

D1.1 Project Management Handbook

WP1 Project management and coordination



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Abstract

This Project Handbook is a document that establishes the foundation for the project cooperation processes and defines all aspects that must be taken into account in order to assure an efficient and coherent management of the project, including: a brief description of the project; its objectives, the scope and work plan; a detailed description of the roles of the different actors in the project management; the Quality Assurance and Risk Management Plan; guidelines and recommendations regarding the communication activities of UPPER, guidelines for reporting; and relevant templates.

Specific attention is paid to the Quality Assurance Plan, which describes the internal reviewing procedure as one of the main tools to guarantee the quality of results and provides guidelines for the preparation of the deliverables and other relevant documents.

Keywords

Handbook, Project Management, Risk management, Quality management

1. Introduction

1.1. Purpose of the document

This deliverable presents the foundation for the project management processes providing a clear route to a successful project implementation. It covers a basic description of the project scope any party involved in the project should be aware of and a detailed description of how the project will be executed, monitored and controlled making it easy to visualize project management timelines.

The project management handbook contains all relevant information to facilitate the execution and control of the different tasks of the project and it may, therefore, be considered key for the overall success of UPPER. In addition, it will ensure that the consortium meets all requirements related to the contract with the EC, controlling that task start and finish according to the project work plan and that the project deliverables are submitted in due time.

The purpose of this document is, therefore, to describe the reporting procedures, communication policies, and the essential information needed in order to facilitate the cooperation and exchange of information among partners in an efficient and agile way. Specific attention is paid to the description of the “Quality Management Plan” and the “Risk Management Plan”, two key tools to properly manage the project.

1.2. Scope of the document

This Deliverable D1.1 is produced within the Project Management work package (WP1) in order to outline a clear picture of an overall management approach ensuring and guiding the consortium in all the cooperation processes demanded by the project.

The document will mainly serve to the team leaders within each partner organisation, as well as the researchers and administrative staff therein. It provides, at every stage of the project, a clear overview of the different available tools to enable the exchange of information and management of the project.

As any other document in the project, but with particular interest to D1.1, this deliverable should not contradict the project contract – and, in particular, the provisions made within the DoA with regards to project schedule and efforts allocated.

1.3. Structure of the document

This document is structured as follows:

- Section 1, 2 and 3 serve as an introduction to the project. It presents the objectives, the expected results, and the working plan. This section is aimed to be the basic information to be used internally when presenting the project within each organisation of the UPPER consortium.
- Section 4 indicates the intern hierarchy of the project and the role of each member.
- Section 5 explains the processes and the protocols for decision making, communications and meetings.

- Section 6 aims to explain into detail the reporting procedure, including the official Project Periodic Report (PPR) and the six-monthly internal report. Specific guidelines for the financial report are provided.
- In Section 7 the “Quality Management Plan” is presented. It details the reviewing methods and the guidelines followed to create, share and deliver the documents.
- Section 8 describes “Risk Management Plan”, including how to identify possible risks of the project and how they will be managed.
- Section 9 and 10 correspond to the conclusions and the bibliography.
- Annex A, B, C and D include the templates and guidelines for the technical and financial report.
- Annex E includes the “Risks table”

2. Project Summary

2.1. UPPER Key Facts

- **Topic:** HORIZON-MISS-2021-CIT-02
- **Project Title:** “Unleashing the Potential of Public transport in EuRope” (UPPER)
- **Type of Action:** HORIZON-IA
- **Project start:** 1 January 2023
- **Duration:** 48 months from 01.01.2023 to 31.12.2026.
- **Project Coordinator:** UNION INTERNATIONALE DES TRANSPORTS PUBLICS (UITP)
- **Consortium:** 41 partner organisations from 10 European countries.

2.2. UPPER introduction

UPPER is a **Cities Mission** project that will put the Public Transport at the centre of the mobility ecosystem by implementing a combination of **84 measures** to push people away from private motorised travel and pull them towards public transport and shared mobility - **push and pull measures** - acting on the five innovation axes that condition users’ choices: mindset and culture, urban mobility planning, mobility services ecosystem, road network management and democratic governance.

UPPER **vision** is to reach a safe, resilient, efficient and inclusive PT that becomes the backbone of the urban mobility in European cities.

2.3. Objectives of the project

The project will be developed around 7 main goals:

1. to understand the needs of different urban areas, user groups and dependencies between public transport and active travel modes;
2. to establish a local policy framework and innovative spatial planning to promote a sustainable and public transport-oriented culture in line with the SUMP;
3. to co-create new local solutions and services to improve the overall PT offer and attractiveness in line with users' needs and expectations and trigger behavioural change;
4. to develop a set of cross-pilot supporting tools as an integrated and replicable approach to plan, test, evaluate and upscale mobility measures;
5. to implement packages of “push and pull” urban mobility measures in the living labs, supported by the UPPER toolkit, to improve the overall PT share in the modal distribution;
6. to establish new solutions, strategies and business models, where public transport and mobility providers cooperate to offer services addressing user needs and;
7. to ease and accelerate the transferability of results, cooperation and uptake of replicable public transport solutions.

2.4. UPPER results

UPPER is an impact-oriented project driven by cities that will demonstrate and evaluate a set of “**push & pull**” **measures**, to be implemented within 5+5 living labs and twinning sites, addressing 5 innovation axes to boost and reinforce the massive potential of PT in Europe:

- Innovation axis 1: Mindset and culture: Perception of accessibility, User satisfaction, Concept of Freedom, Maslow applied to PT, the status of PT, PT as a carrier of culture, image, ‘coolness’.
- Innovation axis 2: Urban mobility planning: Ability to structure space at regional, local and hyperlocal level, PT as the focal point for urban development and economic activity, the combination of infrastructures and services.
- Innovation axis 3: Mobility services ecosystem: Intermodality, MDMS, digital ecosystem, eMobility system, the first mover in automation.
- Innovation axis 4: Road network management: Priority management (traffic lights), access regulation, low emission zones regulation and monitoring, parking space management
- Innovation axis 5: Democratic governance: Multi-stakeholder and multi-level governance, PT as a driver for inclusion, societal return on investment of long-term capital and revenue spending.

In addition to the measures, UPPER will develop a set of 7 IT supporting tools (**UPPER Measures Implementation Support Toolkit**) that will complement the measures in different phases of their design and implementation and will ensure the expected objectives of citizen participation, behaviour understanding, impact, and definition of new policies, knowledge transfer and scalability:

- **U-TWIN**: A solution to provide city and mobility authorities with a comprehensive solution for real-time visualisation and decision support based on deep learning.
- **U-SIM**: A tool to simulate the effect and potential of the “push & pull” measures before its implementation or its upscale to a wider area.

- **U-SUMP:** A platform to integrate the results of the “push & pull” measures and guide the development, implementation and update of the Sustainable Urban Mobility Plans.
- **U-NEED:** A tool to support the Public Transport Operators in defining the optimal capacity and frequency of PT lanes based on the user needs and passenger transport flows.
- **U-GOV:** A community engagement platform to power democratic governance that facilitates citizen participation in the different phases of the decision-making process related to PT.
- **U-KNOW:** A knowledge powerhouse for PT through a Mission-oriented platform for activating a new bottom-up and dynamic capacity building process among cities.
- **U-TRANSFER:** An exchange hub for the UPPER cities based on an online interactive space, resources, calendar, and collaborative tools to promote cooperation, shared initiatives and lessons learnt among cities.

3. UPPER Work Plan

3.1. Work Plan Summary

The UPPER Work Plan is structured into 8 work packages (WPs). **WP2** will set the basis of the project by identifying user needs, setting up a baseline and defining requirements and specifications of UPPER measures and tools. **WP3, WP4** and **WP5** are directly linked to the development of the “push and pull” measures and the UPPER supporting tools. The PT oriented urban planning and network management, the improved PT system and operation, and the application of technology and social innovation to PT services will be addressed in WP3, WP4 and WP5 respectively.

WP6 will showcase the packages of “push and pull” measures composed by the solutions, strategies, tools and policies developed in the WPs 3-5 in the 5 UPPER living labs and the 5 twinning sites. An evaluation work package is responsible for the assessment of the process of mobility solutions delivery as well as their real-life impacts (**WP7**).

The Work Plan is completed by two horizontal work packages, one focused on communication, replication and upscaling activities to achieve large-scale adoption of the UPPER solutions (**WP8**) and one for coordinating and properly manage all project activities in order to ensure the achievement of the project objectives (**WP1**).

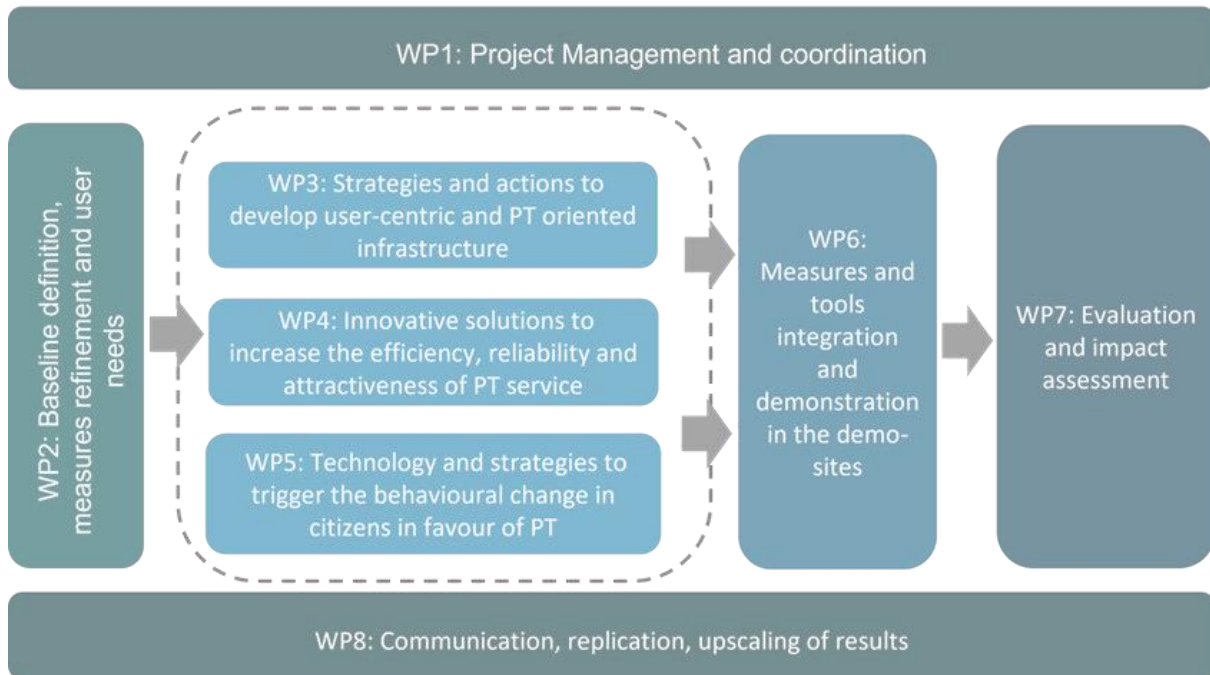


Figure 1. UPPER Work Plan

3.2. UPPER Gantt

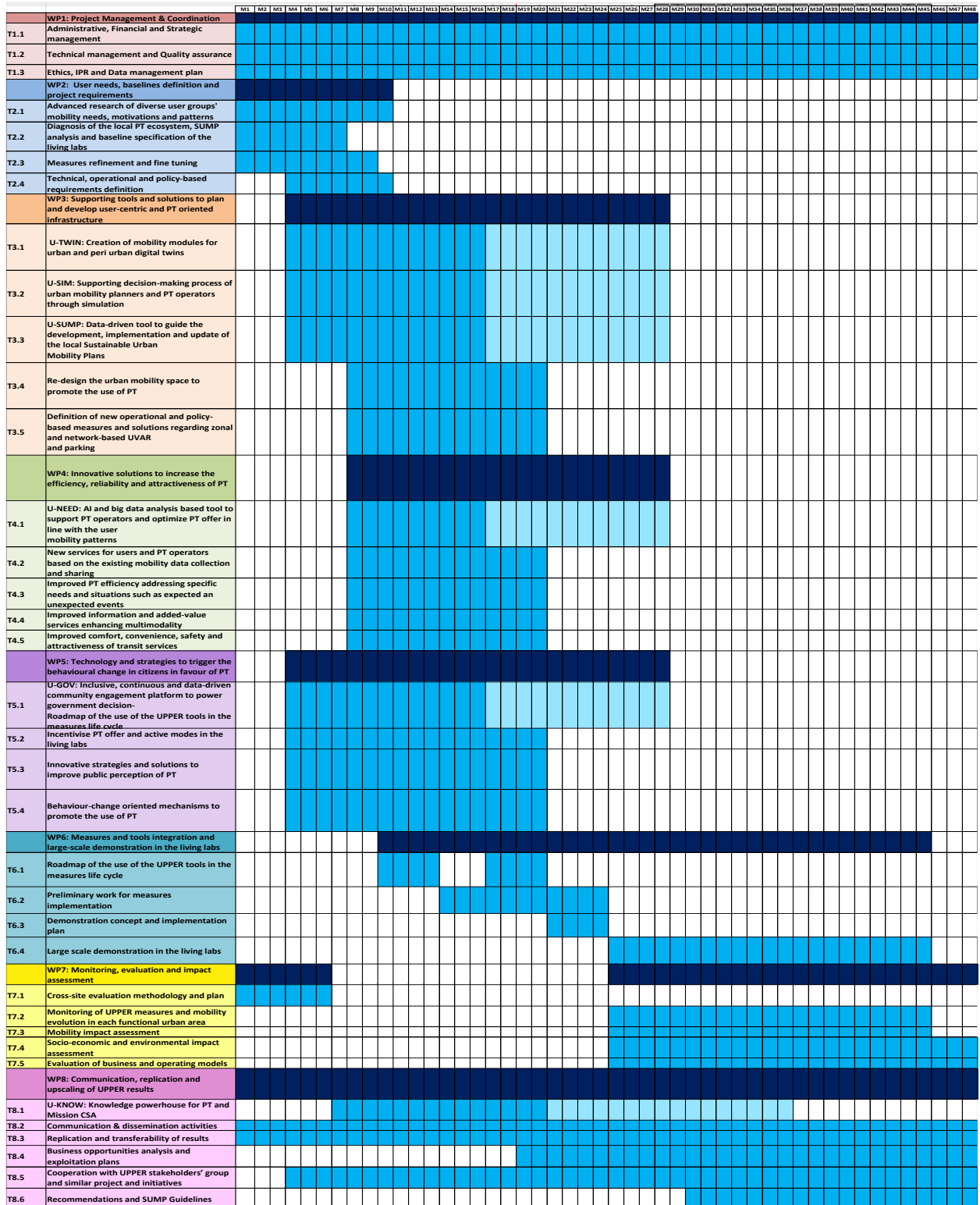


Figure 2. UPPER Gantt

3.3. Work Breakdown Structure (WBS)

The UPPER Work Breakdown Structure (WBS) is presented below, specifying for each task the timeline, the leader, and the related deliverables.

Table 1. Work Breakdown Structure (WBS)

| WP | Task | Start | End | Leader | Related deliverable(s) |
|----|----------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | T1.1 Administrative, Financial and Strategic management | Jan 23 [M1] | Dec 26 [M48] | UITP | D1.1 Project management handbook – [M3] [ETRA] |
| 1 | T1.2 Technical management and Quality assurance | Jan 23 [M1] | Dec 26 [M48] | ETRA | D1.1 Project management handbook – [M3] [ETRA] |
| 1 | T1.3 Ethics, IPR and Data management plan | Jan 23 [M1] | Dec 26 [M48] | UITP | D1.2 Data Management Plan – [M6] [UITP] Rev: [M18, M36, M48] |
| 2 | T2.1 Advanced research of diverse user groups' mobility needs, motivations and patterns | Jan 23 [M1] | Oct 23 [M10] | IBV | D2.1 User groups' mobility needs, motivations and patterns – [M10] [IBV] |
| 2 | T2.2 Diagnosis of the local PT ecosystem, SUMP analysis and baseline specification of the living labs | Jan 23 [M1] | Jul 23 [M7] | FIT | D2.2 Diagnosis of PT in living labs, measures refinement and expected impact – [M7] [FIT] |
| 2 | T2.3 Measures refinement and fine-tuning | Jan 23 [M1] | Sep 23 [M9] | KUL | D2.2 Diagnosis of PT in living labs, measures refinement and expected impact – [M7] [FIT] D2.3 Gamified approach for co-creating inclusive PT solutions – [M9] [KUL] |
| 2 | T2.4 Technical, operational and policy-based requirements definition | Apr 23 [M4] | Oct 23 [M10] | ETRA | D2.4 UPPER Measures, requirements and policy Recommendations – [M10] [ETRA] |
| 3 | T3.1 U-TWIN: Creation of mobility modules for urban and peri urban digital twins | Apr 23 [M4] | Apr 25 [M28] | ETRA | D3.1 U-TWIN: Integrated mobility solution for urban and peri-urban digital twins – [M16, M28] [ETRA] |
| 3 | U-SIM: Supporting decision-making process of urban mobility planners and PT operators through simulation | Apr 23 [M4] | Apr 25 [M28] | PTV | D3.2 U-SIM: A simulation-based tool to evaluate the short and medium-large term impact of the urban mobility measures. – [M16, M28] [PTV] |
| 3 | U-SUMP: Data-driven tool to guide the development, implementation and update of the local Sustainable Urban Mobility Plans | Apr 23 [M4] | Apr 25 [M28] | RC | D3.3 U-SUMP: Data-based planning for climate- neutrality with PT as backbone – [M16, M28] [RC] |
| 3 | Re-design the urban mobility space to promote the use of PT | Aug 23 [M8] | Aug 24 [M20] | ETRA | D3.4 Urban space allocation and design toolbox – [M20] [ETRA] |

| WP | Task | Start | End | Leader | Related deliverable(s) |
|----|----------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------|--------------------------------------------------------------------------------------------------------------------|
| 3 | T3.5 Definition of new operational and policy-based measures and solutions regarding zonal and network-based UVAR and parking | Aug 23 [M8] | Aug 24 [M20] | POLIS | D3.5 UPPER Urban Vehicle Access Regulation Toolbox – [M20] [POLIS] |
| 4 | T4.1 U-NEED: AI and big data analysis-based tool to support PT operators and optimize PT offer in line with the user mobility patterns | Aug 23 [M8] | Apr 25 [M28] | ETRA | D4.1 U-NEED: A tool to optimise the PT offer in line with the user mobility patterns – [M16, M28] [ETRA] |
| 4 | T4.2 New services for users and PT operators based on the existing mobility data collection and sharing | Aug 23 [M8] | Aug 24 [M20] | IFPEN | D4.2 Public Transport operation toolbox. Innovative data capturing and sharing – [M20] [IFPEN] |
| 4 | T4.3 Improved PT efficiency addressing specific needs and situations such as expected an unexpected events | Aug 23 [M8] | Aug 24 [M20] | FAC | D4.3 Public Transport services toolbox. System reliability and efficiency – [M20] [FAC] |
| 4 | T4.4 Improved information and added-value services enhancing multimodality | Aug 23 [M8] | Aug 24 [M20] | CERTH | D4.4 Transition to Multimodal Digital Transport Services (MDTS) and user-friendly multimodal nodes – [M20] [CERTH] |
| 4 | T4.5 Improved comfort, convenience, safety and attractiveness of transit services | Aug 23 [M8] | Aug 24 [M20] | UITP | D4.5 Transition to a more convenient, safe and attractive Public Transport system – [M20] [UITP] |
| 5 | T5.1 U-GOV: Inclusive, continuous and data-driven community engagement platform to power government decision-making | Apr 23 [M4] | Apr 25 [M28] | IBV | D5.1 U-GOV: A novel platform to ease user participation in PT strategies – [M16, M28] [IBV] |
| 5 | T5.2 Incentivise PT offer and active modes in the living labs | Apr 23 [M4] | Aug 24 [M20] | FAC | D5.2 Toolkit to incentivise mobility active modes in UPPER living labs –[M20] [FAC] |
| 5 | T5.3 Innovative strategies and solutions to improve public perception of PT | Apr 23 [M4] | Aug 24 [M20] | FIT | D5.3 Strategies and solutions toolbox to improve public perception of PT –[M20] [FIT] |
| 5 | T5.4. Behaviour-change oriented mechanisms to promote the use of PT | Apr 23 [M4] | Aug 24 [M20] | IBV | D5.4 Behaviour-change oriented mechanisms to promote the use of PT – [M20] [IBV] |
| 6 | T6.1 Roadmap of the use of the UPPER tools in the measures life cycle | Oct 23 [M10] | Aug 24 [M20] | ETRA | D6.1 Roadmap of the use of the UPPER tools in the measures life cycle – [M20] [ETRA] |
| 6 | T6.2 Preliminary work for measures implementation | Feb 24 [M14] | Dec 24 [M24] | CERTH | D6.2 Demonstration concept and implementation Plan – [M24] [ETRA] |
| 6 | T6.3 Demonstration concept and implementation plan | Sep 24 [M21] | Dec 24 [M24] | ETRA | D6.2 Demonstration concept and implementation Plan – [M24] [ETRA] |

| WP | Task | Start | End | Leader | Related deliverable(s) |
|----|----------------------------------------------------------------------------------------|--------------|--------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | T6.4 Large scale demonstration in the living labs | Jan 25 [M25] | Sep 26 [M45] | UITP | D6.3 Implementation Report and Demonstration Outcome – [M45] [UITP] |
| 7 | T7.1 Cross-site evaluation methodology and plan | Jan 23 [M1] | Jun 23 [M6] | KUL | D7.1 Final cross-site evaluation handbook incl. main impact categories and assessment KPIs related to measures – [M6] [KUL] |
| 7 | T7.2 Monitoring of UPPER measures and mobility evolution in each functional urban area | Jan 25 [M25] | Sep 26 [M45] | FIT | D7.2 Impact multipliers matrix per city and implemented innovations – [M45] [FIT] |
| 7 | T7.3 Mobility impact assessment | Jan 25 [M25] | Sep 26 [M45] | CERTH | D7.3 Monitoring system for the implementation and report on impact assessment of PT measures in FUA – [M45] [CERTH] |
| 7 | T7.4 Socio-economic and environmental impact assessment | Jan 25 [M25] | Dec 26 [M48] | KUL | D7.4 Report and online tool for environmental and socio-economic impact assessment of PT innovations – [M48] [KUL] |
| 7 | T7.5 Evaluation of business and operating models | Jan 25 [M25] | Dec 26 [M48] | CERTH | D7.5 Report on collaborative business, operating and governance models for the uptake of innovative PT solutions – [M48] [UITP] |
| 8 | T8.1 U-KNOW: Knowledge powerhouse for PT and Mission CSA | Jul 23 [M7] | Dec 25 [M36] | POLIS | D8.2 U-KNOW platform implementation report – [M20, M36] [POLIS] |
| 8 | T8.2 Communication & dissemination activities | Jan 23 [M1] | Dec 26 [M48] | EUR | D8.1 Plan for dissemination, exploitation and communication activities – [M6, M18, M25, M36] [EUR] |
| 8 | T8.3 Replication and transferability of results | Jan 23 [M1] | Dec 26 [M48] | EUR | D8.3 Transferability guidelines. How to successfully perform transferability process of the UPPER solutions in other cities in Europe – [M42] [EUR] |
| 8 | T8.4 Business opportunities analysis and exploitation plans | Jul 24 [M19] | Dec 26 [M48] | FIT | D8.4 New value propositions and exploitation Plans – [M32] [FIT] |
| 8 | T8.5 Cooperation with UPPER stakeholders' group and similar project and initiatives | Apr 23 [M4] | Dec 26 [M48] | UITP | D8.5 Liaison with other initiatives, Impact Board – [M45] [UITP] |
| 8 | T8.6 Recommendations and SUMP Guidelines | Jun 25 [M30] | Dec 26 [M48] | RC | D8.6 Recommendations with SUMP Guidelines. Toolkit for achieving Cities Mission goals – [M32] [RC] |

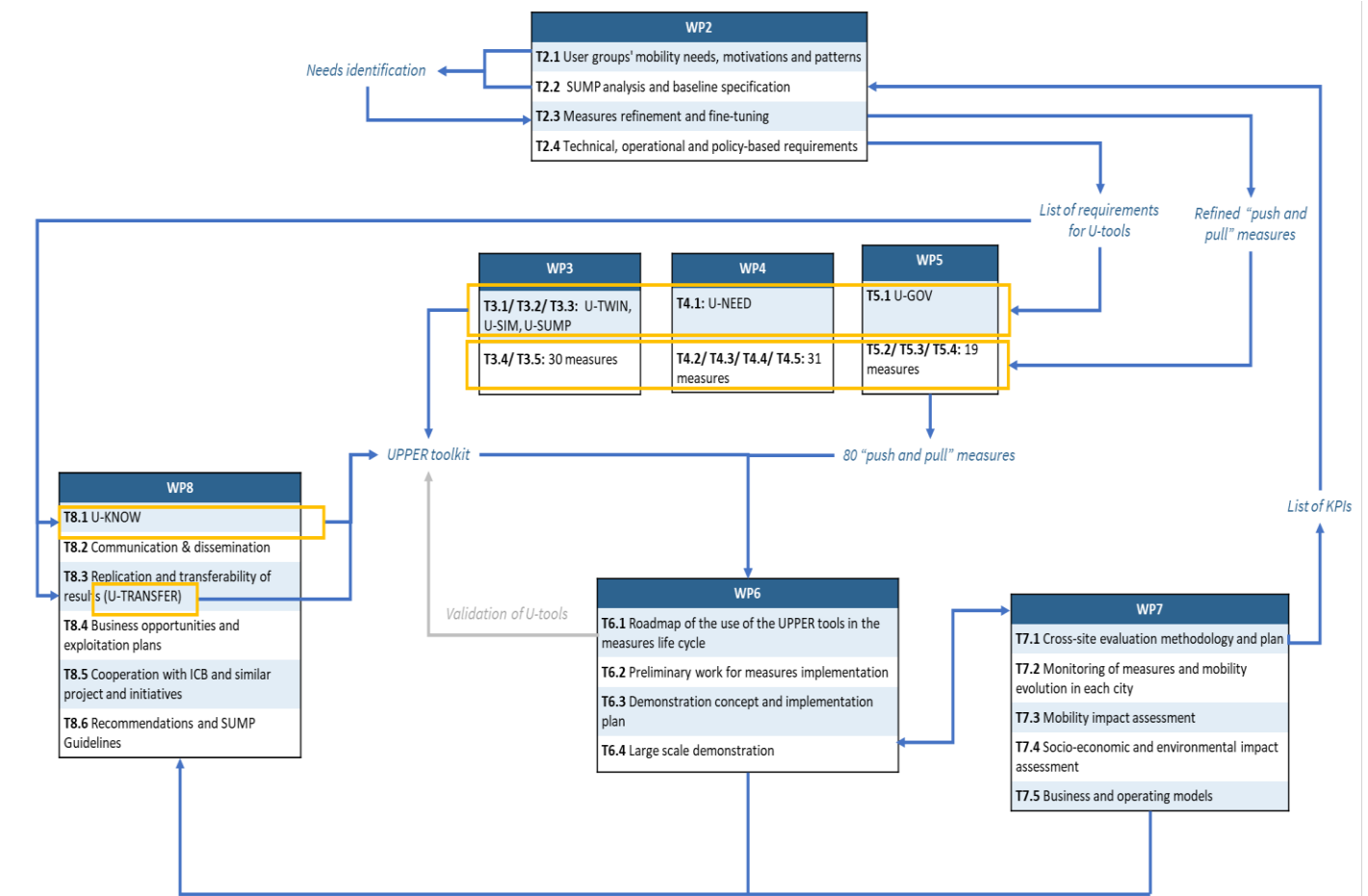


Figure 3. Workflow graphic at task level

4. Management structure

UPPER will be implemented by 41 project partners. The project's nature puts greater emphasis on decision-making mechanisms. Hence a shallow management hierarchy with transparency in the information flow is proposed to facilitate a team of empowered and motivated individuals to respond to the needs of new product development and commercialisation. The management structure has the following characteristics:

- **Goal oriented** – the project requires a determined management with a strong desire to “get things done”.
- **Agile** – to allow adaptation to fast-moving technology dynamics and end-user demands.
- **Empowered/productive** – shallow hierarchy, information transparency and well-defined objectives.

The project management structure is defined so as to allow a reliable overall coordination, efficient communication, clear decision-making procedures and smooth workflow.

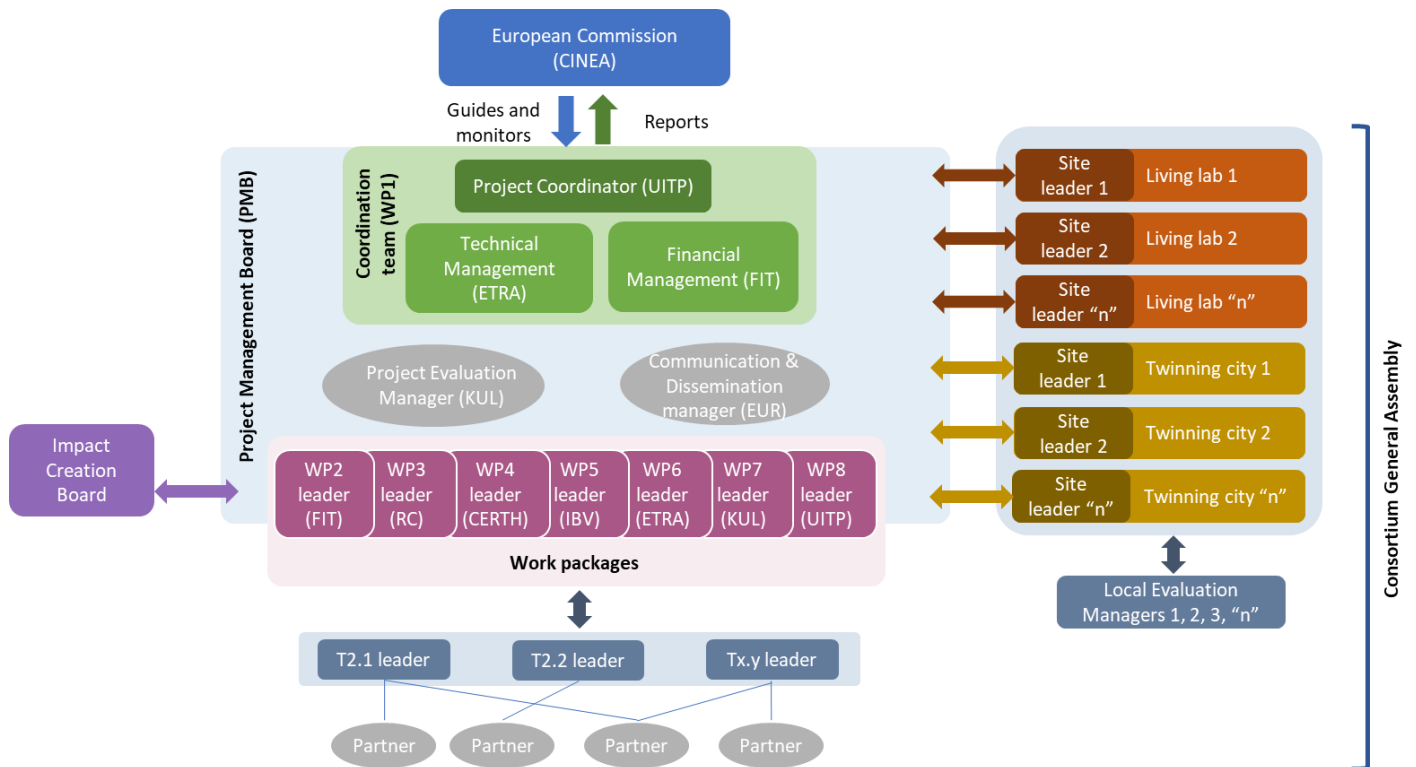


Figure 4. UPPER management structure

4.1. The Consortium

UPPER consists of a multi-stakeholder consortium of 39 beneficiaries, coming from 9 European countries (Belgium, Spain, Italy, France, Germany, Portugal, Norway, Hungary, Greece), one Affiliated entity (SISTeMA) and one Associated partner (IFP) from Switzerland.

UPPER is a cities and public transport-driven project that include the local administrations and/or the public transport authorities and operators from the 10 cities participating in the project. From the technological side, large industrial and consultancy companies (such as ETRA or PTV) and 10 SMEs bring into the consortium their expertise in the field and their technology to design and develop the project outcomes. UPPER also counts with 5 leading academic and research institutions and 9 of the most representative networks of cities, operators and authorities for public transport and urban mobility in Europe.

4.2. Consortium bodies

4.2.1. The Coordination Team (CT)

The **Coordination Team (CT)** will chair the PMB and be responsible for the day-to-day project management and the follow-up of decisions and directions derived from the EC, the PMB and the GA. It consists of the:

- The **Project Coordinator (PC)** (Mircea Steriu, from UITP) who takes responsibility for the overall project management. This includes interactions with the EC on contract-related issues as well as chairing regular management meetings- representing the project in the contract negotiation, and in relation to the Commission's Project Officer, representing the consortium in workshops and official meetings, etc.
- The **Financial Manager (FM)** (Mauro Giorgetti, from FIT), who supports the PC on the financial aspects such as administering project resources and project spending and the establishment and maintenance of financial records relying on standardized processes.
- The **Technical Coordinator (TC)** (Raquel Alario, from ETRA) who supports the PC on the day-to-day management activities of the project by planning, implementing and maintaining a stable technical infrastructure that supports the development, implementation, exploitation and reporting processes of the project.

4.2.2. The Project Management Board (PMB)

The **PMB** makes executive decisions on strategic issues and has a major impact on the overall outcomes and success of the partnership. Major decisions concerning overall technological, innovation and exploitation direction of the project are taken herein. Policies, standards, quality and IPR/knowledge management and publishing procedures will be approved by the PMB. It will also make recommendations for amendments of the Grant Agreement.

The PMB consists of the following bodies:

- The **Coordination Team (CT)**, composed of the Project Coordinator, Technical Coordinator and Financial Manager as described above.
- The **Work Package Leaders (WPL)**, which are responsible for the overall monitoring and performance of the WP they are responsible for and will, in consultation with the Task leaders (TL), report monthly about it to the PMB. WPLs are responsible for the completion of activities and objectives of their WP as specified in the GA, as well as for ensuring that the respective deliverables and outcomes are delivered on time and with high quality.
- The **Project Evaluation Manager (PEM)** will coordinate all the evaluation activities in the project in close cooperation with the local evaluation managers (LEM).
- The **Communication and dissemination Manager (CDM)** is responsible for all dissemination and communication activities.

Reasons for any deviations from the project plan will be identified and the necessary corrective actions will be agreed upon by the entire PMB. Any differences between participants will be resolved by the PMB as they arise. Major changes in the project plan, such as reallocation of resources, may be done within the limits of agreements, by the decision of the PMB as put forward by the Technical Coordinator. The PMB will convene once a month virtually using a videocall platform to discuss the progress of the individual WPs, in order to provide a quick and efficient response to the events that will arise during the project. A PMB meeting will always precede General Assembly (GA) meetings in order to prepare for them.

Table 2. Project Management Board (PMB)

| Role | Responsible |
|-----------------------------------------------|----------------------------------|
| Project Coordinator (PC) | Mircea Steriu (UITP) |
| Technical Coordinator (TC) | Raquel Alario (ETRA) |
| Financial Manager (FM) | Mauro Giorgetti (FIT) |
| Project Evaluation Manager (PEM) | Thérèse Steenberghen (KUL) |
| Communication and Dissemination Manager (CDM) | Francesco Iacorossi (EUROCITIES) |
| WP1 Leader | Mircea Steriu (UITP) |
| WP2 Leader | Francesco Guaraldi (FIT) |
| WP3 Leader | Sinziana Rasca (RC) |
| WP4 Leader | Georgia Aifadopoulou (CERTH) |
| WP5 Leader | Juan Gimenez (IBV) |
| WP6 Leader | Raquel Alario (ETRA) |
| WP7 Leader | Thérèse Steenberghen (KUL) |
| WP8 Leader | Charlotte Van Hek (UITP) |

4.2.3. The General Assembly

The **General Assembly (GA)** is the ultimate and top-level decision body where each project partner is represented by one person (or a proxy). The GA is the key liaison between all the project partners. It has the responsibility to define and maintain the overall project objectives, targets, general directions and implementation plans; to evaluate the progress of the project and approves progress reports and milestone; to elaborate actions needed to be taken in case of deviation; to approve changes to Consortium Agreement; to decide on new consortium partners; or to agree on (re-)allocation of budget, among others.

In the GA meetings, chaired by the PC, all partners will come together to discuss the overall project's status and planning and elaborate on the project results. The General Assemblies shall take place every 6 months and should include a plenary session on project progress and, in addition, workshops on content or topics where all the partners can exchange ideas and present results. The meetings shall be held in person and one of the project partners identified in the GA (via their allocated budget) will be hosting the meeting.

4.2.4. The Impact Creation Board (ICB)

The Impact Creation Board (ICB) is one of the UPPER centres of innovation and it is composed by external and project members, with expertise in the UPPER specific scientific domains.

The ICB members (Task 8.5) role into the UPPER project is to guide the Project Management board/WP leaders in keeping the project to the innovation edge of the most challenging UPPER scientific domains.

Each WP leader (mainly WP3 to WP7) will involve the Impact creation board members in some specific activities:

- Leading strategic meetings
- Reviewing some strategic project outputs/deliverables
- Guiding them in developing project impact & process evaluation methodology and supporting its measurement

The ICB group will be chaired by UITP, the coordinator, which will define specific actions, at the early stage of the project, in order to “activate” the ICB members’ work.

The UPPER Impact Creation Board (ICB), established from an early stage, reinforces the publicity and project impact by collecting feedback from interested and influential stakeholders and disseminates UPPER outcomes to maximise its impact addressed to all target groups, accelerating the achievement of Smart City Mission goals and EU Green Deal targets. The ICB will involve top representatives of cross-domain actors, involving the entire urban mobility value chain having PT at its core. The ICB will reinforce effective cooperation and co-design, by giving voice to all the impacted players, during the whole research and innovation processes, better matching the demand needs and increasing concrete potential for customer satisfaction. The involvement of representatives of multidomain associations in the ICB will accelerate bottom-up identification of service requirements, and set solutions supported by the strong commitment of policymakers. This will align the outcomes of UPPER with the needs and expectations of the public bodies and the entire value chain, including civil society. Modern communication channels and Open Days will improve awareness and involvement and better address needs, allowing the implementation of efficient innovation pathways and reducing the risk when implementing disruptive measures.

The interaction with the ICB will be:

- input on best practices on how to design a new PT system strategy and how to embrace innovations;
- technical / strategic meetings on UPPER features and validation of outputs;
- recommendations to enhance PT identity and corporate culture

4.2.4.1. *ICB Members*

The ICB is composed by Networks that are members of the UPPER Consortium, complemented by other 5 Networks. They are indicated below:

The following UPPER Consortium members are part of the ICB, as Networks they represent and reach an extremely wide set of stakeholders:

- **UITP** is the worldwide PT sector association with more than 1,900 members, over 100 countries and 15 city offices across the globe. UITP is the coordinator of the ICB.

- **POLIS** is the leading network of European cities and regions working together to develop innovative technologies and policies for local transport.
- **EUROCITIES** with + 200 cities in 38 countries represents 130 million people. Being involved in the Mission Platform, Eurocities ensures synergies are created.
- **ICLEI** is a global network of + 2500 local and regional governments committed to sustainable urban development, active in 125+ countries.
- **EMTA** represents the largest metropolitan PT authorities in the main European cities and involves + 30 members from 18 European countries.
- **EIT Urban Mobility** is an EC supported platform engaging European cities, SMEs, research and education institutions, and mobility industry players (+250 partners across Europe).
- **European Passengers' Federation (EPF)** is the voice of PT users with +35 member associations covering 20 European countries. Its mission is to campaign for comprehensive mobility passenger rights.
- **European Cyclists' Federation (ECF)** unites the cycling movements as the only civil society voice at the pan-European level, with + 60 member in + 40 European countries.
- **International Federation of Pedestrians (IFP)** represents associations and individuals with + 40 members from all over the world, working for liveable public space and rights of pedestrians.

Within the technical annex four organisations have been already selected, to participate to the ICB, and a fifth have been also added:

- **Next Move** – Cluster of Innovators on mobility (+600 members) - Innovators in mobility
- **ALICE** European Technology Platform with + 120 members over the Europe - Logistics industry
- **Walk 21** - International network of professionals working to develop and disseminate international best practice walking policies - Professionals in active mobility
- **European Parking Association** umbrella organization of +20 European parking associations promoting parking solutions for sustainable mobility - Parking industry

It is suggested to add a fifth organisation:

- **PAVE** Europe a coalition of industry, non-profits, and academics with the goal to bring the conversation about automated vehicles (AVs) to the public so everyone can play a role in shaping our future.

Each ICB member will appoint at least one top representative who will be involved at different project stages.

The UPPER Project Management Board will select strategically oriented deliverables where high-level input from the ICB is required. Meetings of the ICB will be organised as stakeholder workshops, eliciting inputs from its members. The UPPER partners responsible for the deliverables where ICB input is sought will participate in a take note of the ICB recommendations, integrating these inputs into the process for producing the necessary documents.

4.2.5. Additional roles

Apart from the mentioned bodies, the following roles will be part of the UPPER project team and management structure:

- Within each work package, the **Task Leaders (TL)** will be the directly responsible for the day-to-day work needed to carry out the tasks related to their specific activity. Their coordination work is not subject to any additional administrative or reporting burden; instead, they will act as team leaders of all the individuals from the different partners involved in a specific task.

Moreover, within each living lab and twinning site, the following roles are designated:

- The **Demo Leader (DL)** or site leader of each one of the 10 UPPER living labs and twinning sites will represent the demo site in front of the consortium and will become the contact point when any information is requested (by the Coordination team or by any WP leader) from the pilot or if any information should be transferred to the local partnership.
- The **Local Evaluation Manager (LEM)** is responsible for the evaluation activities for a specific city or site, coordinating or even performing the data collection of all measures in the city or site. He/she will work together with the demo leader (DL) for the activities of the project or even with the persons specifically responsible for a measure (System integrator-SI) in order to monitor the implementation, to collect data for the impact indicators and gather knowledge for the process evaluation. An important requirement is that the LEM has an independent position in relation to the measures allowing them to have a wide view over all the measures in the city and to have an efficient and objective interaction with the DL and SI. The latter can have some responsibilities in collecting the basic data, but the analysis and interpretation of the data should be the first responsibility of the LEMs supported by the Project Evaluation Manager (PEM). The LEMs will have to refer to the PEM (KUL) that supports the cities in performing the evaluation in an efficient and consistent way and is responsible for the synthesis of all the evaluations carried out in the project. Together with other actors in the project, the project evaluation coordinator will also draw conclusions specifically related to the focus of the project
- The **Privacy & Ethical manager** is the pilot responsible to deal with the local responsible of Data Protection and related Authority and the main contributor to the DMP leader (UITP). This figure will assure that every approach to DT and AI will follow the recommended key principles such as human agency and oversight, privacy and data governance, transparency, fairness, diversity and non-discrimination, societal and environmental well-being, and accountability.
- The **Policy Manager** is an expert of local policy framework at pilot level, that will support to define the pilot policy baseline (T2.4), keep the pilot team updated about any changes at local and national level and monitor commitments from the relevant authorities.
- The **System Integrator** is the responsible for integrating a specific tool in the selected measure selected at pilot level, therefore can be more the one per pilot (e.g. one for each tool that will be integrated). The main responsibility is to assure the smooth tool adoption in the pilot. In case the system integrator, is someone subcontracted, the partner responsible for the subcontracting will assure its proper engagement.
- The **IT Architecture Manager** assures that ITS NAP standardization is applied, promotes interoperability of the data and Open Data policy. Verify with UPPER tool providers and the local system integrator the IT architecture readiness to integrate the tool/measure and provide the baseline dataset. IT architecture manager will have to provide the data collected to the LEM for KPIs monitoring.

5. Key project management processes

5.1. Decision making and conflict resolution

Decision making and conflict resolution processes have the objective to set the procedures, flows and rules based on two main principles:

- All partners have the same voting rights independently of their economic and technical contribution, and
- Decisions to be taken by each Consortium Body (either GA or PMB) (min. quorum 2/3 of the members) will be taken upon 2/3 of the votes.

Project partners should strive to resolve any disagreements amicably. If not resolved at that level, and only if it is strictly necessary, a conflict resolution process must be enforced:

- UPPER participants will escalate the issue to higher management levels until it is resolved (to TL, WPL) and consensus to solve the problem is sought at each level.
- Eventually, if still not resolved, the PMB will take care of the issue applying the same rules.
- Some specific examples of the decision procedures are as follows:
 - Decisions regarding a technical issue of major importance, affecting the input, work content or the project's final outcome are expected to be made by the PMB led by the PC and the TC. In general, all major technical issues and related decisions are announced to all partners, even if the issue is not directly connected to their participation.
 - Decision making for important matters within the frame of the grant agreement and the consortium agreement, especially when such decisions may affect the agreements reached in these two contracts, will be addressed by the PMB.
 - Decision making in the administrative domain is the responsibility of the PC with the support of the PMB. Individual financial issues are primarily the responsibility of the partner itself.

5.2. Communication guidelines

Communication will normally take place via e-mail, telephone or online tool (mainly Teams). This section contains a set of best practices to be followed in order to make the communication process easier.

5.2.1. Mailing list

UPPER will use mailing lists whenever possible, with the objective to facilitate a smooth and fluent internal communication.

To this end, a contact list has been created, containing the contacts of the individuals generally following the implementation of UPPER, as well as the contacts details of the individuals who are responsible for the technical implementation of the respective tasks in UPPER. This list is provided in the Document Repository and is editable by all partners. Each project partner is responsible for regularly checking the contacts for their

organisation in each of the mailing groups are up to date, make changes as required. Based on this contact list the PC will create and update the relevant mailing lists.

With respect to the mailing lists per pilot site, these will include the contacts from the cities themselves and those of the partners with horizontal roles in the project, as identified during the proposal preparation phase. These pilot-specific mailing lists are to be used primarily in relation to the implementation, definition and evaluation of measures specific to an UPPER pilot site.

Table 3. UPPER mailing lists

| Group | Mailing list |
|---------------------------|---------------------------------|
| Valencia demo site | PRJ-UPPER-valencia@uitp.org |
| Rome demo site | PRJ-UPPER-rome@uitp.org |
| Ile de France demo site | PRJ-UPPER-paris@uitp.org |
| Oslo demo site | PRJ-UPPER-oslo@uitp.org |
| Mannheim demos site | PRJ-UPPER-mannheim@uitp.org |
| Lisbon demo site | PRJ-UPPER-lisbon@uitp.org |
| Leuven demo site | PRJ-UPPER-leuven@uitp.org |
| Budapest demo site | PRJ-UPPER-budapest@uitp.org |
| Thessaloniki demo site | PRJ-UPPER-thessaloniki@uitp.org |
| Hannover Region demo site | PRJ-UPPER-hannover@uitp.org |

5.2.2. Document repository

In order to facilitate the exchange of information within the UPPER project, a document repository will be used. The SharePoint space for the UPPER project has been built in TEAMS.

This UPPER Teams space is used to share documents among the partners and maintain current and historical versions of files such as source code and documentation.

Each organisation in the consortium has received the instructions to create the credentials to access and modify the repository.

This space includes a document repository with folders organised in relation with the various tasks and WPs. Moreover, to facilitate the interaction among partners, the possibility of creating chats at WP or Task level is provided to WP and Task leaders.

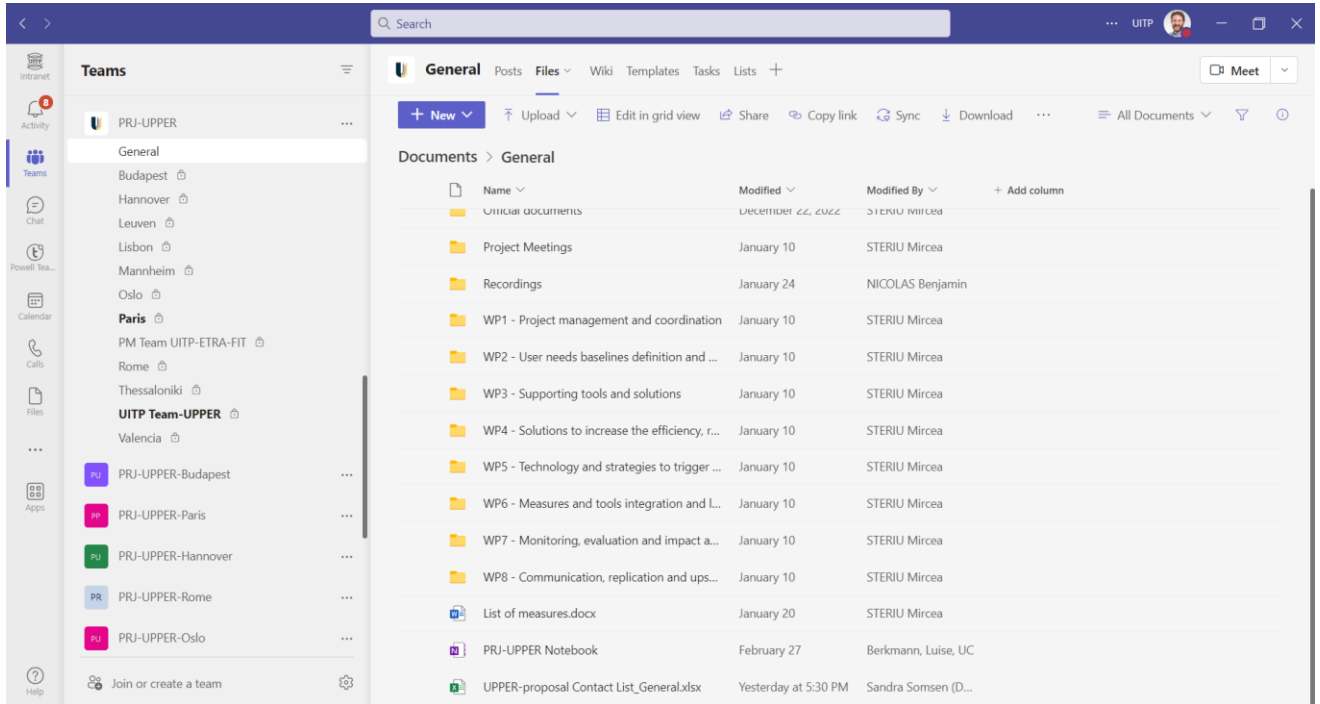



Figure 5. Document repository within UPPER Teams space

The structure allows that all the information produced by the consortium or relevant to the project can be uploaded in a structured and easily retrievable manner. It can and will be updated as the project evolves in order to organise the information in the most efficient way for the partners. All the partners can create new directories in the same logical way, whenever it is needed.

5.2.3. UPPER logo and acronym usage

A specific logo and distinct visual identity have been developed for the project. The logo will be included in all project’s promotional materials including the website, factsheets, etc. together with any other visual elements showing the EU as the funding source for the project activities.

Table 4. UPPER logo, acronym and full name

| UPPER Logo | UPPER Acronym and full name |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p style="text-align: center;">UPPER</p> <p style="text-align: center;">Unleashing the Potential of Public transport in EuRope</p> |

To ensure the quality and integrity of the UPPER logo all partners are requested to use only an appropriate version of the logo downloaded from the document repository.

It is advised that the UPPER logo appears in all UPPER related documents. Any material co-funded with the project budget needs to make explicit reference to it and if possible, make use of the UPPER logo.

The Acronym of the project – i.e., UPPER – is the main representative mark and must be written always in the same way and in capital letters. When possible, it has to be used with the above-mentioned logo, respecting the font and colours.

In accordance with the Grant Agreement and the table of deliverables, a detailed visual style guide will be included in the project Dissemination and Communication plan.

5.2.4. UPPER dissemination actions

The details about the dissemination and communication plan, target groups, and means of communication will be defined in D8.1 “Plan for dissemination, exploitation and communication activities”. Despite this fact, this section aims to introduce one of the key tools that the project will use in order to coordinate and track the participation of partners in dissemination activities and conferences.

All partners are encouraged to promote the UPPER project in their organisation’s respective communication and dissemination activities. To aid in the reporting of project activities, a dissemination tracker will be made available on the document repository. All partners organizing or presenting the project in open forums, events or via publications are asked to fill in the Project Dissemination Tracker available on the project repository: *UPPER dissemination & communication tracker.xlsx*.

5.3. Notification procedures

5.3.1. Notification to the Project Coordinator

As a general procedure any notification sent to the Project Coordinator should be in two signed copies according to the following procedure:

- The person signing the document should be accordingly empowered to do it.
- Always sign the document by the authorised person: administrative and/or technical representative, according to the nature of the notification.
- In case they are not available, find an alternative authorised person empowered to sign the document. In that case, additionally send to the project coordinator two copies of a letter explaining the person is authorised and the empowerment by which they are authorised.
- Send a copy in advance.
- Paper copies should follow by express courier and a notification by e-mail to the project coordinator the day it was sent.
- In case any problem arises, the project coordinator should be contacted to solve the eventual situation.

5.3.2. Bank account: notification of changes

In the event that a partner's bank account changes, the project coordinator should be notified within 2 weeks in advance of any payment.

The bank stamp and the signature of the bank representative are generally required. However, with an attached copy of a recent bank statement, the stamp of the bank and the signature of the bank's representative are not required. The signature of the accountholder and the date are always mandatory.

5.4. Meetings

In order to coordinate and manage the various activities of the UPPER project, meetings will be held at a regular time basis. The Technical Coordinator (TC), in consultation with the Project Coordinator and WPLs, will be in charge of setting up and updating (on a yearly basis) a calendar of meetings that may include dedicated WP meetings, PMB and GA meetings and any webinar and/or workshop organized under WP2 or WP8. Further project meetings may be planned whenever urgent issues need to be solved.

The project intends to run virtual meetings whenever feasible and appropriate using information and communication technologies available. Face-to-face meetings will be organised every 6 months by the project demo sites in rotation.

When specific decisions must be taken in the short term, extraordinary meetings may be held by audio-conferencing, including management aspects that may have as consequence the request of an amendment to the GA; in this case, the voting shall be held via e-mail.

In terms of attendance, and for all UPPER Project Management Board (PMB) meetings, the presence of the Project Coordinator (PC)(chair), Technical Coordinator (TC), Financial Manager (FM), Evaluation Manager (PEM), Communication and Dissemination Manager (CM) and all WP Leaders (or any representatives of their respective companies) is requested.

In relation to the 6 monthly General Assembly (GA) meetings, all partners must attend the physical meeting (or nominate a proxy in case of justified reasons) in each of the project cities and Brussels.

5.4.1. Meeting requests

Meetings are convened by the corresponding chair: the WPL for a WP workshop or meeting, the PC for a PMB meeting and the PC for GA meetings.

The host of the meeting will provide logistics and accommodation information to the participants in case on an in-person meeting. In the case of meetings in a dedicated location in Brussels, the PC will be in charge of organising the meeting.

The tables below summarise the main issues about preparation and organization of meetings.

5.4.2. Convening meetings

The chairperson of a consortium body shall convene meetings of that consortium body.

Table 5. Convening meeting types

| | Ordinary meeting | Extraordinary meeting |
|--------------------------|--------------------------|-----------------------------------------------------------|
| General Assembly | Every 6 months in person | At any time upon written request of any project partner. |
| Project Management Board | Once a month (online). | At any time upon written request of any Member of the PMB |

5.4.3. Notice of a meeting

The chairperson of a consortium body shall give notice in written of a meeting to each member of that consortium body as soon as possible and no later than the minimum number of days preceding the meeting as indicated below.

Table 6. Notice of a meeting

| | Ordinary meeting | Extraordinary meeting |
|--------------------------|---------------------------------|----------------------------------|
| General Assembly | 45 calendar days ⁽ⁱ⁾ | 15 calendar days ⁽ⁱⁱ⁾ |
| Project Management Board | 14 calendar days | 7 calendar days |

⁽ⁱ⁾ 14 calendar days is the absolute minimum established in the CA. However, since General Assemblies are physical meetings and more complex to organize, this period is extended to 45 calendar days.

⁽ⁱⁱ⁾ 7 calendar days is the absolute minimum established in the CA. However, since General Assemblies are physical meetings and more complex to organize, this period is extended to 15 calendar days.

5.4.4. Agenda definition

The chairperson of a consortium body shall prepare and send each member of that consortium body a written (original) agenda no later than the minimum number of days preceding the meeting as indicated below.

Table 7. Agenda definition for a meeting

| | Ordinary meeting | Extraordinary meeting |
|--------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| General Assembly | 21 calendar days. Partners may add items to the agenda until 14 calendar days before the meeting. ⁽ⁱ⁾ | 10 calendar days. Partners may add items to the agenda until 7 calendar days before the meeting. ⁽ⁱⁱ⁾ |
| Project Management Board | 14 calendar days. Partners may add items to the agenda until 7 calendar days before the meeting. | 7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting. |

⁽ⁱ⁾ 14 calendar days is the absolute minimum established in the CA. However, since General Assemblies are physical meetings and more complex to organize, this period is extended to 21 calendar days.

⁽ⁱⁱ⁾ 7 calendar days is the absolute minimum established in the CA. However, since General Assemblies are physical meetings and more complex to organize, this period is extended to 10 calendar days.

5.4.5. Meeting schedule

Considering the project work plan and the budget constraints for meeting purposes, a preliminary schedule for the meetings during the entire lifetime of the project has been created. This plan will be updated on a yearly basis.

For practical reasons, the following schedule only identifies the most convenient month to host each meeting, the exact dates and venue will be decided by the PMB considering availability of partners, rooms and progress of activities.

Table 8. Meeting schedule

| Year | Meeting | Host | Location | Month | Project Month |
|---------|----------------------------------------|------|----------|-----------------|---------------|
| 2023 | Kick Off | UITP | Brussels | Jan 23 | M1 |
| 2023 | General Assembly | VGP | Paris | Jun 23 | M6 |
| 2023/24 | General Assembly | RSM | Rome | Dec 23 / Jan 24 | M12 |
| 2024 | General Assembly + 1 st PPR | UITP | Brussels | Jun 24 | M18 |
| 2024/25 | General Assembly | EMT | Valencia | Dec 24 / Jan 25 | M24 |
| 2025 | General Assembly | NPRA | Oslo | Jun 25 | M30 |
| 2025/26 | General Assembly + 2 nd PPR | UITP | Brussels | Dec 25 / Jan 26 | M36 |
| 2026 | General Assembly | MAN | Mannheim | Jun 26 | M42 |
| 2026 | General Assembly + Final event | UITP | Brussels | Dec 26 | M48 |
| 2027 | Final Review | UITP | Brussels | Jan / Feb 27 | |

5.4.6. Virtual meetings

The Project Coordinator has established the Microsoft Teams platform for the management of virtual meetings. If necessary, other tools – as Webex, Skype or phone calls – can also be used.

The virtual meetings will be used for the monitoring of the project progress or specific work sessions – i.e. webinars. Some basic recommendations to be followed when organising/participating at the virtual meeting can be found hereafter:

- Virtual meetings will be limited in duration. It is recommended to avoid long meetings – no longer than 1.5h.
- All partners are requested to connect to the virtual meeting service 5 minutes in advance, to solve any potential technical problems.
- All microphones must be muted when the partner is not actively participating in the discussion.
- Any partner joining or leaving the meeting is requested to announce it, preferably through the chat tool.
- Even if the service enables the sharing of a screen, it is recommended to circulate in advance – i.e. upload to the project repository – all the material to be used during the meeting.

5.4.7. Minutes of the meeting

The following rules will apply to meeting minutes prepared within the project duration:

5.4.7.1. *Recordings*

Minutes must be recorded for every official project meeting. A rapporteur is appointed at the start of the meeting. Meeting minutes will be taken in turn in the following manner:

- GA and PMB: minutes are taken by the chairperson of the meeting, supported by at least one designated member of a consortium partner.
- Other meetings: minutes are recorded by the member organisation hosting the meeting.

A copy of the minutes will be archived in the project repository.

5.4.7.2. *Consolidation / Approval*

The chairperson of a consortium body shall produce written minutes of each meeting which shall be the formal record of all decisions taken. Draft minutes shall be sent to all members within 10 calendar days of the meeting.

The minutes shall be considered as accepted if, within 15 calendar days from sending, no member has sent an objection in writing to the chairperson.

5.4.7.3. *Circulation / Distribution*

The chairperson will circulate the final version of the minutes to all the partners that were called to the meeting and to the PC.

5.4.7.4. Content

The minutes must at least contain:

- The meeting attendance list;
- The approved meeting agenda, including date and venue;
- Decisions taken, including motivations as far as possible;
- An action list containing for each action a short description, a responsible and a time schedule (if an action was given to a person not attending the meeting, a person for contacting that person needs to be given);
- A list of agreed upcoming events;
- If appropriate, a list of related documents (appendices).

6. Reporting process

In agreement with the Grant Agreement and the Consortium Agreement, the UPPER Reporting is composed by two different layers:

- Official Progress Reporting: formally requested by EC at the end of each reporting period (Month 18, Month 36, Month 48);
- UPPER Internal six-month Reporting: requested every 6 months, to keep a proper control of the project financial resources usage and technical enhancement.

All beneficiaries are requested to fill in specific templates according to the schedule below:

Table 9. UPPER Periodic Reports

| Semester – Reporting period | Period covered by the SFR | Delivery date |
|-----------------------------|---------------------------|-----------------------------------|
| Semester 1 – PR1 | January-June 2023 | 21 st of July 2023 |
| Semester 2 – PR1 | July-December 2023 | 19 th of January 2024 |
| Semester 3 – PR1 | January-June 2024 | 26 th of July 2024 |
| PR1 Official reporting | January 2023 -June 2024 | 31 st of August 2024 |
| Semester 4 – PR2 | July-December 2024 | 17 th of January 2025 |
| Semester 5 – PR2 | January-June 2025 | 18 th of July 2025 |
| Semester 6 – PR2 | July-December 2025 | 23 rd of January 2026 |
| PR2 Official reporting | July 2024 -December 2025 | 28 th of February 2026 |

| | | |
|------------------------|-----------------------|-----------------------------------|
| Semester 7 – PR3 | January-June 2026 | 17 th of July 2026 |
| Semester 8 – PR3 | July-December 2026 | 22 nd of January 2027 |
| PR3 Official reporting | January-December 2026 | 28 th of February 2027 |

Each report is composed by a financial and a technical (narrative) section. Below are presented templates and guidelines, beneficiaries have to follow to be compliant with UPPER reporting procedures.

6.1. Six-monthly report

As part of an internal monitoring activity, every six months the coordination team will ask the partners to complete two documents to gather the information on the resources spent per partner, the work performed and any justification for any delay and deviation in the implementation of the actions or budget allocation. This six-monthly report is for UPPER management internal use only and will not be reported to the EC. Scope of this internal report is to help the coordination team to have a better control on the work done, the resources spent, detect potential deviations and take corrective actions if needed.

- For the Technical Report, the Technical Coordinator will request the partners to provide, following the **Annex A**: Technical semester report Template technical report template, with a brief description of the work developed and the progress achieved with respect to the plan during the 6 months period coverage.
- For the Financial Report, the Financial Manager will request project partners to provide financial semester report template (**Annex B**: Financial semester report Template); an excel file containing the following information: i) Effort in days; ii) Costs by category. To properly fill in this report partner might follow **Annex C**: Financial Report Guidelines guideline and **Annex D**: Time declaration Template time-recording template, requested in Horizon Europe Programme, as well.

The six-monthly internal report will follow the schedules below:

| Action | By when |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Step 1: All beneficiaries receive a notification with an action plan and templates to filled in | 30 days before the end of the Semester |
| Step 2: Each beneficiary fills the six-monthly technical and financial reports | 21 days after the end of the Semester |
| Step 3: Financial manager and technical coordinator requires adjustment, clarification and justification to specific partners, only in case of deviation presented | 25 days after the end of the Semester |
| Step 4: Beneficiary, if requested, will produce an updated version of the report | 35 days after the end of the Semester |
| Step 5: Financial Manager and the Technical Coordinator will consolidate the Financial and Technical reports with assessment of deviations | 60 days after the end of the period |

6.2. Project Periodic Report

Three official reporting periods are defined within the UPPER work plan:

Table 10. UPPER Periodic Report (PPR)

| | Project Timing | Month/ Year |
|------|----------------|------------------------------|
| PPR1 | M1-M18 | January 2023 - June 2024 |
| PPR2 | M19-M36 | July 2024 – December 2025 |
| PPR3 | M37-M48 | January 2026 – December 2026 |

The Project Periodic Report will follow the template provided by the EC for the Horizon Europe Programme. It contains the periodic narrative and financial reports.

The periodic report consists of two parts:

- **Part A** of the periodic narrative report contains the cover page, the table of contents, the list of participants, a project summary and the answers to the questionnaire covering issues related to the project implementation and the economic and social impact, notably in the context of the Horizon Europe key performance indicators and the Horizon Europe monitoring requirements. Part A is generated by the IT system.
- **Part B** of the periodic technical report is the narrative part that includes explanations of the work carried out by the beneficiaries during the reporting period. Part B needs to be uploaded as a PDF document and will contain the following sections:
 - Explanation of the work carried out by the beneficiaries and overview of the progress.
 - Follow-up of recommendations and comments from previous review(s) (if applicable).
 - Exploitation primarily in non-associated third countries (if applicable).
 - Open science.
 - Deviations from Annex 1 and Annex 2 (if applicable).
 - Update of the plan for exploitation and dissemination of result (if applicable).
 - Update of the data management plan (if applicable).
 - The periodic financial report consists of:
 - Individual financial statements (Annex 4 to the GA) for each beneficiary.
 - Explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary for the reporting period concerned.
 - A periodic summary financial statement including the request for interim payment.

The Project Periodic Report (PPR) must be consistent with the six-monthly reports provided both at technical and administrative levels. FIT, as Financial Manager, will check consistency of financial data and, if any difference arises or in case there are relevant deviations with respect to the plan, the Financial Manager will ask the partner to correct it or to provide a justification of the deviation within ten days from notification. Finally, the Project Coordinator will forward the PPR to the EC.

The way of proceeding for the Project Periodic Report is detailed in the table below:

| Action | By when |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Step 1: All beneficiaries receive a notification with an action plan and templates to be filled in | 30 days before the end of the Period |
| Step 2: Each beneficiary fills the six-monthly technical and financial reports, consolidating all semester reports belonging to the specific Project Period Report under production | 21 days after the end of the period |
| Step 3: Financial manager and technical coordinator requires adjustment, clarification and justification to specific partners, only in case of deviation produced | 25 days after the end of the period |
| Step 4: Beneficiary, if requested, will produce an updated version of the report, which has to be validated by financial manager and technical coordinator. | 35 days after the end of the period |
| Step 5: Beneficiaries will upload financial reporting covering the entire Reporting period on-line, by filling in the Form C into the EC participant portal. | 45 days after the end of the period |

6.3. Financial control and deviations

The activity of financial control applied every six months has the ultimate objective to evaluate each semester partner financial reporting avoiding any un-expected deviation with respect of the agreed plan. Being this an internal and unofficial reporting, if any deviations will be identified, they will be anticipated directly by beneficiaries to the Financial Manager and the Technical Coordinator. The management team will cooperate with the partner in order to find common agreed solution to overcome these deviations before the official reporting to the European Commission. Solutions will be presented to the coordinator and to the Project Officer, for their approval.

In addition to this semester check, formal deviation control and corrective actions will be applied at each official periodic report.

At these official reporting deadlines, the financial control will identify all relevant deviations, asking partners to provide justifications and corrective actions. These deviations duly justified will be processed by the management team and formally submitted to the coordinator for its formal approval and consequent financial plan adjustment, before requesting the formal approval of the European Commission.

According to the previous experience in past and running EU funded projects, few financial deviations occur quite often into the projects' lifecycle.

Minor deviations between the preliminary plan (as the one provided at the proposal stage) and actual reporting will always occur and are accepted. UPPER project will have therefore a degree of flexibility in accepting minor deviations, as outlined in the following paragraphs.

Any major deviation that will not be duly justified or not accepted by the management team or not ratified by the positive vote of the coordinator, will be rejected.

A rejection of these deviations will imply for the partner(s) involved a consequent adjustment of their financial reporting, solving the deviation initially included.

Partner(s) could always revise the financial report and/or the justifications in order to be acceptable by the management team in the following financial period.

6.3.1. UPPER major vs minor deviations

To create an easy approach on deviations, it has been set at +/-20% of deviation of actual resources against the ones originally planned, as the threshold for a major deviation.

- A deviation in effort or in cost higher than +20% of the plan will be considered as major deviation and therefore the extra costs/effort will be rejected.
- A deviation in effort or in cost higher than - 20% of the plan will be considered as major deviation and therefore the un-spent effort/costs will be considered as structural. It means that the financial Manager and the technical coordinator will evaluate the capability of the partner to recover this under-spending in agreement within the partner itself. If not, the under-spending budget will be transfer to other partners, according to the project needs.

Partners always have the possibility to justify such major deviations and the management team the possibility to accept them, if clearly justified and with an approved remedial action. Below are listed some of the “typical” deviations that could occur during the project lifetime and that the Quality financial control should identify and solve:

- Deviation in effort and personnel costs allocations:
 - Partner will use a number of working days not aligned with the plan, especially if analysed the effort at WP level. Major deviations at WP level (even if this deviation will not appear globally to the partner level) will only be accepted by the management team if clearly justified.
 - Sometimes partners use an actual average daily salary rate lower than the one identified at the project proposal stage and agreed within the original financial plan. In order to reach, then, the expected amount of personnel cost assigned, partners tend to adjust accordingly the number of working days (increasing them with respect of the plan, to compensate the lower salaries). Major adjustments (increment) needed to reach expected value on personnel cost will not be accepted, unless clearly justified. In order to avoid it, UPPER will apply an analysis of deviation to working days and to average salary rates.

- Deviation in Cost allocations:

Sometimes, partner budget expenses to different cost categories differs from the planned resources. UPPER will try to avoid major budget transfer between cost categories to keep a strong coherence with planned budget structure. According with this basic approach UPPER will evaluate deviations by cost categories, measuring cost deviations (planned versus actual) within each of the following categories:

- Personnel cost
- Travel costs
- Subcontracting costs
- Internally invoiced costs
- Other goods and service costs
- Equipment costs

Major deviations within each of the mentioned category will be rejected, unless properly justified.

6.3.2. Budget transfer between partners

In principle, UPPER project does not accept any budget and effort transfer from one partner to another. Each partner indeed, has its own plan of working days allocation and financial expenditure plan.

If one partner needs to update this structure, not increasing its overall financial amount assigned, should formally ask to the Financial Manager an update of its financial plan moving resources from one category to another, clearly justifying requested changes (example: this is the case when a partner want to move some of its travel budget – minor change - to personnel one, or if it wants to update the number of working days without changing the personnel cost – minor change).

Nevertheless, UPPER project accepts minor resource transfer (5% of cost of the category) from one partner to another one according to the following rules:

- Both partners agreed to this change (the one who will receive the added resources and the one that will reduce its resources).
- The transfer is clearly justified.
- The transfer has no impact on the activity planned.
- The shift is accepted by the Financial Manager and by the technical coordinator.

6.3.3. Delaying contributions

In order to assure to the project a smooth running of its activities, including a delivery process aligned with the expectations of the European Commission, the coordinator has introduced stern corrective actions for partners who do not respect the deadlines stated above. In time delivery of financial and administrative contribution is one of the most critical issues, especially within large consortia. Delay of one single partner imposes to the entire consortium a delay in the submission of the mandatory reports.

Whenever one of the expected financial reporting documents, Financial Statement, Time recording, Forms C, only for the ones expected at the official reporting periods (M18, M36, M48), is not submitted in time by a partner, the associated integrated report will be submitted to the European commission without that partner contribution. In case of financial related documents, it means that no funds will be given to that partner for a specific reporting period. Under this situation the default partner is able, anyhow, to recover these funds into the next reporting period, adding these expenses as adjusted costs of previous period.

This rule will be applied unless the delay is clearly justified by the involved partner and communicated to the financial manager and technical coordinator before the end of the reporting period, which have to accept the justifications behind.

As a standard rule on report delay by partners, the coordinator will have the opportunity to give a maximum of four extra weeks to the pending partner to provide the financial pending reports. After this extra time and without a specific justification, the report will be submitted to the European Commission without the partner's contribution.

To support Financial Statement, time recording, Forms C and CFS delivery, the financial manager and the technical coordinator will constantly keep informed partners about the status of missing Forms.

6.4. Coherence analysis

This monitoring process covers the last quality plan control expected within UPPER project on financial and technical report: once performed the quality control of technical-scientific documents and once performed the financial monitoring, UPPER will implement the third quality control, the evaluation of the coherence between activities performed versus resources used. This will be applied at the time of the official project reporting only.

Due to its interdisciplinary nature, coherence analysis and monitoring will require collective effort of the entire management team, the financial manager and the Technical Coordinator. Evaluation manager support could be requested to optimise the comprehensive understanding of the involved documents under evaluation.

Objectives for the coherence analysis:

The development and implementation of coherence analysis monitoring mechanism for an activity refers to the overall objective of ensuring that each scientific work and its connected resource usage are coherent among each-others.

To assess the accomplishment of this condition, all scientific outputs should be already validated from a quality control point of view and involved financial resources associated to, already validated by the financial monitoring process. Once these controls have been performed, scientific outputs and financial resources used to implement them will be finally connected.

According to this process, the coherence analysis process is the ultimate and most complex analysis of the state of the work and does not use standardised approach. On contrary an in-depth analysis of the work performed, and the resources consumed is expected by the managers involved in the process.

Each WP will be analysed according to the following approach:

- First, it will be identified the status of the content produced and level of objectives achievement. Within this phase, each WP will be measured according to its accomplishment of expected results planned, identifying any eventual delays or gaps.
- Once the evaluation process for each WP has been achieved, a clear deviation list will be produced, identifying the reasons and the partners involved in these deviations: expected outputs not delivered, responsibilities of delays. On contrary, anticipation to expected work will be outlined as well, if any. No inconsistency with plans should be identified considering that the work of each WP has been already evaluated during the quality control phase.
- Once the delay/deviation/anticipation analysis on expected contents and objectives has been identified at WP level, the Coherence analysis process will merge this analysis results with the status of resources consumed (effort usage). For each WP a deviation table summary in terms of effort will be produced, comparing actual resources used with the planned ones.
- Expected results of the coherence analysis: Deviation on expected objectives and deviation on expected resources will be finally compared:
 - WP affected by delays in activities should present proportional under-spending in terms of resources (effort) consumed.

- WP affected by anticipations in activities should presents proportional over-spending in terms of resources (effort) consumed.
- WP not affected by any deviation in terms of accomplished activities should presents no deviations in terms of resources (effort) consumed.

Three previous scenarios are the coherent situations expected by the analysis. On the contrary, incoherence situations (see list below) will not be accepted, and clear justifications will be asked to partners involved, to clarify the unusual combinations:

- WP affected by delays in activities presenting over-spending in terms of resources (effort) consumed.
- WP affected by anticipations in activities presenting under-spending in terms of resources (effort) consumed.
- WP not affected by any deviation in terms of accomplished presenting deviations in terms of resources (effort) consumed.
- WP affected by deviation in activities accomplished (delay or anticipation) presenting no deviation in terms of resources (effort) consumed.

In the presence of incoherence between activities performed and resources consumed, the activity description will be considered the independent variable. It will be asked to adjusted resources used in order to become coherent with the status of activities performed.

7. Quality Management

The main goal of project management is to provide a focused, lean but effective framework to support the partnership in achieving the scientific, technical and business objectives of the project. Efficient decision-making processes and swift responsiveness to changing circumstances are required.

The quality of the project management is ensured by a quality assurance plan. This section describes how UPPER will put into operation - from a very pragmatic perspective -, all the previously described principles, taking into consideration the specific strengths and constraints of the consortium. The goal is to define the principles and procedures that, whilst being as flexible, agile and cost-efficient as possible, leave no room to subjective interpretation.

As a part of a quality assurance plan, the project will apply an internal reviewing procedure to guarantee the quality of its results.

Moreover, a key aspect within the quality management is the project's risk management process. A continuous risk assessment will allow that in case of problems, the required corrective actions are initiated in co-operation with the concerned partners.

7.1. Internal reviewing procedure

The internal reviewing procedure is one of the main tools to guarantee the high quality of the results. Each WPL is responsible for the quality of the results delivered under each WP.

The project deliverables are the main outcomes collecting the results of the project. The main beneficiary of each deliverable is the main responsible of its quality. Moreover, a backup leader has been nominated for each deliverable, just in case the main responsible becomes unavailable.

To guarantee the highest quality of the deliverables, they will be subject to a peer review by at least two additional experts. For the most relevant public deliverables, one of these experts will be one member of the Impact Creation Board.

The peer review team must check the quality of the deliverable (in shape and content) before the submission to the EC. Moreover, UITP and ETRA, as project and technical coordinators respectively, will review the deliverables before the final submission.

The coordination team has elaborated a table which defines the partners in charge of the internal review of UPPER deliverables, ensuring a balanced workload for all of them not only in terms of the number of reports to be reviewed by each partner but also creating enough space in time to avoid several deliverables to be reviewed by the same partner in a short period of time. It is important to highlight that both, ETRA as TC and UITP as PC, will review the relevant deliverables when a project milestone is related.

Table 10. Peer review

| KEY DATES | | | | | | PARTNERS RESPONSIBILITIES | | | |
|-----------|------------------|-------------------|------------------------|---------------------------|-----------------|---------------------------|--------|---------------|--------------------------|
| # | Due date (month) | Table of Contents | Send peer-reviewers to | Send coordination team to | Submission date | Main responsible | Backup | Peer-review | Coordination team review |
| D1.1 | M3 | 30-jan-23 | 09-mar-23 | 24-mar-23 | 31-mar-23 | ETRA | UITP | FIT & UITP | UITP & ETRA |
| D1.2 | M6 | 01-may-23 | 08-jun-23 | 23-jun-23 | 30-jun-23 | UITP | ETRA | ETRA & KUL | UITP & ETRA |
| D1.2_rev | M18 | 01-may-24 | 08-jun-24 | 23-jun-24 | 30-jun-24 | UITP | ETRA | ETRA & KUL | UITP & ETRA |
| D1.2_rev | M36 | 01-nov-25 | 09-dec-25 | 24-dec-25 | 31-dec-25 | UITP | ETRA | ETRA & KUL | UITP & ETRA |
| D1.2_rev | M48 | 01-nov-26 | 09-dec-26 | 24-dec-26 | 31-dec-26 | UITP | ETRA | ETRA & KUL | UITP & ETRA |
| D2.1 | M10 | 01-sep-23 | 09-oct-23 | 24-oct-23 | 31-oct-23 | IBV | FIT | ICLEI & EITUM | UITP & ETRA |
| D2.2 | M7 | 01-jun-23 | 09-jul-23 | 24-jul-23 | 31-jul-23 | FIT | ETRA | KUL & RC | UITP & ETRA |
| D2.3 | M9 | 01-aug-23 | 08-sep-23 | 23-sep-23 | 30-sep-23 | KUL | FIT | FIT & CERTH | UITP & ETRA |
| D2.4 | M10 | 01-sep-23 | 09-oct-23 | 24-oct-23 | 31-oct-23 | ETRA | FIT | PTV & RC | UITP & ETRA |
| D3.1 | M16 | 01-mar-24 | 08-apr-24 | 23-apr-24 | 30-apr-24 | ETRA | RC | EMT & IFPEN | UITP & ETRA |
| D3.1_rev | M28 | 01-mar-25 | 08-apr-25 | 23-apr-25 | 30-apr-25 | ETRA | RC | EMT & IFPEN | UITP & ETRA |
| D3.2 | M16 | 01-mar-24 | 08-apr-24 | 23-apr-24 | 30-apr-24 | PTV | RC | RSM & VAL | UITP & ETRA |
| D3.2_rev | M28 | 01-mar-25 | 08-apr-25 | 23-apr-25 | 30-apr-25 | PTV | RC | RSM & VAL | UITP & ETRA |
| D3.3 | M16 | 01-mar-24 | 08-apr-24 | 23-apr-24 | 30-apr-24 | RC | ETRA | RUTER & LEU | UITP & ETRA |
| D3.3_rev | M28 | 01-mar-25 | 08-apr-25 | 23-apr-25 | 30-apr-25 | RC | ETRA | RUTER & LEU | UITP & ETRA |
| D3.4 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | ETRA | RC | IBV & EMT | UITP & ETRA |
| D3.5 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | POLIS | RC | ROM & HAN | UITP & ETRA |
| D4.1 | M16 | 01-mar-24 | 08-apr-24 | 23-apr-24 | 30-apr-24 | ETRA | CERTH | IS & BKK | UITP & ETRA |
| D4.1_rev | M28 | 01-mar-25 | 08-apr-25 | 23-apr-25 | 30-apr-25 | ETRA | CERTH | IS & BKK | UITP & ETRA |
| D4.2 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | IFPEN | CERTH | RUTER & TTS | UITP & ETRA |
| D4.3 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | FACTUAL | CERTH | IBV & REDL | UITP & ETRA |
| D4.4 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | CERTH | ETRA | RNV & EMTA | UITP & ETRA |

| | | | | | | | | | |
|----------|-----|-----------|-----------|-----------|-----------|---------|-------|---------------|-------------|
| D4.5 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | UITP | CERTH | FAC & SIS | UITP & ETRA |
| D5.1 | M16 | 01-mar-24 | 08-apr-24 | 23-apr-24 | 30-apr-24 | IBV | ETRA | FAC & MAN | UITP & ETRA |
| D5.1_rev | M28 | 01-mar-25 | 08-apr-25 | 23-apr-25 | 30-apr-25 | IBV | ETRA | FAC & MAN | UITP & ETRA |
| D5.2 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | FACTUAL | IBV | ECF & REDL | UITP & ETRA |
| D5.3 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | FIT | IBV | IFP & EPF | UITP & ETRA |
| D5.4 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | IBV | ETRA | CERTH & SIS | UITP & ETRA |
| D6.1 | M20 | 02-jul-24 | 09-aug-24 | 24-aug-24 | 31-aug-24 | ETRA | RSM | RNV & LEU | UITP & ETRA |
| D6.2 | M24 | 01-nov-24 | 09-dec-24 | 24-dec-24 | 31-dec-24 | ETRA | RSM | RSM & IPR | UITP & ETRA |
| D6.3 | M45 | 01-ago-26 | 08-sep-26 | 23-sep-26 | 30-sep-26 | UITP | ETRA | ROM & IFPEN | UITP & ETRA |
| D7.1 | M6 | 01-may-23 | 08-jun-23 | 23-jun-23 | 30-jun-23 | KUL | ETRA | POLIS & EMTA | UITP & ETRA |
| D7.2 | M45 | 01-aug-26 | 08-sep-26 | 23-sep-26 | 30-sep-26 | FIT | KUL | TML & UPV | UITP & ETRA |
| D7.3 | M45 | 01-aug-26 | 08-sep-26 | 23-sep-26 | 30-sep-26 | CERTH | KUL | PTV & IS | UITP & ETRA |
| D7.4 | M48 | 01-nov-26 | 09-dec-26 | 24-dec-26 | 31-dec-26 | KUL | ETRA | UPV & TTS | UITP & ETRA |
| D7.5 | M48 | 01-nov-26 | 09-dec-26 | 24-dec-26 | 31-dec-26 | UITP | KUL | EUR & THETA | UITP & ETRA |
| D8.1 | M6 | 01-may-23 | 08-jun-23 | 23-jun-23 | 30-jun-23 | EUR | UITP | ICLEI & POLIS | UITP & ETRA |
| D8.1_rev | M18 | 01-may-24 | 08-jun-24 | 23-jun-24 | 30-jun-24 | EUR | UITP | ICLEI & POLIS | UITP & ETRA |
| D8.1_rev | M25 | 02-dec-24 | 09-jan-25 | 24-jan-25 | 31-jan-25 | EUR | UITP | ICLEI & POLIS | UITP & ETRA |
| D8.1_rev | M36 | 01-nov-25 | 09-dec-25 | 24-dec-25 | 31-dec-25 | EUR | UITP | ICLEI & POLIS | UITP & ETRA |
| D8.2 | M20 | 02-jul-24 | 09-aug-24 | 24-agg-24 | 31-agg-24 | POLIS | UITP | EITUM & EUR | UITP & ETRA |
| D8.2_rev | M36 | 01-nov-25 | 09-dec-25 | 24-dec-25 | 31-dec-25 | POLIS | UITP | EITUM & EUR | UITP & ETRA |
| D8.3 | M42 | 01-may-26 | 08-jun-26 | 23-jun-26 | 30-jun-26 | EUR | UITP | TML & NPRA | UITP & ETRA |
| D8.4 | M32 | 02-jul-25 | 09-aug-25 | 24-aug-25 | 31-aug-25 | FIT | UITP | TheTA & CML | UITP & ETRA |
| D8.4_rev | M48 | 01-nov-26 | 09-dec-26 | 24-dec-26 | 31-dec-26 | FIT | UITP | CARRIS & HAN | UITP & ETRA |
| D8.5 | M45 | 01-aug-26 | 08-sep-26 | 23-sep-26 | 30-sep-26 | UITP | EUR | EPF & ECF | UITP & ETRA |
| D8.6 | M32 | 02-jul-25 | 09-aug-25 | 24-aug-25 | 31-aug-25 | RC | UITP | BKK & IPR | UITP & ETRA |
| D8.6_rev | M48 | 01-nov-26 | 09-dec-26 | 24-dec-26 | 31-dec-26 | RC | UITP | VGP & OSLO | UITP & ETRA |

A specific timeline has been established for the internal reviewing procedure. The main responsible of each deliverable will provide (or upload in the repository) the proposed table of contents at least 60 days before the submission date. A preliminary full version of the deliverable will be sent to the WPLs as well as to the peer reviewers allocated in the table at least three weeks in advance of the due date. The Project Coordinator and the Technical Coordinator will be also informed. It needs to be noted that early draft versions of the deliverable should be periodically circulated in order to confirm that the work progresses as expected, and progress update will be reported during the monthly PMB meetings.

Peer reviewers will review the document and send comments within one week using the track changes mode in the draft version of the document. In case they encounter that the document does not fulfil the requirements for such document, they will notify accordingly the deliverable responsible partners within one week after the request.

The deliverable responsible will have 1 week to modify the document according to the comments and feedback received from the peer-reviewers. Upon confirming with the peer reviewers that their comments have been effectively addressed, the final version will be sent to the PC and TC at least one week before the delivery date.

In the case that the deliverable fulfils the required objectives, the PC will submit it to the EC and will send an e-mail to all the partners to notified them of the submission. In this way, all partners will be aware of the evolution of the project.

Whether the deliverable responsible partner fails to deliver the document, or the document does not fulfil the objectives, the PMB will take the required actions according to the provisions of the consortium agreement and contract.

The process of internal review is summarized in the following diagram:

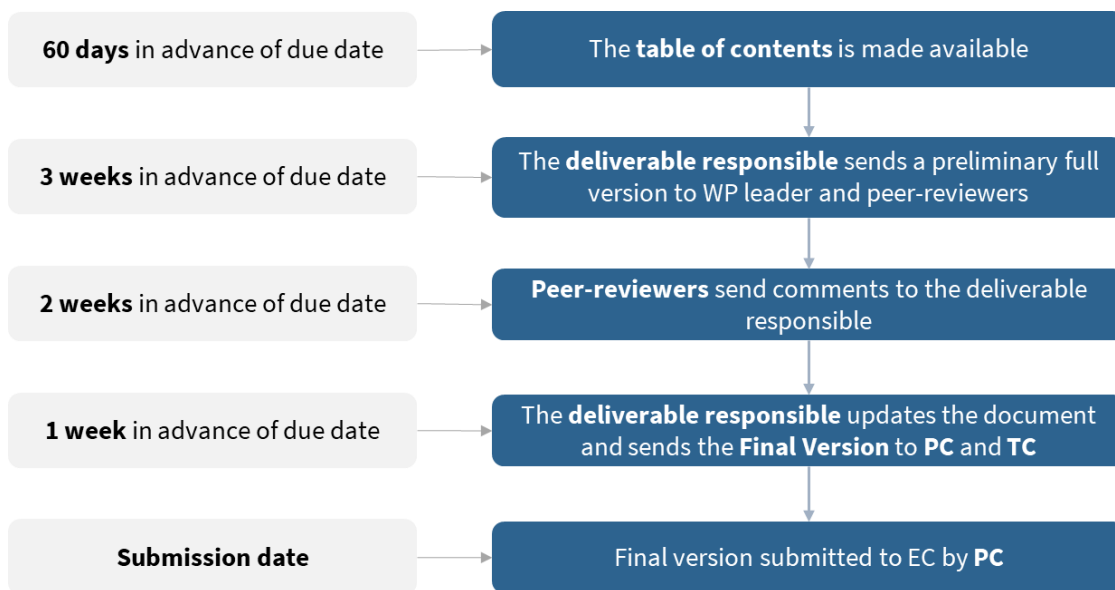


Figure 6. Internal review procedure

The document review could be notified with one of the following summary evaluation:

- Accepted
- Accepted with minor modifications
- Rejected

The reviewers return the document (in track changes mode if changes are needed) to the responsible lead partner and to the Technical Manager.

If the document is accepted or accepted with minor modification, the responsible lead partner produces a final version of the document within 1 week, taking into account the minor comments received.

If the document is rejected, a new version has to be produced (in this case, consensus among reviewers, partners and Technical Manager is settled, in particular on the delivery date of the new version), and the process restarts.

To standardise the review process, the Reviewer should perform the quality control against the following main criteria:

- Stated objectives and requirements – is the document in line and answering the stated objectives and requirements?
- Logical structure of the document – does the organisation of the document follow a logic and coherent structure (objectives, methodologies, results, recommendations)?
- Clearness of concepts, analysis and conclusions – is the document clear in terms of description of methodologies, procedures, analysis, results and conclusions?
- Language proficiency – English style, easiness (smooth) to read.
- Presentation and graphical appearance and compliance with the deliverable fixed layout.

7.2. Deliverables & other documents preparation guidelines

7.2.1. Deliverables and documents

The main responsible for the quality of a deliverable is the main beneficiary or deliverable owner. However, to guarantee the excellence of the project results, UPPER has established a peer review process through which the deliverable quality is checked by the WP leader, the coordination team and also two experts, according to the procedure described in section 8.1. The consortium has elaborated a table (Table 10) to allocate the responsibilities for the peer-to-peer review of each deliverable, trying to ensure that all partners participate in this process in a balanced way.

The templates for the deliverables are available at the project repository. The document shall contain all the logos and it will be formatted according to this handbook recommendations and the visual identity handbook.

Once the project coordinator has submitted the deliverable to the EC, the final documents will be also uploaded (both DOC and PDF version) in the repository document library. At least the project coordinator will keep an additional copy for backup and security reasons.

7.2.2. Documents numbering and naming convention

The deliverables are classified according to the following types:

- **R:** Document, Report.
- **DEM:** Demonstrator, pilot, prototype.
- **DEC:** Websites, patent filling, videos, etc.
- **OTHER:** Other.
- **ETHICS:** Ethics requirement.
- **ORDP:** Open Research Data Pilot.
- **DATA:** data sets, microdata, etc.
- **DMP:** Data Management Plan

With respect to the confidentiality of deliverables and other documents, including presentations, the following levels of security are considered in UPPER:

- **PU:** Public — fully open (automatically posted online on the Project Results platforms)
- **SEN:** Sensitive — limited under the conditions of the Grant Agreement
- EU classified (EUCI) under Decision 2015/444:
 - RESTREINT-UE/EU-RESTRICTED (**R-UE/EU-R**),
 - CONFIDENTIEL-UE/EU-CONFIDENTIAL (**C-UE/EU-C**),
 - SECRET-UE/EU-SECRET (**S-UE/EU-S**)

All these documents will be named and numbered according to the following rules, in order to facilitate the quick identification and indexing:

UPPER_D<dnum>_<docshortname>_<security>_v<ver>.pdf

All documents' names start with the word "UPPER", in order to facilitate the identification with other projects documents, and to raise the awareness of the project within a number of people that will download the documents from the public website.

Versions "v0.X" will indicate that the document is still a draft not approved by the internal reviewers. The official document to be sent to the EC will be numbered as "v1.0".

For example, deliverable D1.1 Project management handbook, having a "public" security level, would be named in the following way:

UPPER_D1.1_Project management handbook _co_v1.0.docx

In order to facilitate the work and localisation of the documents, all documents will be posted in the repository as soon as possible.

7.2.3. Document interchange format

All the text documents exchanged within the project must observe the following rules:

- Format *.docx/doc (Word or equivalent) or *.pdf.
- Track of changes activated (in case of word file).
- Throughout the UPPER deliverables, publications and so on, all numbers like one, two, ... under ten should be spelled out in letters, while 11 and over should be in numerals.
- After the final document has passed the peer review, the project coordinator submitting the document to the EC will generate the PDF file, properly secured.

- It is recommended not to send attachments by e-mail but rather place them on the project repository. Then, the person who has uploaded the document will notify it within the appropriate WP group, announcing the location where the document can be retrieved.
- The presentations will use the *.pptx/ppt format (or equivalent) according to the template available at the repository.
- The six-monthly reports, which are part of internal reporting, have specific templates.
- The deliverables, interim milestone brief reports and documents must follow the format and styles indicated in the template available in the corresponding section of UPPER repository.
- These templates can evolve according to the project needs.

7.2.4. Meeting minutes and agenda

As stated in section 6.4 the reporting of meetings is mandatory to guarantee that the decisions taken are known and accepted by all the people working in the project. The chairperson of the meeting will be responsible of producing the minutes using the UPPER OneNote available as part of the project repository.

The next guidelines should be followed for the elaboration of the meeting minutes:

- The minutes should be stored in the project repository in no more than 15 days.
- The minutes should include the following parts: attendees, agenda items, discussion, decisions and further actions.

7.2.5. Presentations, posters and graphic materials

Any presentation related to the project work in progress or results will be created from the corporate presentation template available at the repository.

In addition to the available template, the consortium is preparing several alternative materials to help disseminate and present the project results in a coherent and effective way.

- **General presentation:** compiled to provide a quick look at the project objectives and contents. This set of slides will be updated periodically with the new results as the project advances.
- **Brochure:** prepared to promote and enhance the visibility of the project.
- **Roll-up:** presenting the project at conferences and poster sessions.

8. Risk management

The consortium's experience in managing complex international projects in conjunction with its technological competence on communication and networking permits to identify the following main areas of possible risks:

- **Technical:** lack of competence to overcome unexpected difficulties.

- **Financial:** deterioration of the economic situation of a partner, which imposes a stop or an unacceptable reduction of all its activities.
- **Key resources availability:** abandon of the participation to the project of resources with key roles.

Furthermore, the combination of the main risk areas above, which could result in an even greater impact, is considered.

The level of technical risk is substantially reduced by the composition of the UPPER consortium, with a well-assorted set of industry partners, research centres, cities and end-users deeply involved in the development process. UPPER partners have demonstrable consolidated experience as leaders in the technological areas in which each of them contributes to the project. Most of the UPPER partners have been involved in previous H2020 innovation actions and are experienced in managing and mitigating risks.

In case of financial problems or lack of resources' availability, the corrective measures will include distributing to the remaining partners the activity not fulfilled or to subcontract them to a third party, or a combination of the two. The corrective measures will be chosen after an evaluation of their impact and relevance on the project.

For the UPPER project, a risk is defined as an event that may or may not occur in the future, which could potentially have an adverse effect on a team's progress and success. A risk has a severity of impact and a probability of occurrence, a formal definition can be found in the next section.

8.1. Definitions

8.1.1. Risk

A risk is a measure of the inability to achieve overall project objectives within defined cost, schedule, and technical (performance and quality) constraints and has two components:

- The probability of failing to achieve a particular outcome, and
- The consequences (impact) of failing to achieve that outcome.

For UPPER, a risk is a measure of the difference between actual performance of a process and the known best practice for performing that process.

A risk can also be the potential that a given threat will exploit vulnerabilities of an asset or group of assets to cause loss of, or damage to, the assets. It is ordinarily measured by a combination of effect and likelihood of occurrence.

8.1.2. Risk Event

Risk events are those events within UPPER that, if they occur, could result in problems in the development of the expected research results, production and assessment of the prototypes, and dissemination of the results. Risk events should be defined to a level such that the risk and causes are understandable and can be accurately assessed in terms of likelihood/probability and the consequence to establish the level of risk.

8.1.3. Type of Risk

It is possible to differentiate between four different kinds of risk types:

- **Technical risks:** Difficulties in meeting any technical product specification that may have an impact on achieving project requirements.
- **Managerial risks:** Managerial Risks are risks associated with the adequacy of the time estimated and allocated for the achievement of the goals of the project, i.e., the design, development and/or deployment of products, the achievement of research results and the dissemination of project results. Three kinds of risk events exist in the UPPER project:
 - Lack of resources' availability.
 - Non-realistic or reasonable schedule estimates and objectives.
 - Project execution falling short of the schedule objectives as a result of failure to mitigate technical risks.
- **Financial risks:** Financial risks are associated with the ability of the project to achieve its cost objectives as determined in the DoA. Two risk areas bearing on cost are:
 - The risk that the cost estimates and objectives are not accurate and reasonable.
 - The risk that project execution will not meet the cost objectives, as a result of a failure to mitigate technical risks.
- **Ethical risks:** Ethical risks are associated with the respect and the protection of the privacy of the involved end-users. Two kinds of risk events are defined:
 - Absence of participants consent
 - Infringement of personal data.

8.1.4. Risk Ratings

A risk rating is the value that is given to a risk event (or the overall project) based on the analysis of the likelihood or probability and impact of the event. For UPPER, risk ratings of low, moderate, or high are assigned based on the following criteria:

- **Low risk:** Has little or no potential to increase in cost, disruption of schedule, or degradation of performance. Actions within the scope of the planned project and normal management attention should result in controlling acceptable risk.
- **Moderate risk:** May cause some increase in cost, disruption of schedule, or degradation of performance and/or quality. Special action and management attention may be required to control acceptable risk.
- **High risk:** Likely to cause significant increase in cost, disruption of schedule, or degradation of performance and/or quality. Significant additional action and high priority management attention will be required to control acceptable risk. This type of risk may be subject to a report to the Commission.

8.1.5. Contingency Plan

Once identified and assessed, it is essential to trace risks both in their status (risk monitoring) and with respect to necessary activities. A contingency plan should cover the registration and reaction to the change of environmental conditions to avoid risk events. In case of materialization of risks, the overall contingency plan can be further elaborated including the mitigation actions.

8.2. Risk management organisation and responsibilities

The UPPER TC is the overall risk manager and responsible for:

- Briefing the consortium on the status of UPPER risks during GA meetings.
- Tracking efforts to reduce high risk to acceptable levels.
- Facilitating consortium-level risk assessments during PMB meetings.
- Combining risk briefings, reports, and documents as delivered by WPLs and required for project reviews by the Commission.

The PMB, and in particular the PC, assists the TC with:

- Maintaining this section of the Project Handbook - Risk Management – updated (as a supporting process) for UPPER.
- Provision and maintenance of the risk information form.

The WPLs are responsible for risk assessment within their work packages:

- Risk identification.
- Risk analysis.
- Risk handling.
- Risk information to the TC (in case of moderate or high risk).
- Risk monitoring.
- Briefing the respective Work Package members on the status of risks.
- Tracking efforts to reduce low and moderate risk to acceptable levels.
- Preparing risk briefings, reports, and documents required for project reviews during PMB meetings.

8.3. Risk management process

This section describes the UPPER risk management process and provides an overview of the UPPER risk management approach. Figure 7 shows, in general terms, the overall risk management process that will be followed in UPPER. Each of the risk management functions shown in Figure 7 is discussed in the following paragraphs, along with specific procedures for executing them.

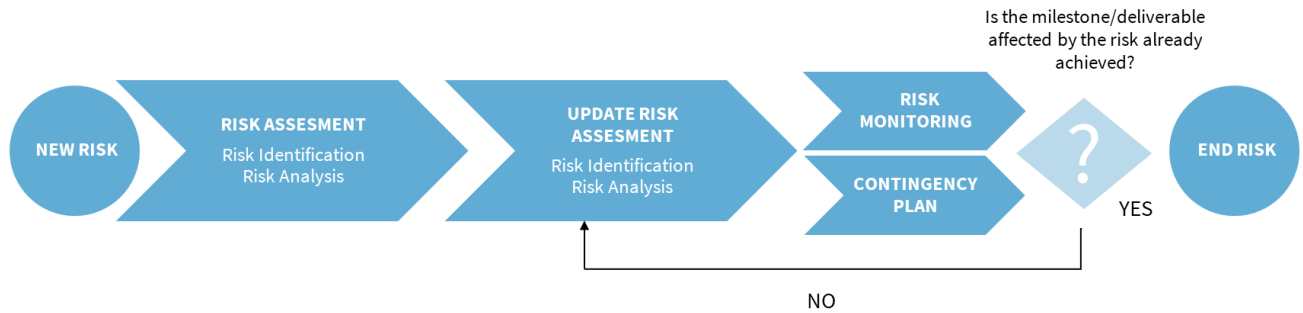


Figure 7. Risk management process

8.3.1. Risk assessment

Risk assessment includes the identification of critical risk events or processes, which could have an adverse impact on the project, and the analysis of these events/processes to determine the likelihood of occurrence/process variance and consequences.

Risk assessment is an iterative process. Each risk assessment is a combination of risks identified/analysed in the previous phase and the identification/analysis of risks on current milestones/deliverables according to the DoA.

8.3.1.1. Risk identification process and procedure

Risk identification is the first step in the assessment process. The basic process involves searching through the entire UPPER project plan to determine those critical events that would prevent the project from achieving its objectives.

All identified risks will be documented in *Annex E: Risks table* with a statement of the risk and a description of the conditions or situations causing concern and the context of the risk. Risks will be identified by all individuals in the UPPER project, particularly by WPLs.

The basic procedure of identifying risks consists of the following steps:

- Understand the requirements and overall project quality and performance goals. Examine the operational (functional and environmental) conditions under which the values must be achieved by referring or relating to the DoA.
- Identify the processes and activities (tasks) that are needed to produce the results.
- Evaluate each activity/task against sources/areas of risk.

8.3.1.2. Risk indicators

Following indicators are helpful for identifying risks:

- Lack of stability, clarity, or understanding of requirements. Changing or poorly stated requirements may lead to performance, cost, and schedule problems.
- Failure to use best practices virtually assures that the project will experience some risk. The further the deviation from best practices, the higher the risk.
- Insufficient or inadequate resources: People, funds, schedule, and tools are necessary ingredients for successfully implementing a process. If any of them are inadequate, there is a potential risk.
- Test failure may indicate corrective action is necessary. Some corrective actions may not fit available resources, or the schedule, and (for other reasons as well) may contain risk.
- Negative trends or forecasts are cause for concern (risk) and may require specific actions to turn around.
- Communication is a critical success factor for UPPER. Failure to provide (push) available information actively as well as to demand (pull) required information actively will both introduce considerable risk.

8.3.1.3. *Risk analysis process and procedure*

Risk analysis is an evaluation of the identified risk events to determine possible outcomes, critical process variance from known best practices, the likelihood of those events occurring, and the consequences (impact) of the outcomes. Once this information has been determined, the risk event may be rated against the project's criteria and an overall assessment of low, moderate, or high may be assigned.

1. The basic procedure for analysing risk comprises the following steps:
2. Gather all identified risks.
3. Assignment of likelihood/probability and consequence to each risk event to establish a risk rating.
4. Prioritisation of each risk event relative to other risk events.
5. Quantitative analysis.

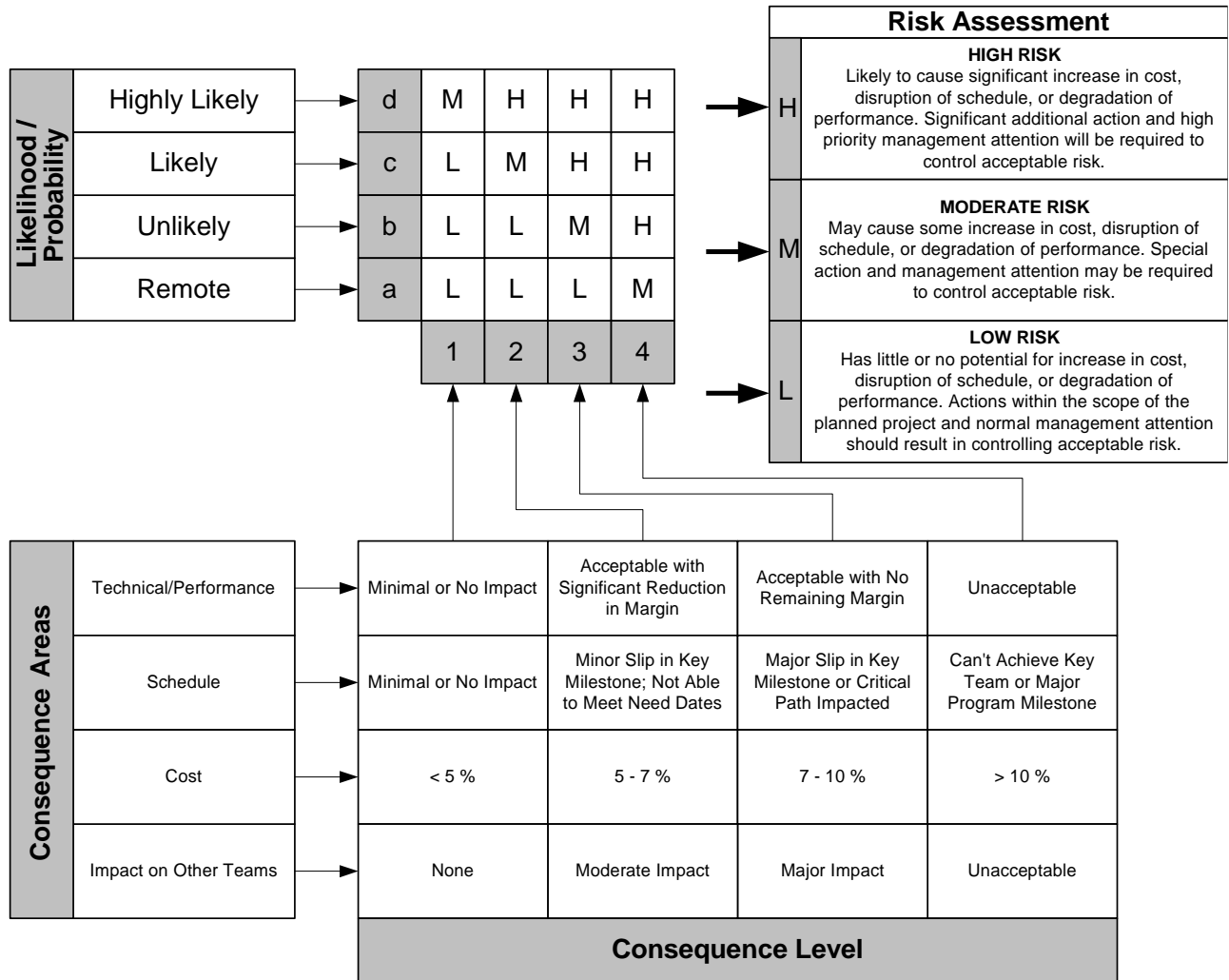


Figure 8. Risk assessment matrix (ref: CROSSBOW project)

The following items provide some more details on the most important issues of the risk assessment matrix:

- Likelihood/Probability:** For each risk area identified, the likelihood/probability of the risk must be determined. There are four levels (a-d) in the UPPER risk assessment process, with the corresponding criteria of remote, unlikely, likely and highly likely. If there is zero likelihood of an event, there is no risk per our definition.
- Consequence/Impact:** For each risk area identified, the following question must be answered: Given the event occurs, what is the magnitude of the consequence? There are four levels of consequence (1-4) for this project. Further, there are four areas that we will evaluate when determining consequence: technical performance, schedule, cost, and impact on other teams (work packages). At least one of the four consequence areas need to apply for there to be a risk; if there is no adverse consequence in any of the areas, there is no risk at all.
- Technical performance:** this category refers to content and includes all requirements that are not included in the other three metrics of the consequence table.

- **Schedule:** this category refers to impacts in the overall time framework of the project. It is important to avoid excluding a consequence level from consideration just because it does not affect the work plan of a specific team/work package – i.e. try to have the whole UPPER consortium in mind.
- **Cost:** since costs vary significantly within UPPER, the percentage criteria shown in the matrix may not strictly apply at the lower levels of the work breakdown structure. Therefore, the WPLs may set the percentage criteria that best reflect their situation, but have to report any deviation from the matrix to the TC.
- **Impact on other teams (work packages):** both the consequence of a risk and the mitigation actions associated with reducing the risk may impact another team. This may involve additional coordination or management attention (resources) and may therefore increase the level of risk.

8.3.1.4. *Evaluation of Risks*

During the risk analysis it is possible that identified scenarios of occurring risk events cause impact to several impact areas. In this case a consequence combination is present, and the worst case of the risk assessment (high risk, moderate risk, low risk) is applicable and influences the required actions as described in the matrix. Of course, all identified consequence areas to a risk event must be recorded, and the consequence area caused the final assessment must be clearly identified.

8.3.1.5. *Quantitative Analysis*

After completion of the risk analysis the quantitative analysis takes place and assigns a rating to each risk (low, medium, high). This finally yields an overview on the risk status over the entire course of the project.

8.3.2. Global Risk Indicator (GRI)

The Global Risk Indicator is calculated based on five criteria:

- Probability (P).
- Technical Performance (TP).
- Schedule (S).
- Cost (C).
- Impact on other teams (I).

The Probability that the risk being analysed will occur is evaluated on a scale from 1 to 4:

- Remote.
- Unlikely.
- Likely.
- Highly Likely.

On the other side, the Consequence or Impact of the risk is assessed considering four sub-criteria:

- Technical Performance (TP).
- Schedule (S).
- Cost (C).
- Impact of other teams (I).

Each of the sub-criteria is evaluated also on a scale from 1 (low impact) to 4 (very high impact).

With this assessment, the Global Risk Indicator is calculated according to the following formula:

$$GRI = P * \frac{TP + S + C + I}{16}$$

8.3.3. Risk monitoring

8.3.3.1. Risk monitoring process

Risk monitoring systematically tracks and evaluates the performance of risk-handling actions. It is part of the management board function and responsibility and will not become a separate discipline. Essentially, it compares predicted results of planned actions with the results actually achieved, to determine the status and the need for any change in risk-handling actions.

To ensure that significant risks are effectively monitored, risk-handling actions will be reflected in the risk table and analysed at each GA meeting. Identifying these risk-handling actions and events in the context of the work breakdown structure establishes a linkage between them and specific work packages, making it easier to determine the impact of actions on cost, schedule, and performance.

8.3.3.2. Risk monitoring procedure

Each member of the consortium is responsible for monitoring and reporting the effectiveness of the handling actions for the risks assigned.

Risks rated as “high” will be reported to the TC, who will handle and track them until the risk is considered “medium” or “low” and recommended for “close out”.

Risks rated as “moderate” will be reported to WLS, who will also track them until the risk is considered Low and recommended for “close out”. However, the risk will be handled within the work package under the responsibility of the work package leader.

Risks rated as “low” are tracked within the work package and monitored continuously to ensure they stay low.

The risk management process is continuous. Information obtained from the monitoring process is fed back for reassessment and evaluations of handling actions to improve the process itself in co-operation with the risk manager and the quality manager.

8.3.4. Contingency plan

8.3.4.1. Risk handling process

After the project's risks have been identified and assessed, the approach to handle each significant risk must be developed. There are essentially four techniques or options for handling risks:

- **Avoidance:** application of tasks in order to avoid the risk event.
- **Control:** watch the environmental conditions for influences on an already assessed risk.
- **Transfer:** application of tasks to set a risk to a lower level.
- **Assumption:** base a decision for handling plans on the assumption the risk event happens.

For all identified risks, the various handling techniques should be evaluated in terms of feasibility, expected effectiveness, cost and schedule implications, the effect on the system's technical quality/performance and the most suitable technique selected.

The results of the evaluation and selection will be included and documented in the risk table. This documentation will include:

- What must be done.
- The level of effort and materials required.
- The estimated cost to implement the plan.
- A proposed schedule showing the proposed start date.
- The time phasing of significant risk reduction activities.
- The proposed date of completion.
- Their relationship to significant Project activities/milestones.
- Recommended metrics for tracking the action.
- A list of all assumptions.
- The person responsible for implementing and tracking the selected option (usually the responsible work package leader).

8.3.4.2. Risk handling procedure

The respective work package leader or (in case of high risk) the TC is responsible for evaluating the risk handling options that are best fitted to the project's circumstances. Once approved, these are included in the work packages or project's strategy or management plans, as appropriate.

For each selected handling option, the responsible project team member will develop specific tasks that, when implemented, will handle the risk. The task descriptions should explain what must be done, the level of effort, and identify necessary resources. The team member should also provide a proposed schedule to accomplish the actions including the start date, the time phasing of significant risk reduction activities, the completion date,

their relationship to significant project activities/milestones and a cost estimate. The description of the handling options should list all assumptions used in the development of the handling tasks.

8.4. Risk table

The main tool to keep track of the different identified risks is the Risk Table (Annex E: Risks table). It contains all the fields to correctly assess, monitor and mitigate a risk.

The table is structured considering the WPs in UPPER in order to create a direct connection between the risks and the responsible of its control. It could be the case that the risk manager or WP leader is not the same partner as the risk responsible, who should indeed provide an action plan and mitigate the problem.

The risk table provides an easy way to quantify the severity of the problem. It implements the risk assessment matrix described above and a global risk indicator that considers the assessment of the four consequence areas as a whole.

In this way, the partner identifying a risk, only has to indicate the probability of the risk (HL=Highly Likely=4; L=Likely=3; U=Unlikely=2; R=Remote=1) and the impact in each of the consequence areas (1 Minimum, 4 Maximum). The table is capable of translating the assessment into the three categories (high risk, moderate risk, low risk) and calculate the global indicator as an average of the different areas (0 Minimum, 4 Maximum).

As explained before, a low global indicator may still imply a high risk, since the worst case should be always considered. A high risk in a single area will imply a low global indicator; however, it requires the maximum priority and attention. The global indicator serves to prioritise and order risks with the same qualification but affecting more than one area.

The risk table is updated every 6 months by all the partners who are responsible of adding, modifying and/or deleting those risk depending on the stage and evolution of the project.

9. Conclusions

The UPPER cooperation processes and most relevant coordination information and guidelines are summarised in this document. This Project Handbook offers a synthetic and high-value guide for all partners involved in UPPER to facilitate and assure that all actions and activities within the project are coherent and well-coordinated, while a proper level of flexibility is maintained to allow an agile development and coordination of the actions. The document aims at maximising the impact of UPPER, optimising the coordination of efforts made by all partners, and providing tools and recommendations to ensure the highest quality of the project results and the proper and continuous managements of the project risks.

10. Bibliography

Project, C. (2017). *D17.1 Project management plan*.

World Intellectual Property Organization. (16th August 2021). Retrieved from <https://www.wipo.int/about-ip/en/>

Annex A: Technical semester report Template

UNLEASHING THE POTENTIAL OF PUBLIC TRANSPORT IN EUROPE

UPPER SIX-MONTHLY REPORT

TECHNICAL PART

Please, provide a brief description of the work developed during the last 6 months and the progress achieved with respect to the plan:

| WP | Task | Measure <i>(If relevant, and just for WP3, WP4 and WP5)</i> | Work description <i>Please describe the activities, progress (incl. deviations if applicable) and outcomes for every task and/or measure your organisation was involved during the past 6-month period.</i> |
|----|------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | |
| | | | |
| | | | |
| | | | |

Please, indicate your contribution to the different deliverables submitted during the last semester (either as leader, contributor or reviewer):

| Deliverable | Role with respect to the deliverable | | |
|-------------|--------------------------------------|--------------------------|--------------------------|
| | Leader | Contributor | Peer-review |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Annex B: Financial semester report Template

Personnel cost Table

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|----------|
| | P/Days | Cost (€) |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | 0,00 € |

Travel costs Table

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|-------------|
| | Cost (€) | Description |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | |

Equipment costs Table

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|-------------|
| | Cost (€) | Description |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | |

Other goods and service costs Table

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|-------------|
| | Cost (€) | Description |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | |

Subcontracting costs

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|-------------|
| | Cost (€) | Description |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | |

Internally invoiced costs Table

| WP | Semester 1 <i>Jan 2023 - June 2023</i> | |
|--------------|-------------------------------------------|-------------|
| | Cost (€) | Description |
| WP1 | | |
| WP2 | | |
| WP3 | | |
| WP4 | | |
| WP5 | | |
| WP6 | | |
| WP7 | | |
| WP8 | | |
| Total | 0 | |

Annex C: Financial Report Guidelines

UNLEASHING THE POTENTIAL OF PUBLIC TRANSPORT IN EUROPE

UPPER SEMESTER FINANCIAL REPORT - GUIDELINES -

1. Overview

Semester Financial Report (SFR) is the basic financial document requested each semester to each partner. It represents the main project instrument focused to the evaluation of the expenses used in the project. The main objective of the SFR is, therefore, to estimate project costs, dividing them by cost categories (personnel costs, travel costs, equipment costs, etc.) and by project WP (WP1 to WP8).

The information included in the FR allows the UPPER management team to understand the status of each partner expenses, outlying any possible deviation from the financial plan (Budgeted).

Each partner has to send to the Financial Manager and his team (giorgetti@fitconsulting.it, barnaba@fitconsulting.it and garlaschelli@fitconsulting.it) the FFR of each semester by the end of the third week of the month following the end of the semester.

| Semester – Reporting period | Period covered by the SFR | Delivery date |
|---------------------------------------|---------------------------|----------------------------------|
| Semester 1 – PR1 | January-June 2023 | 21 st of July 2023 |
| Semester 2 – PR1 | July-December 2023 | 19 th of January 2024 |
| Semester 3 – PR1 (Official reporting) | January-June 2024 | 26 th of July 2024 |
| Semester 4 – PR2 | July-December 2024 | 17 th of January 2025 |
| Semester 5 – PR2 | January-June 2025 | 18 th of July 2025 |
| Semester 6 – PR2 (Official reporting) | July-December 2025 | 23 rd of January 2026 |
| Semester 7 – PR3 | January-June 2026 | 17 th of July 2026 |
| Semester 8 – PR3 (Official reporting) | July-December 2026 | 22 nd of January 2027 |

2. Introduction

This document is intended as a guideline to support each partner in filling in the SFR. For any further clarification, please refer to giorgetti@fitconsulting.it.

The SFR Template has been created in order to maximise the level of information according to the described objectives and, at the same time, to minimise the effort requested to partners.

The SFR is composed by one spreadsheet which has to be filled in every semester and 5 (five) additional spreadsheets with planned information (Grant Agreement financial info), supporting partners in their reporting activity.

3. Supporting spreadsheets

Below are briefly introduced the 5 (five) additional spreadsheets, available in the SFR template:

- **GANTT:** Use the Gantt to check active WPs at each semester. Do not charge resources on not active WPs.
- **Effort-days planned:** here are listed the persons/days each beneficiary has planned within each WP. Within your reporting be consistent with these planned allocations. Effort here is expressed in days, same unit required by Horizon Europe Programme for the official reporting.
- **Purchase costs planned:** here are reported by partner and WP the purchase costs planned and approved within the project. Within your reporting be consistent with these planned allocations.
- **Subcontracting costs planned:** here are reported by partner and WP the subcontracting costs planned and approved within the project. Within your reporting be consistent with these planned allocations.
- **Internally invoiced planned:** here are reported by partner and WP the subcontracting costs planned and approved within the project. Within your reporting be consistent with these planned allocations.

4. How to fulfil the “SEMESTER FINANCIAL REPORT” spreadsheet

MAIN FINANCIAL REFERENCE

In order to have an exhaustive guideline on financial rules and reporting, please refer to:

- UPPER Grant Agreement
- [Horizon Europe Annotate Model Grant Agreement.](#)
- [Horizon Europe on-line Manual](#)

CURRENCY OF THE ACCOUNT AND CONVERSION RATE TO EURO

Costs must be included in EURO only. Conversion to euro should be done in advance and then fill in the “detailed information” with costs converted to euro.

Beneficiaries with general accounts established in a currency other than the euro must convert the costs recorded in their accounts into euro, at the average of the daily exchange rates published in the C series of the Official Journal of the European Union (ECB website), calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the Official Journal for the currency in question, they must be converted at the average of the monthly accounting exchange rates published on the European Commission website (InforEuro), calculated over the corresponding reporting period.

Below are briefly explained how to fill in the tables available in the spreadsheet “SEMESTER FINANCIAL REPORT”.

PERSONNEL TABLE

For each semester you are requested to fill in:

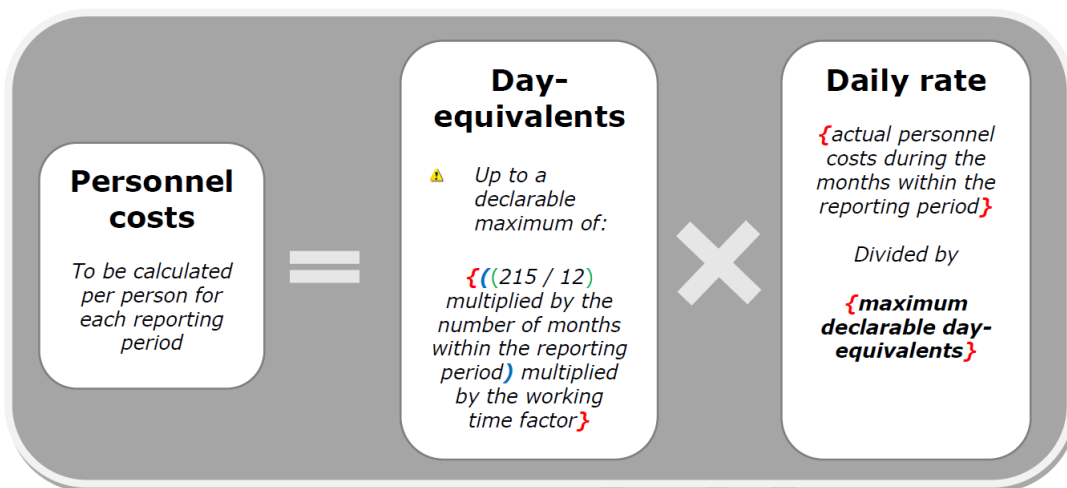
- **P/Days:** summarise here the number of days charged to the project by the entire staff involved within a specific semester.
- **Cost (€):** summarise here the amount of staff costs charged to the project by the entire staff involved within a specific semester.

This information is required for each WP you are involved in.

Official references, related to personnel cost calculations, are available in the Grant Agreement and in the AMG on Article “6.2.A Personnel costs”.

It has to be reminded that with Horizon Europe the effort calculation as well as the personnel cost have been changed since previous EC programmes, as follow:

Personnel cost calculation



Daily rate calculation

You have to calculate a daily rate per person for the reporting period. Many actions have a reporting period not aligned with the calendar year, or part-time work etc.

The formula for calculating break down the annual personnel cost with a daily rate for any possible situation, you have to use the following formula:

$$\frac{\{ \text{actual personnel costs during the months within the reporting period} \}}{\{ \text{maximum declarable day-equivalents} \}}$$

Regarding the calculation of day-equivalents worked in the action: It is the sum of the day-equivalents (persons/days) actually worked for the action, rounded to the nearest half-day, and recorded in the monthly declarations or in your time-recording system (if you have a reliable time-recording system where you record, at least, all the actual time worked in the action). See explanations in Article 20 for details on the declarations and on how to convert your working time on the action into day-equivalents.

In the reporting period from 01/12/2021 to 31/05/2023 the person works full-time 100 days in the action during the **18 months**

Maximum declarable day-equivalents:

18 months period full-time → $((215 / 12) \times 18) \times 1 = \underline{322,5}$ maximum of declarable day-equivalents for the reporting period

Daily rate:

After taking into account all eligible elements (salary + social contribution + 13th salary + taxes etc.) you recorded in your accounts a total eligible cost of EUR 60 000
The daily rate for the person is calculated by dividing the personnel cost by the maximum declarable day equivalents– $(60\,000 / 322.5) = \text{EUR } \underline{186,04}$ daily rate.

Number of day-equivalents worked in the action: 100

Total personnel cost: { day-equivalents worked on the action X daily rate } 100 X 186,04 = 18 604

Conversion from hours to days

In case you organisation is used to record labour-time in hours and not in days, you can consider 1 day-equivalent = 8 hours (215 annual days equivalent = 1720 working hours)

Supporting documents

If the view of possible financial audit control (up to 5 years after the final payment), the following documents should be at disposal for possible external financial auditor. The full reference on supporting documents to kept within your organisation is available in the AGA on Article 20 "Record-keeping":

- Contract & CV of the involved staff
- Assignment to the action of the involved staff
- Timesheets
- Payroll
- Proof of payment of social charges
- Day equivalents calculation
- Daily rate calculation

Time recording

For persons who work for the project, the beneficiary may either:

- (a) use reliable time records (i.e. timesheets) either on paper or in a computer-based time recording system, to record (at least) all the hours worked in the action. Reliable time records must be dated and signed at least monthly by the person working for the action and their supervisor. If the time recording system is computer-based, the signatures may be electronic (i.e. linking the electronic identity data, e.g. a password and username, to the electronic validation data), with a documented and secure process for managing user rights and an auditable log of all electronic transactions. or
- (b) sign a monthly declaration on days spent for the action using the template provided by the European Commission at this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/time-declaration_en.docx

PURCHASE COSTS TABLES (TRAVEL, EQUIPMENT, OTHER GOODS&SERVICES)

Within these three tables you are requested to report all purchase costs occurred within a specific semester. Namely, UPPER has three different purchase costs categories:

- Travel costs
- Equipment costs
- Other goods, works and services.

A full reference of what purchase cost is, what is eligible and what it is not eligible can be found in the Grant Agreement and in the AGA on Article 6.2.C “Purchase costs”.

With the UPPER SFR template, for each semester you are requested to fill in the following cells:

- **Cost (€):** summarise here the amount of purchase costs charged to the project within a specific semester.
- **Description:** provide a brief description for each of the cost item included in the cost cell above.

This information is required for each WP you are involved in.

The information to be added in the “Description” section is listed below:

- For travel costs: i) person/s travelling; ii) meeting name (such as “Steering Committee meeting”); iii) Travel period (dd/mm/yyyy).
- For other goods & services costs: Indicate the legal name of the provider from which you have purchased the good/service and the type of good/service charged to the project.
- In case of equipment, in addition to the case above, please specify the depreciation rule as well.

It has to be reminded that for equipment goods, beneficiaries are allowed to charge the chargeable cost of the good and not the entire purchase cost, as follow:

$$\text{“Equipment Cost”} \times (\text{“Period of usage within UPPER”} / \text{“Depreciation length of the good”}) \times \text{“% Allocation on the project”}$$

Supporting documents

If the view of possible financial audit control (up to 5 years after the final payment), the following documents should be at disposal for possible external financial auditor. The full reference on supporting documents to kept within your organisation is available in the AGA on Article 20 “Record-keeping”:

- C.1 Travel
 - Accounting documents: hotel bill, dinner receipts, flight costs, boarding passes, ...
 - Proof of connection to action: agenda, attendance list, minutes, presentation (Art. 17.2 visibility).
- C.2 Equipment
 - Purchase procedure proving best price-quality ratio or lowest price > 2-3 quotes recommended > project acronym and GA n° on all documents.
 - Objectively comprehensible statement about the actual use.
 - Explanation of how the good was depreciated (exception prototypes).
 - Art. 17.2 visibility.
- C.3 Other goods, works and services
 - Purchase procedure proving best price-quality ratio or lowest price > 3 quotes recommended > project acronym and GA n° on all documents.
 - Art. 17.2 visibility.

SUBCONTRACTING & INTERNALLY INVOICED COSTS TABLE

Here are summarised costs which do not generate any indirect costs in the project: subcontracting and internally invoiced. Each of them has its own Table to be filled in the SFR.

Within UPPER only the following partners have such costs:

- Subcontracting:
 1. UITP
 4. KU LEUVEN
 7. RC
 11. IBV
 17. IFPEN
 18. RSM
 22. UPV
 23. VALENCIA
 24. RUTER
 27. BKK

- 28. CML
- 29. TML
- 30. CARRIS
- 35. RNV
- 36. REGION HANNOVER

- Internally Invoiced:

- 4. KU LEUVEN

Subcontracting Table

Full reference on subcontracting costs is available in the AGA on Article 6.2.B “Subcontracting costs”.

Best value for money applies the general cost eligibility condition set out in Article 6.1(a)(vii) (i.e. that costs must be reasonable and comply with the principle of sound financial management) to the subcontracting context. A competitive selection of subcontractors should be the default approach since it is the safest way to ensure no conflict of interest, best value for money or lowest price through direct comparisons between offers. However, subcontracting does NOT necessarily require competitive selection procedures to be eligible.

Internally invoiced Table

Full reference on internally invoiced costs is available in the AGA on Article 6.2.D.X “Internally invoiced goods and services”.

This budget category covers the costs for goods and services that the beneficiary itself produced or provided for the action. They may include (non-exhaustive list):

- self-produced consumables (e.g. electronic wafers, chemicals)
- use of specific devices or facilities needed for the action (e.g. clean room, wind tunnel, supercomputer facilities, electronic microscope, animal house, greenhouse, aquarium)
- standardised testing or research and development processes (e.g. genomic test, mass spectrometry analysis)
- hosting services for visiting project team members participating in the action (e.g. housing, canteen).

For each semester these beneficiaries are requested to fill in in both Tables:

- **Cost (€):** summarise here the amount of subcontracting or internally invoiced costs charged to the project within a specific semester.
- **Description:** description of the costs incurred in the period and added on the cost above.

This information is required for each WP you are involved in.

Supporting documents

- D1 Subcontracting
 - Purchase procedure proving best price-quality ratio or lowest price > 3 quotes recommended > project acronym and GA n° on all documents.
 - Art. 17.2 visibility.
- D.2 Internally invoiced goods and services
 - proof of n° of pieces used (50 H laboratory, ...).
 - Document costing procedures in writing.

Annex D: Time declaration Template

EU Grants: Time declaration: V1.1 – 01.05.2022

| | | |
|----------------------------------------------------------------------------------------------------------|--------------|--|
| EU GRANTS DECLARATION OF DAYS WORKED ON A PROJECT <i>To be kept on file in case of audits.</i> | YEAR: | |
|----------------------------------------------------------------------------------------------------------|--------------|--|

| | | | |
|----------------------------|-------|---------------------------|------------------------------------------------------------|
| Project acronym: | UPPER | Project number: | 101095904 |
| Participant name: | | | |
| Name of the person: | | Type of personnel: | (employee/ natural person under direct contract/ seconded/ |

| Month | Days worked in the action ¹ (e.g. 15, 7,5, 0,5) | Work Packages worked on (e.g. WP2; WP5) | Date and signature of the person | Name, date and signature of the supervisor |
|--------------|---------------------------------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------------|
| January | | | Signature: Date: | Name: Signature: Date: |
| February | | | Signature: Date: | Name: Signature: Date: |
| March | | | Signature: Date: | Name: Signature: Date: |
| April | | | Signature: Date: | Name: Signature: Date: |
| May | | | Signature: Date: | Name: Signature: Date: |
| June | | | Signature: Date: | Name: Signature: Date: |
| July | | | Signature: Date: | Name: Signature: Date: |
| August | | | Signature: Date: | Name: Signature: Date: |
| September | | | Signature: Date: | Name: Signature: Date: |
| October | | | Signature: Date: | Name: Signature: Date: |
| November | | | Signature: Date: | Name: Signature: Date: |
| December | | | Signature: Date: | Name: Signature: Date: |
| TOTAL | | | | |

¹ 1 day = number of hours that a full-time employee of the participant has to work in a standard day (e.g. 8 hours).

Annex E: Risks table

| | Nr of Risk | Task Name | WP/task leader or Risk Manager | Risk description | Type of Risk | Risk responsible | Milestone or deliverable affected | Risk Assessment | Global Risk Indicator | Contingency Plan or link to document |
|-----|------------|---------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------|------------------|-----------------------------------|-----------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | | | | 0=Minimum 4=Maximum | |
| WP1 | 1 | T1.1 | UITP | Impossibility of performing plenary meetings with all the consortium. | Managerial | UITP | General | LOW | 0,25 | A preliminary schedule for meetings will be set at the beginning of the project – identifying the weeks of the year where meetings will be planned. The project coordinator will launch a poll at least 60 days before the approximate dates of the meeting in order to schedule each meeting with 45 days of prevision and allow all the partners to schedule their own agendas. |
| | 2 | T1.1, T1.2 | UITP | Disagreement or lack of communication among partners | Managerial | UITP, ETRA | General | LOW | 0,5 | PMB meetings are organized once a month to discuss the potential issues that may arise. |
| | 3 | T1.3 | UITP | Disagreement between partners on IPR | Managerial | UITP | General | LOW | 0,375 | There is a CA and a specific task dealing with IPR. |
| | 4 | T1.1 | UITP | Underestimation or resources not well balanced for travel costs | Financial | FIT | General | LOW | 0,5 | Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project. |
| | 5 | T1.1 | UITP | Underestimation of resources for the development of the project solutions and tools. | Financial | FIT | General | MODERATE | 1,5 | Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project. |
| | 6 | T1.2 | UITP | Due to the large extension of the project consortium, lack of clarity on the roles and responsibilities of each partner | Managerial | ETRA | General | MODERATE | 1 | Inception reports at WP level have been elaborated in order to describe in detail the activities to be carried out at Task (and sub-task) level and the partners to be involved, including their specific role. |

| | | | | | | | | | | |
|-----|----|-----------|------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|---------------------------------------------------------------------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WP2 | 7 | T2.1 | IBV | Lack of communication between municipalities members (Agenda 2030,...) and technical offices. | Managerial | IBV | D2.1 | LOW | 0,875 | Monthly meeting with municipalities members has been established to ensure good communication. |
| | 8 | T2.1 | IBV | Lack of incentives to engage vulnerable users . | Technical | IBV | D2.1 | LOW | 0,75 | UPPER has end user associations within its consortium. Also, if necessary, the possibility of purchasing user panels with low income profiles in SurveyMonkey will be explored. |
| | 9 | T2.1 | IBV | Failure to achieve the sample size planned in the research. | Technical | IBV | D2.1 | HIGH | 1,5 | To increase the number of contacts with entities. To recruit users by buying users panels. |
| | 10 | T2.1 | IBV | Failure to have translations into local languages within the necessary timeframes. | Technical | IBV | D2.1 | MODERATE | 1,125 | To contract professional translation services. |
| | 11 | T2.3 | KUL | Lack of participation in serious game sessions | Technical | KUL | D2.3 | LOW | 0,75 | Organise new game session(s), using different outreach methods |
| | 12 | T2.4 | ETRA | Fail to involve the relevant partners into the requirements identification process. | Technical | ETRA | D2.4 | MODERATE | 0,875 | From the very beginning, U-tool developers, city leaders and local clusters will closely collaborate in order to identify (before launching VOLERE) the cities (and particularly the measures) that will be using each tool. Bilateral meeting and surveys will be organized to map the cities interest before the start of T2.4. That will ensure that the relevant partners are identified and engaged in VOLERE from the very beginning. |
| WP3 | 13 | T3.1-T3.5 | All Task Leaders | Underestimation of resources and schedule not well balanced for the development of the project solutions and tools. | Financial and managerial | All Task Leaders | M5 (UPPER toolkit developed) ; M6 (UPPER local solutions developed) | MODERATE | 1,5 | Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project. |
| | 14 | T3.5 | T3.5 leader | U-tools not ready to provide inputs when needed for the development of the UPPER UVAR toolbox. | Technical | All Task Leaders | D3.5 | MODERATE | 1 | Engagement in U-tools development to be aware of their planned functionalities, even if not finalized by the time of the D3.5 draft. |

| | | | | | | | | | |
|----|------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------------------------------------------|----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15 | T3.1-T3.5 | All Task Leaders | Insufficient details/ wrong definition of requirements for the user and mission-oriented measures and tools. | Technical | All Task Leaders | D3.1-D3.5 | MODERATE | 1,125 | All the project partners and relevant stakeholders of the mobility ecosystem will be involved from the beginning in the iterative co-creative process for the definition of requirements and to build a common view and contribute to the user-centric approach. The consortium is composed of experts that have a lot of experience in developing tools and therefore matching user needs and requirements. |
| 16 | T3.1; T3.2; T3.3 | T3.1; T3.2; T3.3 leaders | Lack of understanding of the supporting tools by the target users that lead in a lack of user acceptance. | Technical | T3.1; T3.2; T3.3 | D3.1; D3.2; D3.3 | MODERATE | 1,125 | Workshops and graphic material will be created in order to show the capabilities of the supporting tools. |
| 17 | T3.1-T3.5 | All Task Leaders | Due to high number of use cases and partners, the alignment on the requirements for the implementation and deployment of solutions will be challenging, resulting in a potential delay. | Managerial | All Task Leaders | M5 (UPPER toolkit developed) ; M6 (UPPER local solutions developed) | HIGH | 1,25 | Strong project management; early start of the developments and requirement alignment. Additional technical meetings to follow up the progress of the implementation. |
| 18 | T3.4; T3.5 | T3.4; T3.5 leader | Change of government in a city leading to a change of mobility strategy or priorities. | Technical | Demo leaders | D3.4; D3.5 | MODERATE | 1,25 | All the cities involved in the project have already applied to the Cities Mission and proposed measures are aligned with their application to that initiative and to plans already in place or being developed. Continuous interactions with relevant stakeholders will be done to minimize the risk. |
| 19 | T3.1; T3.2; T3.3 | T3.1; T3.2; T3.3 leaders | Insufficient availability of data for the implementation of solutions and lack of data harmonization. | Technical | T3.1; T3.2; T3.3 leaders | D3.1; D3.2; D3.3 | MODERATE | 1 | The Data Management Plan will define the required data, the data collection strategies, and their format. Regarding personal data, the minimum information to be shared will be defined, and GDPR will be always respected. In addition, WP2 will define the data needs and analyse data sources from PT, cities and open platforms with enough time to detect data gaps and apply corrective measures. |
| 20 | T3.1-T3.5 | All Task Leaders | Missing skills in the consortium when facing innovation and business challenges. | Technical | All Task Leaders | D3.1-D3.5 | LOW | 0,5625 | The consortium is composed by experienced partners with complementary competences and access to wide pool of knowledge and resources. |
| 21 | T3.1-T3.5 | WP Leader | Data collected in WP2 is incomplete/hard to use for | Technical | WP2 Leader | All milestones | MODERATE | 1,375 | If data is identified as incomplete or missing, the leaders of the affected tasks will coordinate in |

| | | | | | | | | | | |
|-----|----|----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|---------------------------------------------------------------------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | WP3 and other connected WPs. | | | and deliverables in WP3 | | | putting together a supplementary data collection strategy to ensure the set milestones and targets are achieved. |
| | 22 | T3.1-T3.5 | WP Leader | Disagreement or lack of communication among partners. | Managerial | WP Leader | | MODERATE | 1 | There will be continuous communication and meetings among all partners. The PC is responsible for solving conflicts during the project. |
| WP4 | 23 | T4.1 | ETRA | Lack of understanding of the supporting tools by the target users that lead in a lack of user acceptance. | Technical | ETRA | D4.1 | LOW | 0,875 | Workshops and graphic material will be created in order to show the capabilities of the supporting tools. |
| | 24 | T4.1 | ETRA | Insufficient availability of data for the implementation of solutions and lack of data harmonization. | Technical | ETRA | D4.1 | MODERATE | 1 | The Data Management Plan will define the required data, the data collection strategies, and their format. Regarding personal data, the minimum information to be shared will be defined, and GDPR will be always respected. In addition, WP2 will define the data needs and analyse data sources from PT, cities and open platforms with enough time to detect data gaps and apply corrective measures. |
| | 25 | T4.1-T4.5 | All Task Leaders | Underestimation of resources and schedule not well balanced for the development of the project solutions and tools. | Financial and managerial | All Task Leaders | M5 (UPPER toolkit developed) ; M6 (UPPER local solutions developed) | MODERATE | 1,5 | Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project. |
| | 26 | Tasks 4.2 -4.5 | CERTH | Due to high number of use cases and partners, the alignment on the requirements for the implementation and deployment of solutions will be challenging, resulting in a potential delay. | Managerial | CERTH | D4.2 - D4.5 | HIGH | 1,25 | Strong project management; early start of the developments and requirement alignment. Additional technical meetings to follow up the progress of the implementation. |
| | 27 | Tasks 4.2 -4.5 | CERTH | Additional resources needed for the development of services. | Financial | CERTH | D4.2 - D4.5 | MODERATE | 1,125 | The Task leader will cooperate closely with the technical partners for proactively identifying cases where additional resources are needed and reallocating the resources. |
| | 28 | Tasks 4.2 -4.5 | CERTH | Delays in the development of services. | Technical | Task leaders | D4.2 - D4.5 | LOW | 1 | Regular meetings will take place for clearly defining the technical requirements from the early stages of |

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|-----|----|----------------|------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|---------------------------------------------------------------------|----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | | | | | the Task and constantly monitoring the development progress. |
| | 29 | Tasks 4.2 -4.5 | CERTH, FIT | Developed services will not address user needs. | Technical | CERTH, FIT | D4.2 - D4.5 | LOW | 0,4375 | User needs are already gathered from the first months of the project; thus, the Task leader and the technical partners will have adequate time for designing services that respond to user needs. Also, when possible, mock versions of the services will be prepared for receiving feedback before the actual development. |
| | 30 | Tasks 4.2 -4.5 | CERTH | Missing data for developing operational services. | Technical | CERTH | D4.2-D4.5 | MODERATE | 1,25 | Data needs and data availability will be already identified from WP2; thus, the Task leader in a close cooperation with the demo leaders and the technical partners will be able to proactively search for suitable data sources and data collection mechanisms, while they will be also able to adapt on the finally available data. |
| | 31 | Tasks 4.2 -4.5 | CERTH | Change of government in a city leading to a change of mobility strategy or priorities. | Technical | CERTH | D4.2 - D4.5 | MODERATE | 1,25 | All the cities involved in the project have already applied to the Cities Mission and proposed measures are aligned with their application to that initiative and to plans already in place or being developed. Continuous interactions with relevant stakeholders will be done to minimize the risk. |
| WP5 | 32 | T5.1 | IBV | Lack of datasets to implement in the information module. | Technical | IBV | D5.1 | MODERATE | 1,3125 | To adapt the contents to the available data in each living lab. |
| | 33 | T5.1-T5.4 | All Task Leaders | Underestimation of resources and schedule not well balanced for the development of the project solutions and tools. | Financial and managerial | All Task Leaders | M5 (UPPER toolkit developed) ; M6 (UPPER local solutions developed) | MODERATE | 1,5 | Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project. |
| | 34 | T5.1 | IBV | Lack of datasets to assess the implemented measure. | Technical | IBV | D5.1 | HIGH | 1,3125 | To redefine de measure according to available data in each living lab. |
| | 35 | T5.3 | FIT | Fail to involve the relevant non PT user in surveys. | Technical | FIT | D5.3 | MODERATE | 1,25 | Focus group will be organized to assure their vision to PT and connection with Mobility Manger at Enterprise and School will be assured. |
| | 36 | T5.3 | FIT | Alignment with WP2 and WP7 could generate duplication of resources. | Managerial | FIT | D5.3 | MODERATE | 1,125 | A revision of action number of focus group, target users through inception report and bilateral WPs |

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|-----|----|------|-------|-----------------------------------------------------------------------------------------------------------|------------|-------------------|-----------------------------------------------------------------|----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | | | | | call, will be done to assure that the action will be complement each other. |
| WP6 | 37 | T6.1 | ETRA | Lack of understanding of the supporting tools by the target users that lead in a lack of user acceptance. | Technical | U-tool developers | D6.1 | LOW | 0,875 | 7 workshops (one per U-tool) and graphic material will be created in order to show the capabilities of the supporting tools. |
| | 38 | T6.1 | ETRA | Misalignment among U-tools and measures that will benefit from them. | Technical | U-tool developers | M8 (UPPER toolkit refined and integrated in the local measures) | MODERATE | 1 | The process of identifying and specifying how will the U-tools will give support to the different push and pull measures will go through at least three rounds of iteration (one in WP2 and two organized under T6.1). Moreover, the cities interested in the U-tools will also contribute to the requirements specifications (VOLERE). This iterative process and close collaboration among cities and U-tool developers will guarantee the alignment among U-tools and cities interests. |
| | 39 | T6.2 | CERTH | Delays in acquiring permits and licenses for project testing. Public procurement procedures delayed. | Managerial | CERTH | M7 (Demo activities ready to start) | MODERATE | 1,25 | The goal of this tasks is to ensure that this particular risk is averted through the planning of all necessary actions well in advance. |
| | 40 | T6.4 | ETRA | Change of government in a city leading to a change of mobility strategy or priorities. | Managerial | ETRA | M7 (Demo activities ready to start) | LOW | 0,875 | All the cities involved in the project have already applied to the Cities Mission and proposed measures are aligned with their application to that initiative and to plans already in place or being developed. Continuous interactions with relevant stakeholders will be done to minimize the risk. |
| | 41 | T6.4 | ETRA | Insufficient availability of data for the implementation of solutions and lack of data harmonization. | Technical | ETRA | D6.3 | MODERATE | 1 | The Data Management Plan will define the required data, the data collection strategies, and their format. Regarding personal data, the minimum information to be shared will be defined, and GDPR will be always respected. In addition, WP2 will define the data needs and analyse data sources from PT, cities and open platforms with enough time to detect data gaps and apply corrective measures. |
| | 42 | T6.2 | CERTH | A partner leaves the consortium during the tendering procedure. | Managerial | CERTH | M7 (Demo activities ready to start) | LOW | 0,4375 | The consortium will try to redistribute among the consortium the tasks/responsibilities/resources not fulfilled or add a substitute partner, or a combination of the two. One of the mitigation actions already taken is that several local partners participate in each pilot site. |

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|-----|----|------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------|------------|-----------------|--------------------------------------|----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 43 | T6.2 | CERTH | Tenders related to specific measures are not successful – no subcontractor identified. | Managerial | CERTH | M7 (Demo activities ready to start) | MODERATE | 0,875 | The Task team will identify alternatives for the measures' implementation in case this happens. |
| WP7 | 44 | T7.1 | KUL | Inconsistencies in data collection needed for impact indicators for the evaluation of the implemented measures. | Technical | KUL | D7.1 | HIGH | 1,5 | The Project Evaluation Manager and Local Evaluation Managers will closely monitor the schedule of the data collection activities to avoid any delays or foresee countermeasures such as the use of available data of other relevant indicators to quantify the impact of the measures. |
| | 45 | T7.2, T7.3, T7.4 | FIT, CERTH, KUL | Insufficient or corrupted raw measurement data collected from demonstrations to be used for the evaluation process. | Technical | FIT, CERTH, KUL | D7.2, D7.3, D7.4 | HIGH | 1,5 | Use of several sources and conduct a pre-evaluation data procedure to identify corruption and repeat part of the measurements if required. When data are too inconsistent for cross-site impact assessment of measures, variations of the main methodology will be used. In case of impossible impact assessment by lack of data, qualitative descriptions will be provided. |
| | 46 | T7.2, T7.3, T7.4 | FIT, CERTH, KUL | Insufficient protection of personal data managed during the project demonstrations. | Ethical | FIT, CERTH, KUL | D7.2, D7.3, D7.4 | MODERATE | 0,875 | Specific procedures are defined to collect, storage, protect and destruct confidential and personal information from participants. |
| | 47 | T7.2, T7.3, T7.4 | FIT, CERTH, KUL | Lack of agreement for additional KPIs between LLs. | Technical | FIT, CERTH, KUL | D7.2, D7.3, D7.4 | LOW | 0,3125 | The PEM and the LEMs will ensure the agreement of core KPIs among LLs to enable the cross-case comparison of solutions in different urban areas. |
| | 48 | T7.4, T7.5 | KUL, CERTH | Lack of methods to monetize all identified indicators. | Technical | KUL, CERTH | D7.4, D7.5 | LOW | 0,625 | Identification and screening of KPIs to use these that are well defined in the literature and used previously in socio-economic assessments. |
| | 49 | T7.1 | KUL | Measure refinement not completed by the due date of the Evaluation handbook. | Technical | KUL | D7.1 | LOW | 0,625 | The measure refinement process is unlikely to lead to large changes to expected impact areas or types of impact, though it may refocus impacts on vulnerable groups or make measures more effective at the local level. This may result in minor changes to Local Evaluation Handbooks. The Project Evaluation Handbook and Plan should not be affected. |
| | 50 | T7.2, T7.3, T7.4, T7.5 | FIT, CERTH, KUL | City will not succeed in keeping the stakeholders engaged during the 4-year project and the participation | Technical | FIT, CERTH, KUL | D7.2, D7.3, D7.4, D7.5 | MODERATE | 1,125 | Ad hoc measures to incentivize and select the stakeholders to participate in the participatory research action of UPPER will be included. Training |

| | | | | | | | | | | |
|-----|----|------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | in the LEM workshops will be low. | | | | | | certificate, incentivization of local evaluation manager figure,...will also be explored. |
| WP8 | 51 | T8.4 | FIT | Living lab and twinning are not interested in supporting tool specific business model | Technical | FIT | D8.4 | LOW | 0,375 | Tool developer will support the development of the value proposition of UPPER measures that adopt the new developed tools. |
| | 52 | T8.4 | FIT | The new value proposition and tools business model might highlight some market/user competition in the actuation phase | Technical | FIT | D8.4 | LOW | 0,25 | Horizontal partner will agree together with tool developer which commercialization channel best suit for each measure/tool. |
| | 53 | T8.6 | RC | SUMP Topic Guide On Public Transport not considered crucial/ not desired by EC (As there is already one that was published by TRT in 2022 and the EC is currently discussing whether new Topic Guides should still be developed). | Technical | RC | D8.6 | MODERATE | 0,75 | Existing SUMP Topic Guide has focus on Creating an attractive and user-friendly PT system – The one planned in UPPER will focus on planning for carbon-neutrality. Early coordination of development of Topic Guide within the EC’s SUMP Platform Coordination Group so to set expectations & understand the scope. |
| | 54 | T8.2 | EUR | Local partners/cities not engaging/communicating enough | Managerial | EUR & UITP | D8.1 | LOW | 0,625 | Ensure provision of communication guidelines to encourage (local) partners to disseminate project outcomes |