ELABORATOR

Deliverable 3.4

Technical definitions of the Lighthouse cities interventions – version I

Co-funded by the European Union

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Project Executive Summary

ELABORATOR stands for 'The European Living Lab on designing sustainable urban mobility towards climate neutral cities'. The EU-funded project uses a holistic approach for planning, designing, implementing and deploying specific innovations and interventions towards safe, inclusive and sustainable urban mobility. These interventions consist of smart behaviour and policy adaptation tools, space redesign and dynamic allocation, shared services, and integration of active and green modes of transportation.

They will be specifically co-designed and co-created with a broad array of local stakeholders including relevant authorities who will be identified as "vulnerable to exclusion" (V2E) Interventions will be demonstrated in a number of cities across Europe, starting with six Lighthouse cities and six Follower cities with three principal aims:

I. to collect, assess and analyse user needs and requirements towards a safe and inclusive mobility and climate neutral cities;
II. to collect and share rich information sets made of real data, traces from dedicated toolkits, users' and stakeholders' opinions among the cities, so as to increase the take up of the innovations via a twinning approach;
III. to generate detailed guidelines, policies, future roadmap and built capacity for service providers, planning authorities and urban designers for the optimum integration of such inclusive and safe mobility interventions into Sustainable Urban Mobility Plans (SUMPs).

ELABORATOR Lighthouse cities

- Milan (Italy)
- Copenhagen (Denmark)
- Helsinki (Finland)
- Issy-les-Moulineaux (France)
- Zaragoza (Spain)
- Trikala (Greece)

ELABORATOR Follower cities

- Lund (Sweden)
- Liberec (Czech Republic)
- Velenje (Slovenia)
- Split (Croatia)
- Krusevac (Serbia)
- Ioannina (Greece)

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Content

1 Introduction

1.1 Deliverable 3.4 (& 3.5)

D3.4 - Technical definitions of the Lighthouse cities interventions – version I [M18–MCRIT–PU–R], will be the document reporting the initial definition of interventions containing actions and plans used to implement each of the local interventions, together with the dataset's definitions.

This deliverable is the beginning of the implementation of the co-creation methodology, aiming to gather all the initial interventions from the 6 ELABORATOR lighthouse cities:

Country	City	Abbreviations
Italy	Milan	CDM
Denmark	Copenhagen	CPHK
Finland	Helsinki	FVH
France	Issy-les-Moulineaux	ISSY
Spain	Zaragoza	AYZG
Greece	Trikala	ETRIK

This deliverable contains a specific chapter on a per city basis, specifying the interventions foreseen, their nature and details, expected timings and stakeholders to be involved in.

Each city is expected to report on these plans, with a double objective:

a) **To document and plan interventions in Lighthouse cities**. This will allow for implementation monitoring (WP5), identification of deviations, and establishing corrective measures. It will also allow for ex-post evaluation of experiences in lighthouse interventions.

b) **To provide guidance for follower cities**, by documenting key actions in lighthouse cities in a matter that allows for replication in follower cities.

This deliverable is directly connected to **D3.5. Technical definitions of the Lighthouse cities interventions – version II**, which is the second part of it, as clearly the name indicates it. Thus, version I includes expectations of the foreseen interventions and therefore some lack of concreteness in some specific points on some interventions can be observed. This is happening foremost for budgeting uncertainties at the moment, but also for stakeholders' involvement and risk management. All these blanks will be indeed fulfilled in D3.5.

1.2 Links with other ELABORATOR works

Revised Intervention KPI's

Before going to the general links of this document with other ELABORATOR works, we need to begin drawing attention to the update of the Intervention KPIs definitions. This document sets the starting point for the project interventions concrete technical definitions, jointly with the framework of the discovery phase. Thus, intervention monitoring needs to be introduced here, as one of the tasks of the interventions (see D1.6 – Domain Model, Figure 1.). The project started (and identified in D2.2 – Evaluation plans) with a list of **24 intervention KPIs**, and this was the list that this document has taken into consideration. However, this list was too long, and we discovered that different cities planned to use different indicators.

To increase cross-evaluation clarity and effectiveness, this list has been revised and reduced into **7 Intervention KPIs** by a task force assembled different project members from WP3, WP4, WP5 and WP7. The list has been validated by different members of the project, and has been approved, only a few days before the compilation of this report, by the project Technical Management Team. Thus, we decided not to include this list in the present deliverable, which is capturing work up to the point before the Intervention KPIs update, because different internal workshops with the Lighthouse cities and co-creation process were conducted with the old list. The new list will be fully presented in **D3.5** and used by all WPs from this point on.

This means that now we have a first approach on what are the Lighthouses willing to monitor, and then this is going to be updated. The new Interventions KPIs list will allow for transferability and, for that, a translation guidance from the initial 24-KPI long to the 7-Intervention KPIs short list will also be developed.

General links

The Evaluation Plan (D2.2.) from **WP2**, served as a first step in defining how cities intended to monitor and evaluate their interventions. Here, we take their analysis further and deep dive into the intervention scale. Therefore, each intervention is defined by which (intervention) KPIs each city will use for each intervention, serving, therefore, to define which data will be obtained from each intervention.

The Feasibility and Action Plan (D3.1) from **WP3** also helped lighthouse cities to start thinking on how to describe what they will to do and to define their LLs, which is a preliminary step to then reduce the scale at intervention scope.

Also, from **WP3**, Replication plans (D3.6) and other twinning activities, such as other WP3 activities (Tasks 3.2 and 3.3). Activities in **WP6** will be directly or indirectly fed by this document, informing follower cities by details of how lighthouses defined and initially performed their interventions.

This will allow **WP4** to know what types of data each city will collect, facilitating its task regarding the data unification (Task 4.1) and to establish a common marketplace for dissemination of data (Task 4.2).

WP5 will be informed to take the definition of the interventions and know which kind of data will be needed to be collected and tracked, implementing the monitoring of the data (Task 5.2).

Similarly, it serves to **WP7** as a baseline to conduct the impact assessment at the environmental, social and safety levels (Tasks 7.1, 7.2 and 7.3 respectively).

The exploitation strategy (Task 8.3) from **WP8** will use D3.4 and D3.5 material to gather city results, showing which are the different city interventions and their definition. Also, the lighthouse interventions and development will guide part of the work of the EU policies and regulations (Task 8.4) on providing recommendations for standardisation and policies.

1.3 Report structure

The structure of the report constitutes a chapter for each Lighthouse city, detailing the planned interventions, including

1. **Intervention details** describing stakeholders, timelines, installation and other key activities and risk management.

2. **Evaluation plans and means** as tables describing interventions evaluation, with reference to KPI's applied from the ELABORATOR outcome indicators by the city per intervention.

This structure is repeated for all interventions listed for each lighthouse city involved:

Milan, Italy

- Intervention CDM1 Olympic Routes
- Intervention CDM2 Tactical intervention
- Intervention CDM3 Decision Support System

Copenhagen, Denmark

- Intervention CPHK1 Relocation of car parking in streets
- Intervention CPHK2 Enhanced bicycle parking
- Intervention CPHK3 Vehicle traffic flow adjustment

Helsinki, Finland

- Intervention FVH1 Testing new solutions for collecting, visualizing and analysing accident-related information
- Intervention FVH2 Optimizing parking locations for shared e-scooters
- Intervention FVH3 Improving safety at intersections

Issy-les Moulineaux, France

- Intervention ISSY1 Flowell
- Intervention ISSY2 Mobility observatory

Zaragoza, Spain

- Intervention AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón
- Intervention AYZG2 Pedestrianised Calle Jerusalen
- Intervention AYZG3 Micromobility Shared & Safe Station
- Intervention AYZG4 Traffic management around Miguel Servet Hospital

Trikala, Greece

- Intervention ETRIK1 Installation of one smart crossing outside a school
- Intervention ETRIK2 Installation of 3 park and ride stations at the periphery of the city
- Intervention ETRIK3 Redesigning cycling lanes and fostering data collection
- Intervention ETRIK4 Expanding SMARTA online application

In the end of the report, a **Roadmaps Annex** is provided. Lighthouse cities drafted their roadmaps for their interventions, with timelines referring to ELABORATOR months. There is a table per intervention for each city. These Roadmaps are to be fine-tuned in D3.5.

2 Milan, Italy

2.1 ELABORATOR Intervention CDM1 *Olympic Routes*

CDM1 Olympic Routes

General description of the intervention.

Milan Living Lab (Milan LL) will be strategically situated in two significant locations associated with the Milan Cortina 2026 Winter Olympics: the area surrounding the Olympic stadium, and a central location designated for the awards ceremony. These locations are not only pivotal for the Olympics but are also integral parts of Milan's urban landscape.

The primary goal of the Milan Living Lab is to integrate Milan's expertise in road and public space design with innovative approaches derived from Universal Design principles. As the Universal Design aims to create environments that are accessible and usable by all people, regardless of age, ability, or other factors, by leveraging the high-profile context of the Winter Olympics, the Living Lab seeks to transform four itineraries into a space that is accessible to the broadest possible range of individuals, including groups that are often vulnerable to exclusion, in particular the visual impaired.

A Paradigm shift: the "Barrier-Free City" has the following objectives:

- Create a more inclusive society
- Promote active mobility among citizens
- Enable the use of local public transportation
- Guide the redevelopment of public spaces
- Support urban planning
- Build a more accessible society

This initiative will focus on developing and testing new design solutions and sensors that ensure inclusivity, ease of access, and comfort for all users. This includes implementing features that cater to the needs of people with physical disabilities, the elderlies, families with young children and others who may face barriers in traditional urban environments. By doing so, the Milan Living Lab aims to set a benchmark for urban design that prioritizes inclusivity and accessibility, ultimately enhancing the quality of life for all residents and visitors.

2.1.1 CDM1 Activity 1 *Crossroads Redesign*

CDM1 Olympic Routes - Activity 1 Crossroads Redesign

General description of the activity.

The activity will focus on two levels of action.

The first phase will include the redesign of approximately 40 street intersections (crossroads) along the itinerary that is expected to be more appealing for a pedestrian experience of the Olympic sites, ideally connecting the city centre to the San Siro stadium area with LPT and active mobility paths. The redesign activity is aimed at removing “architectural barriers” for people moving on wheelchairs, elderlies or children’s caregivers, visually impaired people, travellers and workers carrying trolleys

and, more generally, to provide a safer, easier and more pleasant pedestrian experience to every city user. AMAT will have an active role in this phase by designing a concept of the whole group of intersections to be transformed, with the criteria mentioned above, and will deliver it to CDM.

Secondly, the activity will include the executive design and the actual redevelopment of a selection of those interventions that will be prioritized to be ready for use before the beginning of the Olympics (the complete implementation of all the redesigned intersection is nevertheless expected on the first quarter of 2027 at the latest as requested by the national funding timeline). This activity will see an active contribute and the added value of MM's expertise (see below). The implementation will include a comprehensive reshaping of the intersections to shorten the crossing path of pedestrians on the street level and extending the sidewalks (curbs), along with the realization of slopes, tactile paving paths and, when possible, with the insertion of greening to improve air quality and provide shadow during the hot summer.

Involvement of stakeholders.

One of the main stakeholders in this action is MM, the engineering company involved in the realization of several infrastructural interventions in Milan, including new Metro stations and public spaces. MM is involved in both the executive design of the crossroads and their realization. A possible stakeholder might be ATM, the LPT company of Milan that will interact with CDM to coordinate the transformation where it will involve areas with LPT stops.

Being an activity characterized by a high technical complexity, the public engagement will be mediated through the involvement of Municipality 7, the local authority active on the involved neighbourhoods. Together with Municipality 7 the opportunity of realizing public engagement events about these actions will be evaluated.

Budget.

Besides man-hours, no other specific budget is required as these interventions are financed by national and regional road safety programs.

Planned for.

June 2023 - November 2027

Risk management.

Currently, the activity status rides ahead of schedule as the executive design phase is almost concluded. MM is both in charge of this phase and the implementation one, so the coordination of the two is optimized. Eventual misalignments in the implementation phase might be mitigated by adapting the selection of realizable intersections according with CDM wider urban planning.

Sub-activities.

As this activity is tightly linked with **CDM1 Activity 2**, the sub-activity chart is shown in the act. 2.

2.1.2 CDM1 Activity 2 *Sensors for visual impaired citizens*

CDM1 Olympic Routes - Activity 2 Sensors for visual impaired citizens

General description of the activity.

A specific innovative aspect of this intervention will be the participatory approach that will involve representatives of disabled people communities in selecting better and more advanced technologies to be used in the realization of the intervention, specifically for what concerns sensory disabilities. This activity, in fact, consists in the implementation of sensors able to communicate with sticks widely used among visually impaired citizens through wireless technologies and to provide them information about the surrounding environment and help them move independently through the city. These sensors will be installed in traffic light poles both along the crossroads involved in CDM1 Activity 1 and in some areas in the city centre where a denser visitor flow is expected.

Involvement of stakeholders.

This action has been strongly co-planned with the Disability Consult of CDM, reuniting representatives of disabled people communities and NGOs to address their needs to the city.

Budget.

Besides man-hours, no other specific budget is required as these interventions are financed by national and regional road safety programs.

Planned for.

June 2023 - November 2026.

Risk management.

Currently, the activity status rides ahead of schedule as the executive design phase is almost concluded. MM is both in charge of this phase and the implementation one, so the coordination of the two is optimized. Eventual misalignments in the implementation phase might be mitigated by adapting the selection of realizable intersections according with CDM wider urban planning.

Sub-activities.

- 1. Preliminary phase (June 2023 – December 2023)
  - 1.1 Project Expectations (June 2023 – August 2023)
  - 1.2 Definition of Project Objectives (July 2023 – October 2023)
  - 1.3 Workplan (September 2023 – December 2023)
  - 1.4 Preliminary study (October 2023 – December 2023)
  - 1.5 Preliminary design (November 2023 – December 2023)
- 2. Stakeholder engagement (November 2023 – December 2025)
  - 2.1 Consultation with Disability Consult (March 2024 – May 2024)

- 2.2 Consultation with further NGOs (September 2024 – December 2025)
- 3. Executive design & procurement (January 2024 – February 2025)
- 3.1 Executive design of selected intersections (January 2024 – December 2024)
- 3.2 Contracting for implementation (December 2024 - February 2025)

- 4. Implementation (March 2025 – November 2026)
  - 4.1 Selected intersection implementation (March 2025 – January 2026)
  - 4.2 Sensors installation (March 2025 – January 2026)
  - 4.3 Sensors testing (January 2026 – June 2026)
- 5. Monitoring (January 2026 – June 2026)
  - 5.1 Pedestrian crossing test after sensors installation (January 2026 – June 2026)

2.2 ELABORATOR Intervention CDM2 *Tactical intervention*

CDM2 Tactical intervention
General description of the intervention. The tactical intervention will focus on Via Novara area, which is around 335.000 m^2 with 3944 inhabitants (2022 data). Close to the Stadium. Via Novara is a key street in the western part of Milan and connects the city centre to the outskirts. Its surroundings feature a combination of residential and commercial properties, making it a busy area used by both residents and commuters. It is well-served by public transportation, providing easy access to other areas of the city, and is an important route for people traveling into and out of Milan. The participatory co-design project in Via Novara aims to engage local residents and stakeholders in reimagining this key urban corridor, which blends residential, commercial, and recreational spaces. The project will create synergies with local City District and stakeholders, utilizing the Municipality 7 newsletter, community workshops and meetings to solicit feedback and ideas, fostering a collaborative approach to enhance accessibility, inclusivity, and safety. Tactical Urbanism techniques, which might include temporary pop-up zones and green spaces, will be deployed to trial and refine the ideas based on community feedback. Supported by SBA the tactical intervention will be organised in order to give a broader idea of the potential of the area and collect the results of the co-creation process. This intervention seeks to test the transformation of Via Novara area into a model of community-focused urban design, enhancing its functionality and safety while reflecting the diverse needs and aspirations of its users.

2.2.1 CDM2 Activity 1 *West Axis Vision Concept*

CDM2 Tactical intervention - Activity 1 West Axis Vision Concept
General description of the activity. This activity focuses on establishing clear expectations and defining key objectives. The work plan will centre around the conceptual design phase, with communication playing a supporting role throughout the process. We will start with a preliminary study of the Via Novara area, considering both current plans and future developments, and involving the City Departments already engaged in the area. This will be followed by a review of the study. Active participation from City District, Municipality 7, and key stakeholders will be part of the activity strategy. Once these steps are completed, the final design concept will be developed by SBA. In addition, a governance model will be developed to outline potential future partnerships with all relevant stakeholders.
Involvement of stakeholders. – City of Milan – SBA – Municipality 7 – Local Associations – Local business – Residents
Budget. Besides man-hours, no other specific budget is required.
Planned for. June 2023 - November 2026
Risk management. Misalignment of expectations during the project definition phase can be mitigated through clear communication and consensus-building. Delays and miscommunication in the workplan and concept design stages can be addressed with a structured communication strategy and regular updates. Incomplete data or unforeseen challenges during the preliminary study can be managed by thorough City Departments involvement. Lack of engagement from Municipality 7 or stakeholders is a key risk, which can be minimized by ensuring early and ongoing involvement. Finally, in the case of the governance model. it must clearly define roles and responsibilities to ensure commitment and collaboration from all stakeholders.

Sub-activities.

1.1 Project Expectations (June 2023 – June 2024)

1.2 Definition of Project Objectives (June 2023 – July 2024)

1.3 Workplan - Concept Design (June 2023 – Sept 2024)

1.4 Communication Activities (Sept 2024 – Nov 2026)

1.5 Preliminary study (Feb 2024 – Aug 2024)

1.6 Review of preliminary studies (Sept 2024 – Oct 2024)

1.7 Involvement of Districts (Sept 2024 – Nov 2026)

1.8 Involvement of stakeholders (Nov 2024 – Nov 2026)

1.9 Final Design – Concept (Jan 2025 – March 2026)

1.10 Governance Model and Stakeholders partnership (Oct 2026 – Nov 2026)

2.2.2 CDM2 Activity 2 *Tactical Urbanism Experiment*

CDM2 Tactical intervention - Activity 2 Tactical Urbanism Experiment

General description of the activity.

For this activity, we will start by defining the dataset and proceed with ex-ante monitoring. The project's goals will be clearly outlined, and a preliminary study will assess the situation. Feasibility checks will be carried out alongside cost estimation and the development of a financing strategy. The work plan will focus on the tactical intervention, supported by communication activities which will involve the City District (Municipality 7) and local stakeholders. The preliminary design will be developed, and the involvement of citizens, along with other stakeholders, will be crucial for the final outcome. Finally, ex-post monitoring will take place to evaluate the results.

Involvement of stakeholders.

- City of Milan
- SBA
- Municipality 7
- Local Associations
- Local business
- Residents

Budget.

Besides man-hours, the budget will be supplemented through alternative funding sources (e.g. sponsorships).

Planned for.

June 2023 - November 2026

Risk management.

A risk management strategy will address financial, technical, stakeholder, operational, social, environmental, and regulatory risks. This includes careful cost estimation, infrastructure assessments, and stakeholder engagement to prevent budget overruns and higher necessity of sponsorships, technical challenges, or resistance from the community. Operational risks will be minimized through detailed planning, social impacts will be addressed based on preliminary studies. Compliance with the city plans and regulations will be ensured to avoid delays, and robust monitoring will track progress and outcomes.

Sub-activities.

12.1 Dataset Definition (Jan 2024 – Feb 2025)

2.2 Ex-ante Monitoring (Dec 2024 – Jan 2026)

2.3 Definition of Project Objectives (Jun 2023 – Oct 2024)

2.4 Preliminary study (June 2024 – Oct 2024)

2.5 Feasibility verifications (July 2024 – May 2025)

2.6 Cost Estimation and financing strategy (Sept 2024 – May 2025)

2.7 Workplan - Tactical intervention (July 2024 – Oct 2024)

2.8 Communication activities (July 2024 – Feb 2026)

2.9 Preliminary Design (July 2024 – July 2025)

2.10 Involvement of citizens and other stakeholders (Nov 2024 – Feb 2026)

2.11 Co-design with stakeholders (Dec 2024 – Feb 2026)

2.12 Implementation (Dec 2025 – July 2026)

2.13 Ex-post Monitoring (June 2026 – Nov 2026)

2.3 ELABORATOR Intervention CDM3 *Decision Support System*

CDM3 Decision Support System
General description of the intervention. The Decision Support System (DSS) for identifying and reducing architectural barriers, as well as for improving accessibility in public spaces, is designed to facilitate urban planning by assisting administrations and designers in prioritizing interventions and managing pedestrian flows. Detailed surveys and mapping conducted across various urban areas reveal a significant number of architectural barriers in public spaces. This finding highlights the need for careful prioritization to optimize the use of available resources and to expedite the planning and implementation of accessibility adaptations. The system aims to ensure equitable access to public spaces, with a particular focus on groups with specific accessibility needs. A key component of the project's development is active collaboration with private partners, non-profit organizations, research institutes, universities, and citizens. These stakeholders contribute to data collection and updates, creating an information base that operates independently of public administration. This collaborative approach not only promotes the dissemination of information within an integrated and interoperable system but also supports the introduction of innovative features, such as those for Mobility as a Service (MaaS) systems, aimed at offering more inclusive and efficient mobility solutions. Additionally, the system is designed to be extensible, enabling the expansion of the analyzed area and the integration of supplementary data to enhance the assessment of pedestrian infrastructure. Such data includes information on sidewalk materials, maintenance status, walkway width, cross slopes, and other characteristics critical to the safety and usability of spaces for sustainable and accessible mobility for all.

2.3.1 CDM3 Activity 1 *Mapping of public space and mobility infrastructure*

CDM3 Decision Support System - Activity 1 Mapping of public space and mobility infrastructure
General description of the activity. For this project, we decided to use OpenStreetMap (OSM), mapping within the platform the elements of our interest (almost entirely). OSM is an open-source platform that guarantees all interested stakeholders the use of the exposed data. The greater number of stakeholders using the platform, the greater is the possibility that the collected data will be used for other purposes (e.g., for a MaaS dedicated to people with disabilities), optimized, completed, integrated, and/or improved.

Involvement of stakeholders.

Regarding mappings, we studied the technical specifications of the OSM platform directly with Wikimedia Italia, owner of the platform, and carried out mapping activities with:

- private bigTech operators (TomTom, META) interested in having a comprehensive database on public space available for their services;
- associations of people with disabilities interested in providing open access to as much accessibility data as possible and increasing their quality and proper assessment of relative levels of accessibility;
- associations of mappers such as the Youth Mappers of Polimappers;
- universities and research institutions interested in being able to have public space data with which to develop their own research.

Budget.

Besides man-hours, no other specific budget is required.

Planned for.

June 2023 - June 2026

Risk management.

Mapping, as public access, could be interfered with by mistake or with the intent to vandalize it. Since the tool relies in many aspects on such data, tampering with it poses a risk. To address this risk, we have determined to:

- working with consolidated versions of the data, which are not affected by sudden changes;
- developing data cleaning processes;
- implementing change detection tools dedicated to the information we are interested in so that we are in control of the number and type of changes that are applied to the OSM data we use.

Sub-activities.

1.1 Validation on mapping scheme on OpenStreetMap (June 2023 – Sep 2023)

1.2 Running of mappings (Jun 2023 – Dec 2025)

1.3 Mapathon: stakeholders' involvement in mappings (Jun 2023 – Nov 2024)

1.4 Creation and use of data cleaning procedures on mappings (Mar 2024 – Jun 2026)

2.3.2 CDM3 Activity 2 *DSS development*

CDM3 Decision Support System - Activity 2 DSS development

General description of the activity.

The DSS is an IT decision support tool developed to complement pedestrian and accessibility monitoring, before and after interventions. It uses as input various data: mobility and pedestrian infrastructure (OpenStreetMap); street and intersection regulations, house numbers and location of

public services, pavements, maintenance, and physical or behavioural elements that constitute architectural barriers or obstacles to the use of public space by all (City of Milan and AMAT).

Involvement of stakeholders.

Calibration of the model will be developed through questionnaires targeting NGOs and people with disabilities, while the development of the DSS will also make use of the collaboration of research institutes such as the CNR and the Polytechnic University of Milan.

Budget.

Besides man-hours, no other specific budget is required.

Planned for.

Jan 2024 - June 2026

Risk management.

At this stage the skills for using DSS could be lost. To address the risk, we determined to:

- Produce adequate documentation on the system being developed

Sub-activities.

2.1 Construction of the pedestrian graph (Mar 2024 – Nov 2024)

2.2 Construction of the O/D graph (Mar 2024 – Oct 2025)

2.3 Accessible graph construction (Apr 2024 – Oct 2025)

2.4 Calibration of routing systems (Apr 2024 – Oct 2025)

2.5 DSS evolutionary maintenance (Jan 2024 – Jun 2026)

2.3.3 CDM3 Activity 3 *Use cases study and identification of KPIs*

CDM3 Decision Support System - Activity 3 Use cases study and identification of KPIs

General description of the activity.

As it is not possible to simultaneously and immediately develop use cases related to all disabilities and all types of infrastructure, services or travel, it will be necessary to identify some use cases and KPIs of particular importance on which to use the tool.

Involvement of stakeholders.

NGOs, people with disabilities.

Budget.

Besides man-hours, no other specific budget is required.

Planned for.

Apr 2024 – Nov 2024

Risk management.

At this phase there could be useless use cases and non-identifying KPIs. To address the risk, we determined to:

- Selection of use cases supported and shared by stakeholders

Sub-activities.

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2.3.4 CDM3 Activity 4 *Use of DSS for pre and post intervention accessibility evaluation*

CDM3 Decision Support System - Activity 4 Use cases study and identification of KPIs

General description of the activity.

Regarding the ELABORATOR project we will focus on the analysis of the Downtown Pilot (Olympic routes) and the infrastructure to mobility found along these routes. The tool will also be used to assess the impact of the Stadium Pilot (both concept on the West axis and the temporary tactical intervention). Regarding the Olympic itineraries we will measure, for example, the impact that the removal of architectural barriers has both for the accessibility of the itinerary in general and in the level of accessibility of LPT stops and the corresponding subways.

Involvement of stakeholders.

-

Budget.

-

Planned for.

Apr 2024 – June 2026

Risk management.

At this phase there could be analysis on incorrect data or incomplete data. To address the risk, we have determined to:

- Checks with on-site inspections

Sub-activities.

4.1 Olympic routes analysis (pre) (Sep 2024 – Dec 2025)

4.2 Olympic routes analysis (post) (Jan 2026 – Jun 2026)

4.3 West Axis analysis (pre) (Sep 2024 – Dec 2025)

4.4 West Axis analysis (post) (Jan 2026 – Jun 2026)

2.3.5 CDM3 Activity 5 *Preliminary study of a web interface for DSS*

CDM3 Decision Support System - Activity 5 Preliminary study of a web interface for DSS
General description of the activity. In its usable version, the DSS will be an IT tool managed through a *postgresql* and *postgis* database with queries and algorithms. Beyond the deadlines of the ELABORATOR project, it would be interesting to be able to move such a system to an online platform, a web app with features such that it can be used even by people who are not experts in *sql* programming and language. In the delays of the project, we would like to develop a UX/UI mock-up of such a platform (also in relation to the identified Use Cases and KPIs).
Involvement of stakeholders. Municipality of Milan departments
Budget. Besides man-hours, no other specific budget is required
Planned for. Jan 2026 – June 2026
Risk management. It might be possible to have a limited budget of man-hours for this phase of work. To address the risk, we determined to: • Additional work that is not strictly necessary for the use of the tool
Sub-activities. -

2.3.6 CDM3 Activity 6 *Dissemination of mapping methods and results*

CDM3 Decision Support System - Activity 6 Dissemination of mapping methods and results
General description of the activity. The results obtained from the mapping of public space, the methods used for the elaboration of the Decision Support System and, more generally ELABORATOR project, will be shared by actively participating in both national and international events and conferences by supporting discussions with experts in the field of mobility and urban space. At the same time, these results will be shared through social work (LinkedIn, etc..) to engage a wider audience of professionals, academics and stakeholders interested in improving the management of public spaces.
Involvement of stakeholders. Wikimedia Italia, TomTom, META, PoliMI, Università degli Studi Bicocca.

Budget. Besides man-hours, no other specific budget is required
Planned for. Oct 2023 – Sep 2026
Risk management. -
Sub-activities. -

2.4 Interventions evaluation table from Milan

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention		
				CDM1 Olympic Routes	CDM2 Tactical intervention	CDM3 Decision Support System
Mobility Planning	**1,1**	Expand intervention beyond the LL	**X**			**X**
Mobility Planning	**1,2**	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups	**X**	**X**		
Mobility Planning	**1,3**	Addressing rebalance of public space to achieve desired modal split				
Connected & smart mobility	**2,1**	Reduction of private car use	**X**	**X**		
Connected & smart mobility	**2,2**	Deployment of Zero Emission and shared mobility services				
Connected & smart mobility	**2,3**	75% user acceptance for zero emission services				
Connected & smart mobility	**2,4**	5% increase of desired modal split	**X**		**X**	
Safety	**3,1**	Solutions in unsafe locations score above 75% user satisfaction				
Safety	**3,2**	Addressing safety risk for cycling and e-scooters				
Safety	**3,3**	Decrease of safety risks	**X**	**X**		
Safety	**3,4**	Deploy cutting-edge safety prediction and evaluation tools				
Safety	**3,5**	Min 3 Star Rating	**X**	**X**		
Environment	**4,1**	Increase of Zero Emission modes	**X**		**X**	
Environment	**4,2**	Reduction of emissions	**X**	**X**		
Environment	**4,3**	Reduction in exposure to air and noise pollution	**X**		**X**	
Environment	**4,4**	Climate city contracts supported				
Environment	**4,5**	Addressing Zero Emission targets				
Environment	**4,6**	Increase of quality-adjusted life years	**X**		**X**	
Environment	**4,7**	Supporting circular economy principles and cross sectoral synergies				
Environment	**4,8**	Adapting to climate change	**X**	**X**		
Environment	**4,9**	Mitigate extreme heat				
Social	**5,1**	Toolkits adopted and deployed	**X**		**X**	**X**

Social	**5,2**	Focus group consultation	**X**	**X**	**X**	**X**
Social	**5,3**	Use of engagement apps				

3 Copenhagen, Denmark

3.1 ELABORATOR Intervention CPHK1 *Reduction of car parking in streets*

CPHK1	Relocation of car parking in streets

General description of the intervention.

Today there are approx. 820 regular parking spaces in the streets of the Medieval City of Copenhagen (shown as green area below). Of these, 600 will be relocated. There will then be approx. 220 parking spaces left, which everyone can use. They are especially located on the edge of the medieval city. The current 138 business spaces for cars on yellow plates will be expanded by 12 extras, so that in future there will be 150 business spaces. In the time period 17.00-07.00 and at the weekend, everyone can use these places. The current 68 spaces for visitors with a disabled parking card will be expanded by 7 extras, so that in future there will be 75 spaces. The current 15 disabled places reserved with a number plate will be pre-reserved.

3.1.1 CPHK1 Activity 1 *Initial planning*

CPHK1 Relocation of car parking in streets – Activity 1 Initial planning
General description of the activity. The activity includes the following tasks: specifying the intervention, developing a plan on when and how the intervention will be monitored, developing monitoring methods, and planning the evaluation of the intervention.
Involvement of stakeholders. - CPHK - UCPH - A&T - PLAT
Budget. None
Planned for. June 2023 – June 2024
Risk management. A long planning process including a pilot trial and public participation had been previously carried out by CPHK ensuring that the intervention will be implemented without considerable risks.
Sub-activities. None

3.1.2 CPHK1 Activity 2 *Monitoring before intervention*

CPHK1 Relocation of car parking in streets – Activity 2 Monitoring before intervention
General description of the activity. The intervention will be monitored with assessments carried out before and after the intervention is implemented. Data will be collected with the following methods: • OpenTrafficCam • Travel time sensor InRix • Traffic Counts Municipality • Travel card data • Telraam counts • Survey / street interviews • Survey Citizen Panel • Manual counts • Instagram

- Parking data
- Strava

Involvement of stakeholders.

- UCPH
- PLAT
- Residents of Copenhagen
- DOT
- Public transport authority

Budget.
Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20,000Euro and UCPH 5,000Euro).
Survey/Street interviews: 7,850 Euro from Subcontracting / CPHK

Planned for.

July 2023 – June 2024

Risk management.

A long planning process including a pilot trial and public participation had been previously carried out by CPHK ensuring that the intervention will be implemented without considerable risks.

Sub-activities.
None

3.1.3 CPHK1 Activity 3 *Intervention*

CPHK1 Relocation of car parking in streets – Activity 3 Intervention

General description of the activity.

The intervention is carried out by CPHK during July 2024 – December 2024. There will be temporary signs and roadblocks in the streets during a transition period. When street parking removal is complete in a neighbourhood, new parking signs come into place, and new parking rules come into force. Motorists are advised to use the Medieval City's car parks or park outside the Medieval City. Relevant information and guidelines for different types of users – including residents, private car users, craftsmen, logistics and commercial vehicles, cyclists – of the Medieval City is provided in the Municipality's website. The activity includes the following tasks:

- Relocation of street parking spots
- New traffic signs

Involvement of stakeholders.

- CPHK

Budget.

No budget for it in the ELABORATOR budget.

Planned for.

July 2024 – December 2024

Risk management.

A risk for delay exists. If the implementation of interventions is delayed, Activity 3 will be adjusted.

Sub-activities.
No sub-activities relevant for the ELABORATOR part

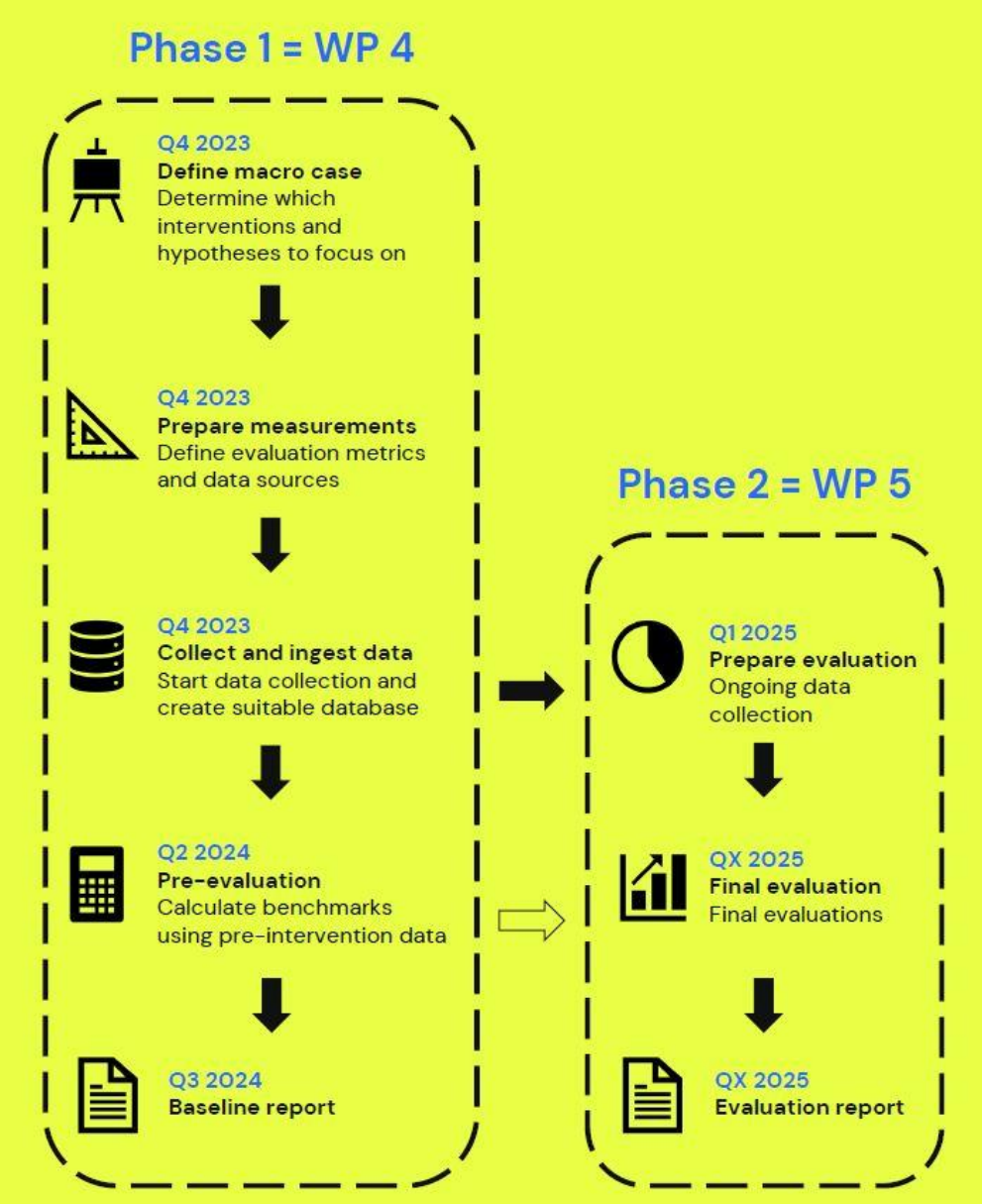
3.1.4 CPHK1 Activity 4 *Urban pulse*

CPHK1 Relocation of car parking in streets – Activity 4 Urban pulse

General description of the activity.

At a macro level, we will analyse how behavioural patterns in the medieval city center change with the implementation of interventions, focusing on the "urban pulse". We aim to build a robust data foundation to monitor shifts in mobility and other changes due to the city's transformation. Insights from this evaluation will aim to inspire other cities within the Elaborator consortium.

Tracking the urban pulse consists of two phases as shown in the figure below: Phase 1 defines the macro case, sets hypotheses, evaluation metrics, identifies data sources, and establishes benchmarks, with a focus on alignment, data collaboration, and continuous data collection. Phase 2 begins after the interventions are implemented, focusing on final measurements and preparing the project's conclusive report.



Involvement of stakeholders.

- A&T
- The Urban Pulse map can be used in focus groups.

Budget.

Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20,000Euro and UCPH 5,000Euro).

Planned for.

Sep 2023- Oct 2025

Risk management.

Lack of sufficient data can be a risk factor.

Sub-activities.
None

3.1.5 CPHK1 Activity 5 *Monitoring after intervention*

CPHK1 Relocation of car parking in streets – Activity 5 Monitoring after intervention

General description of the activity.

This activity concerns the monitoring that will be performed after the intervention has been carried out. The same methods that were used for monitoring before the intervention (activity 2) will be used:

- OpenTrafficCam
- Travel time sensor InRix
- Traffic Counts Municipality
- Travel card data
- Telraam counts
- Survey / street interviews
- Survey Citizen Panel
- Manual counts
- Instagram
- Parking data
- Strava

Monitoring after the intervention is combined with assessments of the Urban Pulse (activity 4).

Involvement of stakeholders.

- CPHK
- UCPH
- A&T
- PLAT
- Residents of Copenhagen
- DOT
- Public transport authority

Budget.
Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20,000Euro and UCPH 5,000Euro).

Planned for.

March 2025 – June 2025

Risk management.

Any technical risks with monitoring are countered by the variety of methods employed.

Sub-activities.
None

3.1.6 CPHK1 Activity 6 *Evaluation*

CPHK1 Reduction of car parking in streets – Activity 6 Evaluation
General description of the activity. The intervention will be evaluated by using the outcomes of monitoring process. The outcomes will be interpreted to assess whether goals have been reached. The collected data will also be used to provide input for KPIs and SUMI's which will be evaluated. Evaluation will be performed in relation to the goals of ELABORATOR as well as the goals of the Municipality. The evaluation will also be reported to local politicians.
Involvement of stakeholders. - CPHK - UCPH
Budget. None
Planned for. August 2025 – December 2025
Risk management. There is always a risk of the intervention not producing the desired outcomes. There was an effort to minimize this risk through extensive planning of the intervention by the Municipality.
Sub-activities. None

3.2 ELABORATOR Intervention CPHK2 *Enhanced bicycle parking*

CPHK2 Enhanced bicycle parking
General description of the intervention. Today there are approx. 5,000 bicycle parking space in bicycle racks placed on streets and squares in the Medieval district. There will be 1,080 new bicycle parking spaces on the freed-up street areas, including 80 specially designed racks for cargo bikes. The historic sites and squares are released for approx. 500 bicycle parking space in racks, which will be moved out into the adjacent streets.

3.2.1 CPHK2 Activity 1 *Initial planning*

CPHK2 Enhanced bicycle parking – Activity 1 Initial planning

General description of the activity.

In order to find location(s) for examining and evaluating the transformation process of freed-up public space when bicycle racks are removed, we chose a strategic sub-area, the Fountain Square (Vandkunsten).

Involvement of stakeholders.

- CPHK, Technical and Environment Administration, staff from Parks and Urban Space unit (Cykel&Vej)

Budget.

None

Planned for.

February 2024 – April2024

Risk management.

There is always a risk of the intervention not producing the desired outcomes. There was an effort to minimize this risk through extensive planning of the intervention by the Municipality.

Sub-activities.
None

3.2.2 CPHK2 Activity 2 *Monitoring before intervention*

CPHK2 Enhanced bicycle parking – Activity 2 Monitoring before intervention

General description of the activity.

The pre-intervention situation is described/mapped through two sorts of data sources: a) pictures/counts/observations of bike parking in and outside the bicycle racks at the square by means of photographs, counts and notes; b) urban life footages of urban space users at the square by means of OpenTrafficCam.

Involvement of stakeholders.

N/A

Budget.
Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20.000Euro and UCPH 5.000Euro).

Planned for.

a) March 2024 - June 2024 (3 visits); b) June 2024 (1 week)

Risk management.

-

Sub-activities.
None

3.2.3 CPHK2 Activity 3 *Intervention*

CPHK2 Enhanced bicycle parking – Activity 3 Intervention

General description of the activity.

The removal of the bicycle racks in the Medieval district's squares is effectuated.

The implementation of new bicycle racks in the Medieval district's streets is effectuated.

- These activities are implemented by CPHK, Technical and Environment Administration, Parks and Urban Space unit (Cykel&Vej)

Involvement of stakeholders.

The pilot project "Experiments of Urban Space" (2021) has involved various stakeholder:

- Follow-up group with representatives from a wide range of interest organizations
- The Kulturkvarter, Inner City local committee, actors in Lille Kongensgade, Hyskenstræde etc.
- Four design studios (BIG, Gehl, Lendager and Tredje Natur)
- Panel of external and municipal experts

Budget.

Allocated from the City budget.

Planned for.

August 2024 – November 2024

Risk management.

A risk for delay exists. If the implementation of interventions is delayed the Activity 4 will be adjusted.

Sub-activities.
None

3.2.4 CPHK2 Activity 4 *Focus groups*

CPHK2 Enhanced bicycle parking – Activity 4 Intervention

General description of the activity.

The perceived impact of bicycle parking on the public life is explored via several focus groups (including the format of workshops, semi-structured interviews, and stop interviews). These are conducted 6-12 months after the implementation of the interventions. They will focus on the changes that have happened in the public space of the Medieval City district, including in The Fountain Square, and will draw on the changes that have been recorded in the before and after monitoring activities. Using these as a starting point the focus groups will participate in co-interpretating the interventions' impacts, potentials, needs and challenges for inclusive and safe urban life.

Involvement of stakeholders.

- NGOs/NPOs (Selected stakeholders from The Follow-up Group of the Medieval City): Copenhagen Elderly Council (Københavns Ældreråd); Danish Chamber of Commerce (Dansk Erhverv); Copenhagen Youth Council (Ungeråd KBH); KBH Commerce and Culture
- KCC (Handelstandsforening); Danish Cyclists' Federation - DFC (Cyklistforbundet); Danish Pedestrians' Federation (Dansk Fodgængerforbund)
- VRUs: Children in day care (1-5 ys) - via day care staff; School children (6-12 ys) - classes in local school; Disabled persons and Caretakers with strollers – stop interviews on site.
- VTU: Homeless people - via local project managers of the federation Project Outside (Projekt Udenfor)

Budget.

To be planned for in details.

Planned for.

August 2025 – October 2025

Risk management.

A risk for delay exists. If the implementation of interventions is delayed the Activity 4 will be adjusted accordingly. Up to six months of delay will still be doable.

Sub-activities.
None

3.2.5 CPHK2 Activity 5 *Monitoring after the intervention*

CPHK2 Enhanced bicycle parking – Activity 5 Monitoring after the intervention

General description of the activity.

The post-intervention situation is described/mapped through two sorts of data sources: a) pictures/counts/observations of bike parking in and outside the bicycle racks at the square by means of photographs, counts and notes; b) urban life footages of urban space users at the square by means of OpenTrafficCam.

Involvement of stakeholders.

N/A

Budget.
To be planned for in details.
Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20.000Euro and UCPH 5.000Euro).

Planned for.

a) March –June 2025 (3 visits); b) May or June 2025 (1 week)

Risk management.

-

Sub-activities.
None

3.2.6 CPHK2 Activity 6 *Evaluation*

CPHK2 Enhanced bicycle parking – Activity 6 Evaluation

General description of the activity.

The intervention regarding enhanced bicycle parking will be evaluated on the basis of input from the focus groups. The evaluation will contain both the revealed and the perceived impact of bicycle parking on the public life focused around the sub-area of The Fountain Square.

The evaluation includes how the two intervention types: the freeing-up public squares from bicycle racks and the implementation of more numerous bicycle parking in the streets, have impact inclusive and safe urban life, as well as which new needs and challenges they potentially foster.

These insights will feed into the detailed planning of the 2nd phase of the City of Copenhagen's interventions in the sub-district, Nørre Kvarter, with the same purpose as our 3 interventions in focus. This second phase is to be implemented in 2026.

Involvement of stakeholders.

- Same as Activity 4
- Various offices in the municipality

Budget.

To be planned for in details.

Planned for.

August 2025 – December 2025

Risk management.

-

Sub-activities.
None

3.3 ELABORATOR Intervention CPHK3 *Vehicle traffic flow adjustment*

CPHK3 Vehicle traffic flow adjustment
General description of the intervention. The change of parking (relocation of parking spots) in the medieval city can have an effect on the traffic flow e.g. at Nørregade, one of the main entries and exit street to the Medieval City. Furthermore, Rådhusstræde will be unidirectional for cars from Nybrogade to Brolæggerstræde (major street) to make up room for bike parking. As a consequence of the unidiretional implementation the one-way direction of Gåsegade (minor street) will be reversed. The aim for the changes in the Medieval City is less car traffic and increase of bikes and pedestrians. This change in traffic flow and type of traffic (Modal Split) will potentially have an effect on the traffic safety in specific intersections for VRU. This will be investigated.

3.3.1 CPHK3 Activity 1 *Initial planning*

CPHK2 Vehicle traffic flow adjustment – Activity 1 Initial planning
General description of the activity. Select the intersections that will be impacted by the changes in the Medieval City.
Involvement of stakeholders. - City of Copenhagen, the Unit for bikes and roads - CPHK - PLAT - UCPH
Budget. None
Planned for. 2023
Risk management. There is a risk that the intersections selected won't be impacted by the changes, but that won't be possible to know before.

Sub-activities.
None

3.3.2 CPHK3 Activity 2 *Monitoring before intervention*

CPHK3 Vehicle traffic flow adjustment – Activity 2 Monitoring before intervention
General description of the activity. There will be a pre-collection of data from the intersections we have selected. It will be manually by observations and survey and automatically by OpenTrafficCam.
Involvement of stakeholders. Owners of the buildings to mount the OpenTrafficCam Traffic Department (permission from Street-light section) UCPH, PLAT, CPHK
Budget. Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20,000Euro and UCPH 5,000Euro).
Planned for. July 2023 – June 2024
Risk management. Delay of permissions, problems with the equipment
Sub-activities. Develop the survey for monitoring near encounters on site Monitor manually near encounters/specific intersections Collect permission for the mounting of the OpenTrafficCam Mount the OpenTrafficCam to monitor Collect data

3.3.3 CPHK3 Activity 3 *App for near encounters*

CPHK3 Vehicle traffic flow adjustment – Activity 3 App for near encounters
General description of the activity. There will be developed an app for Near Encounter analysis. This app is based on the footage from the OpenTrafficCam. The app will be used to investigate the perception of near encounters in the intersections we have selected in the Medieval City.

Involvement of stakeholders. UCPH, PLAT, CPHK Various stakeholders at the municipality e.g. traffic safety unit.
Budget. Part of the personal cost in the budget for the partners in the CPH LL
Planned for. January 2024 – December 2024
Risk management. Delays in collecting the data from the OpenTrafficCam.
Sub-activities. Drafting questionnaire and interface design (May 2024) Test in field of questionnaire (May 2024) Prototype design (June/July 2024) Creation of videos for specific, testable situations (September 2024) Prototype development/deployment (August-September 2024) Prototype alpha test (October 2024) Deployment and test of beta version (presently on-going) Version 1 deployed for test among municipality users (November-December 2024)

3.3.4 CPHK3 Activity 4 *Intervention*

CPHK3 Vehicle traffic flow adjustment – Activity 4 Intervention
General description of the activity. The changes in the Medieval City Centre will be executed in July – December 2024. The changes that effect the traffic flow will be the relocation of parking lots, and the changes at Gåsegade and Rådhusstræde.
Involvement of stakeholders. Various stakeholders within the Municipality.
Budget. Not part of the ELABORATOR budget.
Planned for. July 2024 - December 2024
Risk management. A risk for delay exists. If the implementation of interventions is delayed the Activity 4 will be adjusted.

Sub-activities. None

3.3.5 CPHK3 Activity 5 *Use of app*

CPHK3 Vehicle traffic flow adjustment – Activity 5 Use of app
General description of the activity. The App for near encounters will be used for collection of data
Involvement of stakeholders. UCPH, CPHK, PLAT and a group of users of the app (still needs to be defined)
Budget. Part of the personal cost in the budget for the partners in the CPH LL
Planned for. January 2025
Risk management. It the development of the app is delayed the use of it will also be delayed.
Sub-activities. None

3.3.6 CPHK3 Activity 6 *Monitoring after the intervention*

CPHK3 Enhanced bicycle parking – Activity 6 Monitoring after the intervention
General description of the activity. There will be a post collection of data from the intersections. It will be manually by observations and survey and automatically by OpenTrafficCam.
Involvement of stakeholders. Owners of buildings for mounting the cameras Traffic Department, City Light administration for permission of mounting OpenTrafficCam in lighting poles
Budget. Data collection is part of the personal cost in the budget for the partners in the CPH LL (internal man hours) and budget post for equipment for CPHK and UCPH (CPHK 20,000Euro and UCPH 5,000Euro).

Planned for.

May 2025 – June 2025

Risk management.

There is a risk that the monitoring will be delayed if the development of the app is delayed, or the intervention is delayed.

There is a risk in getting the permissions from the building owners to mount the OpenTrafficCam

Sub-activities.
None

3.3.7 CPHK3 Activity 7 *Evaluation*

CPHK3 Enhanced bicycle parking – Activity 7 Evaluation
General description of the activity. The intervention will be evaluated by using the outcomes of monitoring process. The outcomes will be interpreted to assess whether goals have been reached. The collected data will also be used to provide input for KPIs and SUMI's which will be evaluated. Evaluation will be performed in relation to the goals of ELABORATOR as well as the goals of the Municipality. The evaluation will also be reported to local politicians.
Involvement of stakeholders. PLAT, UCPH, CPHK
Budget. None
Planned for. August – December 2025
Risk management. There is a risk that the evaluation will be delayed if the intervention and the monitoring is delayed
Sub-activities. None

3.4 Interventions evaluation table from Copenhagen

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention		
				CPHK1 Reduction of car parking in streets	CPHK2 Enhanced bicycle parking	CPHK3 Vehicle traffic flow adjustment
Mobility Planning	**1,1**	Expand intervention beyond the LL				
Mobility Planning	**1,2**	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups				
Mobility Planning	**1,3**	Addressing rebalance of public space to achieve desired modal split	**X**	**X**	**X**	
Connected & smart mobility	**2,1**	Reduction of private car use	**X**	**X**		**X**
Connected & smart mobility	**2,2**	Deployment of Zero Emission and shared mobility services				
Connected & smart mobility	**2,3**	75% user acceptance for zero emission services				
Connected & smart mobility	**2,4**	5% increase of desired modal split	**X**	**X**		
Safety	**3,1**	Solutions in unsafe locations score above 75% user satisfaction				
Safety	**3,2**	Addressing safety risk for cycling and e-scooters	**X**	**X**		**X**
Safety	**3,3**	Decrease of safety risks	**X**	**X**		**X**
Safety	**3,4**	Deploy cutting-edge safety prediction and evaluation tools				
Safety	**3,5**	Min 3 Star Rating				
Environment	**4,1**	Increase of Zero Emission modes	**X**	**X**		
Environment	**4,2**	Reduction of emissions	**X**	**X**		
Environment	**4,3**	Reduction in exposure to air and noise pollution	**X**	**X**		
Environment	**4,4**	Climate city contracts supported				
Environment	**4,5**	Addressing Zero Emission targets				
Environment	**4,6**	Increase of quality-adjusted life years	**X**	**X**		
Environment	**4,7**	Supporting circular economy principles and cross sectoral synergies				
Environment	**4,8**	Adapting to climate change				
Environment	**4,9**	Mitigate extreme heat				
Social	**5,1**	Toolkits adopted and deployed	**X**		**X**	**X**

Social	**5,2**	Focus group consultation	**X**	**X**
Social	**5,3**	Use of engagement apps		**X**

4 Helsinki, Finland

4.1 ELABORATOR Intervention FVH1 *Testing new solutions for collecting, visualizing and analysing accident-related information*

FVH1	Testing new solutions for collecting, visualizing and analysing accident-related information
General description of the intervention. Improving traffic safety in the city requires knowledge of the risks associated with traffic. In addition to accident analysis, the feeling of insecurity, near misses and risk situations that are not covered by accident statistics should be taken into account. In the Helsinki Living Lab, we are responding to this by testing new technology, new ways of data collection and visualization. The project pays special attention to accidents involving shared-use bicycles and electric scooters. The aim is to collect and analyse data on single accidents and other accidents that typically remain outside official accident statistics (e.g. with shared e-scooters) and identify the areas where large numbers of risks (unsafe acts, near misses, accidents) are present in Helsinki.	

4.1.1 FVH1 Activity 1 *Citizen survey on traffic safety*

FVH1 Testing new solutions for collecting, visualizing and analysing accident-related information – Activity 1 Citizen survey on traffic safety
General description of the activity. Extensive map-based traffic safety survey for citizens of Helsinki. The survey will be done in September 2024 and in close co-operation with the City of Helsinki. In this first phase of the intervention, perceptions of safety and opinions on dangerous places in traffic are collected from the citizens.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division - Traffic system planning
Budget. Maptionnaire license (VTT), translations into English and Swedish
Planned for Planning started already December 2023 – Data analysis ongoing until March 2025
Risk management. Maptionnaire as a survey tool is well established and widely used. Questionnaire planned in close cooperation with the city of Helsinki. An accessible version was also provided. GDPR-issues taken into account.
Sub-activities:

- Planning the map-based survey in co-operation (VTT, FVH, City of Helsinki); planning an accessible version of the survey.
- Clarifying GDPR-issues
- City of Helsinki promoting the survey via neighbourhoods and associations
- Conducting the survey (September 2024 - October 2024)
- Analysis started October 2024 -> ongoing until March 2025

4.1.2 FVH1 Activity 2 *Stakeholder meetings*

FVH1 Testing new solutions for collecting, visualizing and analysing accident-related information – Activity 2 Stakeholder meetings
General description of the activity. Electric scooters and related safety issues are a key aspect of the Helsinki pilot in the ELABORATOR project. During autumn 2024, discussions will be held with stakeholders on accidents specifically related to electric scooters and how to get better information on those accidents that remain outside official statistics. There have also been discussions before autumn 2024 and discussions will continue as we move from planning to concrete action.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division - Traffic system planning - E-scooter operators - City of Helsinki, Business Helsinki
Budget. Venue and catering costs in 2024. There might be stakeholder engagement costs in 2025.
Planned for September 2023 to November 2024. There have also been discussions before autumn 2024. This activity will continue in 2025 as we move from planning to concrete actions.
Risk management. The risk is the willingness of the relevant stakeholders to participate in the discussions and meetings.
Sub-activities: - Planning and organising meetings - Conclusions and next steps: o Conclusions of the discussions and how to take them into account when planning the next steps of the project.

4.1.3 FVH1 Activity 3 *Proof of concept*

FVH1 Testing new solutions for collecting, visualizing and analysing accident-related information – Activity 3 Proof of concept
General description of the activity. Aim is to test a new technological solution for collecting data, that typically remains outside official accident statistics. The solution will be purchased as an external service. The solution can be e.g. platform based or safety tech case study. The second phase of the intervention will build on the results of the first phase when a new technological solution is tested.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division - Traffic system planning - E-scooter operators - Piloting company
Budget. Purchase budget is around 15.000€ for Innovative AI tools / machine vision-based tools.
Planned for December 2024 - December 2025
Risk management. There are always some risks when testing new technologies (e.g. suitability, functionality). Another risk is the amount of budget allocated to the pilot in other words, whether it will attract companies to offer the piloting.

Sub-activities:
- Defining the needs more precisely:
  o This is done through discussions with various stakeholders and technology providers.
- Open call or request for tenders from tech companies:
  o The timeframe for this is early 2025.
- Selecting suitable solution
  o Selecting the best solution available to meet Helsinki's specific needs. Also listening carefully city's needs to make the piloting more efficient and impactful.
- Data collection
  o The data will be collected according to the objectives defined by the project.
- Analysing the collected data
  o The data will be analyzed according to the objectives defined by the project.

4.2 ELABORATOR Intervention FVH2 *Optimizing parking locations for shared e-scooters*

FVH2 Optimizing parking locations for shared e-scooters
General description of the intervention. The operation of e-scooters has undergone changes in recent years and will continue to do so. In 2022 there were around 18.000 e-scooters in Helsinki, and. In 2023, the city of Helsinki decided to restrict the parking of shared-use e-scooters in the city centre, and in 2024, the restricted area widened. The city has received positive feedback regarding the restricted area in the city centre.

4.2.1 FVH2 Activity 1 *Background study in eastern city centre*

FVH2 Optimizing parking locations for shared e-scooters – Activity 1 Background study in eastern city centre
General description of the activity. Background study on parking of e-scooters was already done through observation, collecting photos and interviews in summer season 2024. This study aimed to find out where the parking restrictions and dedicated parking areas should be applied in the Eastern downtown Helsinki (Kallio district). Data on incorrectly parked shared e-scooters was gathered in the research area by field observations. An e-scooter was categorized incorrectly parked if it was not on the side of the sidewalk or parallel to the direction of travel, on roadways or cycle paths, or parked anywhere outside dedicated parking spaces in pre-defined parking restriction areas close to the subway stations in the area. The incorrectly parked e-scooters were categorized in four categories 1) Sidewalk, 2) Cycle path, 3) Roadway, 4) Outside of designated parking spot in an area where parking is allowed only in them. Data was logged using Maptionnaire software, which has been more often used to gather map-based survey data from citizens.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division - Traffic system planning
Budget. Maptionnaire licence (VTT)
Planned for Planning started January 2024 – baseline data collection June 2024 – treatment data collection planned Summer-Fall –2025 – depending on the city's implementation schedules
Risk management. Field study was carried out by VTT's researchers during the daytime hours and the data was stored in the cloud all the time. The tablet used for the data collection was protected with a rain + fall resistant case.

Sub-activities:

- Site selection and needs of the city
- Planning and testing the tool (Maptionnaire) for this unconventional way of collecting the data (one person collecting the data several times when on the go)
- Observations
- Interviews and questionnaire
- Analysing the collected data

4.2.2 FVH2 Activity 2 *Stakeholder meetings*

FVH2 Optimizing parking locations for shared e-scooters – Activity 2 Stakeholder meetings

General description of the activity.

Electric scooters and related safety issues are a key aspect of the Helsinki pilot in the ELABORATOR project. During autumn 2024, discussions will be held with stakeholders related to parking of electric scooters. One participatory method utilized was to organize a participatory workshop for the e-scooter operators on their needs, expectations and new technological solutions. Five operators out of four, which are operating in the city centre area in the season 2024, participated the workshop in September 2024.

There were also other stakeholder meetings with organisations representing vulnerable road users (VRUs).

Involvement of stakeholders.

- City of Helsinki - Urban Environment Division - Traffic system planning
- E-scooter operators (Voi, Tier, Ryde, Bolt)
- City of Helsinki, Business Helsinki (+Mobility Lab Helsinki)
- Finnish Fed-er-a-tion of the Visually Impaired
- Helsinki and Uusimaa Visually Impaired As-so-ci-a-tion
- The Finnish Association of People with Physical Disabilities
- Association of Finnish Municipalities (E-scooter network)
- Finnish Road Safety Council

Budget.

Venue and catering costs in 2024. There might be stakeholder engagement costs in 2025

Planned for

September 2023 to November 2024.
There have also been discussions before autumn 2024. And discussions will continue as we move from planning to concrete action.

Risk management.

There is a risk that e-scooter operators don't want to have a workshop with us. The general discussion around e-scooters is right now heated.

Sub-activities.

- Planning and organising meetings
- Conclusions and next steps:

- Conclusions of the discussions and how to take them into account when planning the next steps of the project.

4.2.3 FVH2 Activity 3 *E-scooter parking: Testing new geofencing solution*

FVH2 Optimizing parking locations for shared e-scooters – Activity 3 Testing new geofencing solution
General description of the activity. Optimizing parking locations for shared e-scooters, testing new technologies. The solution will be purchased as an external service. This activity will be further defined during autumn 2024.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division – Traffic system planning - E-scooter operators - Piloting company
Budget. 20.000€ for purchase of dynamic geofencing solutions. The solution will be purchased as an external service.
Planned for Planning starting from October 2024. Implementation summer season 2025.
Risk management. There are always some risks when testing new technologies (e.g. suitability, functionality). Another risk is the amount of budget allocated to the pilot, in other words, weather it will attract companies to offer the piloting.

Sub-activities:
- Defining the needs more precisely
  - This is done through discussions with various stakeholders and technology providers
- Open call or request for tenders from tech companies
  - Timeframe for this is early 2024
- Selecting suitable solution
  - Selecting the best solution available to meet Helsinki's needs.
- Data collection
  - The data will be collected according to the objectives defined by the project
- Analysing the collected data
  - The data will be analysed according to the objectives defined by the project

4.3 ELABORATOR Intervention FVH3 *Improving safety at intersections*

FVH3 Improving safety at intersections
General description of the intervention. One of the priorities of the Helsinki Traffic Safety Program 2022-2026 is to improve the safety of junctions and intersections. The majority of road accidents involving pedestrians, cyclists or children, happen at junctions and intersections. Raide-Jokeri Light Rail line started to operate in October 2023. It was built between Itäkeskus in Helsinki and Keilaniemi in Espoo. The length of the line is 25 km. Raide-Jokeri runs through neighbourhoods which did not have a tramline before, and this has raised safety concerns among VRUs. Especially at light rail crossings in which the light rail has the right-of-way. New kinds of crossing points have appeared along the light rail line route. The crossing points differ from regular pedestrian crossings. Pedestrians and cyclists must always give way to approaching light rail vehicles.

4.3.1 FVH3 Activity 1 *Real-time warning system*

FVH3 Improving safety at intersections – Activity 1 Real-time warning system
General description of the activity. Testing of an intelligent active real-time warning system in one pedestrian crossing in Viikki district to warn VRUs of approaching light trams. Leasing of equipment for VRU tracking and conflict detection for one year. Discussions with the city to pilot the warning system started in early 2024. At the same time in Helsinki, Mobility Lab Helsinki was also discussing on pilot of improving safety along the new Raide-Jokeri light rail line. We have been looking for synergies between the two projects. Stakeholder discussions on the pilot have helped to fine-tune the pilot to better meet the needs of the VRU.
Involvement of stakeholders. - City of Helsinki - Urban Environment Division – Traffic system planning - Mobility Lab Helsinki - Metropolitan Area Transport Ltd - **Tampere Tramway Ltd & Lyyli Living Lab** - Piloting company
Budget. Leasing of equipment for VRU tracking and conflict detection (one year). Helsinki Living Lab has purchase money for leasing of equipment 18.000€. Investigating the possibility of synchronising the warning system with an application used by people with visual impairments. Most likely we co-operate with Mobility Lab Helsinki (and share the costs).

City of Helsinki will contribute to the costs of electricity and land construction works.

Planned for

Planning started December 2023. Final decision of the warning system October-November 2024. Implementation starting day is to be defined. Piloting for one year.

Risk management.

There are always some risks when testing new technologies (e.g. suitability, functionality). The safety of the experiment has been given a lot of attention and efforts have been made to improve it.

Sub-activities:

- Initial planning: Site selection (with the City of Helsinki) started December 2023
  - Identifying the needs (with the City of Helsinki, Metropolitan area Transport Ltd. and Mobility Lab Helsinki)
- Final decision and acceptance of the warning system
- Leasing equipment for the experiment

4.3.2 FVH3 Activity 2 *Data collection on selected pedestrian crossing point*

FVH3 Improving safety at intersections – Activity 2 Data collection on selected pedestrian crossing point

General description of the activity.

Data collection for the evaluation of intersections - Deploying innovative online applications, AI, Digital Twins using Lidar, 3D models for the evaluation of intersections. VTT will conduct conflict study, and this requires baseline camera-based data collection. In addition, state-of-the art software will be utilized to analyse the conflicts. FVH will conduct other data collection (e.g. Lidar). Helsinki Living Lab will utilize AI and digital twins to improve traffic safety. There will be camera-based observations at one accident-prone intersection to understand the interactions involving VRUs and collection and analysis of information on used safety margins, frequency of conflicts, severity etc.

Involvement of stakeholders.

- City of Helsinki
- Urban Environment Division
- Traffic planning division
- Metropolitan Area Transport Ltd
- **Tampere Tramway Ltd & Lyyli Living Lab**
- Piloting company

Budget.

VTT conflict study and camera-based data collection.

10.000€ for purchase of drone services, machine vision-based tools.

Planned for

Pre-data collection August 2023. Data collection will continue until the end of piloting of the warning system, May 2026

Risk management.

The challenge has been getting permission for the experiment. There are always some risks when testing new technologies (e.g. suitability, functionality).

Sub-activities:

- Camera-based data collection Fall 2024
- Other data collection using Telraam, Lidar, drone
- Analysing the collected baseline data Fall/Winter 2024-2025
- Collecting the treatment data – goal Fall 2025
- Analysing the treatment data and evaluating the impacts of the warning system Fall/Winter 2025-2026
- Recommendations and selection of potential extensions

4.3.3 FVH3 Activity 3 *Stakeholder meetings*

FVH3 Improving safety at intersections – Activity 3 Stakeholder meetings

General description of the activity.

Improving safety at intersections and crossing are a key aspect of the Helsinki pilot in the ELABORATOR project. During autumn 2024, discussions will be held with stakeholders related to our site of intervention in Viikki area. There have been various meetings with organisations representing vulnerable road users (VRUs). In autumn 2024 we found it particularly valuable to discuss this intervention with visual impaired persons. Our site of intervention is especially difficult for visual impaired persons.

Stakeholder involvement will later take place when the real-time warning system is up and running.

Involvement of stakeholders.

- City of Helsinki - Urban Environment Division - Traffic system planning
- Mobility Lab Helsinki
- Finnish Fed-er-a-tion of the Visually Impaired
- Helsinki and Uusimaa Visually Impaired As-so-ci-a-tion
- The Finnish Association of People with Physical Disabilities
- Metropolitan Area Transport Ltd & The Tampere Tramway system - Lyyli Living Lab
- Finnish Road Safety Council
- Residents of Viikki

Budget.

No additional cost (online meetings) in 2024. There might be stakeholder engagement costs in 2025.

Planned for
September 2023 to November 2024.
There have also been discussions before autumn 2024.
And there will be additional discussions when the warning system is up and running (2025)

Risk management.

There is a risk that relevant stakeholders don't want to have a workshop with us. Getting the pilot to work has been uncertain and not dependent on our project activities.

Sub-activities.

- Planning and organising meetings
- Conclusions and next steps:
    - Conclusions of the discussions and how to take them into account when planning the next steps of the project.

4.4 Interventions evaluation table from Helsinki

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention		
				FVH1 Testing new solutions for collecting, visualizing and analysing accident-related info.	FVH2 Optimizing parking locations for shared e-scooters	FVH3 Improving safety at intersections
Mobility Planning	1,1	Expand intervention beyond the LL				
Mobility Planning	1,2	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups				
Mobility Planning	1,3	Addressing rebalance of public space to achieve desired modal split				
Connected & smart mobility	2,1	Reduction of private car use	X		X	
Connected & smart mobility	2,2	Deployment of Zero Emission and shared mobility services				
Connected & smart mobility	2,3	75% user acceptance for zero emission services	X		X	
Connected & smart mobility	2,4	5% increase of desired modal split	X		X	
Safety	3,1	Solutions in unsafe locations score above 75% user satisfaction	X			X
Safety	3,2	Addressing safety risk for cycling and e-scooters	X	X	X	X
Safety	3,3	Decrease of safety risks	X	X	X	X
Safety	3,4	Deploy cutting-edge safety prediction and evaluation tools				
Safety	3,5	Min 3 Star Rating	X		X	
Environment	4,1	Increase of Zero Emission modes	X			X
Environment	4,2	Reduction of emissions	X			X
Environment	4,3	Reduction in exposure to air and noise pollution	X			X
Environment	4,4	Climate city contracts supported				
Environment	4,5	Addressing Zero Emission targets				X
Environment	4,6	Increase of quality-adjusted life years	X			X
Environment	4,7	Supporting circular economy principles and cross sectoral synergies				
Environment	4,8	Adapting to climate change				
Environment	4,9	Mitigate extreme heat				

Social	**5,1**	Toolkits adopted and deployed	**X**			**X**
Social	**5,2**	Focus group consultation	**X**		**X**	**X**
Social	**5,3**	Use of engagement apps				

5 Issy-les Moulineaux, France

5.1 ELABORATOR Intervention ISSY1 *Flowell*

ISSY1 Flowell

General description of the intervention.

The design of roads and streets plays a crucial role in road safety. A well-thought-out design helps to calm behaviors through a better understanding of the areas and their dangers for different users.

Flowell's luminous and interactive road markings utilize advanced technologies to serve all users, whether they are on foot, on a bicycle, or in a car. The safety of users is enhanced by controlling the illumination of the markings, which prompts a change in behavior. The intelligent lighting of the tiles targets and illuminates at a specific moment to enhance safety, calm behaviors, and increase vigilance. This ensures the right message is conveyed to the right users at the right time.

At night, Flowell achieves visibility performance far superior to the retro-reflection of traditional road markings. During the day, the luminous signal remains visible thanks to the contrast between the black tint of the tile and the white LED light.

To address the energy consumption challenges of cities, commercial sites, and industrial areas, Flowell tiles adapt their light intensity. A light sensor is installed to automatically adjust the intensity of the LEDs during the day (100% if it's very sunny, then at a reduced percentage if it's raining or foggy). At night, the solution uses less than 7% of its capacity to avoid dazzling users and disturbing wildlife outside urban areas.

Flowell was developed from research conducted by the teams at Colas, benefiting from the technological expertise of a major player in transport infrastructure. This solution incorporates tiles composed of LEDs encapsulated in a multi-layered substrate. Designed for road traffic and directly glued to the pavement, the coating is connected to the electrical grid and linked to a control system.

Flowell is the only device with large-format tiles capable of withstanding road traffic. This allows for the creation of all types of markings, from simple rectangular tiles to complex logos or merging arrows. These different symbols can be made with tiles that match the color of the pavement, making them invisible when turned off, which simplifies road understanding but enhances readability when the system is activated.

Flowell helps create a safer environment for road users and reduces the number of accidents on infrastructure. Through dynamic lighting of the markings, Flowell contributes to better sharing of public space and introduces new practices to design an environment that is pleasant for everyone, enhancing safety, considering vulnerable users, calming behaviors, optimizing space usage, controlling speed, and designing suitable infrastructure.

For example, Flowell can increase compliance with pedestrian priority by vehicles from 67% to 94%.

Use case for the Elaborator project:

- Location : Quai Roosevelt/Rue Rouget de Lisle Issy-les-Moulineaux

- Project design
- Cyclist --> highlight the direction of user travel, alerts users of an imminent cyclist crossing
- Vehicle --> guides drivers' trajectory and increases their vigilance

Issy1 Flowell – Activity 1 : Design and validation

General description of the activity.

The first activity concerning the Flowell intervention in Issy-les-Moulineaux is the design and validation phase.

During this first period, there is the need to find the right spot to experiment the Flowell technology and to develop a use case scenario that would lead to a validation from the public authorities and in particular the Direction de la Séurité Routière (DSR), the French national road agency.

The design phase will also see the city deploy a new camera sensor to have a better view on the selected intersection.

The design and validation phase ar**e** absolutely needed to have the intervention running during the project as without validation, the installation of The Flowell technology cannot be done.

Involvement of stakeholders.

- Colas
- Cerema
- DSR
- City of Issy-les-Moulineaux
- Technical Service of the City of Issy-les-Moulineaux
- Grand Paris Seine Ouest
- **Département des Hauts-de–Seine**

Budget.

4200€ are foreseen for the installation of this new video camera sensor.

Planned for
11/1024

Risk management.
The Flowell technology can only be installed in certain weather conditions leading to difficulties to install it in a winter period. There are 2 scenarios on the table: one for the installation in November if an agreement is given by the National Direction for Road Safety to make the works happen.

Sub-activities.
None

Issy1 Flowell – Activity 2: Behaviour pre-assesment

General description of the activity.

Colas, with the help of CEREMA and the city of Issy-les-Moulineaux will develop a behaviour pre-assessment that will take place before the intervention phase to address the population and cyclists needs and better know the environment of the intervention to provide an on-point intervention.

The city will support Colas by holding meetings with different stakeholders, including bike associations and citizens to collect their opinion and feedback about the development of the intervention.

Involvement of stakeholders.

- Colas
- Cerema
- City of Issy-les-Moulineaux
- Bike associations
- Citizens

Budget.

No specific budget.

Planned for
09/2024-12/2024

Risk management.
The risk is to have few citizens engaged in the process. For this, the city of Issy-les-Moulineaux has foreseen to help engaging the local stakeholders through its living lab methodology.

Sub-activities.
None

Issy1 Flowell – Activity 3 : Installation of the Flowell technology

General description of the activity.

Once the design and validation phase ar**e** finished and after the behaviour pre-assesment study, Colas will be in charge of the installation of the Flowell technology in Issy-les-Moulineaux. The works will be held in November and December 2024 to install the Flowell tehcnology following the information decided in the design phase.

Involvement of stakeholders.

- Colas
- City of Issy-les-Moulineaux
- Technical services of the city of Issy-les-Moulineaux
- Département des Hauts-de-Seine
- GPSO

Budget.

Colas will take in charge the costs for the installation of the Flowell technolgoy and the maintenance during the period of the project. After the project, a contract will be achieved between Issy-les-Moulineaux and Colas for the maintenance costs.

Planned for
11/2024-12/2024

Risk management.
The Flowell technology can only be installed in certain weather conditions leading to difficulties to install it in a winter period. There are actually 2 scenarios on the table: one for the installation in November if an agreement is given by the National Direction for Road Safety to make the works happen.

Sub-activities.
None

Issy1 Flowell – Activity 4 : Behaviour assesment and adaptation of the experimentation

General description of the activity.

The behaviour assesment will take place during the project period in order to collect the feedback of the cyclists, pedestrians and other road users towards the deployment of the innovation.

There will also be a collection of data through methods developed by Colas and the Cerema about late-braking and respect of the circulation signs on the place of intervention.

The collection of these feedback and data will help the city of Issy-les-Moulineaux and Colas to decide whether an adaptation of the experimentation is needed to better answer to the user's needs.

Involvement of stakeholders.

- Colas
- Cerema
- City of Issy-les-Moulineaux
- Bike associations
- Citizens

Budget.

No specific budget at the moment.

Planned for
01/2025-08/2026

Risk management.
The risk is to have few citizens engaged in the process. For this, the city of Issy-les-Moulineaux has foreseen to help engaging the local stakeholders through its living lab methodology.

Sub-activities.
None

Issy1 Flowell – Activity 5 : Dissemination

General description of the activity.

The intervention phase and the results obtained during the ELABORATOR project will be shared by presenting the project to the media at the end of the installation phase during a presentation event that should take place before Christmas. At the same time, it will be shared through social media (LinkedIn, Instagram, etc...) to engage a wider audience of professionals and citizens and so inform the inhabitants of Issy-les-Moulineaux

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- Bike associations
- Citizens
- Medias
- Colas

Budget.

Budget to be defined. Organization of an event and posts on social medias.

Planned for
12/2024-11/2026

Risk management.
The risk is the date of the event to present the intervention to the medias as it is dependent of the installation phase.

Sub-activities.
None

Issy1 Flowell – Activity 6 : Evaluation

General description of the activity.

Colas will lead the evaluation of the intervention through the mobilization of stakeholders and the collection of data after the launch of the intervention leading to a complete evaluation of the intervention to happen before the end of the project and see if a larger scalability is possible.

This evaluation will be shared with the local politicians to see if a follow-up intervention can be done in other parts of the city or in the intercommunity after the end of the Elaborator project.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- Bike associations
- Citizens
- Cerema
- Colas

Budget.

Budget to be defined. .

Planned for
03/2025-11/2026

Risk management.
There is a risk that the evaluation will be delayed if the intervention and the monitoring is delayed

Sub-activities.

None

5.2 ELABORATOR Intervention ISSY2 *Mobility observatory*

ISSY2	Mobility observatory

General description of the intervention.

The city of Issy-les-Moulineaux is undertaking policies to shift urban transportation towards greater sustainability and liveability. The municipality is aiming at climate neutrality in 2050 and defined annual objectives in its climate budget, first adopted in 2021 for concrete every year actions. It is also actively working on the Axes de vie project which goal is to restructure the city's major road and urban spaces. These actions are taking place in the context of rapidly changing mobility patterns, especially since the COVID-19 pandemic. Overall, the Île-de-France region saw its cyclist modal share increase from 1.6% in 2010 (enquête globale transport) to 8% in 2023 (enquête mobilité par GPS). Additionally, Issy-les-Moulineaux is part of the Low Emission Zone (LEZ) implemented by the Metropolis of the Greater Paris, which has already imposed restrictions on motorized modes, with further measures to come. Current trends in mobility are thus highly dynamic and dependent on a combination of new constraints, both temporary and long-lasting. However, traditional methodologies rely on surveys only conducted every ten years. Therefore, it is key to adopt more granular observation techniques to effectively monitor and respond to local events.

The mobility observatory in Issy-les-Moulineaux is an initiative aimed at measuring and visualizing urban mobility in the most comprehensive manner possible. By integrating various modes of transportation such as cycling, driving, and public transit, the objective is to better understand the structural axes of mobility, the coexistence of these different modes and their dynamics.

The primary goals of the observatory are to identify risky areas, inform decision-making through data analysis, improve urban planning, and monitor the long-term impact of decisions. The key themes are:

1. **Safety**: Identify accident-prone areas.
2. **Carbon Footprint**: Measure the impact of workers, visitors, and residents on the territory's carbon footprint.
3. **Inclusivity**: Ensure that mobility initiatives meet the needs of all users.

The development of the observatory is integrated into the cross-sectional work carried out with consortium members, including calculation methodologies and global measurement indicators towards sustainable, safer and inclusive mobility. Data collection and processing are essential, involving sensors to monitor risky behaviours and mobility habits, as well as analytical tools to interpret the data and generate precise reports.

Data will come from various sources based on opportunities: traffic sensors, cameras, open data on public transportation, surveys from transport operators, and connected vehicle data (Floating Car Data - FCD).

A key data source will be the Geco Air application, developed by IFPEN, which helps citizens reduce air pollution by adapting their mobility habits and prioritizing active modes of transportation.

The different data sources will be integrated into a tool developed by Urban Radar, which is modular, allowing for continuous and adjusted analysis.

Construction Steps of the Observatory:

1. Preliminary Study: Analysis of the city's needs and definition of the observatory's objectives.
2. Definition of necessary and existing data sources
3. Installation of Data Collection Systems: Setup of sensors, cameras, and other systems at the experimental site.
4. Data Collection: Gathering of local and global data, including surveys and open data.
5. Processing and Analysis: Use of analytical tools to interpret the collected data and produce detailed reports.
6. Integration and Visualization: Development by Urban Radar of a data visualization platform accessible to decision-makers.
7. Monitoring and Evaluation: Surveillance of the experiment's impact and adjustment of long-term mobility strategies.

Overall, the tool will be developed by IFPEN and Urban Radar, guided by Issy-les-Moulineaux's suggestions and needs. A first public meeting is scheduled for September 2024 to discuss this initiative with cycling associations and local companies, aiming to gather feedback and promote the project. Citizens from Issy-les-Moulineaux will also contribute by using the Geco Air app. Public and private companies will be approached for data sources. Based on these inputs, a preliminary version is expected to be released in March 2025. Subsequently, adaptive iterations will be conducted for continuous improvements. The intervention will also coordinate with the administrative intercommunal structure of Grand Paris Seine Ouest.

Risks: The deployment of the observatory entails several risks: compliance with data protection regulations (GDPR), reliability of sensors and data processing systems, difficulty to access relevant data, low adoption of Geco Air in the population, over-specific tool.

By providing accurate data, the mobility observatory will enable the city to make informed decisions, improve traffic safety and flow, and plan for sustainable and inclusive urban development.

Budget (€): 10k€ will be needed to ensure the purchase of the different sensors needed to develop the mobility observatory with one camera sensor about 4 000€. -September 2024-october 2024.

Issy2 Mobility observatory – Activity 1: Data benchmark

General description of the activity.
Mobility data sources are highly fragmented, divided across various public and private stakeholders as well as across different territorial scales (e.g., municipal, regional, national, ...). There is a pressing need for centralizing this information to better support political decision-making. In this context, mobility data hypervisors are emerging as platforms that centralize diverse data streams in one place. Each data source, however, has its unique limitations (e.g., temporal frequency, under-sampling) as well as advantages. The role of the observatory will be to go beyond simple cataloguing or the mere addition of sources. It will fuse data and add modelling layers to meet the growing demand for dynamic and local mobility monitoring in a context of

rapidly evolving patterns and habits. As such, a comprehensive data benchmark is crucial for identifying complementary insights across sources, enhancing the overall value of the information collected for the city of Issy-les-Moulineaux.

This data benchmark will be led by Urban Radar, IFPEN and the city of Issy-les-Moulineaux and will be conducted through the analysis of the data already collected on the open data portal of the city of Issy-les-Moulineaux and the data coming from other sources, in particular departmental, regional and state data.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- Département des Hauts-de-Seine
- Région Ile-de-France
- IFPEN
- Urban Radar

Budget.

No specific budget foreseen.

Planned for
06/2024-11/2024

Risk management.
There is a risk that the needed data can be hard to find. Some stakeholders might be reluctant to sharing their data. Other sources might suffer from quality issues. The technical part of the data needs an expertise that is present essentially in the IFPEN and Urban Radar teams.

Sub-activities.
None

Issy2 Mobility observatory – Activity 2: Needs definition

General description of the activity.
The mission of the observatory is to meet Issy-les-Moulineaux's concrete needs. As the city embarks on mobility projects such as Axe de vie and strives to achieve carbon neutrality by 2050, it will need to monitor a range of mobility indicators -some of which will be useful in the ELABORATOR evaluation process- to track projects progress. The observatory will meet these requirements by incorporating feedback from the city, thereby enhancing its operational capacity for field use. Additionally, the definition of needs will involve acknowledging potential data limitations highlighted in the previously mentioned data benchmark.

Another important actor in this activity will be the intercommunity GPSO to ensure coordination and to prevent duplication of efforts between different administrative levels. This is especially relevant as considerations for expanding the observatory may arise in the future.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- IFPEN
- Urban Radar

- GPSO

Budget.

No budget defined for this action.

Planned for
11/2024-03/2025

Risk management.
The risk that must be avoided is that the observatory becomes too abstract or disconnected from Issy-les-Moulineaux's concrete needs (hence the importance of this activity). The quality of the need's definition will also depend on the quality of the prior data benchmark.

Sub-activities.
None

Issy2 Mobility observatory – Activity 3: Data collection and integration

General description of the activity.
Once the needs of the city of Issy-les-Moulineaux in coordination with GPSO are defined, IFPEN and Urban Radar will be able to start the data collection and integration in a new platform that will be the base of the mobility observatory.

To achieve this, IFPEN and Urban Radar will be able to find new ways to collect the missing data from the city of Issy-les-Moulineaux but also other public and private actor that already work with the city or that will be contacted upon the development of the Elaborator project. Additionally, the Geco Air app, developed by IFPEN, will be promoted throughout Issy-les-Moulineaux, and qualitative studies will be conducted by the city to address specific questions.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- IFPEN
- Urban Radar
- GPSO

Budget.

10000€ are needed for this as 4200€ are foreseen for the installation of a new video sensor that will help to monitor the data collection, and the rest of the budget is needed for future sensors.

Planned for
12/2024-08/2025

Risk management.
The risk on this activity can be the willingness of external actors to the city of Issy-les-Moulineaux to share their data with the city and its core partners.

Sub-activities.
None

Issy2 Mobility observatory – Activity 4: Modelling and monitoring

General description of the activity.
To track the rapid changes in mobility patterns within Issy-les-Moulineaux, IFPEN and Urban Radar will design models that integrate diverse data sources to provide a comprehensive, coherent, unified, and dynamic picture of mobility in the city. This process will involve methods such as data analysis, AI, and simulation based on the data sources identified in the previous steps.

This approach will enable localized and temporal monitoring of key mobility indicators, supporting the city's mobility initiatives in three main areas: (1) observing and tracking evolving mobility patterns across the city, (2) informing political decision-making by notably identifying high-priority areas, and (3) evaluating public policies to assess the impacts of ongoing initiatives.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- IFPEN
- Urban Radar
- GPSO

Budget.

IFPEN and Urban radar will use a part of their budget foreseen in Elaborator for the development phase of the mobility observatory. The city of Issy-les-Moulineaux will support them in it.

Planned for
12/2024-11/2026

Risk management.
The main risk is to lose time by changing some minor details and not be able to have time to change strong issues in the experimentation.

Sub-activities.
None

Issy2 Mobility observatory – Activity 5: Evaluation

General description of the activity.
The evaluation will take place once the first model of the mobility observatory with sufficient collected data will come out of the project.

The evaluation will be very important as it will show if the modelling choices and the data collection ones were in a good direction that can be adapted during the development of the experimentation to let phases of improvement and of rethinking happen.

Urban Radar and IFPEN will seek the feedback of the city of Issy-les-Moulineaux by evaluating the adoption and the use of the observatory through questionnaires and workshops. These questionnaires and workshops will then allow IFPEN and Urban Radar to make some changes after the feedback collected.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- IFPEN
- Urban Radar
- GPSO

Budget.

IFPEN and Urban Radar will be in charge of the evaluation and will take on their budget to make it happen.

Planned for
06/2025-11/2026

Risk management.
The risk is to define a clear evaluation method that can identify quickly points of improvement.

Sub-activities.
None

Issy2 Mobility observatory – Activity 6: Communication

General description of the activity.

The intervention phase and the results obtained during the ELABORATOR project will be shared by presenting the project to the mayors and councillors of various cities including the ones present in the territory of GPSO. At the same time, it will be shared through social media (LinkedIn, Instagram, etc…) to engage a wider audience of professionals and elected people for them to develop it in their city.

The possibility to participate in various events like conferences, exhibitions, … will also be considered to present the project.

Involvement of stakeholders.

- City of Issy-les-Moulineaux
- IFPEN
- Urban Radar

Budget.

A part, not evaluated now, of the dissemination budget of the city of Issy-les-Moulineaux will be used in this dissemination part.

Planned for
06/2025-11/2026

Risk management.
There is a high need of identifying the good interlocutors to present to them the project and the first results.

Sub-activities.
None

5.3 Interventions evaluation table from Issy-les Moulineaux

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention	
				ISSY1 Flowell	ISSY 2 Mobility observatory
Mobility Planning	**1,1**	Expand intervention beyond the LL	**X**	**X**	**X**
Mobility Planning	**1,2**	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups	**X**		
Mobility Planning	**1,3**	Addressing rebalance of public space to achieve desired modal split			
Connected & smart mobility	**2,1**	Reduction of private car use	**X**		**X**
Connected & smart mobility	**2,2**	Deployment of Zero Emission and shared mobility services			
Connected & smart mobility	**2,3**	75% user acceptance for zero emission services			
Connected & smart mobility	**2,4**	5% increase of desired modal split	**X**		**X**
Safety	**3,1**	Solutions in unsafe locations score above 75% user satisfaction		**X**	
Safety	**3,2**	Addressing safety risk for cycling and e-scooters		**X**	**X**
Safety	**3,3**	Decrease of safety risks	**X**	**X**	
Safety	**3,4**	Deploy cutting-edge safety prediction and evaluation tools			
Safety	**3,5**	Min 3 Star Rating	**X**	**X**	
Environment	**4,1**	Increase of Zero Emission modes	**X**		**X**
Environment	**4,2**	Reduction of emissions	**X**		**X**
Environment	**4,3**	Reduction in exposure to air and noise pollution	**X**		**X**
Environment	**4,4**	Climate city contracts supported			
Environment	**4,5**	Addressing Zero Emission targets			
Environment	**4,6**	Increase of quality-adjusted life years	**X**		**X**
Environment	**4,7**	Supporting circular economy principles and cross sectoral synergies			
Environment	**4,8**	Adapting to climate change	**X**		**X**
Environment	**4,9**	Mitigate extreme heat			
Social	**5,1**	Toolkits adopted and deployed	**X**	**X**	**X**

Social	**5,2**	Focus group consultation	**X**	**X**	**X**
Social	**5,3**	Use of engagement apps			

6 Zaragoza, Spain

6.1 ELABORATOR Intervention AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón
General description of the intervention. This intervention aims to create safer and more accessible spaces around schools by implementing tactical urbanism strategies, such as traffic calming and pedestrian-focused infrastructure. The intervention includes phases of safety assessment by applying the Star Rating System and CycleRap methods, co-creation workshops with students based on the Gamification Toolkit, co-creation workshop with teachers and parents, and an emphasis on designing safe routes in collaboration with the STARS project, which encourages sustainable school travel. The anticipated outcome is improved safety around schools through enhanced crossings, repurpose of car space, and more pedestrian-friendly streetscapes.

6.1.1 AYZG1 Activity 1 *Preparation*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 1 Preparation
General description of the activity. This phase involves initial planning, identification of stakeholders, and setting up a clear framework for the intervention. The focus will be on defining the tactical urbanism approach, in line with the STARS project, and identifying key areas for intervention around schools on Calle Asín y Palacios and Calle Condes de Aragón.
Involvement of stakeholders. Environmental education team (Ayto de Zaragoza) – Consult
Budget. None
Planned for. Q1 2024
Risk management. Delays in stakeholder engagement due to summer holidays.

Sub-activities.

- Develop the intervention plan, including objectives and timelines.
- Identify and confirm stakeholders, including schools, parents, and local authorities.
- Coordinate with the environmental education team to align with the STARS project and assess school areas on Calle Asín y Palacios and Calle Condes de Aragón.
- Plan initial outreach to schools and community members.
- "SUPERBARRIO" development - 3D Romareda (T2.4)

6.1.2 AYZG1 Activity 2 *Baseline*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 2 Baseline
General description of the activity. Data collection on current traffic, pedestrian, and school mobility patterns around the area. Baseline measurements will be taken regarding vehicle speed, pedestrian, and safety risks near schools to identify areas of concern.
Involvement of stakeholders. Schools – Empower
Budget. Within ELABORATOR budget
Planned for. Q2 2024
Risk management. Delays in stakeholder engagement due to procedures and authorization timing.
Sub-activities: - Perform data collection on vehicle speed, pedestrian footfall, and safety risks near schools. Deploy Labkit for data gathering in school zones (e.g., César Augusto, Doctor Azúa). - Apply CYCLERAP (Cycling Risk Assessment Platform) for bike and pedestrian safety assessments at specific schools (e.g., Colegio Salvador, IES Miguel Catalán). - Gather baseline data using the Star Rating System on streets (e.g., Calle Asín y Palacios, Calle Condes de Aragón).

6.1.3 AYZG1 Activity 3 *Co-creation*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 3 Co-creation
General description of the activity. A series of workshops with stakeholders, including residents, school staff, and parents, to gather input on potential urban interventions. The aim is to identify co-designed solutions such as traffic calming, safer pedestrian crossings, and school access improvements.
Involvement of stakeholders. Schools – Empower Environmental education team (Ayto de Zaragoza) – Consult
Budget. 5.000 € subcontracting a participation expert and facilitator.
Planned for. Q3 2024
Risk management. Low participation in co-creation workshops. Diverging opinions leading to a lack of consensus on intervention solutions.
Sub-activities: - Host introductory sessions on ELABORATOR's aims and objectives for school communities and nearby residents. - Conduct interviews with stakeholders from schools to understand mobility concerns. - Organize workshops in schools for "Superbarrio" (superblock) model implementation, allowing stakeholders to co-design elements. - Facilitate design validation sessions with parent associations (AMPAs) and incorporate feedback.

6.1.4 AYZG1 Activity 4 *Feasibility and action plan*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 4 Co-creation
General description of the activity. Based on the co-created inputs, this phase focuses on assessing the feasibility of proposed urban changes. It includes developing an actionable plan for implementing tactical urbanism changes around the school zones.

Involvement of stakeholders.

None.

Budget.

None.

Planned for.

Q3 2024

Risk management.

Technical constraints related to infrastructure that hinder the feasibility of proposed interventions.

Unforeseen budgetary limitations affecting the scope of the action plan.

Sub-activities.

- Analyze feasibility of proposed traffic calming and pedestrian-focused interventions.
- Finalize the list of recommended improvements in collaboration with stakeholders, integrating feedback from previous sessions.
- Develop a risk management framework for anticipated challenges, such as delays in stakeholder engagement.
- Draft a preliminary action plan that includes timelines, roles, and responsibilities for all parties involved.

6.1.5 AYZG1 Activity 5 *Technical Definition*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 5 Technical Definition

General description of the activity.

Technical definition of urban interventions, such as detailed design for new pedestrian pathways, traffic calming measures, and reconfiguration of school access points. Technical drawings and specifications will be finalized in this phase.

Involvement of stakeholders.

TBD.

Budget.

TBD.

Planned for.

Q4 2024 – Q2 2025

Risk management.

TBD.

Sub-activities.

- Utilize pedestrian microsimulation to model proposed changes and assess traffic flow impacts.
- Outline technical requirements for the installation of safety features (e.g., speed bumps, signage).
- Prepare a Gantt chart that outlines key milestones, estimated costs, and potential risks associated with the implementation phase.

6.1.6 AYZG1 Activity 6 *Implementation*

AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón – Activity 6 Implementation
General description of the activity. Execution of urban design interventions, including installation of new pedestrian infrastructure, traffic control measures, and street furniture near schools. This phase will directly address safety and accessibility improvements. This is a transversal activity for all interventions that include Zaragoza's contribution to: • Initial Implementation • Implementation assessment • Final Implementation
Involvement of stakeholders. TBD.
Budget. TBD (Construction and material costs).
Planned for. Q2 2025 – Q2 2026
Risk management. Disruption of traffic and school access during construction. Budget overruns or construction delays due to unforeseen site conditions. Potential regulatory barriers related to the modification of public space.
Sub-activities. – Begin the tactical urbanism installation of pedestrian pathways, crosswalks, and street furniture. – Implement traffic control measures, such as signal upgrades, speed bumps, and signage adjustments. – Monitor and evaluate the effectiveness of each implemented change, including feedback collection from schools and residents. – Document lessons learned, and adjust final versions based on community feedback. – Contribute to the creation of detailed technical drawings and specifications for new infrastructure, such as pedestrian paths and school access points.

6.2 ELABORATOR Intervention AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)
General description of the intervention. As the refurbishment of the stadium will affect its surroundings, the goal is to co-define the final look of Calle Jerusalén and Calle Eduardo Ibarra into a pedestrian-priority area, enhancing walkability and reducing vehicular traffic in this central location. Initial planning involves mapping existing conditions, with data collection on pedestrian and traffic flows and air quality to create a baseline, and in-street survey based on GIS to identify safety and accessibility black spots. Through community workshops and consultations with residents, vulnerable road users, and local institutions, the project seeks to design a layout that balances pedestrian needs with urban functionality. The result will ideally be a safer, more accessible pedestrian zone.

6.2.1 AYZG2 Activity 1 *Preparation*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 1 Preparation
General description of the activity. Initial preparation for the pedestrianisation of Calle Jerusalén. This phase includes preliminary surveys, mapping of current conditions, and planning of the engagement of local authorities and stakeholders to discuss objectives.
Involvement of stakeholders. None
Budget. None
Planned for. Q4 2024
Risk management. Potential delays in stakeholder engagement or approvals from municipal bodies.
Sub-activities: - Develop a GIS-based survey to map current conditions on safety and accessibility. - Set up initial consultations with city authorities, residents, and local businesses to discuss pedestrianization goals. - Assemble baseline equipment and resources for data collection, including pedestrian and air quality sensors.

6.2.2 AYZG2 Activity 2 *Baseline*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 2 Baseline
General description of the activity. This phase involves gathering current data on traffic, pedestrian flows, and environmental factors. The data collected will serve as a benchmark to assess the impact of pedestrianizing these streets.
Involvement of stakeholders. None
Budget. None
Planned for. Q2 2024
Risk management. Equipment or sensor malfunction and inadequate sample sizes.
Sub-activities: - Conduct pedestrian and traffic flow assessments using Labkit in key areas of Calle Jerusalén and Eduardo Ibarra. - Monitor air quality levels, noise, and traffic volumes to establish baseline environmental conditions. - Apply the Star Rating System to evaluate safety for pedestrians and other vulnerable road users. - Use GIS mapping to document current pedestrian paths, key crossing points, and possible barriers.

6.2.3 AYZG2 Activity 3 *Co-creation*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 3 Co-creation
General description of the activity. Engage stakeholders, including residents, local businesses, pedestrian and cyclist associations, to collaboratively design the pedestrianization plan. In this phase, participatory workshops and in-person consultations will be held to design pedestrian-friendly solutions. Residents and stakeholders will contribute to shaping the final layout. The goal is to generate community-driven solutions for a safer, more walkable area.

Involvement of stakeholders.

- Romaredas promotors: Zaragoza, DGA, Real Zaragoza – Involve
- Neigbouhood associations – Involve
- Pedestrian and ciclist asociations – Collaborate
- UNIZAR – University students – Collaborate
- VRU associations – Empower
- Miguel Servet Hospital - Empower

Budget.

TBD.

Planned for.

Q3 2024

Risk management.

Resistance from local businesses to changes, lack of participation from key groups (e.g., vulnerable road users).

Sub-activities:

- Host information sessions with neighbourhood associations and key promoters (Zaragoza city authorities, local businesses).
- Organize workshops with vulnerable road users (VRUs) and cyclist groups to integrate safety features and amenities.
- Arrange focus groups with nearby healthcare facilities and nursing homes to ensure accessibility needs are prioritized.

6.2.4 AYZG2 Activity 4 *Feasibility and action plan*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 4 Co-creation

General description of the activity.
Based on co-creation outcomes, this phase assesses the feasibility of proposed changes, such as the layout, safety features, and amenities for pedestrians. A detailed action plan is created to implement and evaluate the pedestrianization.

Involvement of stakeholders.

None.

Budget.

None.

Planned for.

Q3 2024

Risk management.

Technical constraints related to infrastructure that hinder the feasibility of proposed interventions.

Unforeseen budgetary limitations affecting the scope of the action plan.

Sub-activities.

- Finalize a list of recommended infrastructure changes, prioritizing feedback from residents and VRUs.
- Develop a risk management framework to address potential obstacles, including stakeholder resistance and budgetary constraints.
- Outline an action plan with timelines, responsibilities, and roles of each participating group.

6.2.5 AYZG2 Activity 5 *Technical Definition*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 5 Technical Definition
General description of the activity. Technical definition of urban interventions, such as detailed design for new pedestrian pathways, traffic calming measures, and reconfiguration of school access points. Technical drawings and specifications will be finalized in this phase.
Involvement of stakeholders. TBD.
Budget. TBD.
Planned for. Q4 2024 – Q2 2025
Risk management. TBD.
Sub-activities. - Designate technical specifications for safety measures like crosswalks, pedestrian signal upgrades, and bollards to control vehicle access. - Plan locations for infrastructure improvements, such as benches, lighting, and wayfinding signs, using pedestrian microsimulation to optimize layout. - Establish a project timeline and Gantt chart that outlines construction milestones, costs, and risk mitigation strategies.

6.2.6 AYZG2 Activity 6 *Implementation*

AYZG2 Pedestrian areas around Romareda (Cll. Jerusalen and Cll Eduardo Ibarra)– Activity 6 Implementation
General description of the activity. Execute the planned pedestrianization of Calle Jerusalén and Eduardo Ibarra, focusing on transforming these areas into safe, accessible, and enjoyable pedestrian spaces. This intervention might fall into a temporal pedestrianization for evaluation purposes before contributing to the final drawings. This is a transversal activity for all interventions that include Zaragoza's contribution to: • Initial Implementation • Implementation assessment • Final Implementation
Involvement of stakeholders. TBD.
Budget. TBD (Construction and material costs).
Planned for. Q2 2025 – Q2 2026
Risk management. Disruption of traffic and school access during construction. Budget overruns or construction delays due to unforeseen site conditions. Potential regulatory barriers related to the modification of public space.
Sub-activities. - Install pedestrian infrastructure, including widened sidewalks, enhanced crosswalks, and safety barriers. - Implement environmental features such as greenery, improved lighting, and designated seating zones. - Deploy traffic control measures to restrict vehicle access and ensure pedestrian safety. - Conduct post-implementation monitoring, gathering feedback from pedestrians and local stakeholders to assess the effectiveness of the changes and make adjustments if needed. - Contribute to the development technical drawings for new pedestrian paths, landscaped areas, and seating arrangements along Calle Jerusalén and Eduardo Ibarra.

6.3 ELABORATOR Intervention AYZG3 Traffic management around Miguel Servet Hospital

AYZG4 Traffic management around Miguel Servet Hospital
General description of the intervention. This intervention addresses traffic congestion and safety concerns around the hospital by studying vehicle flows and parking usage near the emergency entrance. Building on a previous traffic study carried out by Zaragoza's Mobility Office, this project will analyze issues such as school drop-offs and taxi services that contribute to congestion. Workshops with hospital representatives, municipal departments, and neighborhood groups will help develop strategies to manage traffic flow, including traffic calming and potential rerouting to ensure smoother access to the hospital.

6.3.1 AYZG3 Activity 1 *Preparation*

AYZG3 Traffic management around Miguel Servet Hospital– Activity 1 Preparation
General description of the activity. Initial traffic studies and consultations to evaluate the existing traffic congestion issues around Miguel Servet Hospital. This phase involves coordinating with local stakeholders to map out key traffic bottlenecks and other mobility concerns. This intervention recovers the conclusions on a mobility assessment carried out in 2018 by Zaragoza's Mobility Office.
Involvement of stakeholders. Involved in the 2018 assessment: - Equipment and Infrastructures (Ayto de Zaragoza) - Urbanism (Ayto de Zaragoza) - Westworld (parking managers) - Taxi association - Miguel Servet Hospital
Budget. None
Planned for. Q1 2024
Risk management. None.
Sub-activities. - Define intervention objectives, focusing on easing congestion and improving emergency access to the hospital. - Identify and confirm key stakeholders (hospital staff, patients, nearby schools, emergency services). - Conduct initial outreach to inform stakeholders about the intervention's goals.

- Set up coordination with Zaragoza Urban Mobility Service and traffic control to access existing data and resources.

6.3.2 AYZG3 Activity 2 *Baseline*

AYZG3 Traffic management around Miguel Servet Hospital– Activity 2 Baseline
General description of the activity. Collection of data on traffic volume, parking utilization, and congestion points, especially around the emergency entrance. This data will help understand current issues related to school drop-offs and taxi services.
Involvement of stakeholders. Miguel Servet Hospital – Empower
Budget. None
Planned for. Q2 2024
Risk management. Delays in stakeholder engagement due to procedures and authorization timing.
Sub-activities. - Monitor traffic volumes, peak congestion times, and waiting times for emergency vehicles using the Traffic Control Center's data. - Identify key congestion hotspots and patterns, particularly around the emergency entrance. - Deploy sensors to record data on vehicle speeds, pedestrian footfall, and types of vehicles in the area.

6.3.3 AYZG3 Activity 3 *Co-creation*

AYZG3 Traffic management around Miguel Servet Hospital– Activity 3 Co-creation
General description of the activity. Engage stakeholders, including hospital staff, patients, local schools, and emergency services, to collaboratively develop strategies for managing traffic and improving access. Identify and co-design the most effective traffic management strategies. These might include introducing traffic calming measures and potential rerouting options.

Involvement of stakeholders.

- Miguel Servet Hospital
- Equipment and Infrastructures (Ayto de Zaragoza)
- Urbanism (Ayto de Zaragoza)
- Westworld (parking managers)
- Taxi association

Budget.

None.

Planned for.

Q3 2024

Risk management.

Insufficient participation from key stakeholders, or conflicting ideas on the best traffic management strategies.

Sub-activities.

- Organize workshops with hospital staff, emergency services and mobility operators to discuss traffic issues and gather insights on potential solutions.
- Conduct focus groups with residents and school representatives to address safety concerns for pedestrians and VRUs around the hospital.
- Gather feedback on proposed traffic reconfiguration options, including access-only zones, pedestrian paths, and designated school drop-off points.

6.3.4 AYZG3 Activity 4 *Feasibility and action plan*

AYZG3 Traffic management around Miguel Servet Hospital

General description of the activity.

Development of a detailed action plan based on the input gathered from stakeholders. This will include a feasibility study to assess the practicality of proposed urban changes and traffic management solutions. It includes evaluating proposed changes and preparing a detailed action plan for implementation.

Involvement of stakeholders.

None.

Budget.

None.

Planned for.

Q3 2024

Risk management.

Technical constraints related to infrastructure that hinder the feasibility of proposed interventions.

Unforeseen budgetary limitations affecting the scope of the action plan.
Sub-activities. - Analyze feasibility of proposed traffic flow adjustments, access restrictions, and emergency access routes. - Develop a prioritized list of actionable changes based on co-creation input, such as designated hospital drop-off areas and improved pedestrian crossings. - Conduct risk assessments to prepare for potential obstacles, such as disruptions to hospital operations or delays in construction. - Draft an action plan with specific roles, responsibilities, and timelines, coordinating closely with Zaragoza Urban Mobility Service and emergency responders.

6.3.5 AYZG3 Activity 5 *Technical Definition*

AYZG3 Traffic management around Miguel Servet Hospital– Activity 5 Technical Definition
General description of the activity. Technical definition of urban interventions, such as detailed design for new pedestrian pathways, traffic calming measures, and reconfiguration of school access points. Also, define the technical specifications for managing traffic flow, including detailed designs for road reconfigurations, emergency access routes, and signage improvements.
Involvement of stakeholders. TBD.
Budget. TBD.
Planned for. Q4 2024 – Q2 2025
Risk management. TBD.
Sub-activities. - Create technical specifications for redesigned traffic lanes, pedestrian crossings, and restricted access areas around the hospital. - Designate zones for emergency vehicle access, school drop-offs, and pedestrian crossings, using traffic microsimulation to evaluate effectiveness. - Outline requirements for safety improvements, including new signage, traffic lights, and curb adjustments. - Prepare a Gantt chart with milestones, budget estimates, and risk mitigation measures for construction and deployment.

6.3.6 AYZG3 Activity 6 *Implementation*

AYZG3 Traffic management around Miguel Servet Hospital– Activity 6 Implementation
General description of the activity. Execute the traffic management interventions around Miguel Servet Hospital, focusing on easing congestion, securing emergency access, and enhancing pedestrian safety. This is a transversal activity for all interventions that include Zaragoza's contribution to: • Initial Implementation • Implementation assessment • Final Implementation
Involvement of stakeholders. TBD.
Budget. TBD (Construction and material costs).
Planned for. Q2 2025 – Q2 2026
Risk management. Disruption of traffic and school access during construction. Budget overruns or construction delays due to unforeseen site conditions. Potential regulatory barriers related to the modification of public space.
Sub-activities. - Reconfigure traffic flow around key congestion points, implementing dedicated emergency access lanes and school drop-off zones. - Install pedestrian crossings, improved signage, and traffic calming measures to enhance safety and reduce congestion. - Deploy monitoring tools to assess the effectiveness of traffic changes and collect feedback from stakeholders on operational improvements. - Document lessons learned, and adjust interventions as necessary, ensuring that changes align with the needs of the hospital and surrounding community.

6.4 ELABORATOR Intervention AYZG4 Safe and shared parking for bicycles and VMP

AYZG4 Safe and shared parking for bicycles and VMP
General description of the intervention. This intervention introduces a dedicated station for shared and safe parking for bicycles, together with e-scooters sharing system, focusing on safe and accessible options in residential areas and/or working areas (e.g. Hospital). Data collection will assess current usage patterns and behaviour with hospital staff, school communities, and nearby residents involved in co-design sessions to tailor the station's features and location. Integrating safety monitoring and user feedback, the station aims to facilitate eco-friendly, low-impact transport solutions for vulnerable groups

6.4.1 AYZG4 Activity 1 *Preparation*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 1 Preparation
General description of the activity. This phase establishes the groundwork by identifying locations for safe parking, gathering stakeholder input, and assessing site requirements. The aim is to define the scope and objectives for creating accessible, secure parking facilities for bicycles and PMVs.
Involvement of stakeholders. None
Budget. None
Planned for. Q2 2024
Risk management. Delays due to indecision regarding the best location or lack of interest from local businesses or community members.
Sub-activities. - Define project goals, focusing on increasing accessibility and safety for bicycle and PMV users in high-traffic areas near schools, parks, and healthcare facilities. - Identify key stakeholders, including residents, local schools, PMV providers, and the Zaragoza Urban Mobility Service. - Plan preliminary outreach to engage local residents, cyclists, and PMV users to understand their needs and preferences for parking facilities.

6.4.2 AYZG4 Activity 2 *Baseline*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 2 Baseline
General description of the activity. Collect data on current bicycle and PMV parking needs, usage patterns, and security concerns. This baseline data will be essential for designing parking solutions that meet the needs of users while improving urban space utilization.
Involvement of stakeholders. None
Budget. None
Planned for. Q2 2024
Risk management. Potential data gaps due to malfunctioning sensors or non-participation in surveys by target users.
Sub-activities. - Survey current bicycle and PMV usage near schools, hospitals, and key points of interest to assess demand for parking. - Use GIS mapping to document existing parking facilities, identifying gaps in coverage and areas with high demand. - Analyze safety and security issues reported by users, including incidents of theft or vandalism. - Gather data on vehicle types, peak usage times, and preferred parking spots to guide the design and placement of new facilities. - Conduct site visits to evaluate potential locations for bike and PMV parking facilities, considering accessibility, security, and visibility.

6.4.3 AYZG4 Activity 3 *Co-creation*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 3 Co-creation
General description of the activity. Engage users, including cyclists, PMV owners, school communities, and local businesses, in co-creation workshops to collaboratively design parking solutions. The goal is to create safe, accessible, and user-friendly parking facilities based on real community needs.
Involvement of stakeholders. - Schools - Empower - Miguel Servet Hospital - Empower

Budget. None.
Planned for. Q3 2024
Risk management. Insufficient participation from key groups such as local businesses or vulnerable road users.
Sub-activities. - Host workshops with cyclists, PMV users, school representatives, and nearby residents to discuss ideal locations, design features, and security needs. - Develop prototypes or visual mock-ups of parking designs to facilitate feedback and adjustments before finalizing plans.

6.4.4 AYZG4 Activity 4 *Feasibility and action plan*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 4 Co-creation
General description of the activity. This phase assesses the feasibility of implementing the proposed parking solutions, considering factors such as space availability, cost, and technical requirements. An action plan is then developed to guide the installation and setup of parking facilities.
Involvement of stakeholders. None.
Budget. None.
Planned for. Q3 2024
Risk management. Technical constraints related to infrastructure that hinder the feasibility of proposed interventions. Unforeseen budgetary limitations affecting the scope of the action plan.
Sub-activities. - Conduct a feasibility analysis of the proposed parking sites to ensure they meet technical, spatial, and budgetary requirements. - Finalize parking design features, such as the number of spaces, security measures, and potential charging points for PMVs. - Develop a risk management plan to address potential issues, such as lack of user adoption or maintenance needs. - Draft a detailed action plan with timelines, responsibilities, and key milestones for the construction and installation phases

6.4.5 AYZG4 Activity 5 *Technical Definition*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 5 Technical Definition
General description of the activity. Define the technical specifications for the shared parking infrastructure, ensuring the facilities meet safety, accessibility, and user requirements. Detailed design plans will guide the installation and maintenance of these parking areas.
Involvement of stakeholders. TBD.
Budget. TBD.
Planned for. Q4 2024 – Q2 2025
Risk management. TBD.
Sub-activities. - Create technical drawings for parking structures, including layout, materials, and safety features like anti-theft locks and lighting. - Define specifications for additional features, such as charging stations, shelter structures, and accessibility adjustments for VRUs. - Establish technical guidelines for construction and installation, covering dimensions, materials, and security technologies. - Prepare a Gantt chart to manage implementation timelines, costs, and responsibilities for each phase of construction.

6.4.6 AYZG4 Activity 6 *Implementation*

AYZG4 Safe and shared parking for bicycles and VMP – Activity 6 Implementation
General description of the activity. Define the technical specifications for the shared parking infrastructure, ensuring the facilities meet safety, accessibility, and user requirements. Detailed design plans will guide the installation and maintenance of these parking areas. This is a transversal activity for all interventions that include Zaragoza's contribution to: • Initial Implementation • Implementation assessment • Final Implementation
Involvement of stakeholders. TBD.

Budget.

TBD (Construction and material costs).

Planned for.

Q2 2025 – Q2 2026

Risk management.

Disruption of traffic and school access during construction.

Budget overruns or construction delays due to unforeseen site conditions.

Potential regulatory barriers related to the modification of public space.

Sub-activities.

- Install designated parking facilities at identified locations, including racks, secure locks, lighting, and signage.
- Set up charging stations for electric bicycles and PMVs, following technical specifications to ensure safety and ease of use.
- Conduct a monitoring campaign post-installation to collect user feedback on facility accessibility, security, and convenience.
- Make adjustments as needed based on user feedback, ensuring the parking facilities are safe, accessible, and widely used by the community.

6.5 Interventions evaluation table from Zaragoza

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention			
				AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón	AYZG2 Pedestrianised Calle Jerusalen	AYZG3 Micromobility Shared & Safe Station	AYZG4 Traffic management around Miguel Servet Hospital
Mobility Planning	1,1	Expand intervention beyond the LL	X				X
Mobility Planning	1,2	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups	X	X			
Mobility Planning	1,3	Addressing rebalance of public space to achieve desired modal split					
Connected & smart mobility	2,1	Reduction of private car use	X	X			
Connected & smart mobility	2,2	Deployment of Zero Emission and shared mobility services					
Connected & smart mobility	2,3	75% user acceptance for zero emission services					
Connected & smart mobility	2,4	5% increase of desired modal split	X		X		
Safety	3,1	Solutions in unsafe locations score above 75% user satisfaction					
Safety	3,2	Addressing safety risk for cycling and e-scooters					
Safety	3,3	Decrease of safety risks	X	X			
Safety	3,4	Deploy cutting-edge safety prediction and evaluation tools					
Safety	3,5	Min 3 Star Rating	X	X			
Environment	4,1	Increase of Zero Emission modes	X		X		
Environment	4,2	Reduction of emissions	X	X			
Environment	4,3	Reduction in exposure to air and noise pollution	X		X		
Environment	4,4	Climate city contracts supported					
Environment	4,5	Addressing Zero Emission targets					
Environment	4,6	Increase of quality-adjusted life years	X		X		
Environment	4,7	Supporting circular economy principles and cross sectoral synergies					
Environment	4,8	Adapting to climate change	X	X			
Environment	4,9	Mitigate extreme heat					
Social	5,1	Toolkits adopted and deployed	X		X		X

Social	**5,2**	Focus group consultation	**X**	**X**	**X**	**X**
Social	**5,3**	Use of engagement apps				

7 Trikala, Greece

7.1 ELABORATOR Intervention ETRIK1 Installation of one smart crossing outside a school

ETRIK1 Installation of one smart crossing outside a school
General description of the intervention. The intervention includes the installation of 1 smart crossing outside a school for traffic control. This will promote road safety in the relevant district.

7.1.1 ETRIK1 Activity 1 *Initial planning*

ETRIK1 Installation of one smart crossing outside a school – Activity 1 Initial Planning
General description of the activity. This activity is divided in 4 sub-activities: 1.1 Initial planning (M10-13): etrikala with the collaboration of the Municipality (Department of urban planning) investigated potential sites and finalized the area that the intervention will take place) 1.2 Initial planning (Baseline) (M14-16): etrikala with the collaboration of the Municipality and the local police department will identify the needs of the specific area in order fro the intervention to take place. 1.3 Stakeholders consultation (M16): etrikala will organize consultation focus groups and open discussions with the stakeholders involved (Municipality, local police department and the school personnel near the crossing) in order to engage them at an early stage and identify the real needs. 1.4 Final decision (M16): etrikala will finalize the area and characteristics of the intervention
Involvement of stakeholders. Municipality of Trikala (Department of urban planning) Local Police School Personnel Cycling Association of Trikala
Budget. Besides man-hours, no other specific budget is required.
Planned for April to September 2024

Risk management.

Currently (Sept. 2024), the activity status rides on schedule. There is no risk detected for this phase.

7.1.2 ETRIK1 Activity 2 *Procurement*

ETRIK1 Installation of one smart crossing outside a school – Activity 2 Procurement
General description of the activity. This activity is divided in 2 sub activities: 2.1 Select equipment (M17-18): etrikala with the support of ICCS will select the right equipment for the smart crossing 2.2 Procure from suppliers (M19-21): etrikala will procure the equipment
Involvement of stakeholders. e-Trikala ICCS
Budget. Besides man-hours, there is dedicated budget in the project that stands at approx. 20k€ for the installation of "smart crossings" infrastructure for traffic control metrics.
Planned for October 2024 – February 2025
Risk management. Currently, the activity status rides on schedule. Costly and over-bureaucratic tendering procedures could be a risk on this activity but based on previous experience, it can be tackled sufficiently.

7.1.3 ETRIK1 Activity 3 *Installation and testing*

ETRIK1 Installation of one smart crossing outside a school – Activity 3 Installation and testing
General description of the activity. This activity is divided in 2 sub activities: 3.1 Set timetable (safe hours) (M22-25): etrikala along with ICCS and the Municipality will set the operation timetable and safe hours. 3.2 Site works (M22-25): etrikala will collaborate with the Municipality and hire a subcontractor to conduct measurements, identify existing options, install sensors and paint the crossing.

Involvement of stakeholders.

e-Trikala

ICCS

Subcontractor

Budget.

Besides man-hours, there is dedicated budget in the project that stands at approx. 20k€ for the installation of "smart crossings" infrastructure for traffic control metrics.

Planned for

March 2025– June 2025

Risk management.

No risks detected for this activity.

7.1.4 ETRIK1 Activity 4 *Focus group*

ETRIK1 Installation of one smart crossing outside a school – Activity 4 Focus group

General description of the activity.

As a LL city, Trikala will also conduct a number of participatory workshops and engage vulnerable groups in order to:

- Identify potential obstacles that prohibit women from choosing more active personal mobility options
- Evaluate the sense of safety for women cyclists
- Examine new mobility ways to support caregivers and elderly

4.1 Select and launch focus groups (M22-25): URBANA will support etrikala to conduct the participatory activities and engage groups of vulnerable citizens (local support organizations and women associations)

Involvement of stakeholders.

e-Trikala

Citizens

Women

URBANA

Budget.

Besides man-hours, no additional budget is required.

Planned for March 2025– June 2025
Risk management. Low engagement in the focus groups is a risk detected for this activity. This will be solved through clear communication and recruitment process with the various groups.

7.1.5 ETRIK1 Activity 5 *Living Lab Demonstration and Evaluation*

ETRIK1 Installation of one smart crossing outside a school – Activity 5 Living Lab Demonstration and Evaluation
General description of the activity. This activity will have 4 sub activities: 5.1 Start of demonstration/Intervention (M26-35): etrikala will launch the intervention. Stakeholders to be involved is the Municipality and the school. 5.2 Data collection (M26-35): etrikala will gather all the relevant data, according to the evaluation plan and the recommended KPIs. 5.3 Raise awareness and future recommendations (M33-42): etrikala will conduct a number of dissemination activities to raise awareness 5.4 Evaluation (M33-42): during this timeframe ICCS and etrikala will conduct the evaluation of the intervention, according to the evaluation plan and the identified KPIs.
Involvement of stakeholders. e-Trikala ICCS citizens Municipality of Trikala
Budget. Besides man-hours, no additional budget is required.
Planned for July 2025– November 2026
Risk management. No risks detected for this activity.

7.2 ELABORATOR Intervention ETRIK2 Installation of 3 park and ride stations at the periphery of the city

ETRIK2 Installation of 3 park and ride stations at the periphery of the city
General description of the intervention. Installation of 3 park and ride stations at the periphery of the city along with: 30 new bikes in total for all park and ride stations, 60 Sensors and software for monitoring bike stations/fleet (including biometrics) and installation of software for monitoring bicycle stations.

7.2.1 ETRIK2 Activity 1 *Initial planning*

ETRIK2 Installation of 3 park and ride stations at the periphery of the city – Activity 1 Initial Planning
General description of the activity. This activity is divided in 4 sub activities: Initial planning (M11-13): etrikala collaborated with the Municipality (Department of urban planning) to identify and select the 3 parkings that are located at strategic points of the city. Initial planning (M14-16): etrikala along with ICCS and the Municipality will identify the needs of the intervention to be installed Stakeholders consultation (M16): etrikala will organize consultation focus groups and open discussions with the stakeholders involved (Astiki Anaptyxi, Municipality, ICCS, cyclists) in order to engage them at an early stage and identify the real needs. Final decision (M16): etrikala will finalize the areas and characteristics of the intervention
Involvement of stakeholders. e-Trikala Cycling Association of Trikala Astiki Anaptiksi Municipality of Trikala
Budget. Besides man-hours, no additional budget is required.
Planned for April 2025– November 2024
Risk management. No risks detected for this activity.

7.2.2 ETRIK2 Activity 2 *Procurement*

ETRIK2 Installation of 3 park and ride stations at the periphery of the city – Activity 2 Procurement
General description of the activity. This activity is divided in 2 sub activities: 2.1 Select equipment (M17-18): etrikala with the support of ICCS will select the right equipment for the park and ride stations 2.2 Procure from suppliers (M19-21): etrikala will procure the equipment
Involvement of stakeholders. e-Trikala ICCS
Budget. Besides man-hours, no additional budget is required.
Planned for October 2024 – February 2025
Risk management. No risks detected for this activity.

ETRIK2 Activity 3 Installation and testing

ETRIK2 Installation of 3 park and ride stations at the periphery of the city – Activity 3 Installation and testing
General description of the activity. This activity is divided in 2 sub activities: 3.1 Set timetable (safe hours) (M22-25): etrikala along with ICCS and the Municipality will set the operation timetable and safe hours. 3.2 Site works (M22-25): etrikala will collaborate with the Municipality and hire a subcontractor to conduct measurements, identify existing options, install sensors
Involvement of stakeholders. e-Trikala ICCS

Subcontractor

Municipailty of Trikala

Budget.

Besides man-hours, additional budget is required for the installment of the equipment which will be finalised in the next period.

Planned for

March– June 2025

Risk management.

No risks detected for this activity.

7.2.3 ETRIK2 Activity 4 Focus group

ETRIK2 Installation of 3 park and ride stations at the periphery of the city – Activity 4 Focus group

General description of the activity.

As a LL city, Trikala will also conduct a number of participatory workshops and engage vulnerable groups in order to

- Identify potential obstacles that prohibit women from choosing more active personal mobility options
- Evaluate the sense of safety for women cyclists
- Examine new mobility ways to support caregivers and elderly

4.1 Select and launch focus groups (M22-25): URBANA will support etrikala to conduct the participatory activities and engage groups of vulnerable citizens (local support organizations, cyclists, rural citizens and women associations).

Involvement of stakeholders.

e-Trikala

URBANA

Citizens

Rural citizens

women

Budget.

Besides man-hours, no additional budget is required.

Planned for
March – June 2025

Risk management.

No risks detected for this activity.

7.2.4 ETRIK2 Activity 5 Living Lab Demonstration and Evaluation

ETRIK2 Installation of 3 park and ride stations at the periphery of the city – Activity 5 Living Lab Demonstration and Evaluation

General description of the activity.

This activity will have 4 sub activities:

5.1 Start of demonstration/Intervention (M26-35): etrikala will launch the intervention. Stakeholders to be involved is the Municipality.

5.2 Data collection (M26-35): etrikala with the support of ICCS will gather all the relevant data, according to the evaluation plan and the recommended KPIs.

5.3 Raise awareness and future recommendations (M33-42): etrikala will conduct a number of dissemination activities to raise awareness. Stakeholders involved are rural citizens, cyclists, women, city visitors and people living in suburban areas.

5.4 Evaluation (M33-42): during this timeframe ICCS and etrikala will conduct the evaluation of the intervention, according to the evaluation plan and the identified KPIs.

Involvement of stakeholders.

e-Trikala

ICCS

Municipality of Trikala

Rural citizens, city visitors, people living in suburban areas

Budget.

Besides man-hours, no additional budget is required.

Planned for
June 2025 – November 2026

Risk management.

No risks detected for this activity.

7.3 ELABORATOR Intervention ETRIK3 Redesigning cycling lanes and fostering data collection

ETRIK3 Redesigning cycling lanes and fostering data collection
General description of the intervention. Redesigning cycling lanes and fostering data collection: - 60 Sensors to record the use of bikes and software for monitoring the bikes' fleet (including biometrics) - Implementation of 10 sensors to record illegal parking illegal parking on bike lanes and provide real time information to the municipal police. - The data collected from the sensors will provide information to re-design safer bike lanes

7.3.1 ETRIK3 Activity 1 *Initial planning*

ETRIK3 Redesigning cycling lanes and fostering data collection – Activity 1 Initial Planning
General description of the activity. This activity is divided in 4 sub activities: Initial planning (M11-13): etrikala collaborated with the Municipality (Department of urban planning) to identify and select the cycling lanes that are located at strategic points of the city. Initial planning (M14-16): etrikala along with ICCS and the Municipality will identify the needs of the intervention to be installed Stakeholders' consultation (M16): etrikala will organize consultation focus groups and open discussions with the stakeholders involved (Municipality, ICCS, cyclists, municipal police, Astiki Anaptyxi) in order to engage them at an early stage and identify the real needs. Final decision (M16): etrikala will finalize the areas and characteristics of the intervention
Involvement of stakeholders. e-Trikala Astiki Anaptiksi Municipality of Trikala Citizens ICCS Cyclists

municipal police
Budget. Besides man-hours, no additional budget is required.
Planned for April - September 2024
Risk management. No risks detected for this activity.

7.3.2 ETRIK3 Activity 2 *Procurement*

ETRIK3 Redesigning cycling lanes and fostering data collection – Activity 2 Procurement
General description of the activity. This activity is divided in 2 sub activities: 2.1 Select equipment (M17-18): etrikala with the support of ICCS will select the right equipment/ sensors for data collection 2.2 Procure from suppliers (M19-21): etrikala will procure the equipment
Involvement of stakeholders. e-Trikala ICCS
Budget. Besides man-hours, no additional budget is required.
Planned for October 2024– February 2025
Risk management. No risks detected for this activity.

7.3.3 ETRIK3 Activity 3 *Installation and testing*

ETRIK3 Redesigning cycling lanes and fostering data collection – Activity 3 Installation and testing
General description of the activity. This activity is divided in 2 sub activities: 3.1 Set timetable (safe hours) (M22-25): etrikala along with ICCS and the Municipality will set the operation timetable and safe hours. 3.2 Site works (M22-25): etrikala will collaborate with the Municipality and hire a subcontractor to conduct measurements, identify existing options, install sensors
Involvement of stakeholders. e-Trikala Municipality of Trikala Subcontractor ICCS
Budget. Besides man-hours, no additional budget is required.
Planned for March – June 2025
Risk management. No risks detected for this activity.

7.3.4 ETRIK3 Activity 4 Focus group

ETRIK3 Redesigning cycling lanes and fostering data collection – Activity 4 Focus group
General description of the activity. As a LL city, Trikala will also conduct a number of participatory workshops and engage vulnerable groups in order to - Identify potential obstacles that prohibit women from choosing more active personal mobility options - Evaluate the sense of safety for women cyclists - Examine new mobility ways to support caregivers and elderly

4.1 Select and launch focus groups (M26-31): URBANA will support etrikala to conduct the participatory activities and engage groups of vulnerable citizens (local support organizations, cyclists, elderly, women).

Involvement of stakeholders.

e-Trikala

URBANA

Citizens

Rural citizens

women

Budget.

Besides man-hours, some additional budget is required for the installation of the equipment and the redeisign of the cycling lanes.

Planned for
March – JuneJuly 2025 – October 2026

Risk management.

No risks detected for this activity.

7.3.5 ETRIK3 Activity 5 Living Lab Demonstration and Evaluation

ETRIK3 Redesigning cycling lanes and fostering data collection – Activity 5 Living Lab Demonstration and Evaluation

General description of the activity.

This activity will have 4 sub activities:

5.1 Start of demonstration/Intervention (M26-35): etrikala will launch the intervention. Stakeholders to be involved is the Municipality and cyclists

5.2 Data collection (M26-35): etrikala with the support of ICCS will gather all the relevant data, according to the evaluation plan and the recommended KPIs.

5.3 Raise awareness and future recommendations (M33-42): etrikala will conduct a number of dissemination activities to raise awareness. Stakeholders involved are cyclists, women, elderly, municipal police.

5.4 Evaluation (M33-42): during this timeframe ICCS and etrikala will conduct the evaluation of the intervention, according to the evaluation plan and the identified KPIs.

Involvement of stakeholders. e-Trikala URBANA Citizens Cyclists Municipal Police Elderly
Budget. Besides man-hours, no additional budget is required.
Planned for April – September 2024
Risk management. No risks detected for this activity.

7.4 ELABORATOR Intervention ETRIK4 Expanding SMARTA online application

ETRIK4 Expanding SMARTA online application
General description of the intervention. Integration of the existing SMARTA2 app to allow residents to access the city as well as to evaluate the experience/sense of comfort of the citizens and vulnerable to exclusion groups.

7.4.1 ETRIK4 Activity 1 *Initial planning*

ETRIK4 Expanding SMARTA online application – Activity 1 Initial Planning
General description of the activity. This activity is divided in 4 sub activities: Initial planning (M11-13): etrikala collaborated with the Municipality (Department of urban planning) to select the app to be integrated. Initial planning (M14-16): etrikala along with ICCS and the Municipality will identify the needs of the intervention

Stakeholders consultation (M16): etrikala will organize consultation focus groups and open discussions with the stakeholders involved (Municipality, ICCS, municipal police, Astiki Anaptyxi, bus company) in order to engage them at an early stage and identify the real needs. Final decision (M16): etrikala will finalize the characteristics of the intervention
Involvement of stakeholders. **e-Trikala** **ICCS** **Astiki Anaptiksi** **Municipality** of Trikala **citizens** **ICCS** **bus company**
Budget. Besides man-hours, no additional budget is required.
Planned for April – September 2024
Risk management. No risks detected for this activity.

7.4.2 ETRIK4 Activity 2 *Procurement*

ETRIK4 Expanding SMARTA online application – Activity 2 Procurement
General description of the activity. This activity is divided in 2 sub activities: 2.1 Select new functionalities (M17-18): etrikala with the support of ICCS will select the new functionalities of the app 2.2 Procure from suppliers (M19-21): etrikala will procure new functionalities
Involvement of stakeholders. e-Trikala ICCS

Budget. Besides man-hours, no additional budget is required.
Planned for October 2024 – February 2025
Risk management. No risks detected for this activity.

7.4.3 ETRIK4 Activity 3 *Design and testing*

ETRIK4 Expanding SMARTA online application – Activity 3 Design and testing
General description of the activity. This activity is divided in 2 sub activities: 3.1 Finalize the new application (M22-25): etrikala along with ICCS and the Municipality will finalize the new features of the application. 3.2 Integration of evaluation functionality within the SMARTA online application (M22-25): etrikala will collaborate with the Municipality and the subcontractor to integrate and evaluate the functionalities of the app.
Involvement of stakeholders. e-Trikala ICCS Subcontractor Municipality of Trikala
Budget. Besides man-hours, some additional budget is required for the development of the SMARTA online application.
Planned for March – June 2025
Risk management. A long planning process had been previously carried out by e-Trikala ensuring that the intervention will be implemented without considerable risks.

7.4.4 ETRIK4 Activity 4 Living Lab Demonstration and Evaluation

ETRIK4 Expanding SMARTA online application – Activity 4 Living Lab Demonstration and Evaluation
General description of the activity. This activity will have 4 sub activities: 4.1 Start of demonstration/Intervention (M26-35): etrikala will launch the intervention. Stakeholders to be involved is the Municipality. 4.2 Data collection (M26-35): etrikala with the support of ICCS will gather all the relevant data, according to the evaluation plan and the recommended KPIs. 4.3 Raise awareness and future recommendations (M33-42): etrikala will conduct a number of dissemination activities to raise awareness. Stakeholders involved are rural citizens, city visitors, people living in suburban areas 4.4 Evaluation (M33-42): during this timeframe ICCS and etrikala will conduct the evaluation of the intervention, according to the evaluation plan and the identified KPIs.
Involvement of stakeholders. e-Trikala ICCS Rural citizens city visitors people living in suburban areas
Budget. Besides man-hours, no additional budget is required.
Planned for July 2025 – November 2026
Risk management. No risks detected for this activity.

7.5 Interventions evaluation table from Trikala

Dimension	Outcome indicator	Indicator name	Information from Evaluation Plan D2.2	Relevant KPIs per city intervention			
				ETRIK1 Installation of one smart crossing outside a school	ETRIK2 Installation of 3 park and ride stations at the periphery of the city	ETRIK3 Redesigning cycling lanes and fostering data collection	ETRIK4 Expanding SMARTA online application
Mobility Planning	1,1	Expand intervention beyond the LL					
Mobility Planning	1,2	Addressing re-assessment of roads and public space quality scored over 75% in acceptance responding to needs of diverse groups					
Mobility Planning	1,3	Addressing rebalance of public space to achieve desired modal split					
Connected & smart mobility	2,1	Reduction of private car use	X		X	X	X
Connected & smart mobility	2,2	Deployment of Zero Emission and shared mobility services					
Connected & smart mobility	2,3	75% user acceptance for zero emission services					
Connected & smart mobility	2,4	5% increase of desired modal split	X		X	X	X
Safety	3,1	Solutions in unsafe locations score above 75% user satisfaction					
Safety	3,2	Addressing safety risk for cycling and e-scooters	X			X	
Safety	3,3	Decrease of safety risks	X	X		X	
Safety	3,4	Deploy cutting-edge safety prediction and evaluation tools					
Safety	3,5	Min 3 Star Rating					
Environment	4,1	Increase of Zero Emission modes	X	X	X	X	X
Environment	4,2	Reduction of emissions	X		X	X	X
Environment	4,3	Reduction in exposure to air and noise pollution	X		X	X	X
Environment	4,4	Climate city contracts supported					
Environment	4,5	Addressing Zero Emission targets					
Environment	4,6	Increase of quality-adjusted life years	X		X	X	X
Environment	4,7	Supporting circular economy principles and cross sectoral synergies					
Environment	4,8	Adapting to climate change	X				
Environment	4,9	Mitigate extreme heat					
Social	5,1	Toolkits adopted and deployed					
Social	5,2	Focus group consultation	X	X	X	X	
Social	5,3	Use of engagement apps					

ANNEX 1– ROADMAPS

Milan, Italy

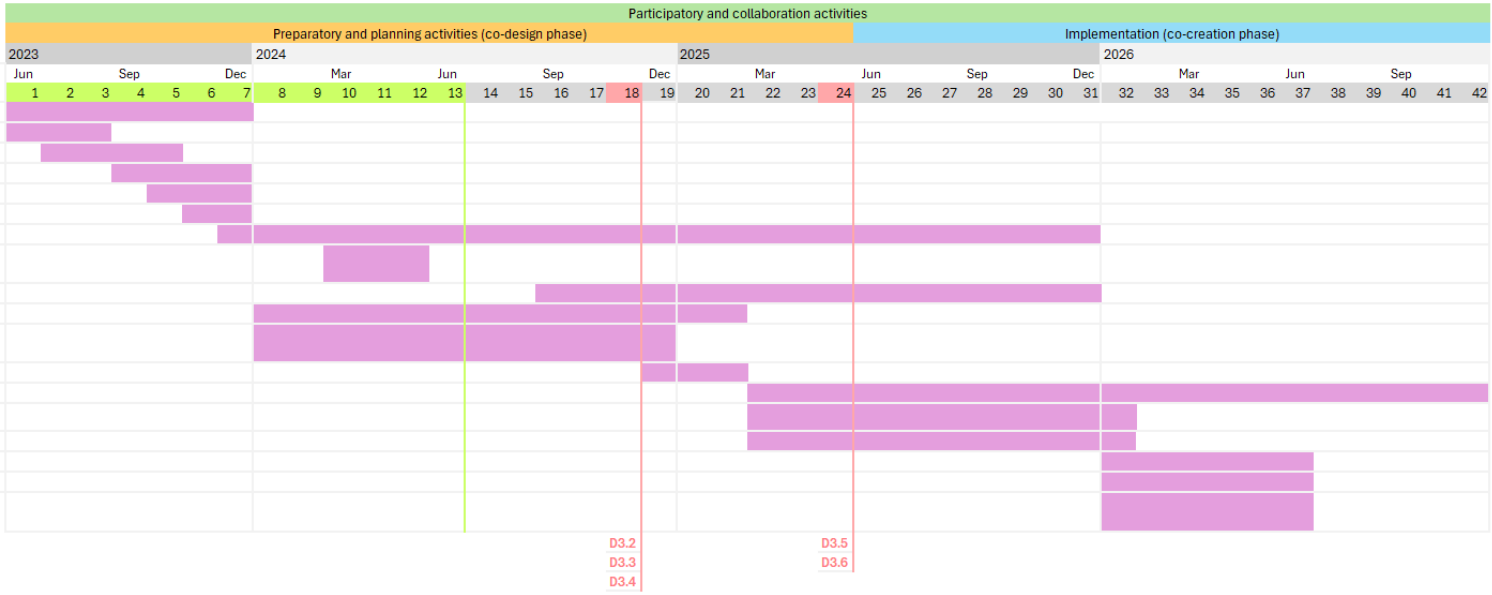
- Intervention CDM1 Olympic Routes
- Intervention CDM2 Tactical intervention
- Intervention CDM3 Decision Support System

Roadmap

City name: Milan

Selected intervention title: Olympic itineraries

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Preliminary phase			0
1.1 Project Expectations	CDM	MM	0
1.2 Definition of Project Objectives	CDM	MM	0
1.3 Workplan	AMAT	MM	0
1.4 Preliminary study	AMAT	MM	0
1.5 Preliminary design	AMAT	MM	0
2. Stakeholder engagement	CDM		0
2.1 Consultation with Disable Consult	CDM	Disability Consult	0
2.2 Consultation with further NGOs	CDM	NGOs	0
3. Executive design & procurement	MM		0
3.1 Executive design of selected intersections	MM	ATM, Municipality 7	0
3.2 Contracting for implementation	MM	_	0
4. Implementation	MM		0
4.1Selected intersection implementation	MM	_	0
4.2 Sensors installation	A2A	_	0
4.3 Sensors testing	A2A	_	0
5. Monitoring	AMAT	_	0
5.1 Pedestrian crossing test after sensors installation	CDM - AMAT	Citizens, users	0

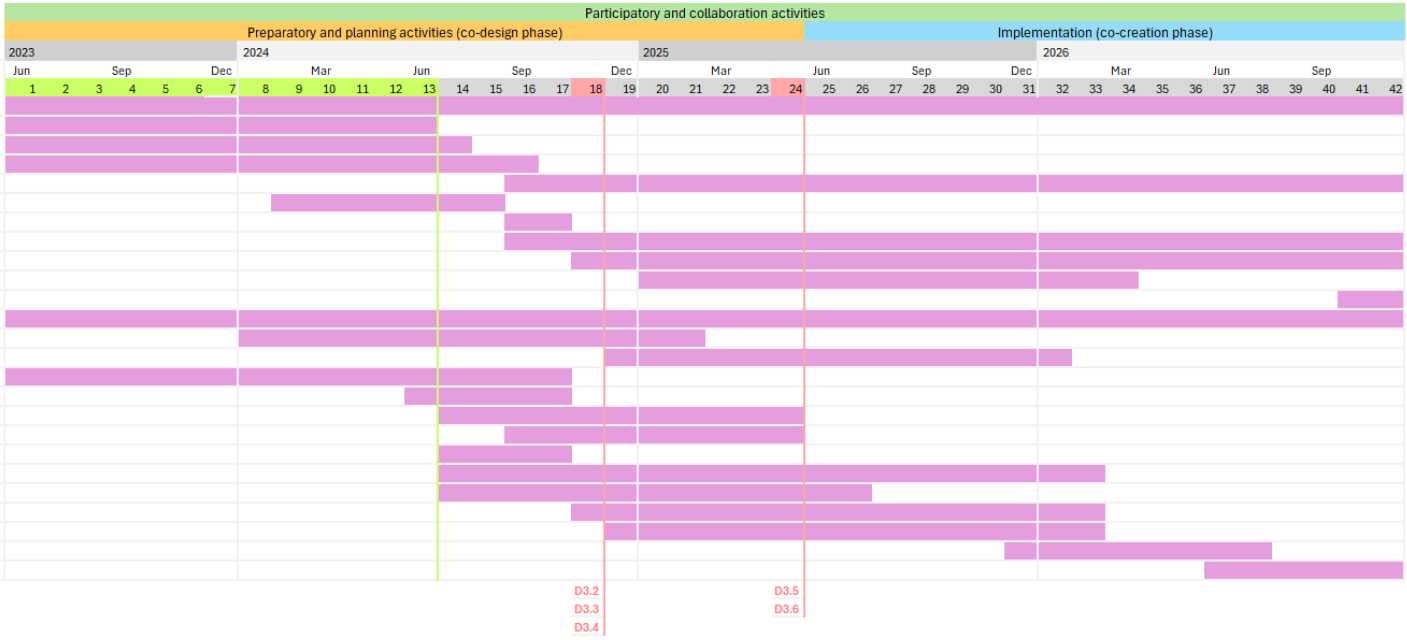


Roadmap

City name: Milan

Selected intervention title: Tactical intervention

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. West Axis Vision Concept			0
1.1 Project Expectations	CDM	-	0
1.2 Definition of Project Objectives	CDM	-	0
1.3 Workplan - Concept Design	CDM - SBA	-	0
1.4 Communication Activities	CDM - THINGS	Municipality 7, Local Associations, Lo	0
1.5 Preliminary study	SBA	-	0
1.6 Review of preliminary studies	SBA - AMAT	-	0
1.7 Involvement of Districts	CDM	Municipality 7	0
1.8 Involvement of stakeholders	CDM	Local Associations, Local business an	0
1.9 Final Design - Concept	SBA	-	0
1.10 Governance Model and Stakeholders partn	CDM	Municipality 7	0
2. Tactical Urbanism Experiment			0
2.1 Dataset Definition	AMAT	-	0
2.2 Ex-ante Monitoring	AMAT	-	0
2.3 Definition of Project Objectives	CDM	-	0
2.4 Preliminary study	SBA	-	0
2.5 Feasibility verifications	CDM - AMAT	Municipality 7	0
2.6 Cost Estimantion and financing strategy	CDM	-	0
2.7 Workplan - Tactical intervention	CDM	-	0
2.8 Communication activities	CDM - THINGS	Municipality 7, Local Associations, Lo	0
2.9 Preliminary Design	AMAT - SBA	Municipality 7	0
2.10 Involvement of citizens and other stakehol	CDM	Municipality 7, Local Associations, Lo	0
2.11 Co-design with stakeholders	CDM - SBA	Municipality 7, Local Associations, Lo	0
2.12 Implementation	ALL	Municipality 7, Local Associations, Lo	0
2.13 Ex-post Monitoring	AMAT	-	0

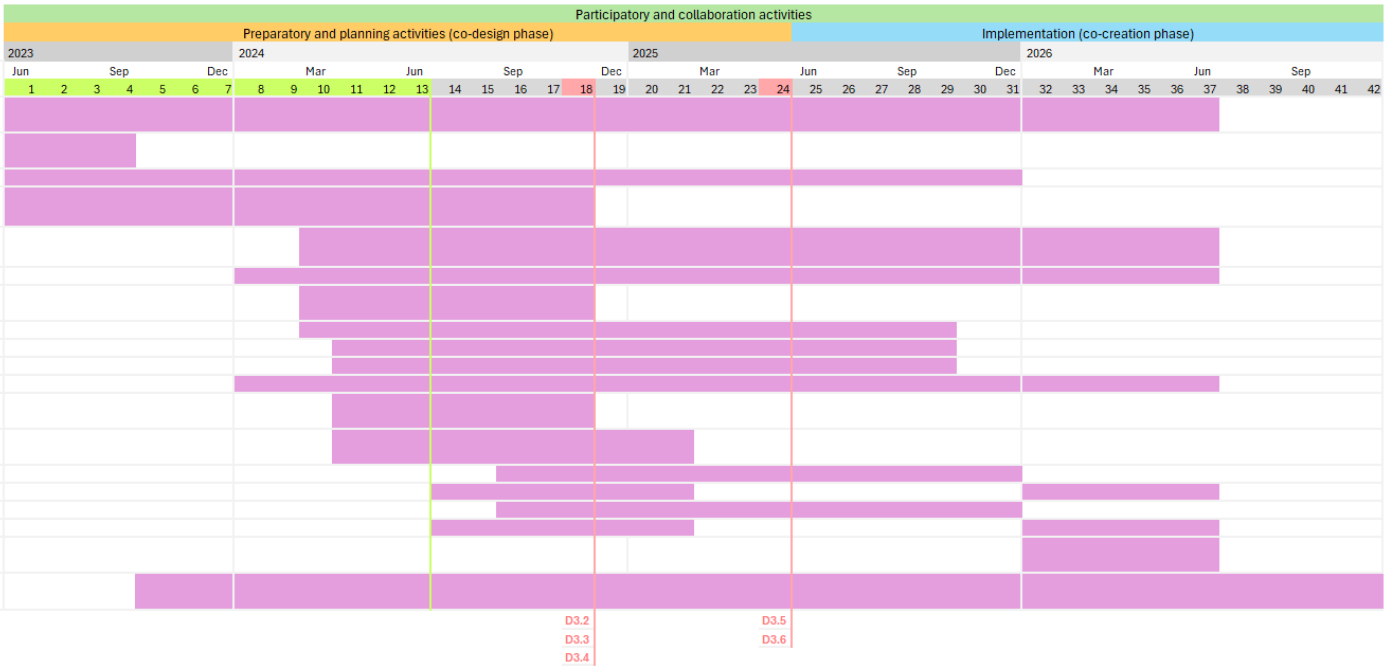


Roadmap

City name: Milan

Selected intervention title: Decision Support System (DSS)

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1 Mapping of public space and mobility infrastructure	AMAT		0
1.1 Validation on mapping scheme on OpenStreetMap	AMAT	Wikimedia Italia	0
1.2 Running of mappings			
1.3 Mapathon: stakeholders involvement in mappings	AMAT	Wikimedia Italia, TomTom, META, Polimappers	0
1.4 Creation and use of data cleaning procedures on mappings	AMAT		0
2 DSS development	AMAT		0
2.1 Construction of the pedestrian graph	AMAT		0
2.2 Construction of the O/D graph	AMAT		0
2.3 Accessible graph construction	AMAT		0
2.4 Calibration of routing systems	AMAT	NGOs people with disabilities	0
2.5 DSS evolutionary maintenance	AMAT		0
3 Use cases study and identification of KPIs	AMAT	NGOs people with disabilities	0
4 Use of DSS for pre and post intervention accessibility evaluation	AMAT		0
4.1 Olympic routes analysis (pre)	AMAT		0
4.2 Olympic routes analysis (post)	AMAT		0
4.3 West Axis analysis (pre)	AMAT		0
4.4 West Axis analysis (post)	AMAT		0
5 Preliminary study of a web interface for DSS	AMAT	Municipality of Milan departments	0
6 Dissemination of mapping methods and results	AMAT	Wikimedia Italia, TomTom, META, PoliMI, Università degli Studi Bicocca	0



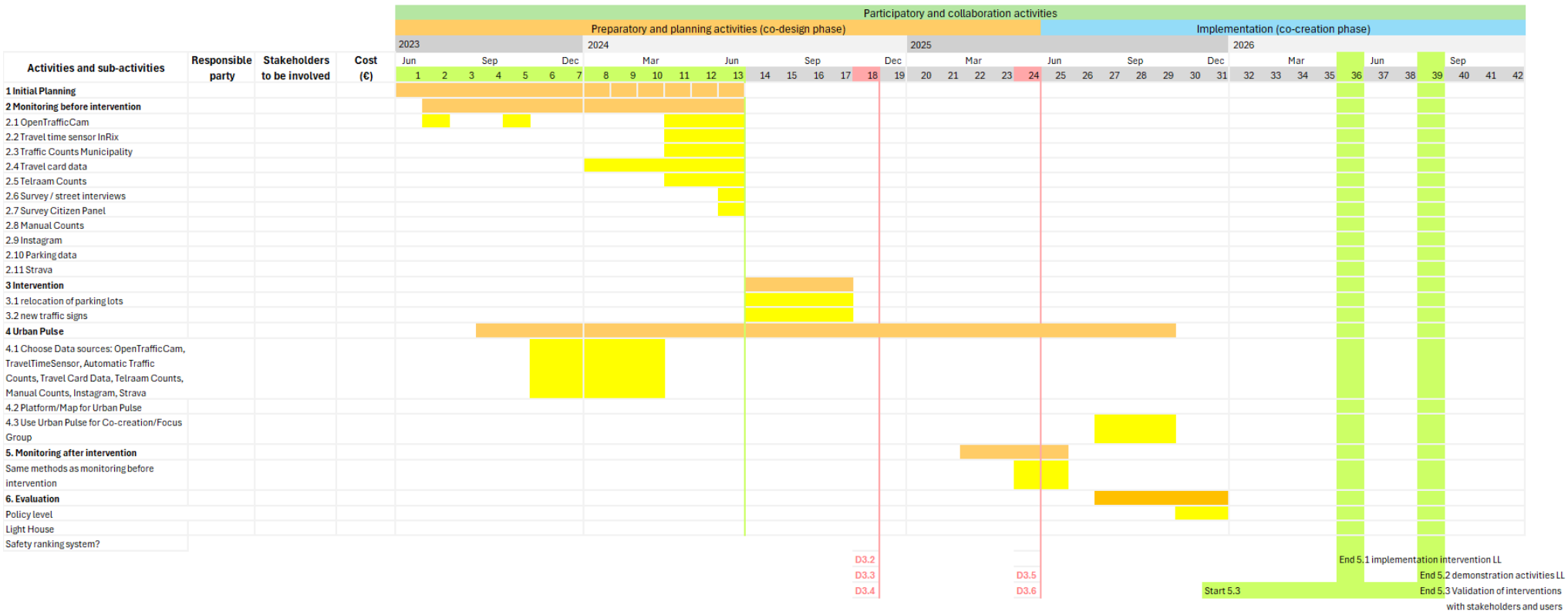
Copenhagen, Denmark

- Intervention CPHK1 Relocation of car parking in streets
- Intervention CPHK2 Enhanced bicycle parking
- Intervention CPHK3 Vehicle traffic flow adjustment

Roadmap

City name: Copenhagen

Selected intervention title: Relocation of Car Parking in Streets

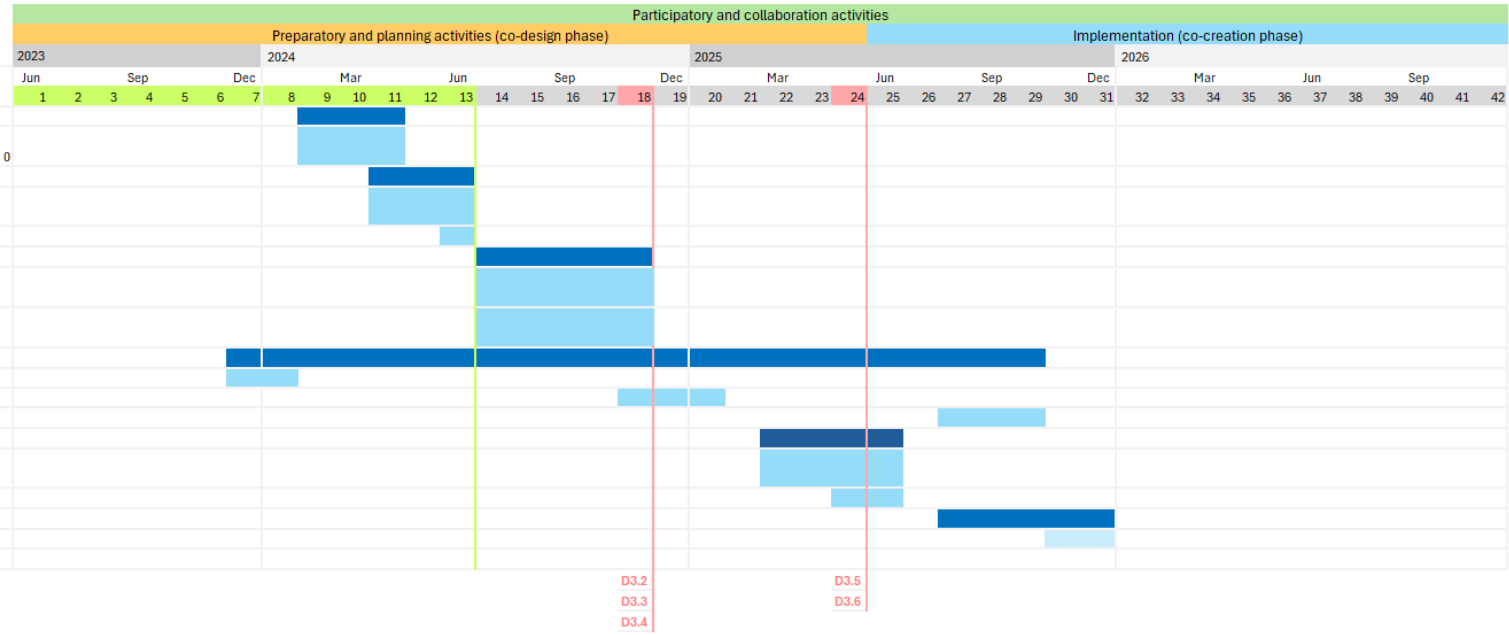


Roadmap

City name: Copenhagen

Selected intervention title: Enhanced Bicycle Parking

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1 Initial Planning			
1.1 Choose sub-area/square (Vandkunsten)	CPHK/UCPH		0
2 Monitoring before intervention			
2.1 Pictures/counts/observation of bike parking at Vandkunsten			
2.2. OpenTrafficCam			
3 Intervention			
3.1 Removal of bikeracks in the area, incl. Vandkunsten	CPHK (Cykel&Vej)		
3.2 New Bikeracks being implemented in streets	CPHK (Cykel&Vej)		
4. Focus groups	UCPH		
4.1 Select focus group			
4.2 Contact focus group			
4.3 Conduct focus group			
5. Monitoring after intervention			
5.1 Pictures/counts/Observation of bike parking at Vandkunsten			
5.2. OpenTrafficCam			
6. Evaluation			
Policy level			
LightHouse			

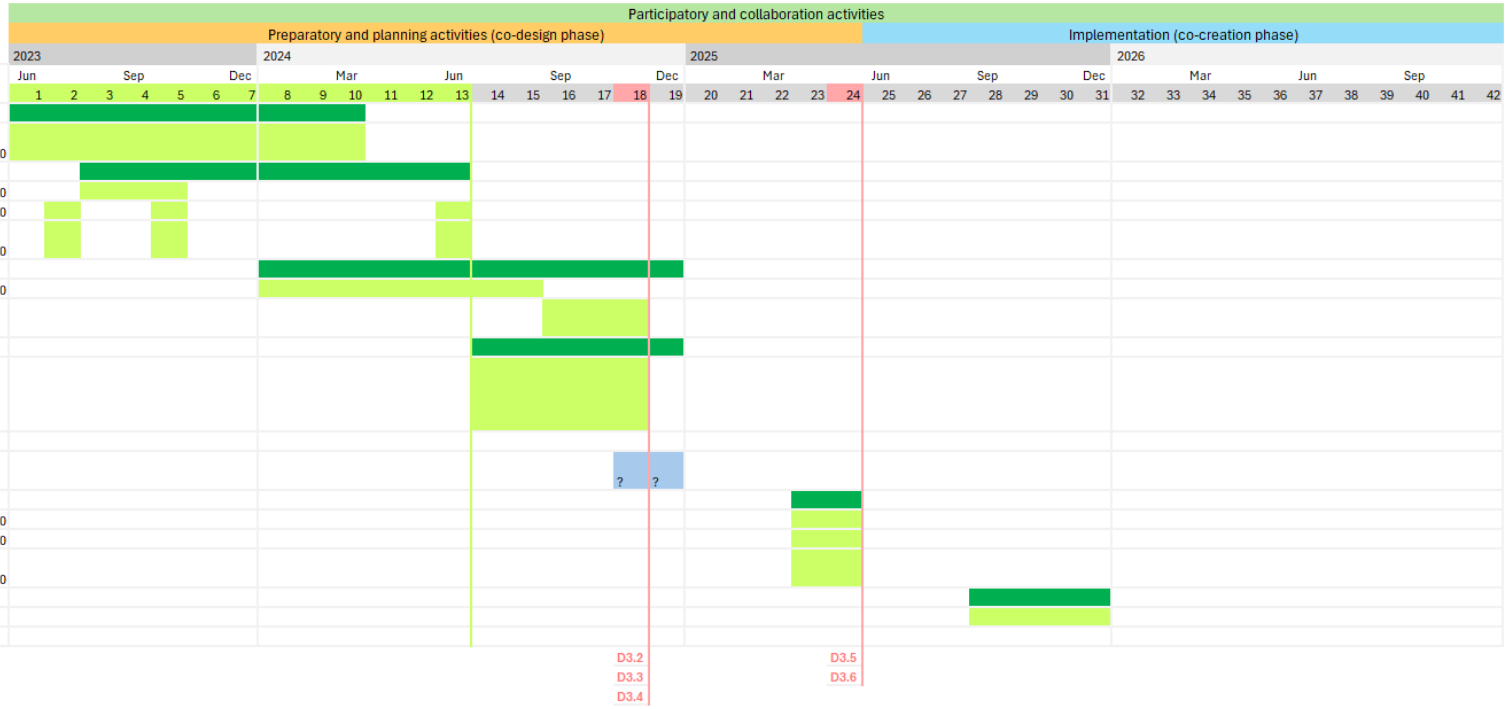


Roadmap

City name: Copenhagen

Selected intervention title: Vehicle traffic flow adjustment

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1 Initial Planning			
1.1 Choose intersections for Near Encounter and traffic flow	UCPH/CPHK/ PLAT		0
2 Monitoring before intervention			
2.1 observation	UCPH		0
2.2 Survey conduction on site	UCPH		0
2.3 OpenTrafficCam footage	PLAT/UCPH/ CPHK		5000
3 APP for Near Encounters			
3.1 development	PLAT		10000
3.2 Test	PLAT/UCPH	CPHK, Testpersons	?
4 Intervention			
4.1 one-way street (Rådhusstræde) and reverse direction Gåsegade	CPHK		Not in ELABORATOR Budget
5 Use of App			
5.1 co-creation tool ? group of responders?	UCPH		?
6 Monitoring after intervention			
6.1 observation	UCPH		0
6.2 Survey conduction on site	UCPH		0
6.3 OpenTrafficCam footage	PLAT/UCPH/ CPHK		5000
7 Evaluation			
Evaluation of near encounters	CPH LL		?
5 star safety ranking system?	IRAP/CPH LL		?



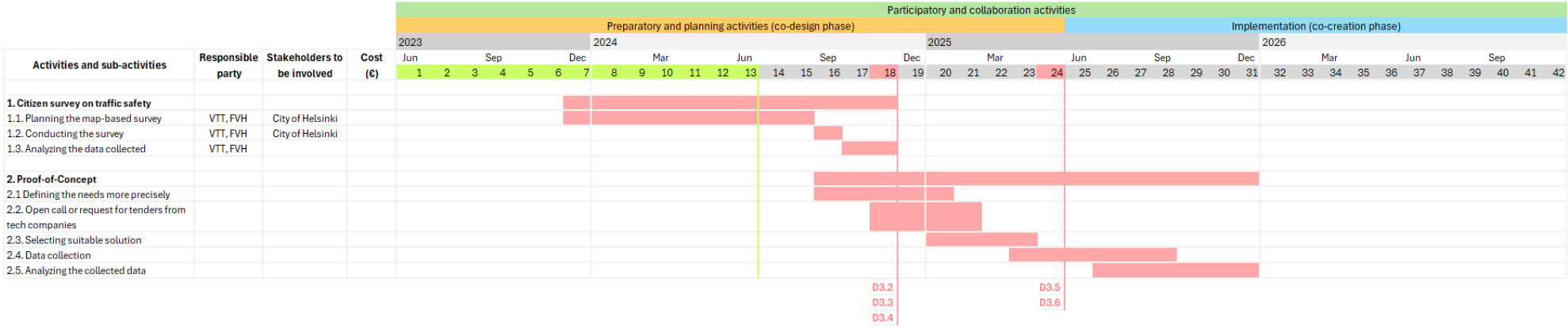
Helsinki, Finland

- Intervention FVH1 Testing new solutions for collecting, visualizing and analysing accident-related information
- Intervention FVH2 Optimizing parking locations for shared e-scooters
- Intervention FVH3 Improving safety at intersections

Roadmap

City name: Helsinki

Selected intervention title: Testing new solutions for collecting, visualizing and analyzing accident-related information

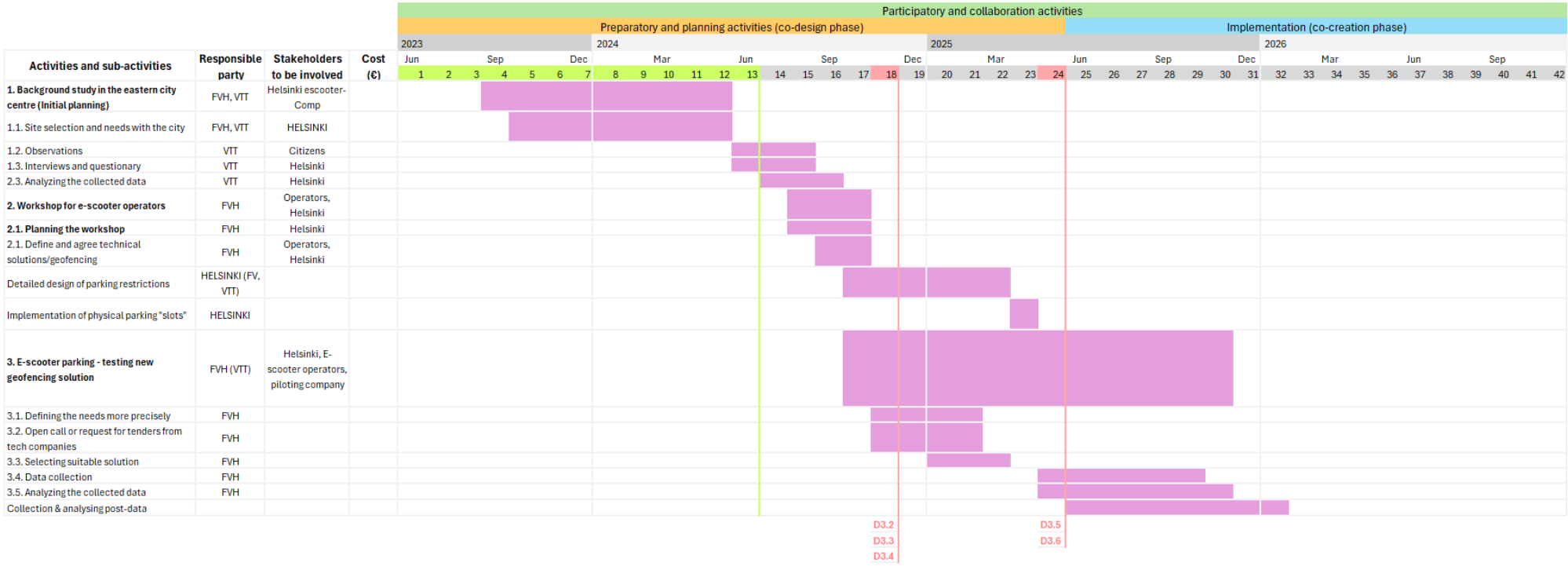


Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Citizen survey on traffic safety			
1.1. Planning the map-based survey	VTT, FVH	City of Helsinki	
1.2. Conducting the survey	VTT, FVH	City of Helsinki	
1.3. Analyzing the data collected	VTT, FVH		
2. Proof-of-Concept			
2.1 Defining the needs more precisely			
2.2. Open call or request for tenders from tech companies			
2.3. Selecting suitable solution			
2.4. Data collection			
2.5. Analyzing the collected data			

Roadmap

City name: Helsinki

Selected intervention title: Optimizing parking locations for shared e-scooters

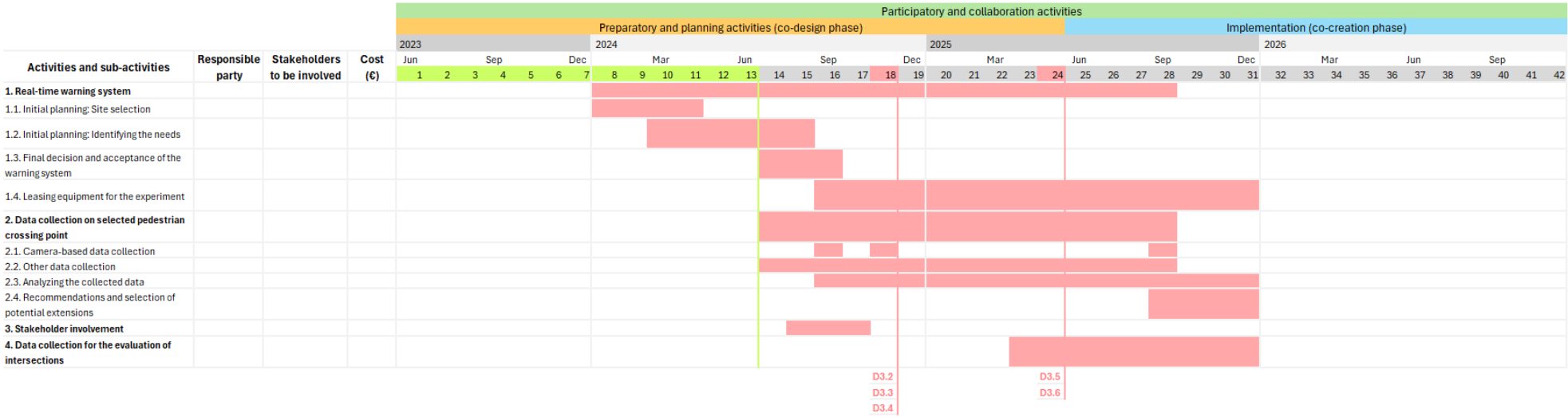


Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Background study in the eastern city centre (Initial planning)	FVH, VTT	Helsinki escooter-Comp	
1.1. Site selection and needs with the city	FVH, VTT	HELSINKI	
1.2. Observations	VTT	Citizens	
1.3. Interviews and questionary	VTT	Helsinki	
2.3. Analyzing the collected data	VTT	Helsinki	
2. Workshop for e-scooter operators	FVH	Operators, Helsinki	
2.1. Planning the workshop	FVH	Helsinki	
2.1. Define and agree technical solutions/geofencing	FVH	Operators, Helsinki	
Detailed design of parking restrictions	HELSINKI (FV, VTT)		
Implementation of physical parking "slots"	HELSINKI		
3. E-scooter parking - testing new geofencing solution	FVH (VTT)	Helsinki, E-scooter operators, piloting company	
3.1. Defining the needs more precisely	FVH		
3.2. Open call or request for tenders from tech companies	FVH		
3.3. Selecting suitable solution	FVH		
3.4. Data collection	FVH		
3.5. Analyzing the collected data	FVH		
Collection & analysing post-data			

Roadmap

City name: Helsinki

Selected intervention title: Improving safety at intersections



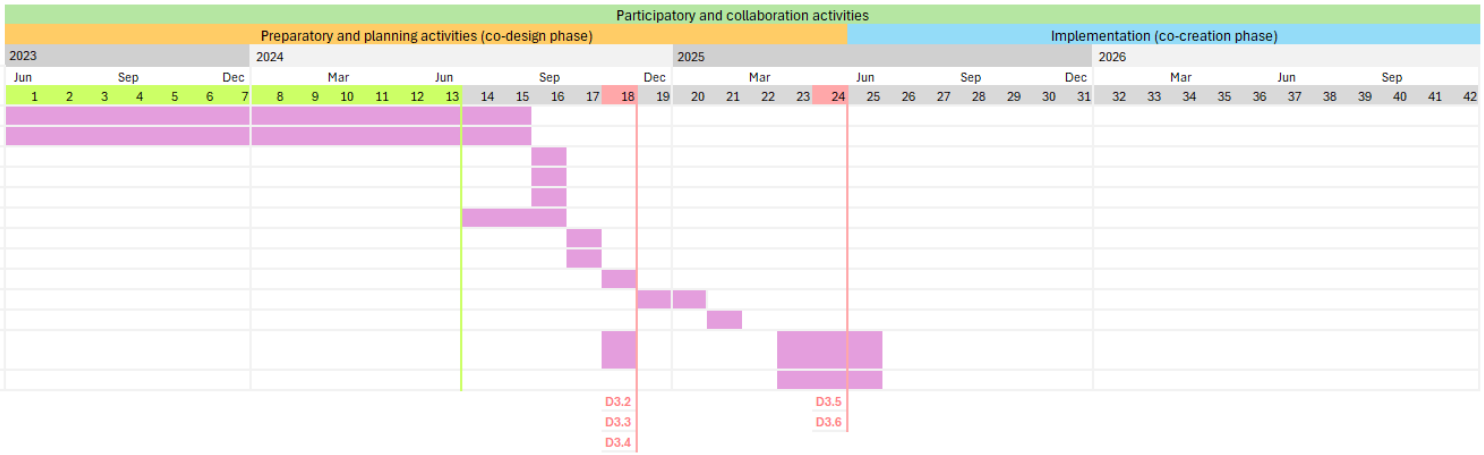
Issy-les Moulineaux, France

- Intervention ISSY1 Flowell
- Intervention ISSY2 Mobility observatory

Roadmap

City name: Issy-les-Moulineaux

Selected intervention title: Flowell

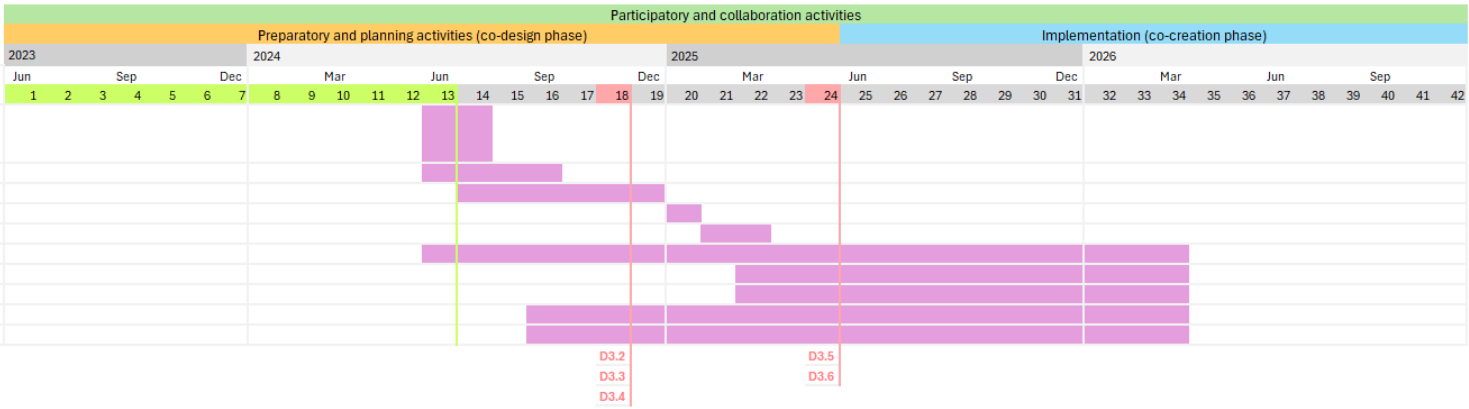


Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
Design phase	COLAS, ISSY	ISSY	
Public authority validation	ISSY	French ministry	
Behaviour pre assessment	COLAS	CEREMA	
Asso\Citizen consolidation	ISSY	Association	
Final design completed	COLAS	ISSY	
Components manufacturing	COLAS	-	
Installation	COLAS	-	
Commission organization	COLAS	-	
Behaviour assessment #1	COLAS	CEREMA, users	
Adaptation	COLAS	ISSY	
Behaviour assessment #2	COLAS	CEREMA, users	
Communication / Media	ISSY	COLAS, IFPEN, URBAN RADAR	
Evaluation + scale up	ISSY	Association	

Roadmap

City name: Issy-les-Moulineaux

Selected intervention title: Mobility Observatory



Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
Available DATA benchmark	IFPEN, URBAN RADAR		
Needs definition	IFPEN, UR		
Data collection	IFPEN, UR		
Data integration	IFPEN, UR		
Data visualization	IFPEN, UR		
Modeling	IFPEN		
Users feedback	IFPEN, UR		
Adaptation	IFPEN, UR		
APPS Development	IFPEN		
Adaptation (physical + digital)	IFPEN		

Zaragoza, Spain

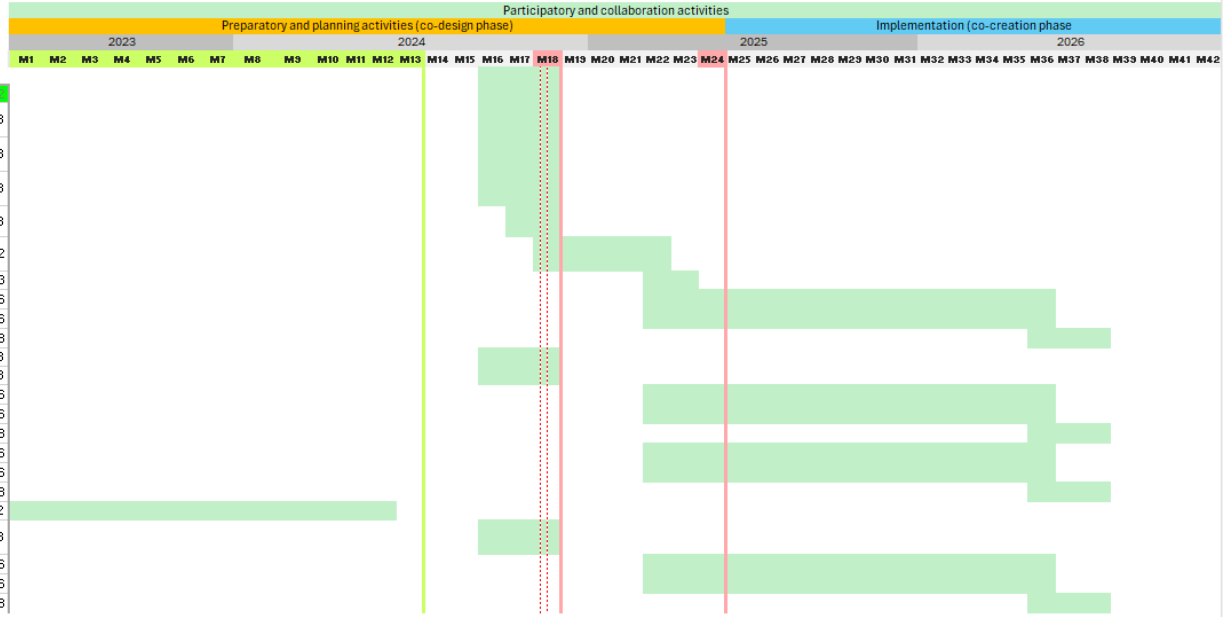
- Intervention AYZG1 Tactical urbanism around schools and access: Calle Asín y Palacios and Calle Condes de Aragón
- Intervention AYZG2 Pedestrianised Calle Jerusalen
- Intervention AYZG3 Micromobility Shared & Safe Station
- Intervention AYZG4 Traffic management around Miguel Servet Hospital

City name: Zaragoza

Intervention 1	Tactical urbanism around schools and access - Calle Asín y Palacios and Calle Condes de Aragón
Intervention 2	Pedestrianised Calle Jerusalen
Intervention 3	Micromobility Shared & Safe Station
Intervention 4	Traffic management around Miguel Servet Hospital

ELABORATOR

Intervention	ACTIVITY	SUBACTIVITY	Responsible party	Stakeholders to be involved	Cost (€)		
1	Base line	Labkit - Recolección de datos en (Cesar Augusto, Doctor Azúa, Margarita Salas, Romareda Agustinos Ricoletos, Cesario Alierta)	CIRCE	Schools		16	18
1	Base line	Apply CYCLERAP at School Access (Cesar Augusto, Doctor Azúa, Margarita Salas, Romareda Agustinos Ricoletos, Cesario Alierta)	CIRCE	Schools		16	18
1	Base line	Apply Star Rating System - Calle Asín y Palacios, Calle Condes de Aragón, Juan II de Aragón y Pedro IV	CIRCE	Schools		16	18
1	Co-creation	Co-design phase - Superbarrio Workshops in STARS schools	IAAC	Schools		17	18
1	Co-creation	Co-design phase - Superbarrio Workshops in schools - replication facilitator	IAAC	Schools	#########	18	22
1	Co-creation	Co-design phase - Superrio - validation of AMPAS results	IAAC	Schools		22	23
1	Implementation	Implementation V1	ZGZ	-		22	36
1	Implementation	Initial assessment	CIRCE	-		22	36
1	Implementation	V2 Implementation	ZGZ	-		36	38
2	Base line	Labkit -Data collection Calle Jerusalen	CIRCE	-		16	18
2	Base line	Apply Star Rating System - Calle Jerusalen	CIRCE	-		16	18
2	Implementation	Implementation V1	ZGZ	-		22	36
2	Implementation	Initial assessment	CIRCE	-		22	36
2	Implementation	V2 Implementation	ZGZ	-		36	38
3	Implementation	Implementation V1	ZGZ	-		22	36
3	Implementation	Initial assessment	CIRCE	-		22	36
3	Implementation	V2 Implementation	ZGZ	-		36	38
4	Base line	Study of traffic and mobility in the environment and access Miguel Servet	ZGZ	Hospital		1	12
4	Base line	Apply CYCLERAP at Miguel Servet Hospital, Colegio Salvador, IES Miguel Catalan	CIRCE	Hospital, Schools		16	18
4	Implementation	Implementation V1	ZGZ	-		22	36
4	Implementation	Initial assessment	CIRCE	-		22	36
4	Implementation	V2 Implementation	ZGZ	-		36	38



Trikala, Greece

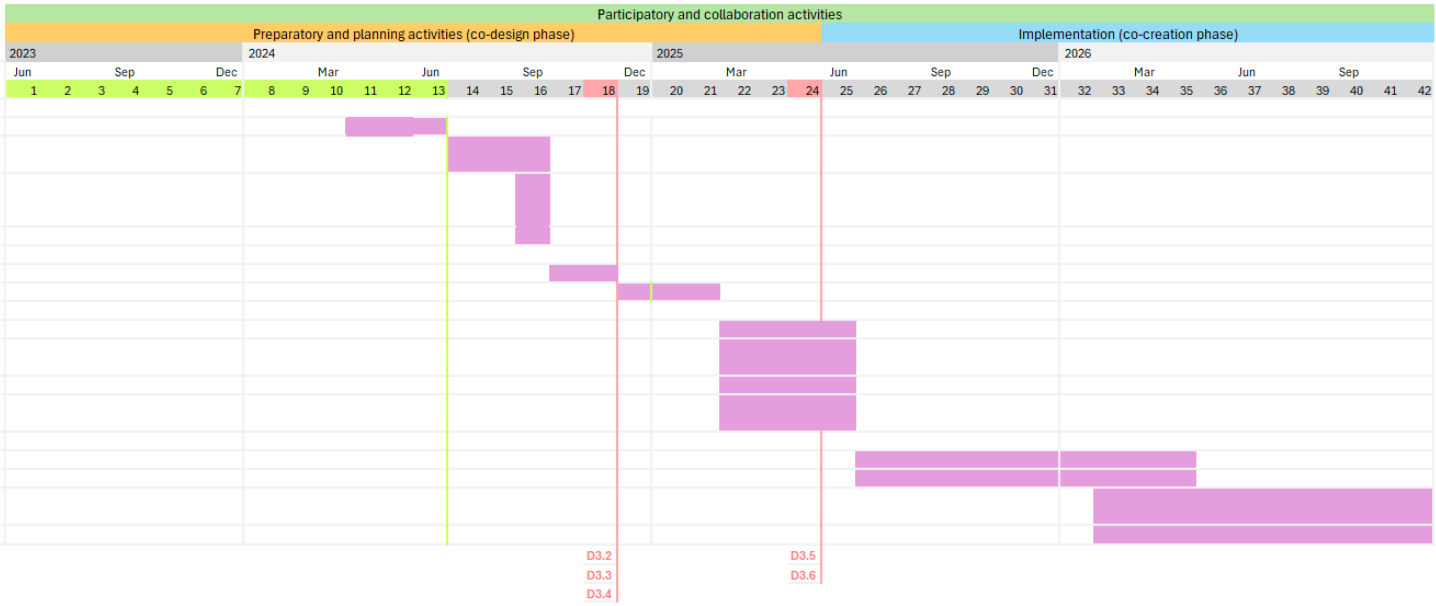
- Intervention ETRIK1 Installation of one smart crossing outside a school
- Intervention ETRIK2 Installation of 3 park and ride stations at the periphery of the city
- Intervention ETRIK3 Redesigning cycling lanes and fostering data collection
- Intervention ETRIK4 Expanding SMARTA online application

Roadmap

City name: Trikala

Selected intervention title: Instalation of one smart crossing outside a school

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Initial Planning			
1.1. Initial planning: Site selection	e-Trikala	Municipality of Trikala	
1.2. Initial planning: Identifying the needs	e-Trikala	Police, Municipality of Trikala	
1.3. Stakeholders consultation (School, municipality, etc.)	e-Trikala	School, Municipality, citizens, ICCS, Cycling Association of Trikala	
1.4. Final decision	e-Trikala		
2. Procurement			
2.1. Select equipment	e-Trikala, ICCS		
2.2. Procure from suppplies	e-Trikala		
3. Installation & Testing			
3.1. Set timetable (safe hours)	e-Trikala, ICCS	Municipality of Trikala	
3.2. Site works (measurement, existing options), Install sensors / paint crossing	e-Trikala, Subcontractor	Municipality of Trikala	
4.Focus group			
4.1 Select and launch focus groups	URBANA	e-Trikala, citizens, women	
5. Living Lab Demonstration & Evaluation			
5.1. Start of demonstration / Intervention	e-Trikala	Municipality, school	
5.2 Data collection			
5.3. Raise awareness and future recommendations	e-Trikala		
5.4. Evaluation	ICCS		

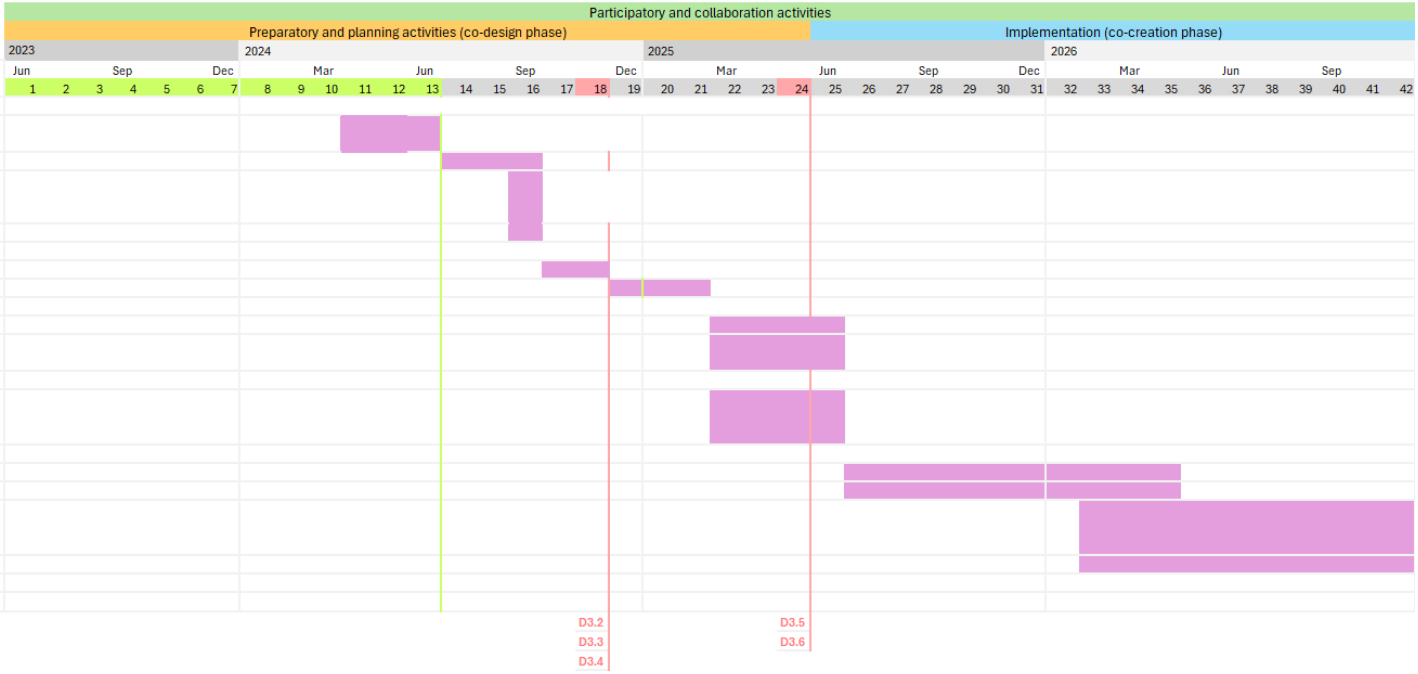


Roadmap

City name: Trikala

Selected intervention title: Installation of 3 park and ride stations at the periphery of the city

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Initial Planning			
1.1. Initial planning: Site selection on parkings located at the strategic points in the city	e-Trikala	Municipality of Trikala	
1.2. Initial planning: Identifying the needs	e-Trikala, ICCS	Municipality of Trikala	
1.3. Stakeholders consultation	e-Trikala	Astiki Anaptiksi, Municipality, citizens, ICCS, Cycling Association	
1.4. Final decision	e-Trikala		
2. Procurement			
2.1. Select equipment	e-Trikala, ICCS		
2.2. Procure from suppplies	e-Trikala		
3. Installation & Testing			
3.1. Set timetable (safe hours)	e-Trikala, ICCS	Municipality of Trikala	
3.2. Site works (measurement, existing options), Install sensors	e-Trikala, Subcontractor	Municipality of Trikala	
4.Focus group			
4.1 Select and launch focus groups	URBANA	e-Trikala, citizens, rural citizens, cyclists, women	
5. Living Lab Demonstration & Evaluation			
5.1. Start of demonstration / Intervention	e-Trikala	Municipality	
5.2 Data collection	e-Trikala, ICCS		
5.3. Raise awareness and future recommendations	e-Trikala	Rural citizens, city visitors, people living in suburban areas	
5.4. Evaluation	ICCS	e-Trikala	

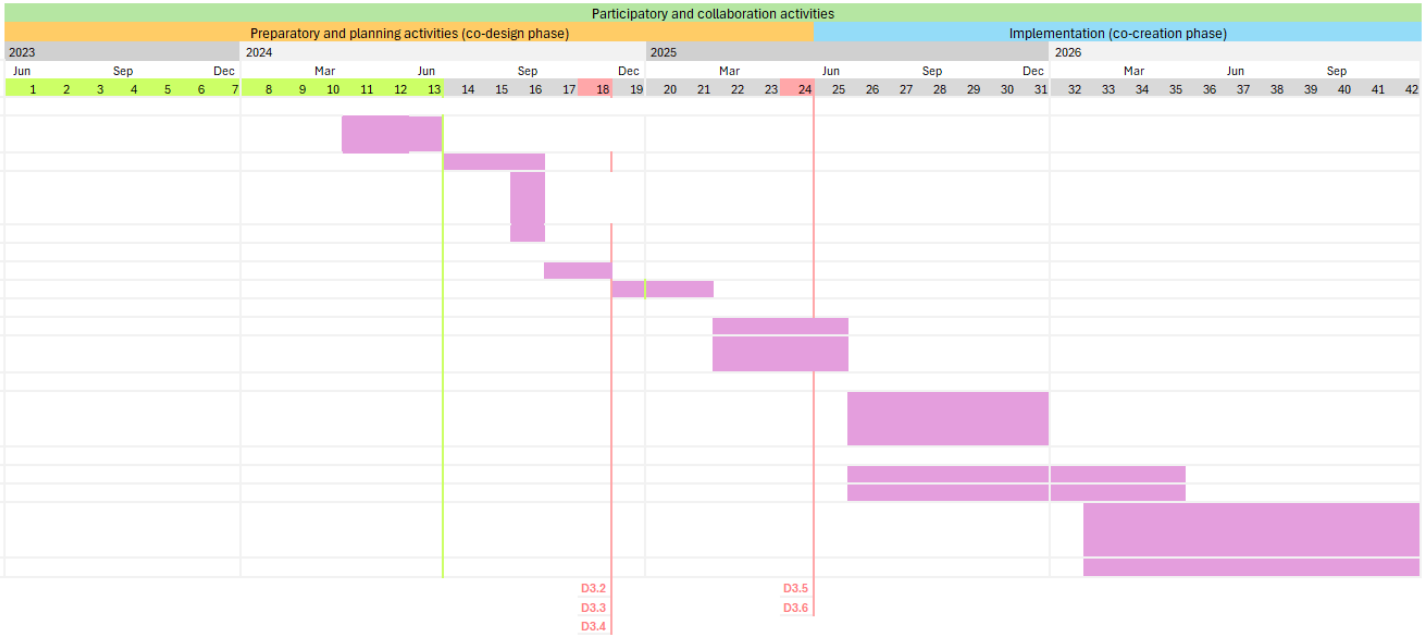


Roadmap

City name: Trikala

Selected intervention title: Redesigning cycling lanes and fostering data collection

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Initial Planning			
1.1. Initial planning: Site selection on cycling lanes located at the strategic points in the city	e-Trikala	Municipality of Trikala	
1.2. Initial planning: Identifying the needs	e-Trikala, ICCS	Municipality of Trikala	
1.3. Stakeholders consultation	e-Trikala	Astiki Anaptiksi, Municipality, citizens, ICCS, Cyclists, municipal	
1.4. Final decision	e-Trikala		
2. Procurement			
2.1. Select equipment	e-Trikala, ICCS		
2.2. Procure from suppplies	e-Trikala		
3. Installation & Testing			
3.1. Set timetable (safe hours)	e-Trikala, ICCS	Municipality of Trikala	
3.2. Site works (measurement, existing options), Install sensors	e-Trikala, Subcontractor	Municipality of Trikala	
4.Focus group			
4.1 Select and launch focus groups	URBANA	e-Trikala, citizens, cyclists, municipal police, elderly	
5. Living Lab Demonstration & Evaluation			
5.1. Start of demonstration / Intervention	e-Trikala	Municipality, cyclists	
5.2 Data collection	e-Trikala, ICCS		
5.3. Raise awareness and future recommendations	e-Trikala	cyclists, women, elderly, municipal police	
5.4. Evaluation	ICCS	e-Trikala	



Roadmap

City name: Trikala

Selected intervention title: Expanding the SMARTA online application

Activities and sub-activities	Responsible party	Stakeholders to be involved	Cost (€)
1. Initial Planning			
1.1. Initial planning	e-Trikala	Municipality of Trikala	
1.2. Initial planning: Identifying the needs	e-Trikala, ICCS	Municipality of Trikala	
1.3. Stakeholders consultation	e-Trikala	Astiki Anaptiksi, Municipality, citizens, ICCS, bus company	
1.4. Final decision	e-Trikala		
2. Procurement			
2.1. Select new functionalities	e-Trikala, ICCS		
2.2. Procure from suppplies	e-Trikala		
3. Design & Testing			
3.1. Finalize the new application	e-Trikala, ICCS	Municipality of Trikala	
3.2. Integration of evaluation functionality within the SMARTA online application	e-Trikala, Subcontractor	Municipality of Trikala	
4. Living Lab Demonstration & Evaluation			
4.1. Start of demonstration / Intervention	e-Trikala	Municipality	
4.2 Data collection	e-Trikala, ICCS		
4.3. Raise awareness and future recommendations	e-Trikala	Rural citizens, city visitors, people living in suburban areas	
4.4. Evaluation	ICCS	e-Trikala