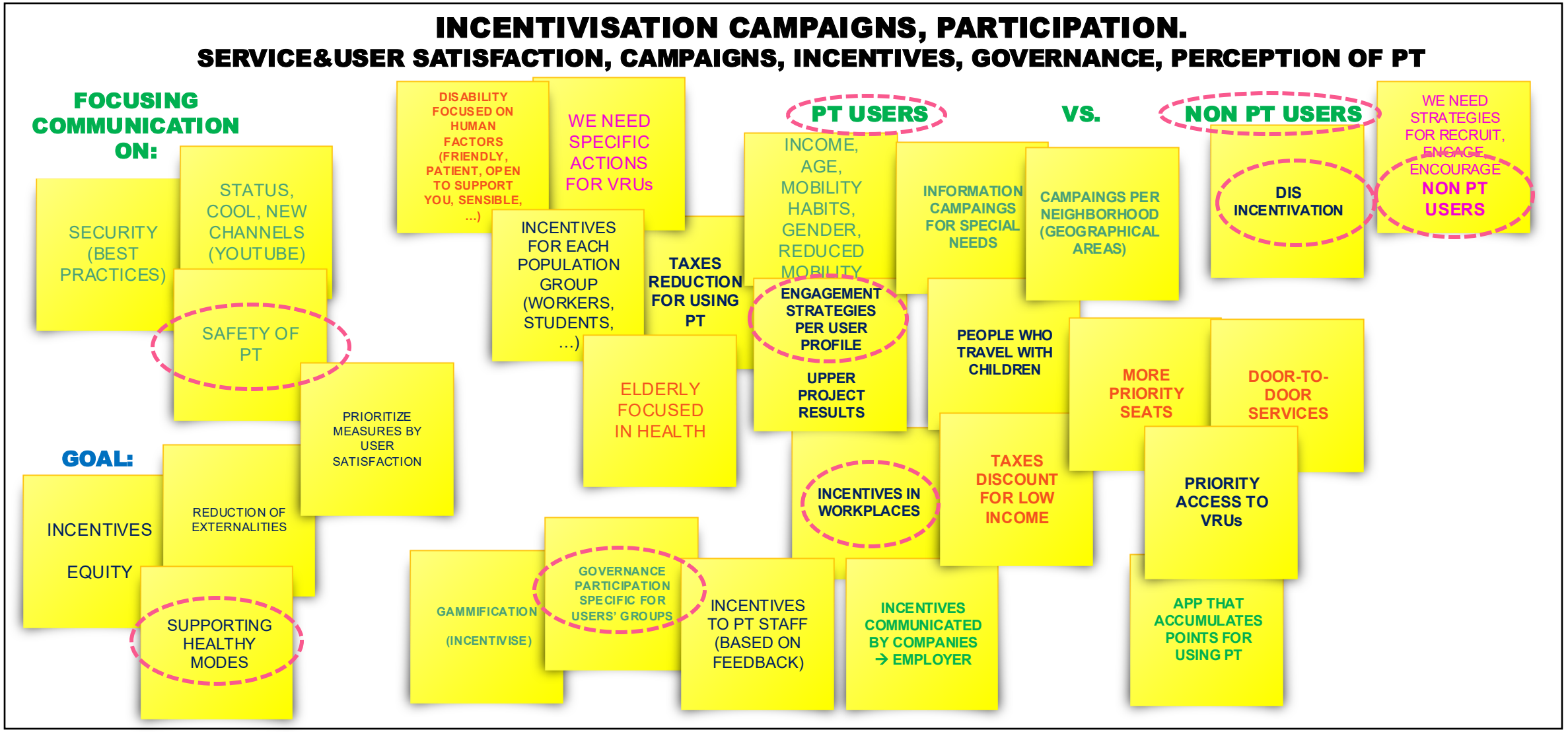
The MaxSumo approach: behavior change actions are explained by individuals' readiness to change travel mode by categorising them in one of four stages



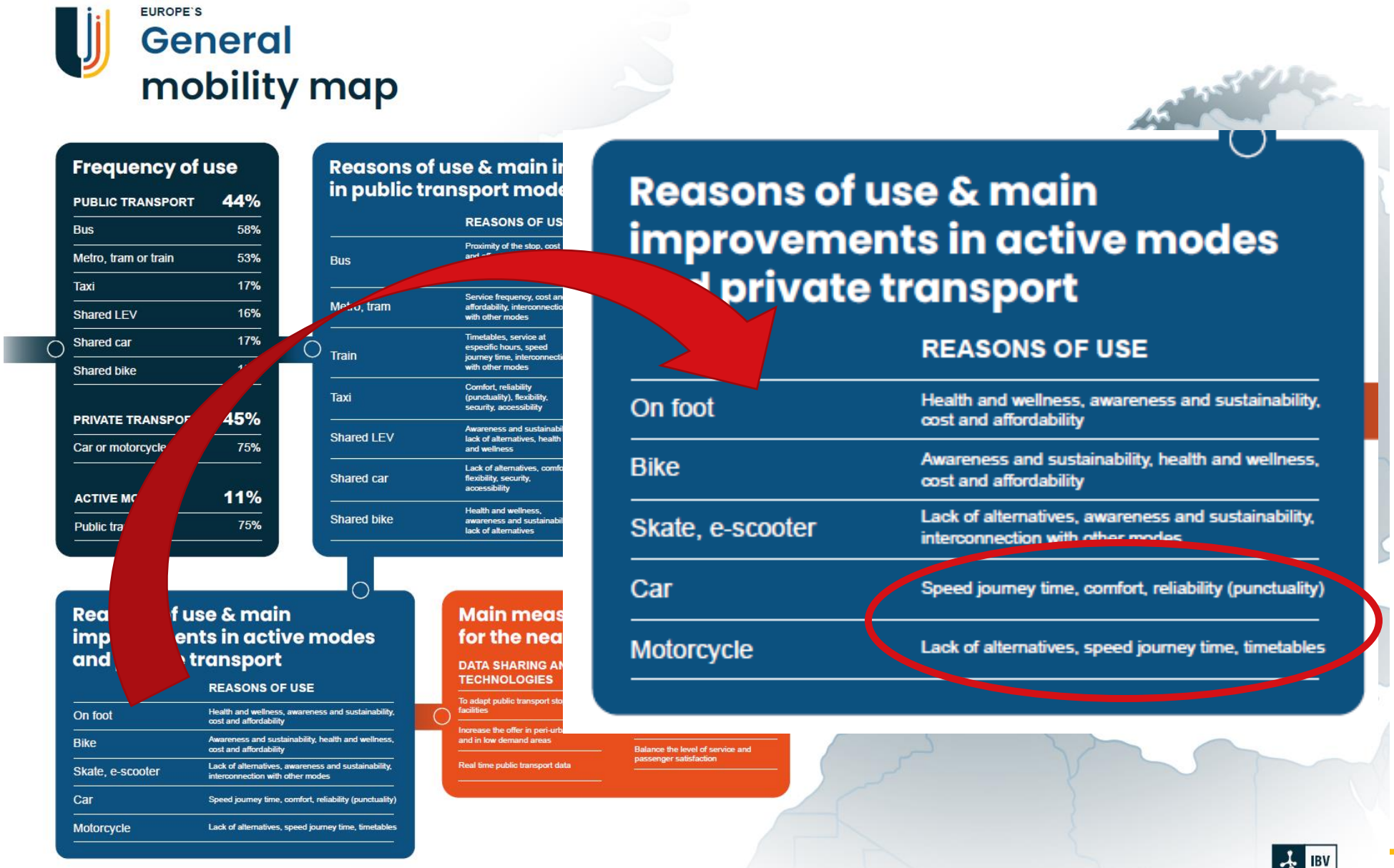
STAGE		DESCRIPTION
STAGE 1	Pre-contemplative stage	Individuals typically make most of their trips by car and are quite happy with the way they currently travel (i.e. as car drivers). At the moment, they have no wish, or desire to change to another mode, or feel that it would be impossible for them to do so at the present time.
STAGE 2	Contemplative stage	Individuals typically make most of their trips by car, but are not as content with their current travel behaviour and would like to reduce their level of car use and change to another way of travelling (mode), but at the moment are unsure of which mode to switch to, or perhaps don't have enough confidence to do so.
STAGE 3	Preparation/action stage	Individuals typically make most of their trips by car, but have decided which mode they intend to switch to for some or all of their trips, have the confidence to do so and may have already tried this new mode for some of their trips.
STAGE 4	Maintenance stage	Individuals typically make most or all of their trips by walking, cycling and public transport. These can either be people who do not own or have access to a car for their trips (and therefore are already dependent on non-car modes for travelling), or people who do own/have access to cars but for various reasons use them only for some of their trips, very infrequently, or not at all.

Report http://www.max-success.eu/downloads/MAX_SoA_AnnexB1_1.pdf.

A first approach to communication and incentivisation in PT (by the UPPER consortium)

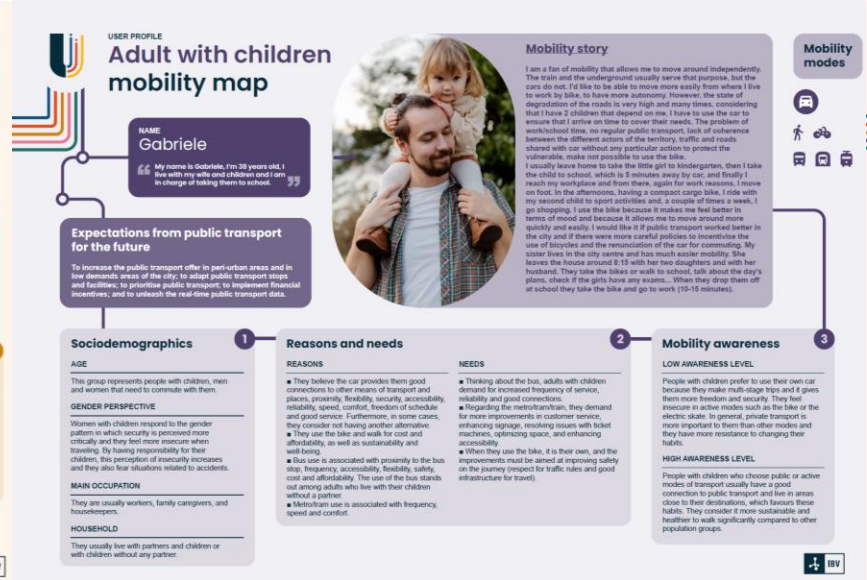


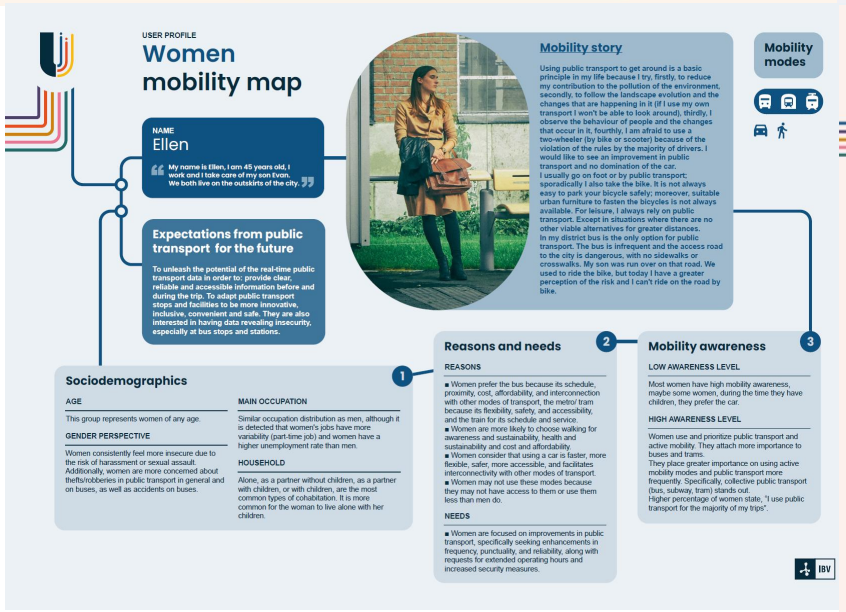
Mobility Maps: Results from UPPER survey in 9 countries



- To increase PT uptake:
  - to shift users from private car to PT
  - to offer mobility to new users
- MaaR: to be a real alternative of mobility for users with especial needs; inclusive PT

Mobility Maps for different Users' groups





Mobility Maps: Family with children

USER PROFILE

Adult with children mobility map

NAME

Gabriele

My name is Gabriele, I'm 38 years old, I live with my wife and children and I am in charge of taking them to school.

Mobility story

I am a fan of mobility that allows me to move around independently. The train and the underground usually serve that purpose, but the cars do not. I'd like to be able to move more easily from where I live to work by
degradatio
that I have
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n th
my second
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terms of
quickly an
the city an
use of icy
sister li
leaves th
husband.
plans, che
at school t

Mobility modes

Expectations from public transport for the future

To increase the public transport offer in peri-urban areas a
low demands areas of the city; to adapt public transport st
and facilities; to prioritise public transport; to implement fi
incentives; and to unleash the real-time public transport da

Sociodemographics

1

AGE

This group represents people with children, men and women that need to commute with them.

GENDER PERSPECTIVE

Women with children respond to the gender pattern in which security is perceived more critically and they feel more insecure when traveling. By having responsibility for their children, this perception of insecurity increases and they also fear situations related to accidents.

MAIN OCCUPATION

They are usually workers, family caregivers, and housekeepers.

HOUSEHOLD

They usually live with partners and children or with children without any partner.

Reasons and needs

REASONS

- They believe the car provides them good connections to other means of transport and places, proximity, flexibility, security, accessibility, reliability, speed, comfort, freedom of schedule and good service. Furthermore, in some cases, they consider not having another alternative.
- They use the bike and walk for cost and affordability, as well as sustainability and well-being.
- Bus use is associated with proximity to the bus stop, frequency, accessibility, flexibility, safety, cost and affordability. The use of the bus stands out among adults who live with their children without a partner.
- Metro/tram use is associated with frequency, speed and comfort.

NEEDS

- Thinking about the bus, adults
demand for increased frequency
reliability and good connections.
- Regarding the metro/tram/trair
for more improvements in custor
enhancing signage, resolving iss
machines, optimizing space, anc
accessibility.
- When they use the bike, it is th
improvements must be aimed at
on the journey (respect for traffic rules and good infrastructure for travel).

People with children who choose public or active modes of transport usually have a good connection to public transport and live in areas close to their destinations, which favours these habits. They consider it more sustainable and healthier to walk significantly compared to other population groups.

IBV

Reasons and needs

2

REASONS

- They believe the car provides them good connections to other means of transport and places, proximity, flexibility, security, accessibility, reliability, speed, comfort, freedom of schedule and good service. Furthermore, in some cases, they consider not having another alternative.
- They use the bike and walk for cost and affordability, as well as sustainability and well-being.
- Bus use is associated with proximity to the bus stop, frequency, accessibility, flexibility, safety, cost and affordability. The use of the bus stands out among adults who live with their children without a partner.
- Metro/tram use is associated with frequency, speed and comfort.

NEEDS

- Thinking about the bus, adults with children demand for increased frequency of service, reliability and good connections.
- Regarding the metro/tram/train, they demand for more improvements in customer service, enhancing signage, resolving issues with ticket machines, optimizing space, and enhancing accessibility.
- When they use the bike, it is their own, and the improvements must be aimed at improving safety on the journey (respect for traffic rules and good infrastructure for travel).

Mobility Maps: Elderly people

USER PROFILE

Elderly people mobility map

NAME

Paqui

"My name is Paqui, I am 78 years old, and I live with my husband Pedro, who is 75 years old."

Expectations from public transport for the future

In the near future they aspire to more accessible public transport, with service improvements in peri-urban areas and inclusive bus or metro/tram stops.

Mobility story

On a day-t
go to the doc
la superm
loved to c
supermarket
take me by ca
of falling. I ta
the station is
a while, for e
the hospital.
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telling our da
with my frien
people and th
I came back l
at the bus. I c
(his grandso
perfect exper
the buses are
shopping cer
the same bus
same buses.

Sociodemographics

1

AGE

The group represents those over 65 years of age, and mainly those over 75. In this group, in addition to age, it is necessary to consider health status. An active person who is 67 years old, without chronic pathologies, will not have the same mobility pattern as a person with some health incident.

GENDER PERSPECTIVE

As in other age groups, women use public transport more than men, although the gap is smaller. The perceived insecurity in public transport, on the bus, in the subway/tram/train, taxi and transport stations and stops decreases with respect to younger women (especially the risk of sexual harassment). Although the perceived insecurity in shared transport increases due to accidents.

MAIN OCCUPATION

They are usually people who are in retirement. The most active ones may be developing learning activities and in general distribute the roles of caring for the home. Other main activities may be taking care of family members, whether grandchildren or parents.

HOUSEHOLD

The most common types of cohabitation are as a couple or alone.

Reasons and needs

REASONS

- Higher degree of satisfaction with pul transport due to the less importance of factor.
- Greater enjoyment of travel time.
- They walk for health and well-being. after 75 years of age they reduce their
- Reduction of use of your own bike an use a motorcycle and shared modalitie electric scooter, motorcycle...).
- Reduction of all modes of transport fr age of 75 (especially they stop using th car, bus, train and taxi).

NEEDS

- Reduction of the number of trips when health problems appear. They need measures of accessibility.
- They feel more unsafe in shared transport modes because of accidents.

modes is related to the insecurity generated by private vehicles. This insecurity can be transferred to public transport. Another motivation for the use of active mobility is to maintain a state of health and well-being. In addition, they usually make short trips. They are early adopters of the 15-minute city.

IBV

Reasons and needs

REASONS

- Higher degree of satisfaction with public transport due to the less importance of the time factor.
- Greater enjoyment of travel time.
- They walk for health and well-being. Although after 75 years of age they reduce their trips.
- Reduction of use of your own bike and do not use a motorcycle and shared modalities (bike, electric scooter, motorcycle...).
- Reduction of all modes of transport from the age of 75 (especially they stop using their own car, bus, train and taxi).

NEEDS

- Reduction of the number of trips when health problems appear. They need measures of accessibility.
- They feel more unsafe in shared transport modes because of accidents.

Mobility awareness

3

LOW AWARENESS LEVEL

Over 66 years group uses the car a lot and does not consider changing, if they maintain the activity of driving. The speed, comfort and reliability are the reasons.

HIGH AWARENESS LEVEL

The elderly gives more importance to active mobility. Specifically, those over 75 moves on foot more than other age groups. In this group, the increase in the use of public transport and active modes is related to the insecurity generated by private vehicles. This insecurity can be transferred to public transport. Another motivation for the use of active mobility is to maintain a state of health and well-being. In addition, they usually make short trips. They are early adopters of the 15-minute city.

IBV

Mobility Maps: Functional diversity

USER PROFILE

Functional diversity mobility map

NAME

Richard

"My name is Richard, I am 35 years old, I use crutches to walk, I live alone but I spend a lot of time with my friends."

Expectations from public transport for the future

In the near future they aspire to more accessible public transport, with service improvements in peri-urban areas and inclusive bus or metro/tram stops. They hope to get involved in a participative governance.

Sociodemographics

1

AGE

This group represents people with functional diversity of any age, mainly adults and seniors.

MAIN OCCUPATION

Usually pensioners, students or workers.

GENDER PERSPECTIVE

Women with functional diversity highlight the same characteristics as women in other groups. They use public transport and go on foot to a greater extent, they feel more insecure in all types of public transport and demand greater frequency, punctuality and schedules.

HOUSEHOLD

They usually live alone, with partners, with family (mother, father, siblings…) or with caregivers.

Mobility sto

I go to w k by car, for short trips on foot or by bus.

Reasons and needs

REASONS

- The main reason for using a publi typology is the lack of other alternat of alternatives and their needs guid
- Very low use of bike, motorcycle a modalities (bike, electric scooter, m
- The speed of the car and the taxi are the main reasons for using thes

NEEDS

- For them, public transport poses accessibility, uncertainty due to diffi accessing information and problems sensitivity towards their needs by the other passengers, which makes the transition to sustainable mobility difficult.
- They feel more unsafe in public transport in general (included stops) because of fights, thefts, harassment and accidents.

Reasons and needs

REASONS

- The main reason for using a public transport typology is the lack of other alternatives. The lack of alternatives and their needs guide their choices
- Very low use of bike, motorcycle and shared modalities (bike, electric scooter, motorcycle...)
- The speed of the car and the taxi service hours are the main reasons for using these modes.

NEEDS

- For them, public transport poses problems of accessibility, uncertainty due to difficulty in accessing information and problems of lack of sensitivity towards their needs by the other passengers, which makes the transition to sustainable mobility difficult.
- They feel more unsafe in public transport in general (included stops) because of fights, thefts, harassment and accidents.

Mobility awareness

3

LOW AWARENESS LEVEL

38% of people with functional diversity use private vehicles, due, among other reasons, to the unavailability of adapted buses or taxis and the speed that the car offers them compared to public transport. The possibility of moving door to door means that part of the group doesn't want to change to this modality.

HIGH AWARENESS LEVEL

Even so, the main mode of transport they use is public transport. People with diversity take the bus, metro-tram-train and taxi more frequently than other collectives. For them, public transport is very important, it is a matter of lack of alternatives. Their accessibility needs dictate the choice of transport mode.

than other collectives. For them, public transport is very important, it is a matter of lack of alternatives. Their accessibility needs dictate the choice of transport mode.

Mobility Maps: Women

USER PROFILE

Women mobility map

NAME

Ellen

"My name is Ellen, I am 45 years old, I work and I take care of my son Evan. We both live on the outskirts of the city."

Expectations from public transport for the future

To unleash the potential of the real-time public transport data in order to: provide clear, reliable and accessible information before and during the trip. To adapt public transport stops and facilities to be more innovative, inclusive, convenient and safe. They are also interested in having data revealing insecurity, especially at bus stops and stations.

Mobility story

Using public transport to get around is a basic principle in my life because I try, firstly, to reduce its contrib... Secondly, t... changes th... transport l... observe th... that occur... two-wheele... violation o... would like... transport a... I usually g... sporadical... easy to pa... urban furn... available. ... transport. ... other viabl... In my distr... transport. ... to the city ... crosswalks... used to rid... perception... bike.

mode...

Sociodemographics

1

AGE

This group represents women of any age.

GENDER PERSPECTIVE

Women consistently feel more insecure due to the risk of harassment or sexual assault. Additionally, women are more concerned about thefts/robberies in public transport in general and on buses, as well as accidents on buses.

MAIN OCCUPATION

Similar occupation distribution as men, although it is detected that women's jobs have more variability (part-time job) and women have a higher unemployment rate than men.

HOUSEHOLD

Alone, as a partner without children, as a partner with children, or with children, are the most common types of cohabitation. It is more common for the woman to live alone with her children.

Reasons and needs

REASONS

■ Women prefer the bus because its sche... proximity, cost, affordability, and interconn... with other modes of transport, the metro/ ... because its flexibility, safety, and accessi... and the train for its schedule and service.
■ Women are more likely to choose walki... awareness and sustainability, health and ... sustainability and cost and affordability.
■ Women consider that using a car is fas... flexible, safer, more accessible, and facili... interconnectivity with other modes of tran...
■ Women may not use these modes bec... they may not have access to them or use ... less than men do.

NEEDS

■ Women are focused on improvements in public transport, specifically seeking enhancements in frequency, punctuality, and reliability, along with requests for extended operating hours and increased security measures.

Reasons and needs

REASONS

■ Women prefer the bus because its schedule, proximity, cost, affordability, and interconnection with other modes of transport, the metro/ tram because its flexibility, safety, and accessibility, and the train for its schedule and service.
■ Women are more likely to choose walking for awareness and sustainability, health and sustainability and cost and affordability.
■ Women consider that using a car is faster, more flexible, safer, more accessible, and facilitates interconnectivity with other modes of transport.
■ Women may not use these modes because they may not have access to them or use them less than men do.

NEEDS

■ Women are focused on improvements in public transport, specifically seeking enhancements in frequency, punctuality, and reliability, along with requests for extended operating hours and increased security measures.

Mobility awareness

3

LOW AWARENESS LEVEL

Most women have high mobility awareness, maybe some women, during the time they have children, they prefer the car.

HIGH AWARENESS LEVEL

Women use and prioritize public transport and active mobility. They attach more importance to buses and trams.
They place greater importance on using active mobility modes and public transport more frequently. Specifically, collective public transport (bus, subway, tram) stands out.
Higher percentage of women state, "I use public transport for the majority of my trips".

Mobility Measures in UPPER cities for Behavioural change

Behaviour-change oriented mechanisms to promote the use of PT			
Participative governance	Ile de France – Versailles Grand Parc	IDF_01	Participative governance framework for the update of the regional SUMP
	Mannheim	MAN_01	Establish participative governance and dialog formats to address the citizens with a focus on the (special) needs of user groups
	Lisbon	LIS_03	To improve the mobility planning
Communication campaigns	Manheim	MAN_02	Campaigning for sustainable forms of transport, such as PT, walking and cycling. Establishing a PT culture with PT as a green, safe, inclusive, and social space
	Lisbon	LIS_08	To implement campaigns and partnership initiatives
	Leuven	LEU_06	To launch communication campaigns and digital tools to increase the uptake of PT

- **Participative governance:**
  - **Target groups**
  - **Stakeholder engagement**
  - **Multimodality and Social impact**
- **Communication campaigns:**
  - **Tailored communication**
  - **Multimodality and Active mobility**
  - **MaaR: Mobility as a Right**

More than 20 measures on Multimodality: Physical Integration of mobility services and Hub Creation & Operational and Digital Integration of mobility services

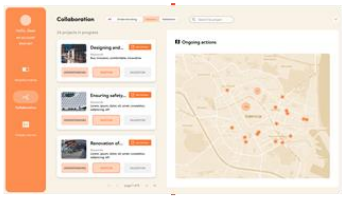
U-GOV: an UPPER tool for participative governance

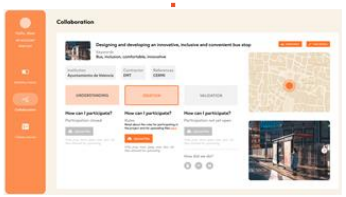
REGISTRATION

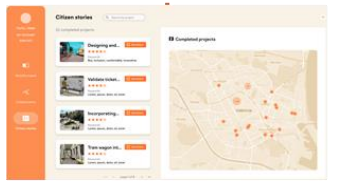
COLLABORATOR

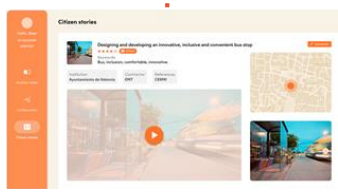
PROMOTER

HANNOVER
MANNHEIM
LISBON
OSLO
ROME
THESSALONIKI
VALENCIA





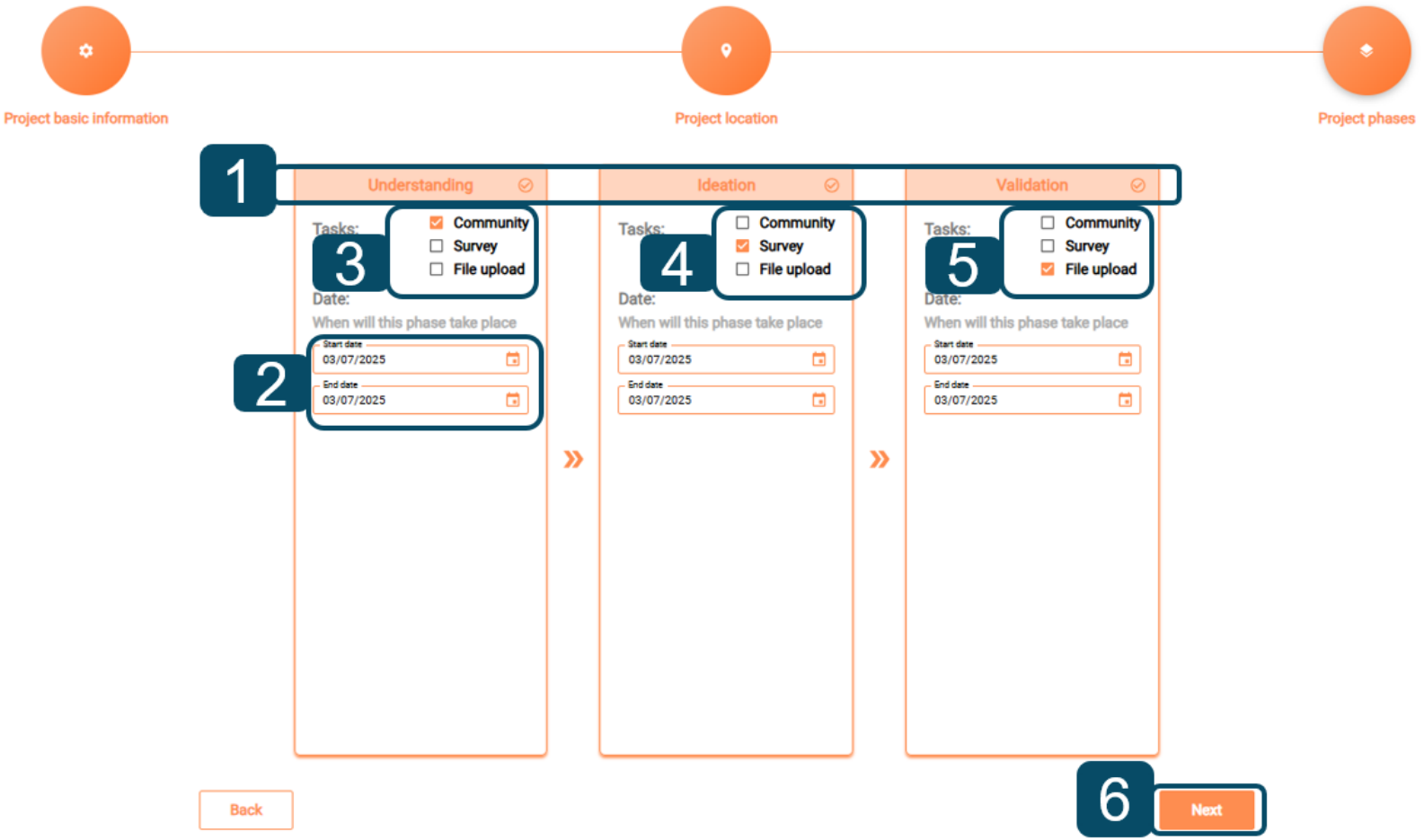




Mobility habits: to raise awareness on mobility impacts

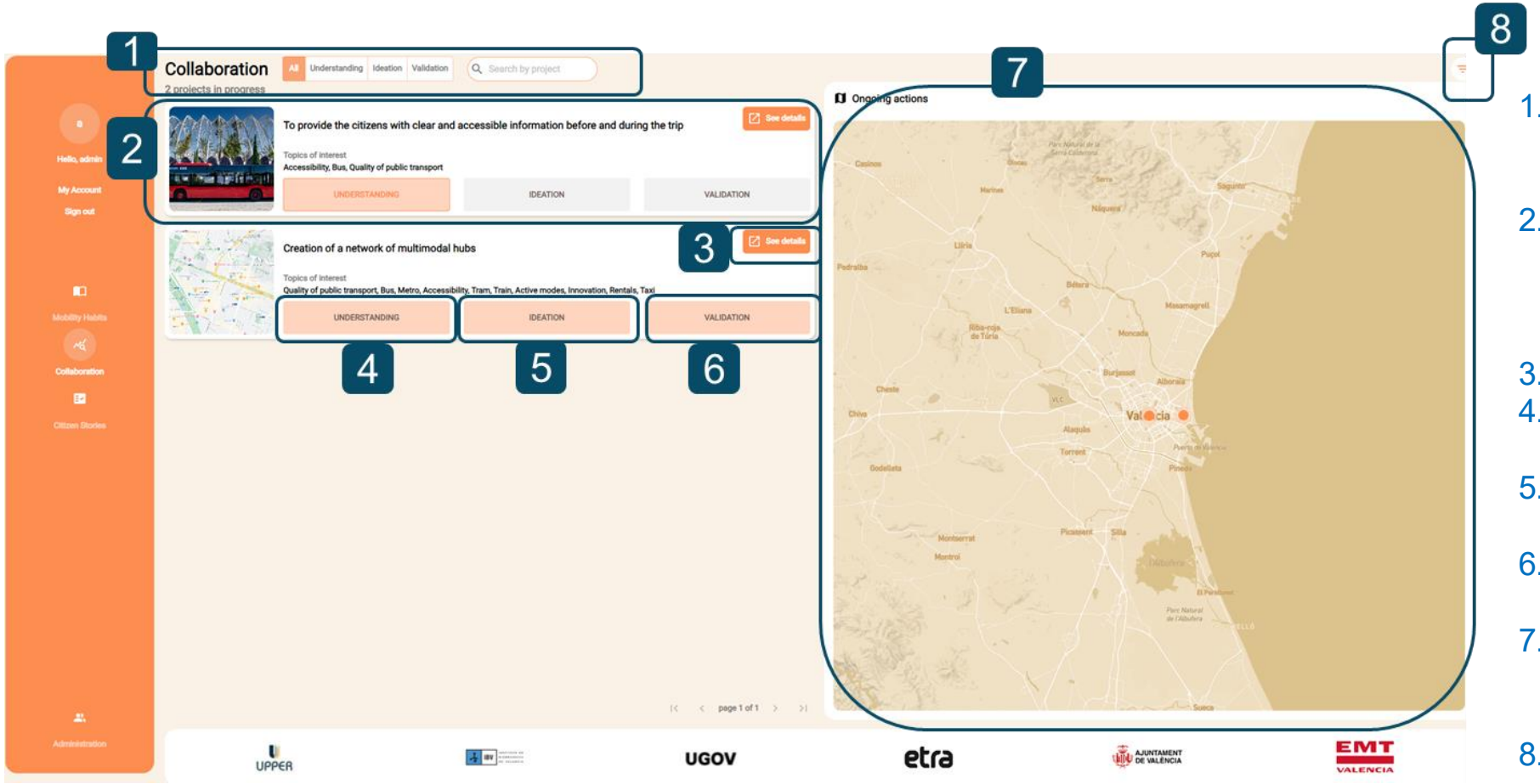
1. Information about the modal share, comparing the situation in the city with the average modal share of other cities.
2. CO_2 emissions per inhabitant and year related to mobility in the city. The graph presents the city's values, compared to other cities.
3. Motivation of the city to participate in an innovation project like UPPER project.
4. Status of the active mobility in the city, distinguishing between cycling and walking.
5. A map displaying ongoing projects in the city. Clicking on it will take users to the *Collaboration Projects in Progress* screen.

Collaboration: PROMOTER's project definition screen



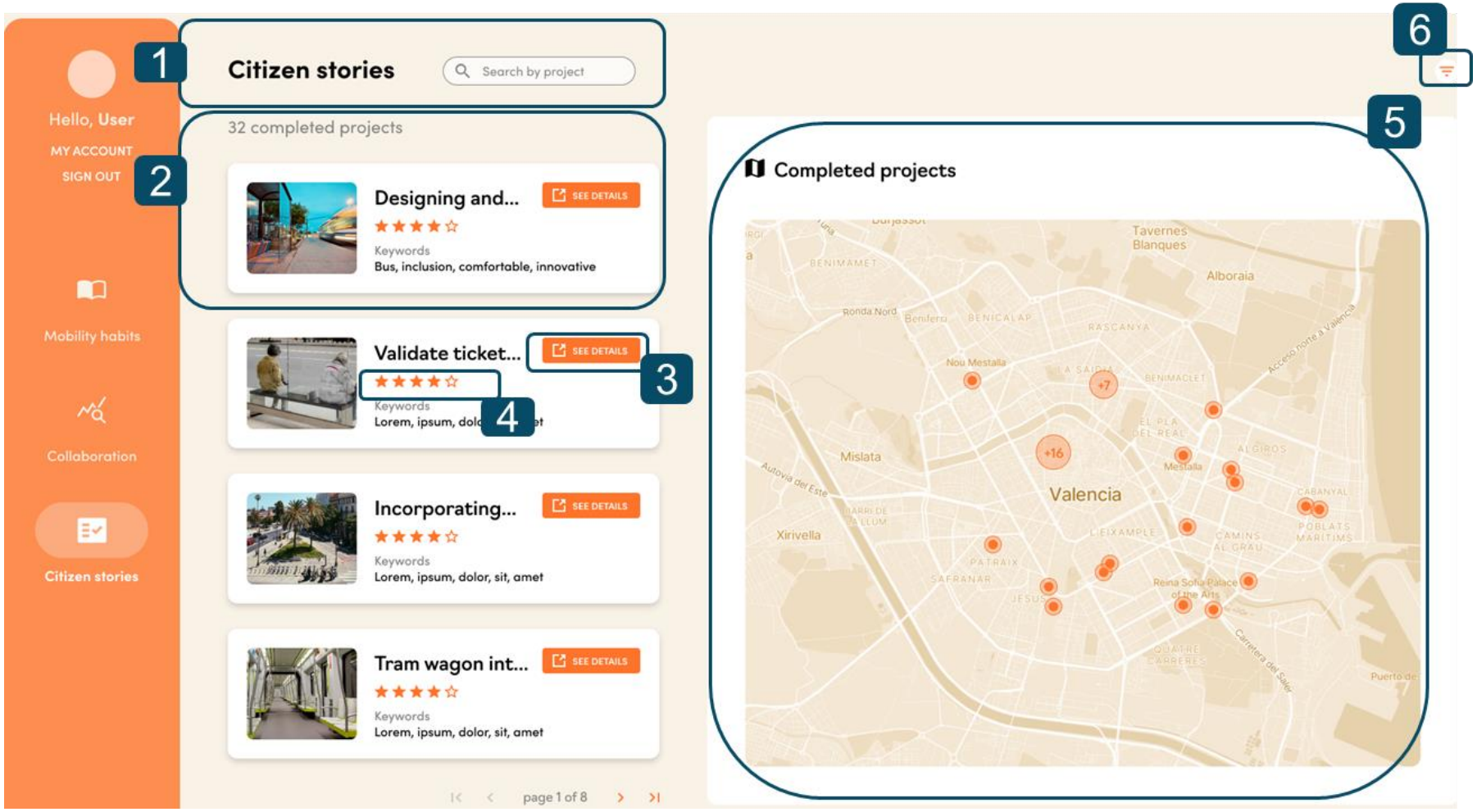
1. Select the phases in which activities will be conducted.
2. Project Date: To establish the project's timeframe, including start and end dates.
3. Understanding-Community: To activate the *Community* activity forum and set start and end date. The other interventions (Survey and File upload can also be activated for this phase.
4. Ideation-Survey: To activate the *Survey* activity and add the questionnaire link (Google Forms or other platforms).
5. Validations-File Upload: To activate the ideas sharing activity and specify accepted file types.
6. Next: access to the next screen for project definition.

Collaboration: collaborators' screen



1. Projects filtering according to the participation phase or searching for projects with semantic keys.
2. General information about the projects: title, topics of interest, phases available for participation, and active or inactive phases.
3. Access to the details of each project.
4. Direct access to activities of the *Understanding* phase of a project.
5. Direct access to activities of the *Ideation* phase of a project.
6. Direct access to activities of the *Validation* phase of a project.
7. This area shows the map where the ongoing actions are located. The map can be zoomed in.
8. Filter by topics function.

Citizen stories: to address the social impact



1. Searching for projects using semantic keywords.
2. Providing general information about the projects: title, average evaluation of the project by COLLABORATORs and citizens, and keywords.
3. Providing access to the details of each project.
4. Displaying the average evaluation of the project by COLLABORATORs and citizens.
5. Mapping completed projects in the city and providing access to the details of each project.
6. Allowing the filtering of projects according to topics of interest.

Some conclusions

- The UPPER project is addressing the citizens mobility's behavioural change from a perspective of PUSH and PULL measures.
- Behavioural change means individuals get awareness about the ecological impact of their mobility habits, switching to alternatives based on Public Transport and active mobility.
- PUSH measures are focused on communication campaigns, required to raise awareness on citizens about the ecological impact that mobility habits have, but also on the new services of Public Transport for users with special needs.
- PULL measures are focused on participative governance. Participative governance is aimed to involve end users and stakeholders in the decision making process for urban mobility, and to co-create new mobility solutions to fulfill specific end users groups' needs.
- UPPER cities are implementing mobility measures focuses on communication campaigns for mobility's behavioural change, and for participative governance, but also measures to supply multimodal mobility, as a way to facilitate behavioural change.
- U-GOV is a specific tool developed within the UPPER project to facilitate the participative governance. This tool is being tested in different UPPER cities.

UPPER

Unleashing the Potential of Public Transport in Europe

Thank you!

[jugimen@ibv.org]
[amlovi@ibv.org]
[csoriano@ibv.org]
[ibv@ibv.org]

This project has received funding from the Horizon Europe research and innovation programme under grant agreement No 101095904

CIVITAS 2030 Sustainable and smart mobility for all

EU MISSIONS CLIMATE-NEUTRAL & SMART CITIES

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

Kranj's Mobility as a Service Platform

Polona Prosen – Office for Development, Green Transition Department

Funded by the European Union

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K2030
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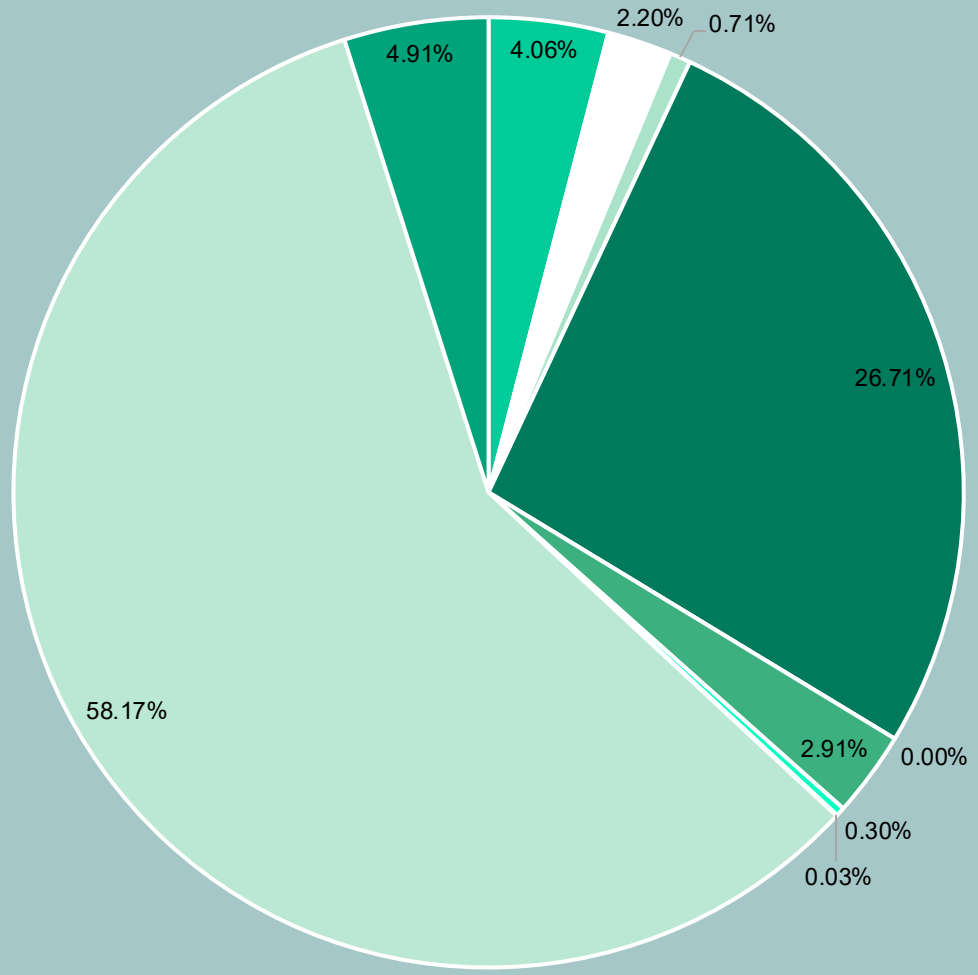
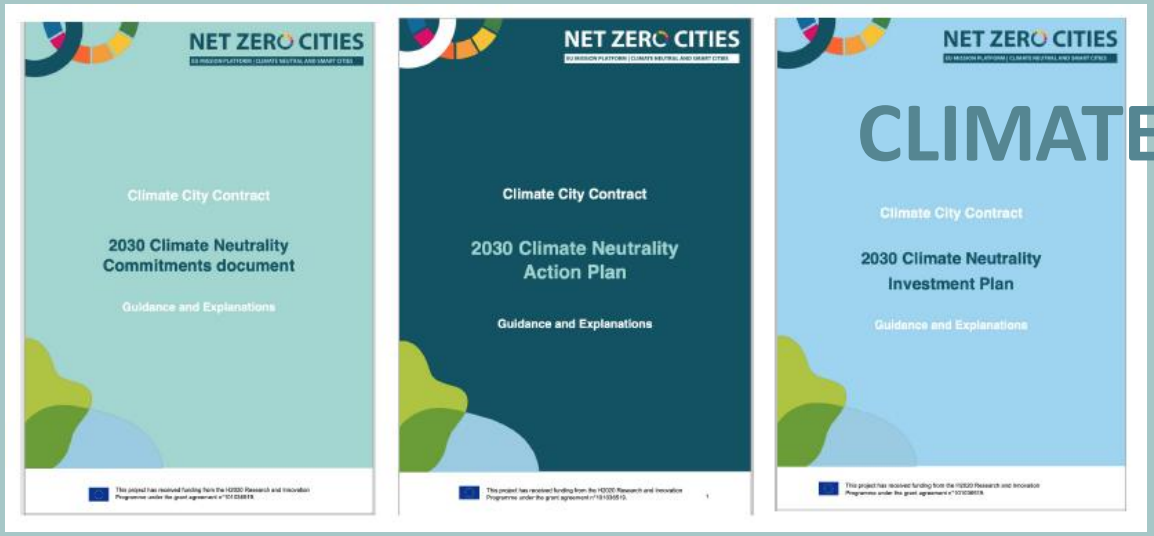
OFFICE FOR DEVELOPMENT AND SMART COMMUNITIES



BEHAVIORAL CHANGE in MOBILITY



CLIMATE CITY CONTRACT =>BEYOND CO_2

UP-SCALE => *NZC Pilot Cities Programe Cohort 1*

Development of Slovenia's first operational maas application

Technical readiness and open-source architecture for replication

Public transport optimisation and data-driven route planning

Integrated CO_2 impact monitoring

Pilot-based capacity building and policy integration

KReATIVE => *NZC Enabling City Transformation*

PAMETNI KRANJ – digitalna info točka

Prek aplikacije Pametni Kranj so na voljo podatki, ki se stekajo v mestno digitalno platformo: o vrstah in dostopnosti mobilnosti, dogajanju v mestu, okoljski podatki, uporabne informacije, omogoča tudi komunikacijo mestna uprava–občani, pa tudi ozaveščanje.

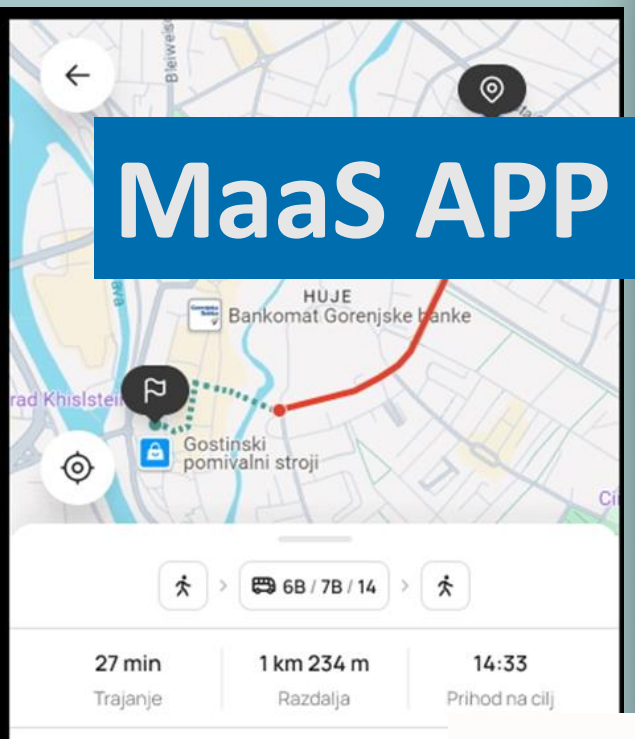
Za projekt so zlasti pomembne ažurne informacije o mobilnosti:

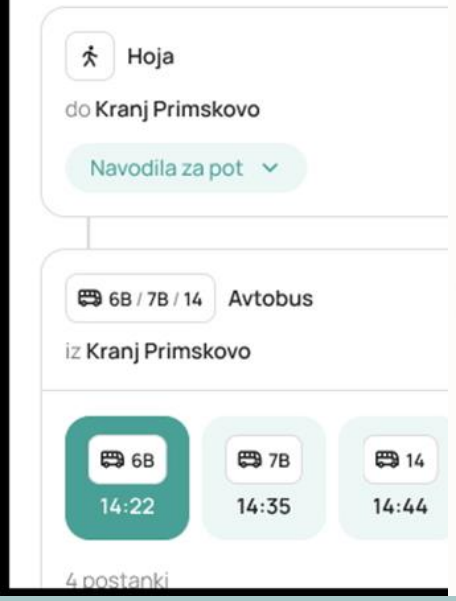
- Sistem za izposojo koles KRsKOLESOM;
- Javni potniški prevoz;
- Souporaba e-vozil;
- Kranvaj – brezplačni prevoz z mini e-avtobusom po mestnem jedru;
- Parkirišča: podatki o prostih parkirnih mestih;
- Število in zasedenost e-polnilnic;
- Počivališča za avtodome;
- Prometne informacije.

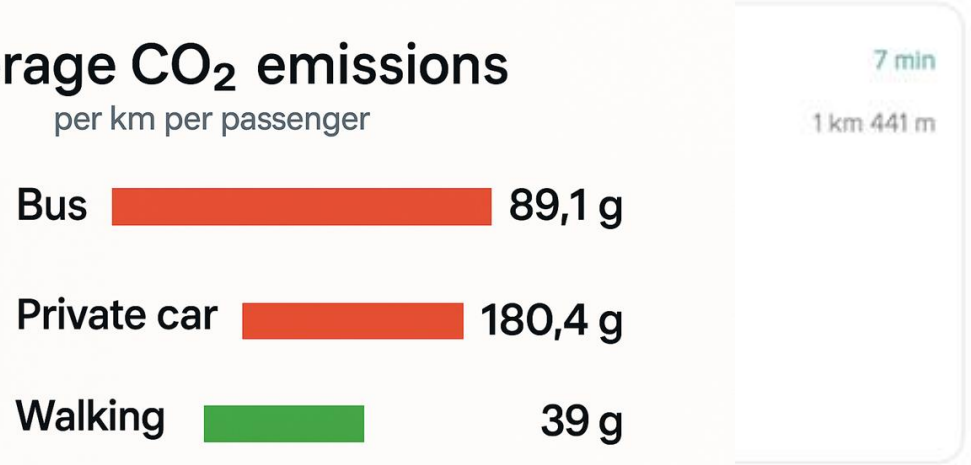
Ob digitalni info točki pa načrtujemo tudi fizično – podnebno svetovalnico, po programu oz. vsebinah podobni tistima v Ljubljani in Velenju. Občankam in občanom želimo omogočiti lažji dostop

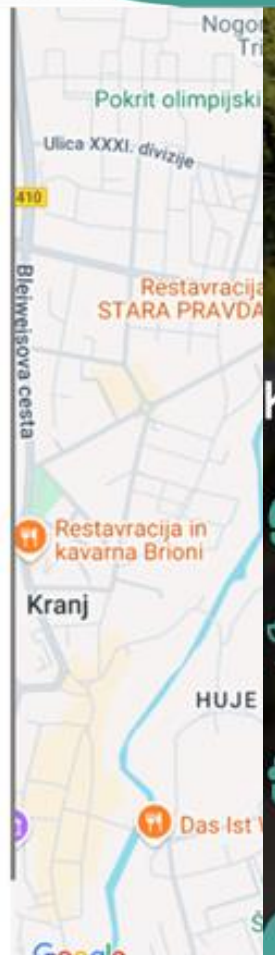
MaaS APP & SMART KRANJ

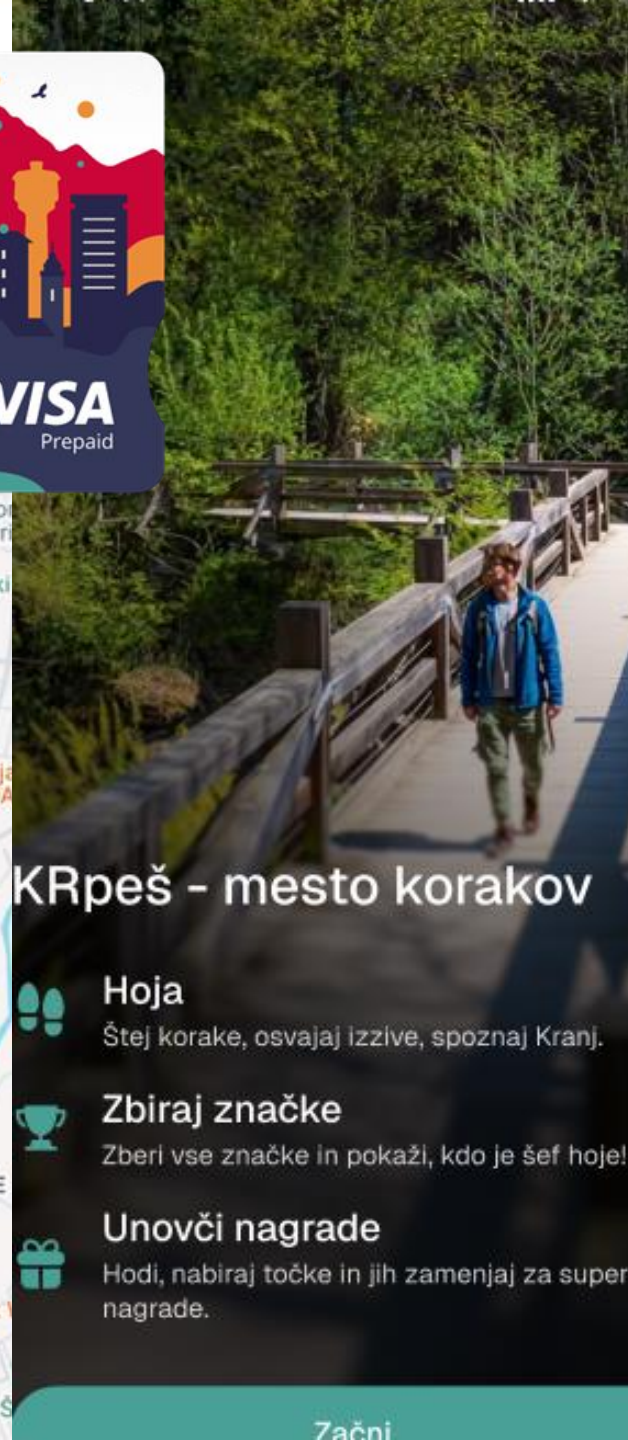
Pametni Kranj











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Any questions?

Funded by
the European Union

Valladolid's Citizens app (SPINE project)

Francisco Benito Sanchez – Innovation and Economy Development Agency

Funded by
the European Union

This project has received funding from the Horizon Europe research and innovation programme under the GA No. 101096664

SPINE

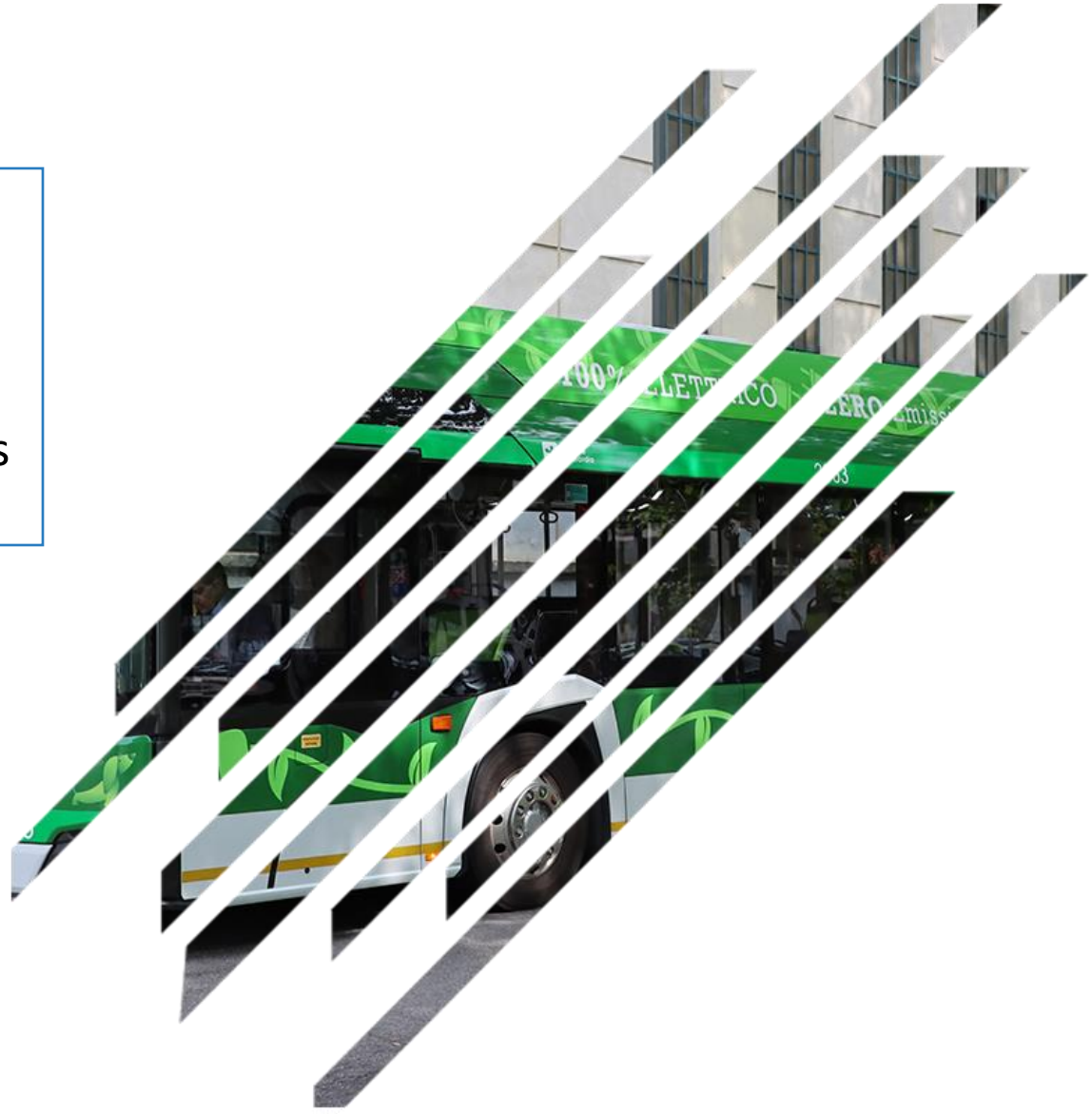
Smart Public transport Initiatives for climate-Neutral cities in Europe

NET ZERO ONLINE PLANNING LAB Session

Francisco Benito, Valladolid City Council

Agenda

- **Valladolid Mission**
- SPINE - Behavioral change model task
- SPINE Living Lab Valladolid: Measures/actions



EUROPEAN GREEN DEAL

EU MISSIONS

Climate-neutral and smart cities

Adaptation to climate change

Charter signatory

Valladolid Mission

EU MISSION LABEL
CLIMATE-NEUTRAL & SMART CITIES
VALLADOLID

https://www.ideva.es/misionvalladolid/ceroemisiones

Ambassadors

Over 180 local entities supporting Valladolid Mission

SPINE BEHAVIOURAL MODEL

- SPINE: Project with impact in Mission´s goals in terms of mobility
- Local agents supporting Mission help to define estrategy to reach target groups identified

Fundación UVa

Universidad de Valladolid

inea

UEMC Universidad Europea Miguel de Cervantes

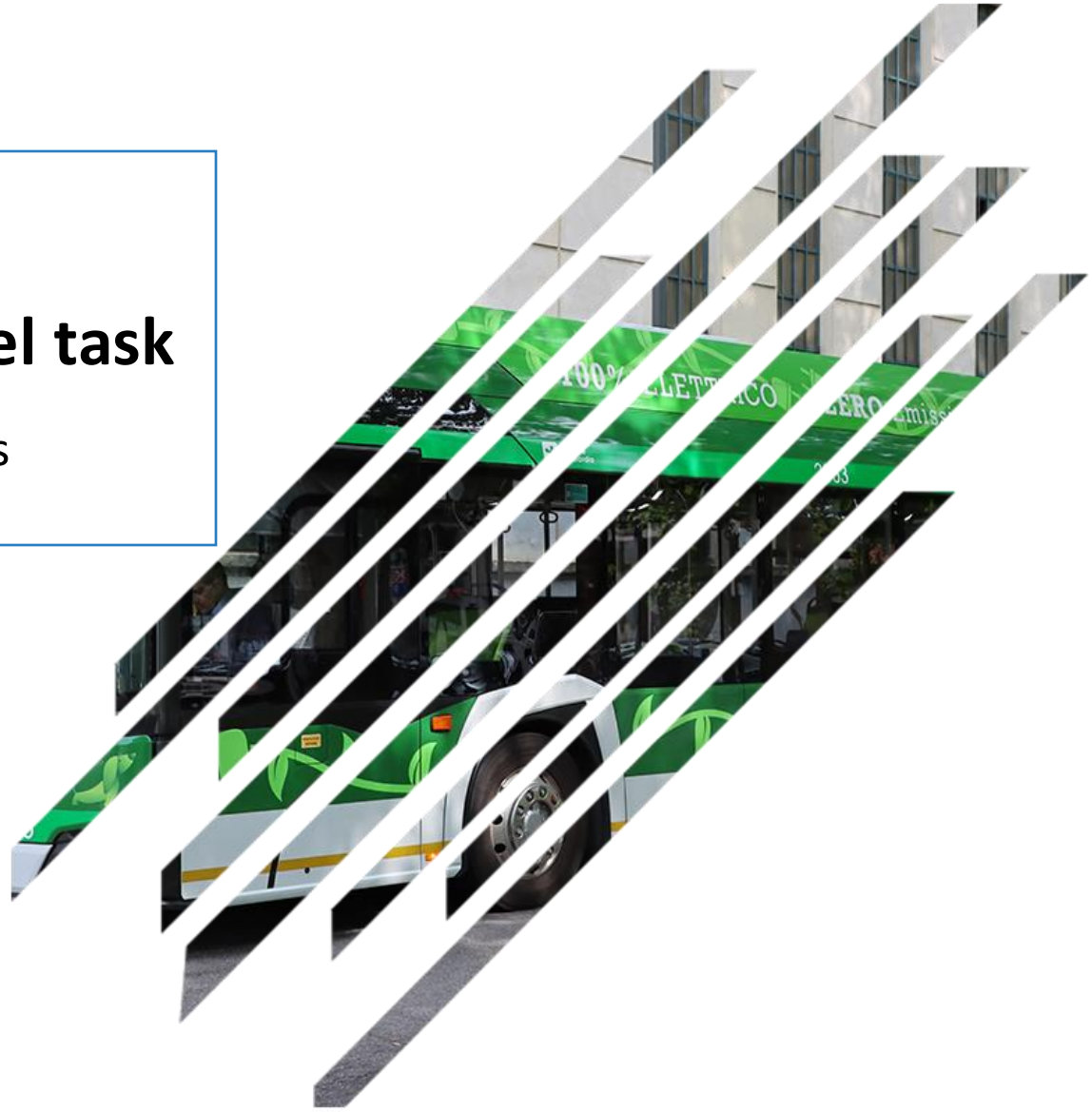
esi Escuela Superior de Diseño

Junta de Castilla y León

Ayuntamiento de Valladolid

Agenda

- Valladolid Mission
- **SPINE - Behavioral change model task**
- SPINE Living Lab Valladolid: Measures/actions



SPINE Behavioral Change Model

- Behavioral change models are estimated through Discrete Choice Models that allow for a categorical dependent variable (Train, 2009).
- Variables used to study Valladolid´s local context

	Value	Std. Error	t value	p value
female	0.29	0.14	2.04	0.04
under25	0.16	0.32	0.49	0.62
between25_44	0.12	0.17	0.72	0.47
over65	-0.67	0.35	-1.88	0.06
low_income	0.31	0.21	1.49	0.14
medium_income	-0.10	0.18	-0.53	0.60
high_income	0.10	0.23	0.43	0.67
pmr	0.03	0.34	0.08	0.93
license	-0.02	0.20	-0.10	0.92
car	-0.35	0.20	-1.79	0.07
bike	-0.37	0.16	-2.34	0.02
household	-0.90	0.43	-2.08	0.04
student	-0.24	0.45	-0.54	0.59
employed	-0.35	0.35	-1.00	0.32
unemployed	-0.90	0.41	-2.19	0.03
retired	-0.67	0.46	-1.45	0.15
am_car	0.04	0.25	0.16	0.87
am_bike	0.00	0.30	0.01	0.99
am_walk	-0.03	0.23	-0.14	0.89
am_scooter	0.95	0.49	1.95	0.05
dur_comf_acc	-0.50	0.12	-4.24	0.00
1|2	-3.22	0.51	-6.27	0.00
2|3	-3.14	0.51	-6.11	0.00
3|4	-2.39	0.51	-4.70	0.00
4|5	2.08	0.53	3.92	0.00

Sociodemographic:

•Positively correlated: Female, scooter as an alternative mode.

•Negatively correlated: age over 65, owning a

•car or a bike, housework, unemployed.

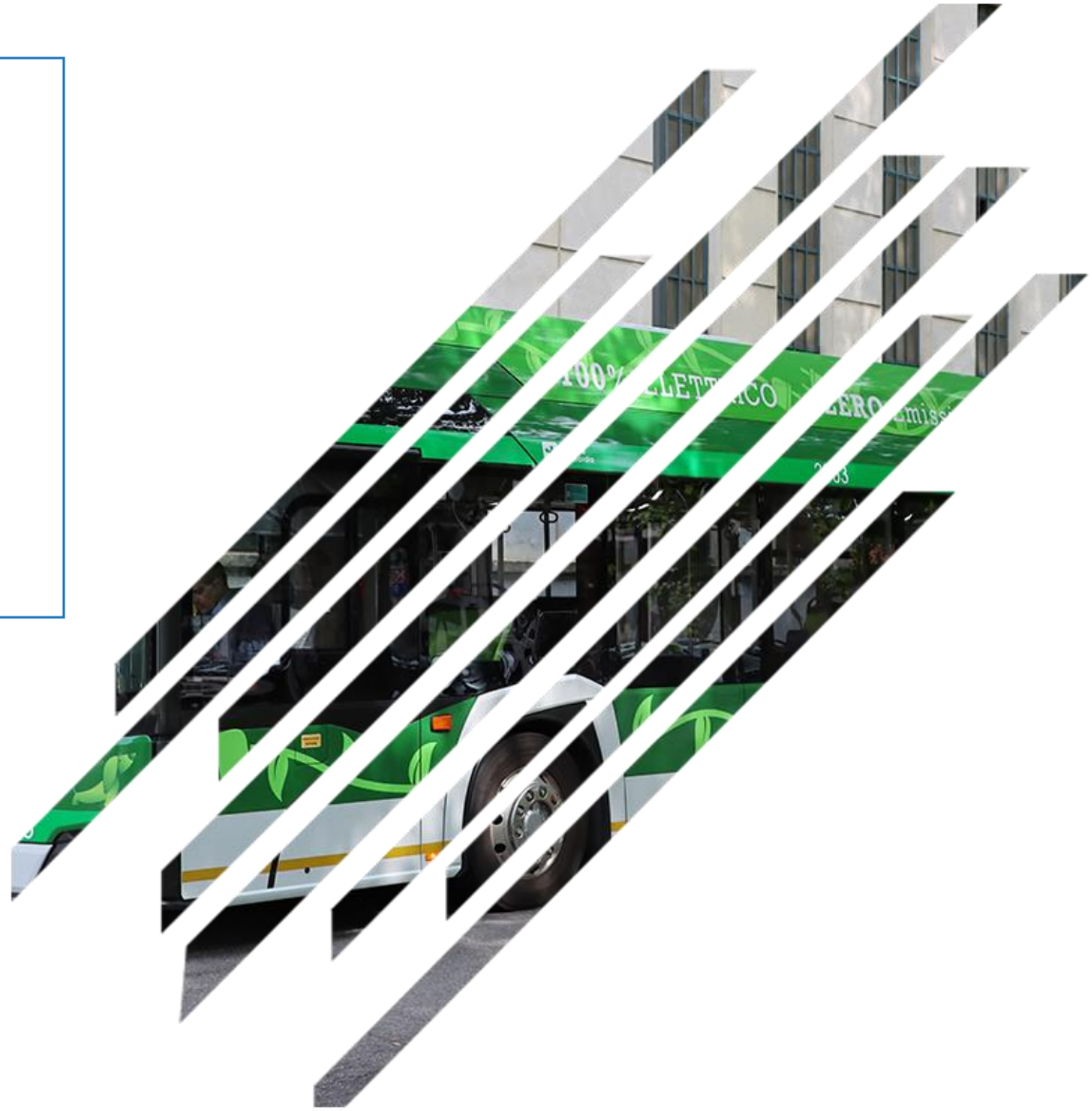
Satisfaction: Duration, Comfort, Accessibility, Services supplied and Availableinformation

- Insights on satisfaction: Higher satisfaction is necessary to encourage PT use, but not sufficient on its own — socio-demographic and economic characteristics strongly influence mobility choices.
- Behavioural model is a fast analytical tool to orient interventions, not to replace them. Interventions (e.g., citizen events) should be linked with model insights.

García García, S. M., Di Ciommo, F., Alonso, M., Asperti, S., Manso Gonzalez, A., Liguori, G., & Russi, L. (2024, November 20). *Caring for people saves our planet: Transport's contribution to sustainability*. cambiaMO.

Agenda

- Valladolid Mission
- SPINE - Behavioral change model task
- **SPINE Living Lab Valladolid**
  - Measures/actions



Living Lab Valladolid

SPINE consortium & local governance model

BEHAVIOURAL CHANGE IN SPINE LIVING LAB VALLADOLID

- SPINE MEASURES: Citizen Mobility APP, Predictive tools of demand
- Participative actions
- Events with specific collectives

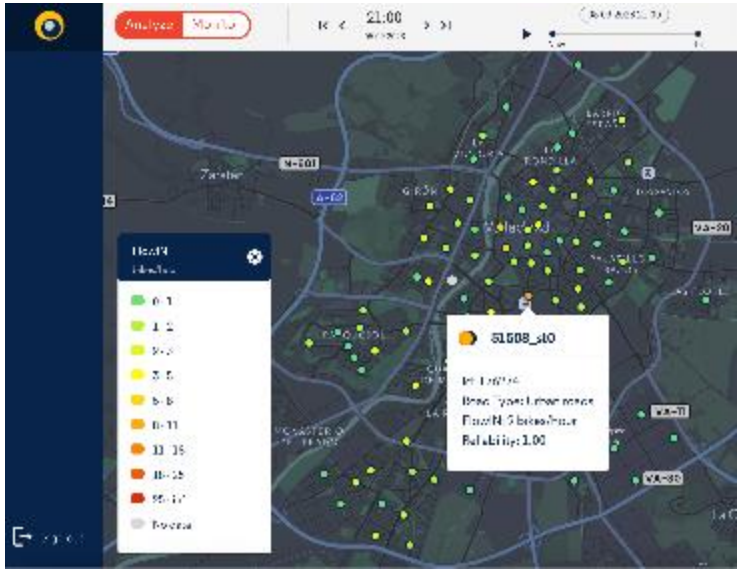
CITIZEN APP – LIVING LAB VALLADOLID ACTIONS

- EMW 2025 – Gymkana , SPINE Dissemination, Surveys

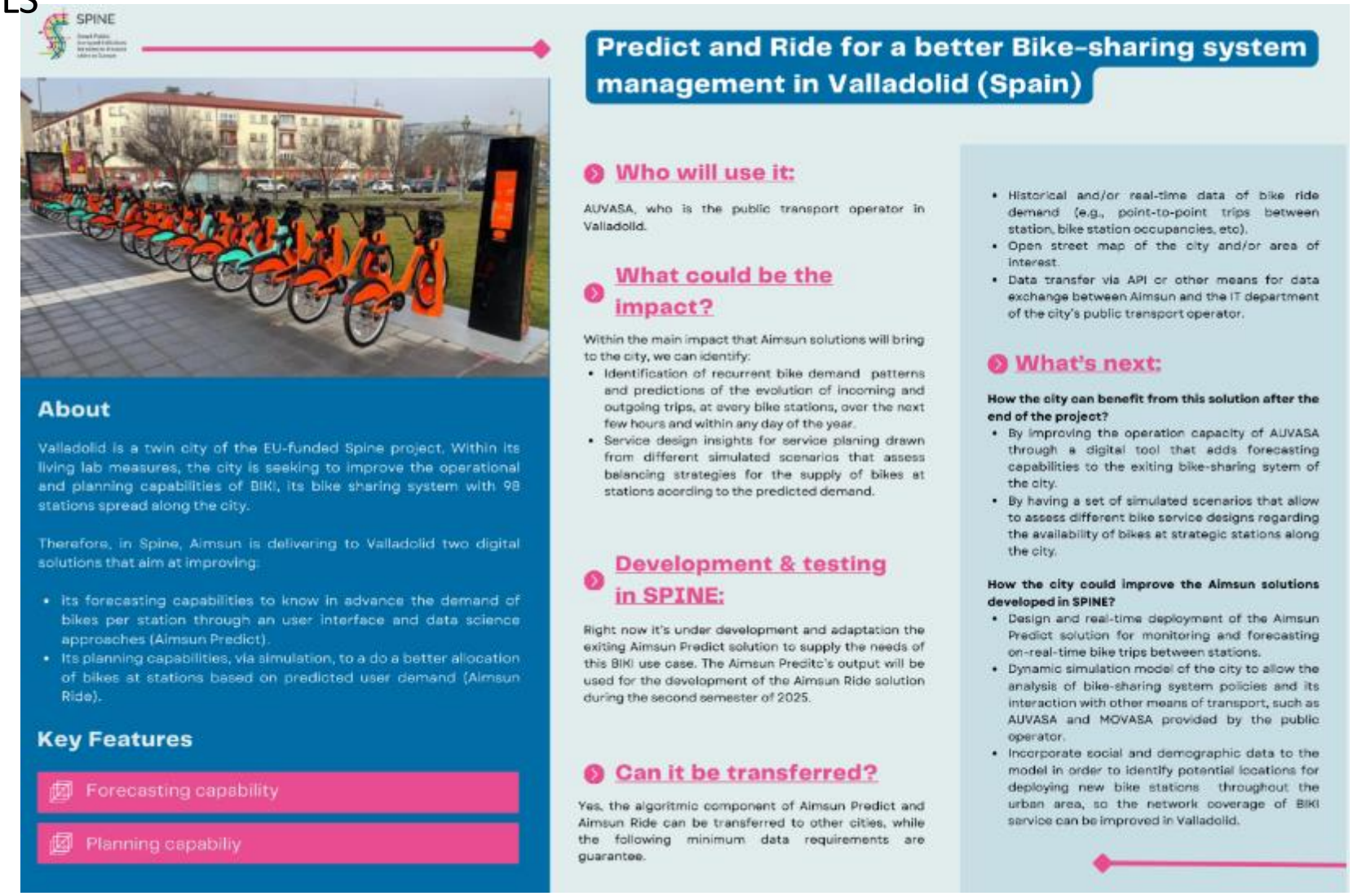
- LEZ notifications & information
- Hub of communication: Questionnaries&surveys
- Engagement through contents

PREDICTIVE SPINE TOOLS

- PREDICTIVE DEMAND TOOLS



- Demand estimation in public bike service - Digital twin of bike estations
- Other measures: Park&Ride management / Traffic management



Source: AIMSUN (partner in SPINE)

Engagement Living Lab actions

- EVENTS WITH TARGET GROUPS

Promotion new PT services

- MULTIMODAL HUB SPINE MEASURE

Other Living Lab actions

- POP UP EXHIBITIONs – JUNE 2025

[When music meets sustainability in Valladolid - Spine Project]

[Valladolid pop-up exhibition]

Thank you!

SPINE

Valladolid City Council

Any questions?

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Interactive Workshop

Funded by
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Interactive Workshop

- Objective: create a mini-strategy to tackle one travel behaviour
- Choose a breakout group based on a target behaviour you'd like to tackle in your city:
  - commuting to work
  - school drop-offs
  - leisure trips (cultural, entertainment, etc.)
  - errands (administrative tasks, grocery shopping, etc.)

Funded by
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Interactive Workshop

1. Identify the behaviour related barriers
2. Select behavioural enablers and digital tools to address them
3. Identify 2-3 key stakeholders
4. Summarise the best intervention in one sentence

30 minutes

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Sharing and reflecting

Share your group’s best intervention in one key sentence

NetZeroCities has received funding from the H2020 Research and Innovation Programme under grant agreement n°101036519.

Related NetZeroCites Portal Groups

[Design Your City's Net Zero Strategy: Online Planning Lab]

[Mobility and Transport in cities]

[Digital Tools]

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Related Projects

- SPINE
- UPPER

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Related Resources

- Solution Outliner
- Mobility as a Service
- Kranj's – MaaS Case Study
- Multimodality
- Cooperative Intelligent Transport Systems (C-ITS)
- Standarising Data Sharing for Mobility
- Better understanding mobility flows
- NetZeroCities Mobility Policy Brief

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Next Sessions

https://netzerocities.app/resource-4501

MODULE 1	**Core** The NetZeroCities program, service offering, systemic approach, what works for Mission Cities	**Spotlight 1** NetZeroCities Orientation	**Spotlight 2** Shaping Climate Narratives	**Spotlight 3** Climate City Contracts
MODULE 2	**Core** Developing a transition team, mapping and activating the ecosystem	**Spotlight 1** Transition team & climate leadership	**Spotlight 2** Engaging the private sector	**Spotlight 3** Citizen engagement for systemic climate action
MODULE 3	**Core** Developing the city's action plan for climate neutrality	**Spotlight 1** Reporting and MEL	**Spotlight 2** Co-Designing a Climate Portfolio	**Spotlight 3** Using NetZeroPlanner to Support Climate Planning, MEL, and Implementation Management to Achieve Net Zero Goals
MODULE 4	**Core** Levers of change: Technical solutions, social innovation and multi-actor collaborations	**Spotlight 1** Passive solutions to reduce energy demand in buildings	**Spotlight 2** Systemic energy transition at buildings, districts and city level	**Spotlight 3** Data-driven approaches to energy transition in buildings and districts **Spotlight 4** Mobility **Spotlight 5** Scope 3 and other emission domains
MODULE 5	**Core** Increase finance knowledge of the public administration & learn about options to finance projects	**Spotlight 1** Preparing a pipeline of projects for external financing	**Spotlight 2** Different investor groups and the key priorities and returns profiles for each and instruments	**Spotlight 3** Financing the ambition: Learning from Mission Cities
MODULE 6	**Core** Multilevel governance, national platforms and policy strategies	**Spotlight 1** Policy and regulations innovation	**Spotlight 2** Public procurement – national specificities	**Spotlight 3** Just transition

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Get in touch with NetZeroCities!

NetZeroCities Help Desk: infocities@netzerocities.eu

@NetZeroCitiesEU

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www.netzerocities.eu

hello@netzerocities.eu

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