



Unleashing the Potential of  
Public Transport in Europe



**U-GOV**

# D5.1 U-GOV: A novel platform to ease user participation in PT

WP5 Technology and strategies to trigger the behavioural change in citizens in favour of PT



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



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





## Legal disclaimer

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the granting authority, CINEA. Neither the European Union nor the granting authority can be held responsible for them.

## Copyright statement

The work described in this document has been conducted within the UPPER project. This document reflects only the UPPER Consortium view and the European Union is not responsible for any use that may be made of the information it contains.

This document and its content are the property of the UPPER Consortium. All rights relevant to this document are determined by the applicable laws. Access to this document does not grant any right or license on the document or its contents. This document or its contents are not to be used or treated in any manner inconsistent with the rights or interests of the UPPER Consortium or the Partners detriment and are not to be disclosed externally without prior written consent from the UPPER Partners.

Each UPPER Partner may use this document in conformity with the UPPER Consortium Grant Agreement provisions.



## Deliverable details

Project number	Project acronym	Project title
101095904	UPPER	Unleashing the potential of public transport in Europe

Title	WP	Version
D5.1 U-GOV: A novel platform to ease user participation in PT	5	1.0

Contractual delivery	Actual delivery date	Delivery type*
30/04/2024		R

\*Delivery type: **R**: Document, report;  
**DEM**: Demonstrator, pilot, prototype;  
**DEC**: Websites, patent filings, videos, etc;  
**OTHER**;  
**ETHICS**: Ethics requirement;  
**ORDP**: Open Research Data Pilot.

Author(s)	Organisation
Amparo López Vicente	IBV
Alejandro Vicent Micó	ETRA
Juan Giménez Pla	IBV
Carolina Soriano García	IBV

## Document history

Version	Date	Person	Action	Status*	Dissemination level**
V0.1	09/04/2024	IBV	Contents and draft	Draft	CO
V0.2	12/04/2024	Rnv	Peer-review	Draft	CO



V0.3	17/04/2024	Factual Consult	Peer-review	Draft	CO
V0.4	22/04/2024	UITP	Final review	Draft	CO
V0.5	26/04/2024	ETRA	Final review	Draft	CO
V1.0	30/04/2024	IBV	Final version	Final	PU

\*Status: Draft, Final, Approved, Submitted (to European Commission).

\*\*Dissemination Level: **PU**: Public;

**CO**: Confidential, only for members of the consortium (including the Commission Services);

**EU-RES**: Classified Information - restraint UE;

**EU-CON**: Classified Information - confidential UE;

**EU-SEC**: Classified Information - secret UE

# Contents

<b>CONTENTS</b>	<b>5</b>
<b>1. ABOUT U-GOV</b>	<b>8</b>
1.1. Overview	8
1.2. Purpose of the Tool	8
1.3. Intended audience	13
1.4. Technical Readiness Level (TRL) Explanation	14
<b>2. SYSTEM REQUIREMENTS</b>	<b>14</b>
2.1. Data requirements	14
2.2. Hardware Requirements	14
2.3. Software Requirements	15
<b>3. USER ROLES AND PERMISSIONS</b>	<b>15</b>
3.1. Explanation of different user roles	15
3.2. Access permissions associated with different role	16
<b>4. GETTING STARTED</b>	<b>16</b>
4.1. Access/Authentication	16
4.2. User Interface Overview	18
<b>5. FUNCTIONALITIES/CONTENT OF U-GOV</b>	<b>22</b>
<b>5.1. Core Features</b>	<b>23</b>
5.1.1. Mobility habits	23
5.1.2. Collaboration – Ongoing actions	24
5.1.3. Citizen stories	26
<b>5.2. Advanced Features</b>	<b>27</b>
5.2.1. Collaboration – Projects in progress – Filter by topics – COLLABORATOR role	27
5.2.2. Collaboration – Project view details - COLLABORATOR role	27
5.2.3. Collaboration – Understanding phase – Community activity - COLLABORATOR role	28
5.2.4. Collaboration – Ideation phase – Share ideas activity - COLLABORATOR role	30
5.2.5. Collaboration – Validation phase – Survey activity - COLLABORATOR role	31



5.2.6. Citizen stories – Project details - COLLABORATOR role	34
5.2.7. Citizen Stories – Project review - COLLABORATOR role	34
5.2.8. Administration – PROMOTER role	35
<b>6. DATA MANAGEMENT</b>	<b>40</b>
<b>6.1. Importing Data</b>	<b>40</b>
<b>6.2. Exporting Data</b>	<b>41</b>
<b>7. DEVELOPMENT TIMELINE</b>	<b>41</b>

## Abstract

This document outlines a functional version of the U-GOV tool, at two development levels: the Collaboration module is functional, while the Mobility habits module and the Citizen stories module are at a concept level. Its purpose is to delineate the objectives, user roles, and functionalities, providing a user manual for the initial validation within an iterative process.

The U-GOV platform introduces a procedure for managing and participating in public transport projects, adopting a perspective rooted in citizen science and participatory governance.

Various stakeholders' projects can be initiated within the U-GOV platform with the aim of engaging the citizenship in the development of novel mobility solutions. Specifically, this deliverable elucidates the key functionalities pertaining to sensitization and information dissemination (regarding mobility habits), collaboration across three stages (understanding, ideation, and validation), and lastly, the communication and evaluation of completed projects (through citizen stories).

## Keywords

Participatory governance, Collaborative methodologies, Community engagement, Open Data, Co-creation processes, Citizen science

# 1. About U-GOV

## 1.1. Overview

Aligned with the strategy of fostering initiatives tailored to the diverse needs of user groups, this endeavour is centred on defining, developing, and implementing a platform to facilitate citizen participation across four tiers: Information/Sensitization, Consultation/Dialogue, Collaboration/Co-creation, and Alliance/Decision making. In the framework of the UPPER project such initiatives are categorised as “PULL”, i.e., bringing users towards public transport and sustainable mobility options. The objective of the U-GOV platform is to serve as a conduit for addressing the expectations and aspirations of various citizen organizations seeking involvement in the decision-making processes related to public transportation (PT).

The platform will serve as a nexus for stakeholders in social innovation to propose, discuss, enhance, and co-create novel solutions and services to advise decision-makers. It will exist in digital format, encompassing a suite of tools utilised in social innovation, accessible to mobility agents (Public Transportation Operators and Authorities) to enable proposition, public consultation, discussion, enrichment, co-creation, and validation of new solutions and services.

The information currently presented on the U-GOV platform is provisional; the final platform will be determined following validation processes. The Collaboration functionality segment represents the most intricate aspect, necessitating extensive programming development. Presently, the development of this functionality is at a functional stage. Content blocks concerning Mobility Habits and Citizen Stories are for the time being only developed at the concept level.

This deliverable contains the user manual with the current development status of the tool (D5.1, M16). The development of the tool is scheduled to end at M28 (T5.1). The final version of the complete tool will be delivered in D5.1\_review, M28, when the outstanding programming requirements and functionalities are resolved.

U-GOV aspires to contribute to addressing environmental concerns and the urgent climate change crisis from the mobility perspective, recognising them as pivotal global issues necessitating immediate action, with implications for citizen science projects. In this context, digital platforms seek novel approaches to understanding democracy and identify citizen science as an ideal partner in fostering empowerment and consensus-building. These driving forces are likely to reshape current approaches to designing citizen science projects, potentially emphasizing individual well-being, lifelong learning, and social cohesion<sup>1</sup>.

## 1.2. Purpose of the Tool

U-GOV is an inclusive, continuous, and data-driven community engagement platform designed to facilitate decision-making processes. U-GOV promotes citizen participation across four levels: Information/, Consultation/Dialogue, Collaboration/Co-creation and Alliance/Decision. It serves as a convergence point for various stakeholders in social innovation, enabling the proposal of ideas and facilitating public consultation, discussion, enrichment, co-creation, and validation of new solutions and services to inform decision-makers. The platform, in digital format, encompasses a suite of tools used in social innovation, tailored for use by mobility agents. In addition, it allows interventions carried out in person to be incorporated into the Citizen stories module for evaluation, and the management and dissemination activities of in-person interventions.

---

<sup>1</sup> Perelló, J., Klimczuk, A., Land-Zandstra, A., Vohland, K., Wagenknecht, K., Narraway, C., ... & Ponti, M. (2021). The recent past and possible futures of citizen science: Final remarks. *The Science of Citizen Science*, 517.



U-GOV is a participative governance tool, aligning with the PULL measures developed by the UPPER project living labs and twinning sites. According to the description of the UPPER measures provided, U-GOV is instrumental in implementing, enriching, assessing, and evaluating these measures.

Throughout the project, the U-GOV team is developing a platform featuring a general dashboard based on the project's mobility measures. To accommodate large-scale demonstrations, U-GOV will incorporate dedicated dashboards for each city.

U-GOV will be translated into the local languages of the cities that plan to use it, to guarantee citizen participation.

The four participation levels described in the above paragraphs, have been organised in three modules (Mobility habits – Collaboration – Citizen stories), as detailed below:

- Information/Sensitisation activities displayed on the **Mobility habits module**, showcasing mobility diagnostics based on netnography data from each living lab city, open data pertaining to public transport usage, behavioural change campaigns, incentive measures, and ongoing action information.
- Consultation/Dialogue activities presented on the **Collaboration module**, featuring three participation channels: an open forum for anonymous users to discuss various topics, a moderated forum for debating specific topics by invitation or selection, and a channel for hosting appointments for online discussion groups or surveys.
- Collaboration/Co-creation activities showcased on the **Collaboration module**, offering functionalities for idea collection through video, photo, just comments. These functionalities facilitate new solutions' description, and proposals' development activities such as co-creation workshops, idea forums, and online concept assessments.
- Alliance/Decision making activities displayed on the **Collaboration and Citizen stories modules**, featuring functionalities for anonymous voting, selection, and evaluation of new products and services. In addition, validation processes through questionnaires and forums on usability, acceptance, satisfaction, and usefulness of new developments are also facilitated. Finally, these functionalities facilitate participation in pilots and demonstration studies.

The platform also includes a module to monitor action progress by project PROMOTERs (cities, PTOs, PTAs, etc.). Besides, an additional module facilitates the personal data management screen for users/citizens.

U-GOV has been compared to several platforms representing different engagement strategies<sup>2</sup>. These platforms have been selected to represent differentiated proposals according to their developers (European Union, Municipalities, private companies, non-governmental organizations...), and scope of the functionalities. U-GOV offers distinct characteristics compared to the State of the Art (SoA) platforms (refer to Table 1). It provides direct and practical participation in ongoing public transport projects and initiatives with a high probability of complete development. Its focus on active mobility and public transport simplifies the platform's scope. Operating from a quadruple helix approach<sup>3</sup> it incorporates contributions from the perspectives of all key stakeholder groups (government, researchers, industry and citizens), across different domains. U-GOV allows for anonymous, registered, or selected participation, enabling individuals to engage in actions of interest without community membership. Emphasizing the local level, it proposes collaboration on actions with direct impacts on participants' quality of life. The platform adopts a simple participation model, leveraging three reference techniques optimised for online environments. Finally, its simplicity enables agile programming of actions and interventions.

<sup>2</sup> In next steps U-GOV will analyse the stakeholder engagement tools from the MORE project: <https://www.roadspace.eu/wp-content/uploads/2022/04/MORE-D4.6-Tools-for-stakeholder-engagement.pdf>

<sup>3</sup> Paskaleva, K., Evans, J., & Watson, K. (2021). Co-producing smart cities: A Quadruple Helix approach to assessment. *European Urban and Regional Studies*, 28(4), 395-412.

Table 1: State of the Art. Comparison of U-GOV against reference participation platforms.

PLATFORM	AIM	FUNCTIONALITIES	Comparison with U-GOV
<a href="https://greenmobilitycollabplatform.eu/">https://greenmobilitycollabplatform.eu/</a>	<p>Develop knowledge, skills, and attitudes conducive to empathetic, responsible, and environmentally conscious thinking, planning, and action.</p> <p>Empower learners to reconcile cognitive dissonance arising from awareness of issues with a sense of agency to effect change.</p> <p>Encourage responsible action and cultivate a willingness to advocate for or undertake initiatives at local, national, and global levels.</p>	<p>Educational Program: Foster learning activities.</p> <p>Events: Promote European-level events.</p> <p>Dialogue: Facilitate discussion forums.</p> <p>Self-Assessment: Offer recommendations for behavioural shifts in mobility.</p>	<p>Green Mobility shares a focus on mobility with U-GOV. While Green Mobility emphasizes training, promotion, and dissemination of educational activities and events, providing recommendations, it does not involve devising or evaluating specific mobility solutions. Conversely, U-GOV adopts a participatory approach, allowing citizens and professionals to propose, contribute content to, and evaluate solutions directly.</p>
<a href="https://decidim.org/es/features/">https://decidim.org/es/features/</a>	<p>It enables users to create, activate, and manage various participation processes, organising them into different phases that can incorporate multiple components (such as committee member election processes, participatory budgets, strategic planning, collaborative regulation or standard drafting, urban space design, or public policy plan development).</p> <p>Users can configure participation spaces and enhance them with a variety of components, including face-to-face meetings, surveys, proposals, and voting mechanisms.</p>	<p>They can create proposals, compare them with existing ones, publish them on the platform, and add supplementary information.</p> <p>The platform facilitates the scheduling of meetings, including determining their location, time, and the number of participants. It also features a draw function, enabling the random selection of proposals (e.g., selecting jury candidates), as well as various voting or support systems for proposals.</p> <p>Users can engage in discussions by adding comments, rating them as favourable, unfavourable, or neutral, and voting on them. Additionally, they can design and publish surveys, and view/download the results.</p>	<p>Decidim shares some features with U-GOV, such as the capability to propose, comment on contributions, and evaluate through surveys.</p> <p>However, Decidim's scope extends beyond that of U-GOV, encompassing participatory governance in any domain, including finance and regulations. In contrast, U-GOV is focused on mobility solutions, offering a simpler platform tailored to its specific and limited scope.</p> <p>Furthermore, U-GOV supports anonymous participation, invites participants from project promoters' user databases, or hires panels of participants, in addition to its own community-based participation model (Decidim modality).</p>
<a href="https://clustercollaboration.eu/">https://clustercollaboration.eu/</a>	<p>The platform's mission is to serve as the European online hub for cluster stakeholders, including cluster organizations, policymakers, and other related entities within the cluster ecosystem. Additionally, it aims to become the primary one-stop-shop for stakeholders from third countries seeking to establish partnerships with European counterparts</p>	<p>Key features of the platform include:</p> <p>Dynamic mapping of over 1,400 profiled cluster organizations worldwide.</p> <p>The platform serves as the largest information hub for clusters, providing the latest news and open calls to a broad community through the ECCP newsletter.</p> <p>Various events such as webinars, capacity building seminars, and</p>	<p>It's important to note that while the Cluster Collaboration platform differs in focus and orientation from U-GOV, it directs its interventions towards cluster stakeholders, providing events and information to foster synergies and collaboration opportunities at the corporate and academic levels. Direct participation of citizens is not within its scope.</p>

PLATFORM	AIM	FUNCTIONALITIES	Comparison with U-GOV
		<p>conferences are organized by the ECCP, European Cluster Partnerships, and the cluster community to facilitate capacity building and peer discussions. Matchmaking events are conducted to support the development of cooperation between clusters in Europe and beyond.</p> <p>An extensive knowledge database containing mappings of regional, national, international, and sectoral cluster networks, as well as toolkits and publications developed by the ECCP, European Commission, academia, and the wider community.</p> <p>Detailed information on European Cluster Partnerships and a dedicated Partnership forum for members.</p>	
<p><a href="https://www.citizenlab.co/">https://www.citizenlab.co/</a></p>	<p>The platform primarily serves as a community engagement tool for local governments, fostering resident involvement in public projects while amplifying and analysing their voices and concerns. Its features streamline interaction and reduce administrative burdens, encompassing everything from strategic planning and budgeting to community expansion.</p>	<p>Key functionalities include:</p> <p>Participatory Budgeting: This feature facilitates the allocation of budgets to specific project ideas, allowing for a better understanding of investment opportunities that align with community priorities.</p> <p>Surveys: Through surveys, the platform collects insights from community members, providing a deeper understanding of their needs and expectations.</p> <p>Mapping: Visual representations of neighbourhood events aid in addressing local needs and concerns, offering a spatial perspective on community issues.</p> <p>Ideation: Residents can directly contribute their input, offering valuable insights into their preferences for utilizing public spaces.</p> <p>Workshops: Live discussions and real-time deliberations create opportunities for collaboration within the community</p>	<p>Citizen Lab's scope extends beyond that of U-GOV, focusing on participatory governance across various sectors, including finance and regulations. Both platforms share a commitment to citizen engagement, allowing users to create proposals, offer comments, and participate in surveys. However, U-GOV is tailored specifically to mobility solutions, offering a simpler platform due to its specialized focus. Additionally, U-GOV permits anonymous participation and provides options for inviting participants from user databases or hiring panels, while Citizen Lab also offers a community-based participation model known as CitiLab.</p>
<p><a href="https://decidimvalencia.es/">https://decidimvalencia.es/</a></p>	<p>DecidimValencia collaboratively determines how the budget allocated by the Valencia City Council will be invested, distributing funds among the</p>	<p>Here's how it works:</p> <p>Proposal and Support: Citizens of Valencia can submit investment project proposals for their chosen district or town. Others can then</p>	<p>Decidim Valencia serves as the channel for the participatory investment budget of the Valencia Council and differs in focus and orientation from U-</p>

PLATFORM	AIM	FUNCTIONALITIES	Comparison with U-GOV
	<p>districts and towns of Valencia. Through Participatory Investment Budgets, Valencia residents have direct decision-making power.</p>	<p>endorse the proposals they favour in any district and/or town. Evaluation: The Technical Services of the Valencia City Council will assess the legal, technical, and budgetary feasibility of each proposal. Voting: Viable proposals will be put to a citizen vote, and those selected will commence execution each year.</p>	<p>GOV. While citizens propose investment projects and municipality technicians evaluate feasibility, the voting process allows citizens to express preferences by district. Unlike U-GOV, however, citizens cannot enrich, assess, and comment on proposals.</p>
<p><a href="https://www.civocracy.org/">https://www.civocracy.org/</a></p>	<p>Streamlining Citizen Engagement through Co-Creation of Projects and Policies. This platform simplifies citizen engagement by facilitating the co-creation of projects and policies. With a variety of communication channels, cities can efficiently engage with citizens, fostering participation and collaborative governance initiatives. Our civic tech company is dedicated to building better cities in a transparent and efficient manner. Key features include direct project communication, surveys, discussions, idea sharing, and participatory budgeting.</p>	<p>Phase 1: Designing the Campaign Narrative and Goals In this phase, we conduct two interactive workshops to develop a compelling narrative, define campaign goals, and outline the campaign roadmap using storytelling frameworks. Phase 2: Co-Creating the Campaign We invite our most engaged clients and partners to participate in shaping the campaign from the outset. Through tailored questionnaires and interviews, we incorporate their perspectives and preferences. Phase 3: Launching and Energizing the Campaign Our digital participation platform orchestrates various activities to sustain momentum throughout the campaign. Phase 4: Building an Action Plan Based on Campaign Results. Following the campaign, we analyse the results to construct an action plan.</p>	<p>While Civocracy shares similarities with U-GOV, our scope extends beyond U-GOV's focus on mobility solutions. Civocracy encompasses participatory governance across various domains, including policy and regulation activities. Though both platforms involve participatory phases, U-GOV is more specialized and offers a simpler platform tailored to its specific domain. Additionally, U-GOV permits anonymous participation, the invitation of participants from project promoter databases, or the hiring of participant panels, alongside its own community-based approach (Civocracy modality).</p>
<p><a href="https://wesolve.app/">https://wesolve.app/</a></p>	<p>The Wesolve app revolves around inclusivity, co-creation, and understanding community needs. Users can post challenges, surveys, polls, and distribute stories to their community. The platform unites various organizations on a central interface, akin to a social network. All information is collected and presented in one interface for easy review and immediate action. Listening involves understanding the audience's needs and behaviours, while engagement entails creating and delivering</p>	<p>Activities include: Ideation: Easily gathering insights and ideas. Feedback collection. Surveys and polls: Promoting informed decision-making and active engagement with insightful community feedback. News: Promoting participation and sharing information to shape opinions and foster engagement.</p>	<p>The Wesolve app shares with U-GOV the participation proposal, focusing on understanding needs, creating proposals, and soliciting contributions through comments and surveys, among other methods. Additionally, both platforms offer easy collaboration models. However, Wesolve has a broader scope, focusing on participatory governance in any area, while U-GOV is oriented toward mobility solutions, hence its simpler platform design due to its limited and specialized scope. Finally, the Wesolve app emphasizes a business</p>

PLATFORM	AIM	FUNCTIONALITIES	Comparison with U-GOV
	content that involves the community. Managing entails monitoring and responding to feedback, taking full control of activities. Automation integrates the platform across all channels, saving time.		orientation, contrasting with U-GOV's quadruple helix approach.

### 1.3. Intended audience

Any public entity, company, university, research centre, as well as non-governmental social entities and citizens, can be considered a U-GOV audience due to their interest in objectives related to: identifying or detailing mobility problems and needs in their city, assessing mobility, to generate mobility solutions, to validate and analyse new mobility solutions and strategies, and to validate and analyse mobility actions in cities.

The following users' profile and entities are the intended audience of the U-GOV platform:

- PTOs
- Municipalities
- Public administration
- Universities and research centres
- Logistic operators
- Tourist operators (coaches/buses)
- Sharing mobility operators
- Service fleets
- Commuters
- Railway operators
- Energy Utilities
- Airports
- Shopkeepers
- All the stakeholders that take part in the regional SUMP processes
- PT users and potential PT users
- University students
- Healthcare system users and workers
- Citizens and tourists in general
- Vulnerable users
- Peri-urban neighbourhoods

## 1.4. Technical Readiness Level (TRL) Explanation

The Measures Support Toolkit of the UPPER project, which includes U-GOV, is planned to achieve a TRL $\geq$ 6-7, aiming to provide well-established and standardized technologies that minimize technical and financial risks. Specifically, U-GOV is aligned with Social Relevant Levels (SRL), targeting SRL6-7 upon project completion.

Social Relevant Levels:

SRL 6 – Demonstrating solution(s) in a relevant environment and collaborating with stakeholders to gather initial feedback on potential impact.

SRL 7 – Refining the project and/or solution and, if necessary, retesting in the relevant environment with stakeholders.

# 2. System Requirements

## 2.1. Data requirements

Considering that each city is different, the districts in which every one of the cities is divided must be provided. The data of the districts come from polygons on GeoJSON format that contains an array of coordinates necessary for painting the districts in DeckGL so that they can be seen in the map.

Besides, the tool needs a list of topics of interest, from which a group of topics can be selected for a specific project during the project creation and during the user registration. These topics come from a Mongo database in the format { `_id`, `name` }, where `_id` is the topic identifier and `name` is the name of the topic. This list can be further expanded for a city by adding more topics to the database.

Furthermore, a list of JSON files is provided, each one containing the translation to a different language, so that the tool can swap between the available languages. By default, English and Spanish are provided, but additional languages can be added if a new JSON file with the translations is created. In this case, the tool will automatically translate to that new language.

Furthermore, the tool will be prepared to integrate data coming from other U-tools. On the one hand, diagrams and tables from the mobility habits menu will receive data from U-NEED, with information such as daily trips or trips per transport type will be retrieved.

On the other hand, data from U-SUMP will be used as input for processing information about different KPIs, that will provide feedback to the PROMOTERs. If a certain instance/city is not using U-SUMP, the possibility to manually import data will be available. This functionality is still not implemented and will be available for April 2025.

## 2.2. Hardware Requirements

The U-GOV tool has been developed both for computers and mobile devices. Since the tool has been designed for all audiences, the functionalities developed do not require a great number of resources from the device, so it has low resource consumption and can be used effectively even on devices with limited hardware specifications:

1. Processor (CPU)
  - Minimum: Dual-core CPU (e.g. Intel Core i3 or equivalent)
  - Recommended: Quad-core CPU or better (e.g. Intel Core i5 or equivalent)

2. Memory (RAM)
  - Minimum: 4 GB RAM
  - Recommended: 8 GB RAM or more
3. Graphics Card (GPU)
  - Minimum: Integrated GPU (e.g. Intel HD Graphics)
  - Recommended: Dedicated GPU with at least 2GB VRAM (e.g. NVIDIA GeForce GTX 1050 or equivalent)

## 2.3. Software Requirements

Since the U-GOV tool is a web application, it is compatible with a wide range of operating systems. It will be hosted in the cloud of IBV's Amazon Web Services (AWS) and will have an instance for each of the different cities, with the specific requirements and data for that city. As long as the device has network connectivity with a minimum internet connection and access to one of the web browsers listed below, the tool can be accessed. The requirements are the following ones:

1. Network connectivity
  - Minimum: Stable internet connection (at least 10 Mbps download speed)
  - Recommended: High-speed internet connection (at least 25 Mbps download speed)
2. Operating system
  - Minimum: Windows 10, macOS 10.15 (Catalina), or Linux (Ubuntu 18.04 or equivalent)
  - Recommended: Latest stable version of the respective operating system from the above ones.
3. Web browser
  - Minimum: Google Chrome 58.0, Mozilla Firefox 52.0 or Microsoft Edge 79.0.
  - Recommended: Latest version of Google Chrome, Mozilla Firefox or Microsoft Edge

## 3. User Roles and Permissions

### 3.1. Explanation of different user roles

All mobility stakeholders are eligible to leverage U-GOV with its benefits. Two primary roles have been identified: the project manager (PROMOTER), responsible for catalysing initiatives, and the citizenship (COLLABORATOR).

The PROMOTER's role involves creating initiatives (involving cities, PTO's, PTA's, and other mobility providers) to meet their informational needs on the platform. The platform offers them a collaborative framework with citizens and support in participant recruitment; furnishes real-time mobility insights based on citizen perception and experience; facilitates information dissemination and receipt of feedback from campaigns and actions. In addition, the platform provides a toolbox of participatory methodologies for needs and preferences identification, ideation, co-creation of

solutions, and validation of new initiatives, that cities can use as a test bed. U-GOV ensures comprehensive management of online participatory processes and supports face-to-face activities. The PROMOTER manages and coordinates all actions offered by the platform (for example: survey design, forum moderation, images management...).

The citizenship role (COLLABORATOR), as informer, adviser, co-creator, validator, and communicator, empowers citizens to actively engage in their city's development processes of mobility initiatives and influence decision-making. U-GOV provides citizens with pertinent information such as real-time mobility diagnostics or campaign updates, along with the ability to directly provide feedback on mobility decisions and city mobility strategies.

### 3.2. Access permissions associated with different roles

Access and permissions as they are presented in this document are not definitive, as they are subject to validation. We can distinguish the following profiles:

- COLLABORATOR without registration: they can access the Mobility Habits and Citizen Stories page to view information, but they cannot interact, assess, or rate unless permitted by the PROMOTER. On the COLLABORATOR page, they can view projects with activities selected by the PROMOTER, allowing for anonymous participation.
- COLLABORATOR: users have access to the Mobility Habits and Citizen Stories pages and can interact with information, rate, and comment on completed projects. On the COLLABORATOR page, they can view all projects, select those of interest, and participate in them.
- PROMOTER: they have the authority to create, manage, and modify projects, as well as access the results generated by their projects.

## 4. Getting started

### 4.1. Access/Authentication

U-GOV provides access and authentication functionality similar to other platforms, streamlining the process and compatible with the use of a Google<sup>4</sup> account. Specifically, the access and authentication design of U-GOV includes the following features, as correspondingly presented in Figure 1:

1. Field for users who first-time access U-GOV.
2. Field to log in with the user's Google account.
3. Option to continue anonymously, granting limited access to U-GOV with some collaborative features available.
4. Field for registered users to enter their username or email and password.
5. Field for registered users who have forgotten their password (users will receive an email at their registered email address to reset their password).

---

<sup>4</sup> The use of the authentication codes (logging and password) of commercial platforms has been included to ease the U-GOV access.

- 6. Option to enable password autofill for convenience, eliminating the need for users to remember their password every time they log in.

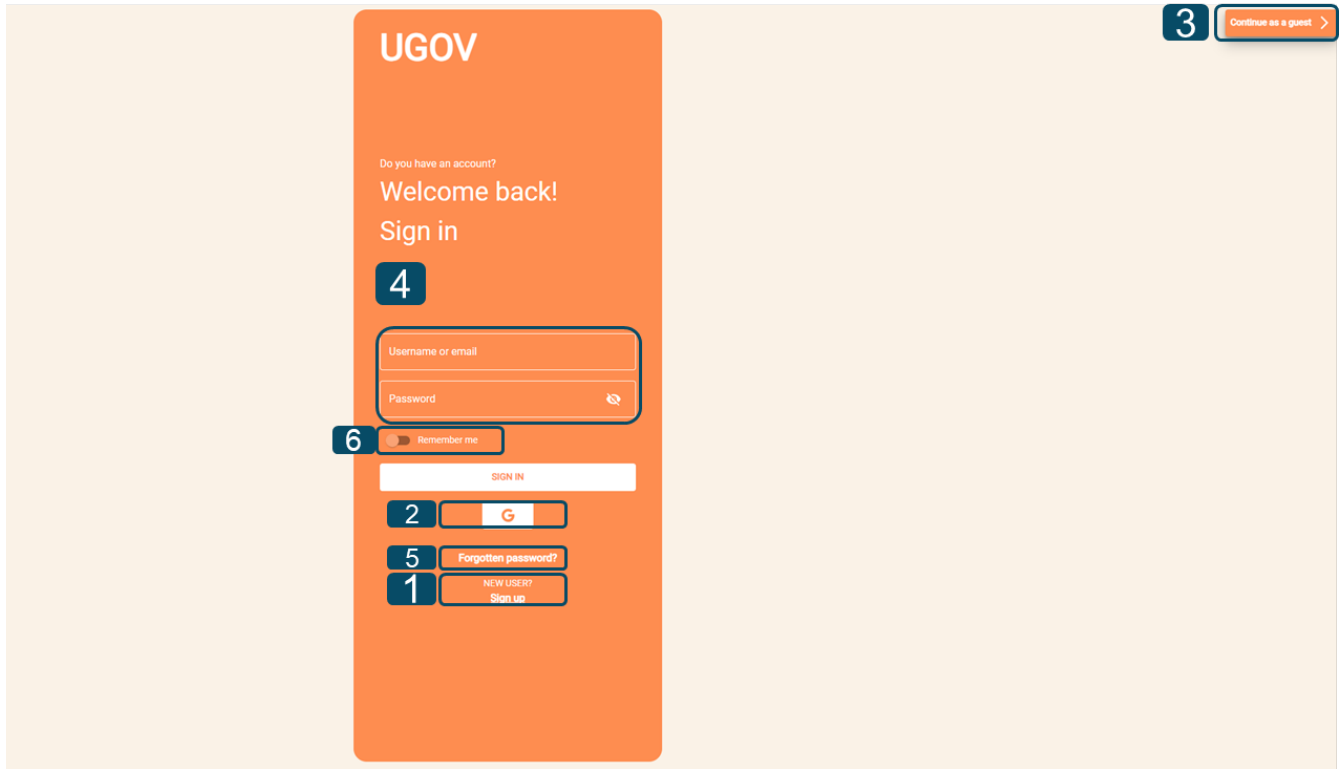


Figure 1: Access/Authentication process

For new users, the initial steps are as follows, as correspondingly presented in Figure 2: 1. Enter your email address; 2. Choose a username; 3. Create a password and confirm it; 4. Complete the sign-up process.

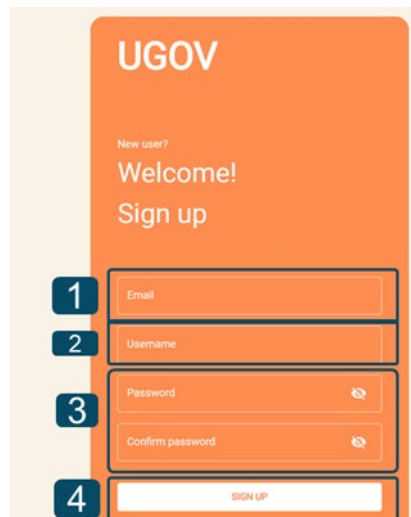


Figure 2: Welcome menu

The next step for new users to access the platform involves providing the following information, as correspondingly presented in Figure 3. Completing personal data will be optional. In the case of interventions that require information that is not available (e.g. gender or city of interest), the participant will have to provide this information.

1. First and last name.
2. Age and gender.
3. Any form of functional diversity, country, and city of interest to participate, and professional profile (if the user wishes to share it with U-GOV).
4. To identify as a COLLABORATOR, along with the topics of interest, enabling us to select projects related to your interests for participation.
5. "Sign up" marks the final step to become part of the U-GOV community.

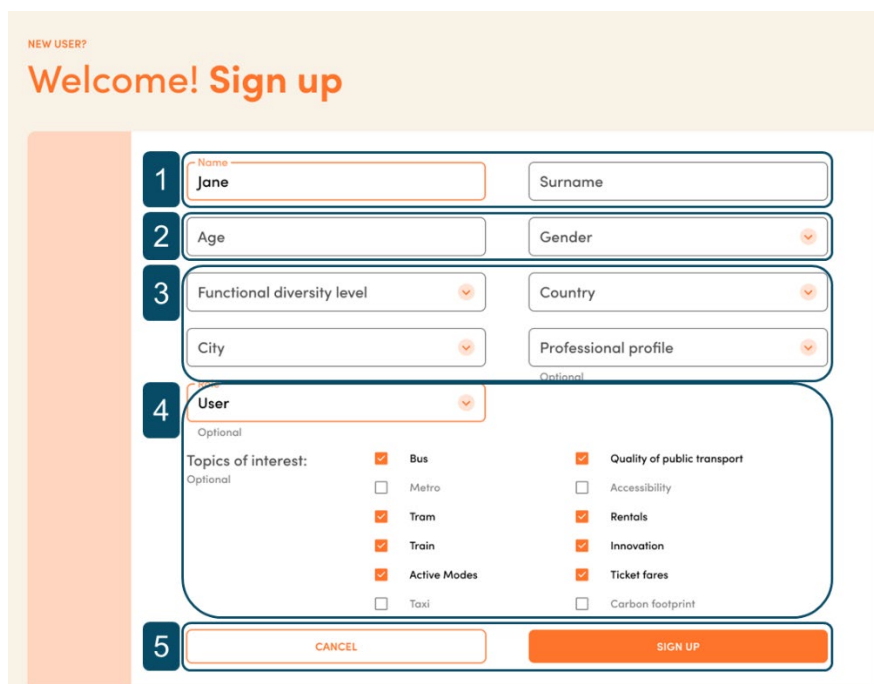


Figure 3: Personal data menu

## 4.2. User Interface Overview

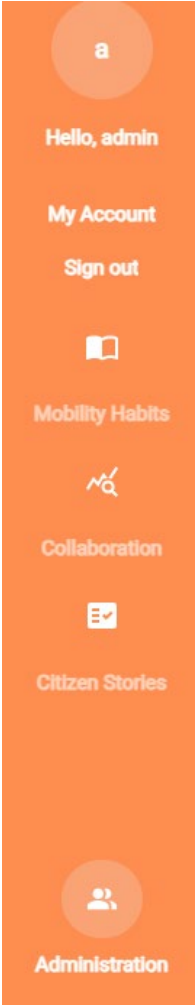
Based on the established requirements outlined in D2.4, U-GOV is designed to be user-friendly, clean, and easy to navigate. It adheres to GDPR standards, ensuring user privacy and data protection. Operators of PT control centres utilise a browser interface, while end-user front-ends are tailored for a wider audience and comply with accessibility guidelines such as those provided by W3C<sup>5</sup>.

In alignment with these requirements, U-GOV front-ends will prompt users to grant all necessary permissions required by the system.

The following table (Table 2) highlights the key components, menus, buttons, and icons:

<sup>5</sup> <https://www.w3.org/>

Table 2: Key components of U-GOV platform

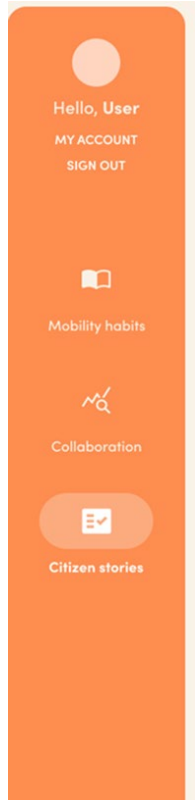
CONTENT	TYPOLOGY	FUNCTIONALITIES
<p><b>STRUCTURE</b></p>		<p><b>PROMOTER ROLE:</b>            U-GOV proposes a lateral toolbar of contents that allows navigation through four main content blocks, including Administration for project creation and storage of insights, enabling direct access from any screen.</p>



CONTENT

TYOPOLOGY

FUNCTIONALITIES



**COLLABORATOR ROLE:**  
U-GOV proposes a lateral matrix structure allowing navigation through three main content blocks, facilitating direct access from any screen.

**Administration**

Users administration   Project creation   Uploaded files

**PROMOTER ROLE:**  
PROMOTER menu includes sections for user administration, project creation, and data registration.

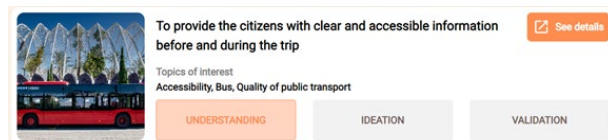


**PROMOTER ROLE:** Project creation phases.

MENUS



**PROMOTER ROLE:** Selection of phases for planning activities. The phases of the project can be active or inactive, depending on the project development status.

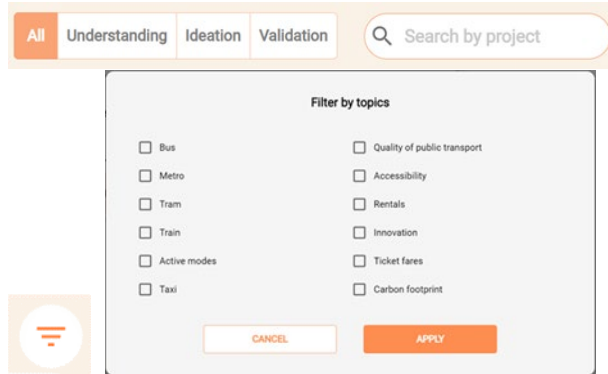


**COLLABORATOR ROLE:**  
Navigation menu within the project, providing access to project information, collaboration phases, and activities. The active phases are shown in orange, while the inactive phases are shown in grey.

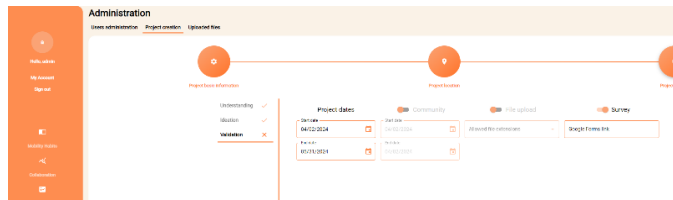
CONTENT

TYOLOGY

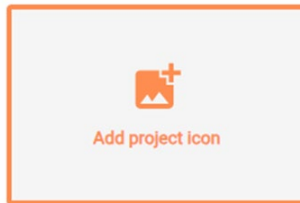
FUNCTIONALITIES



COLLABORATOR ROLE: Filter menus for selecting projects of interest.

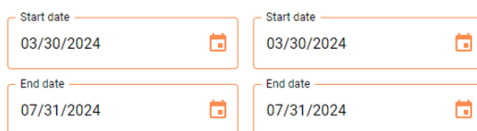


PROMOTER ROLE: Icons for: project basic information; project location; and project phases, during the intervention planning.



PROMOTER ROLE: Icon for adding project image.

ICONS AND BUTTONS



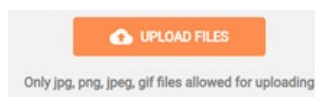
PROMOTER ROLE: Icons for starting and ending phases and activities.






PROMOTER ROLE: Icons for selecting/activating a function.



COLLABORATOR ROLE: Icons for viewing or hiding details.



COLLABORATOR ROLE: Icons for sharing ideas.

CONTENT	TPOLOGY	FUNCTIONALITIES
	 	COLLABORATOR ROLE: Icons for commenting on needs and wants.
		COLLABORATOR ROLE: Icons for rating a completed project.

## 5.Functionalities/Content of U-GOV

U-GOV is being developed with a meticulously structured format and design, adhering to the requirements outlined during the VOLERE process<sup>6</sup> in T2.4. The main requirements that have guided the development of the U-GOV platform are:

- GOV\_003 The platform must manage GDPR restrictions.
- GOV\_004 Different user profiles will be considered in the platform.
- GOV\_006 Set up specific groups of discussion based on different mobility topics.
  - This requirement has been incorporated into the community activity
- GOV\_007 Use U-GOV surveys to analyse third party mobility incentives fares politics.
- GOV\_010 The platform must be compatible across all devices (desktop, mobile, tablet etc.) to ensure proper user experience.
- GOV\_011 The platform should be designed to comply with universal design principles.
- GOV\_012 New section to track the implementation of the co-designed measures.
  - This requirement has been incorporated during the ideation phase within the 'share ideas' activity
- GOV\_014 The Interface should be user friendly for any basic technology end user, with few stepping stones in the process.
- GOV\_020 The platform will host questionnaires. Simple questionnaires will be hosted in the platform, and other questionnaires will be hosted in commercial platform (Miro, Mentimeter, SurveyMonkey, Google Forms, ...).
  - Currently, Google Forms.
- GOV\_021 The PROMOTER (project manager profile) of each initiative will have access to its project, in order to update status.
- GOV\_024 The platform user should be able to report videos/photos that reveal personal data for deleting them from databases.
- GOV\_028 Clear distinction of which tools are used by whom (teams, stakeholders etc) in U-GOV.

<sup>6</sup> [https://www.upperprojecteu.eu/wp-content/uploads/2023/11/UPPER\\_D2.4\\_Requirements-and-policy-recommendations-v.1.0-3.pdf](https://www.upperprojecteu.eu/wp-content/uploads/2023/11/UPPER_D2.4_Requirements-and-policy-recommendations-v.1.0-3.pdf)

- GOV\_045 To show a map with the ongoing projects, in the collaboration module. The maps include links to the project page in the platform.
- GOV\_046 The alliance module includes results of previous projects, developed with citizens participation.
- GOV\_047 The collaboration module includes the possibility of uploading an anonymized contribution for an ongoing project.
- GOV\_048 A registered user can upload contributions for an ongoing project, in the module participation
- GOV\_050 The user profile will include demographic data: Gender, Age, District, Awareness level (behavioural change), family typology, mobility habits, ...
- GOV\_051 End users contribute to ongoing projects with photos and videos; these files can require high storage capacity.
- GOV\_055 The tool should provide users with a clear understanding of the governance background of a measure and inform which organisations are involved in what capacity (responsibilities, funding, operation, maintenance).
- GOV\_058 The platform should cover PT in a given city/metropolitan region provided by the cities or operators at large and make the distribution across "mobilisers of initiatives" in the backoffice/afterwards.
- GOV\_066 Functionality that end users can use to provide feedback about ongoing processes in their city.
- GOV\_070 The platform should include a "Mobility habits module" to inform about news and improvements related to mobility in the city.
- GOV\_078 The platform should differentiate ongoing projects at neighbourhood level and those at the whole city level.
- GOV\_079 The platform will include a forum facility to facilitate dialogue with participants (COLLABORATORS).
- This requirement has been incorporated into the community activity.
- GOV\_081 The platform includes in the Collaboration module tools to search ongoing projects employing different topics: geographical area, transport mode, key words.

## 5.1. Core Features

### 5.1.1. Mobility habits

This page corresponds to the functionality of information awareness necessary for motivation and engagement in the city's mobility challenges.

The 'Mobility Habits' module is accessed after the COLLABORATOR has logged in. It provides essential information for the U-GOV user, including data on: the number of trips per day; the evolution of transportation mode usage in the city over the last 5 years; a graph displaying the city's carbon footprint for the current and previous year; the average satisfaction rating with public transportation usage; the main challenges of the city regarding public transportation; and a map showcasing ongoing projects in the city.

The information currently displayed by the U-GOV platform is subject to change; the relevant information will be defined in subsequent validations.

Currently, the development of this functionality is at the conceptual level, and it does not yet support interaction with comparison variables, which will be developed in the next stage of development.

The concept includes the following function, as correspondingly presented in Figure 4. This information is pending of definition and selection, according to the most relevant data, obtained from open data sources or other UPPER tools such as U-SUMP.

1. This section presents information on the number of trips per day for the most significant modes of transportation in the city. Users can select up to three cities.
2. This section displays the evolution of transportation mode usage in the city over the last 5 years. Users can select the mode of transport.
3. This section provides a comparative graph of the city's carbon footprint for the current and previous year.
4. This section shows the average satisfaction rating with the use of public transportation.
5. This section elaborates on the main challenges the city faces regarding public transportation.
6. A map displaying ongoing projects in the city. Clicking on it will take users to the 'Collaboration\_Projects in Progress' screen.



Figure 4: Mobility habits module

### 5.1.2. Collaboration – Ongoing actions

This page corresponds to the Consultation/Dialogue and Collaboration/Co-creation functionalities necessary for participating in the city's mobility challenges.

The Collaboration module can be accessed from the ongoing actions map located on the Mobility Habits page or from the matrix on the screen's left side. It provides key functionalities for viewing active projects in the city, selecting topics and projects of interest, and connecting with participation actions for U-GOV users.

The information currently displayed on the U-GOV platform is not definitive; general information about project phases or descriptions will be defined in upcoming validations.

The block of functionalities related to Collaboration is the most complex, advanced, and with the highest degree of programming development. Currently, the development of this functionality is at a partially functional level, allowing interaction with filters, access to participatory activities, and enabling active participation.

The Collaboration module offers the following interactive functions, as correspondingly presented in Figure 5:

1. It allows filtering projects according to the participation phase or searching for projects with semantic keys from the title.
2. It provides general information about the projects: title, topics of interest, phases available for participation, and active or inactive phases (phases appearing in grey will not be activated in the project).
3. It grants access to the details of each project.
4. It enables direct access to activities of the Understanding phase of a project. The text appears in orange if the phase is active and in grey if it has not yet been activated.
5. It enables direct access to activities of the Ideation phase of a project. The text appears in orange if the phase is active and in grey if it has not yet been activated.
6. It enables direct access to activities of the Validation phase of a project. The text appears in orange if the phase is active and in grey if it has not yet been activated.
7. This area shows the map where the ongoing actions are located.
8. Filter by topics function.



Figure 5: Ongoing actions in the Collaboration module

### 5.1.3. Citizen stories

This module corresponds to the functionality for alliance and decision-making activities necessary to understand, evaluate, and contribute, based on opinions and experiences from projects carried out in the city.

The Citizen Stories module is accessed from the matrix appearing on the screen's left side. It provides key functionalities for viewing active projects in the city, selecting topics and projects of interest, and connecting with participation actions for U-GOV users.

The information currently displayed by the U-GOV platform is not definitive; the pertinent information will be determined in the validations to be undertaken.

Currently, the development of this functionality is at the conceptual level, which does not allow interaction with project details, rating, and comments. These features will be defined in the next stage of the development process, based on the conceptual interaction proposals of the Citizen Stories content block (5.2 Advanced Features).

The concept includes the following functions, as correspondingly presented in Figure 6:

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

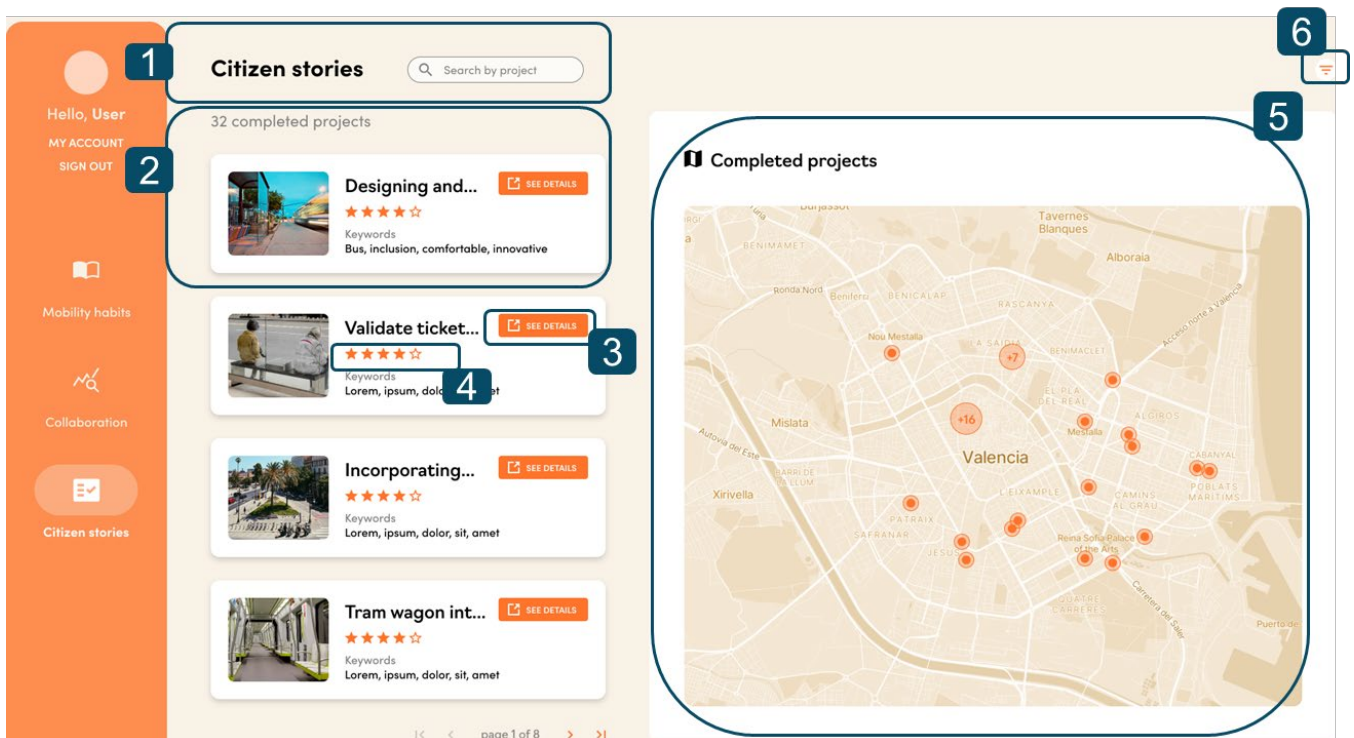


Figure 6: Citizen stories module

## 5.2. Advanced Features

### 5.2.1. Collaboration – Projects in progress – Filter by topics – COLLABORATOR role

Currently, the platform enables users to filter projects based on their topics of interest, as correspondingly presented in Figure 7:

1. The 'Filter by Topics' menu is used for display the list.
2. Individual 'Filter by Topics' items (1), allowing users to select, accept, or cancel their choices (2).

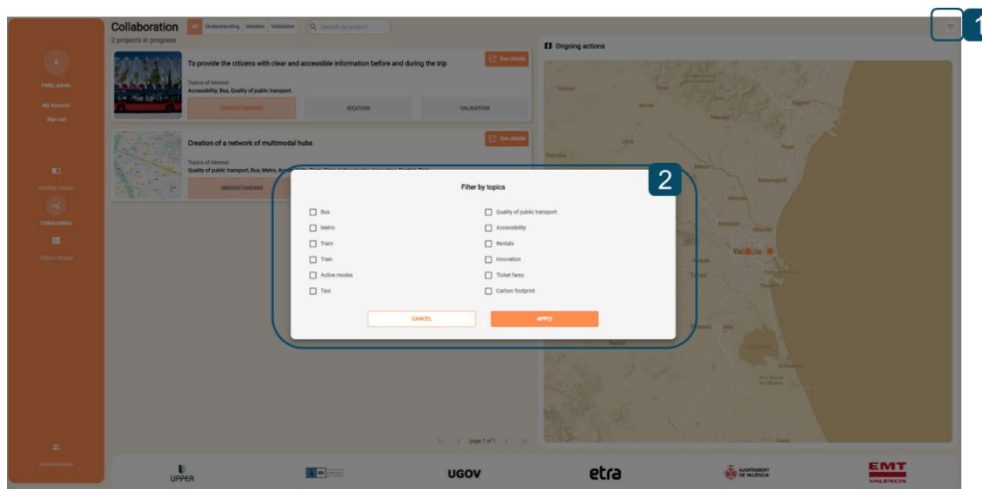


Figure 7: Filtering by topics within Collaboration module

### 5.2.2. Collaboration – Project view details - COLLABORATOR role

This page is accessed from the “See details” field on the Collaboration content page or project description. It displays various project information such as Title, Topics of interest, PROMOTERs, Collaboration Phases (both active and inactive), Date, How to participate, Access to the activities, and Return to the main project page (Hide details). Please note that the information provided by the U-GOV platform regarding this functionality could change; details about phases and activity descriptions will be finalized during validation processes.

The set of features related to Collaboration is the most advanced and has undergone extensive programming development. Currently, this functionality is partially functional, allowing for interaction with activities, access to collaborative tasks, and active participation.

Specifically, the functionalities of this page include, as correspondingly presented in Figure 8:

1. Project Description: Title; Topics of interest; PROMOTERs (institution, contractor, or reference entity).
2. Phases: Understanding, Ideation, and Validation (with pending descriptions of collaboration for each phase).
3. Date: It indicates the project's phase end date.
4. How can I participate? It provides details on participating in the project (to be defined).
5. Upload files: Access to ideas' sharing activity (pending details on activity information).
6. Community: Access to forum activity (pending details on activity information).
7. Project location map within the city.

8. Access to the project's general Community activity (if greyed out, it indicates no general forum).
9. Hide Details: It allows returning to the list of projects.

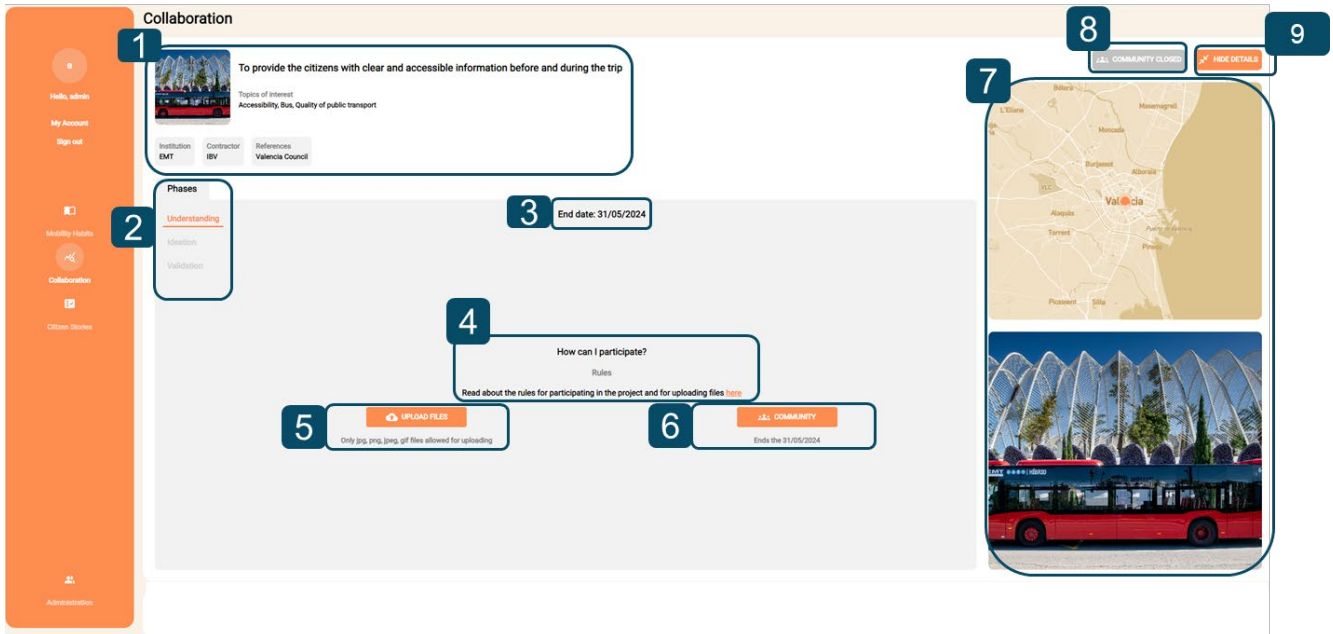


Figure 8: Project details within Collaboration module

### 5.2.3. Collaboration – Understanding phase – Community activity - COLLABORATOR role

This page is accessed from the 'Community' section on the Project content page. It displays project information including the Title, Topics of Interest, PROMOTERS, Number of Comments, the Comments themselves, and provides access to generate a new comment. The activity's description (which defines the questions asked in the forum) will be finalized during validation processes.

Specifically, the functionalities of this page are as follows, as correspondingly presented in Figure 9:

1. It indicates the user's current location on the platform and allows for easy navigation back to the list of projects.
2. It summarizes key project information.
3. It displays the number of posts and highlights important threads.
4. It shows the comments.
5. It enables users to react to comments.
6. It provides the option to generate a new comment.

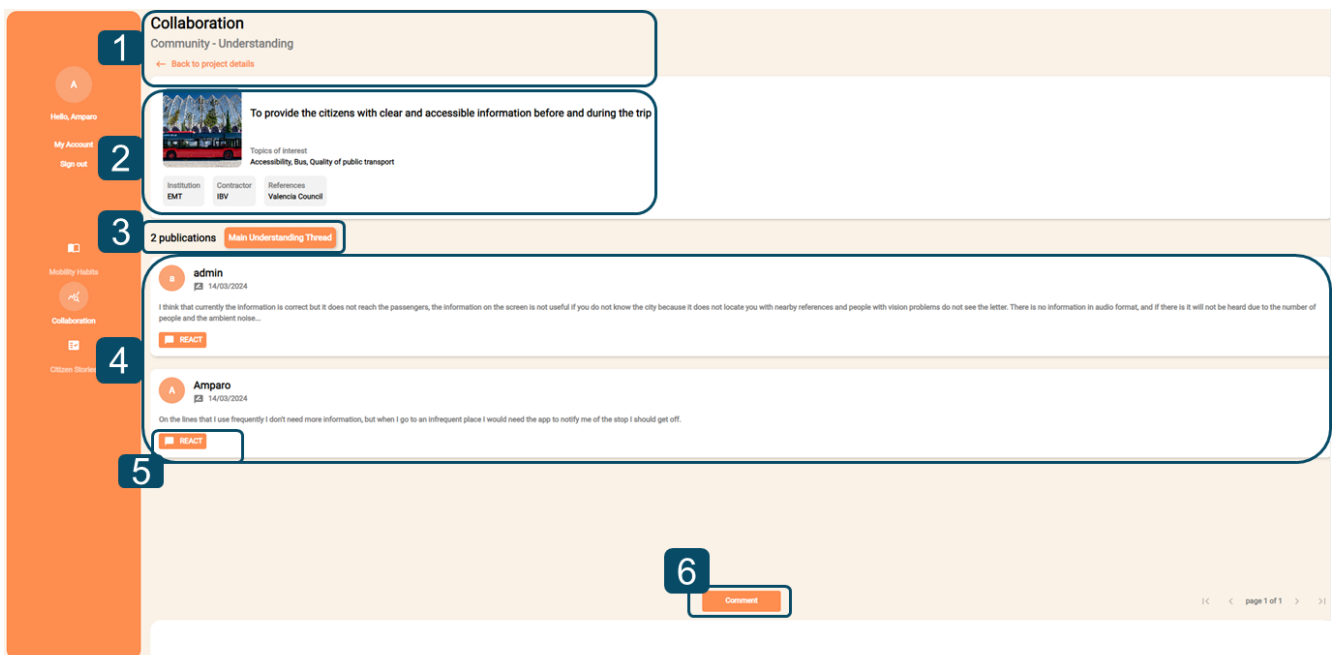


Figure 9: “Understanding” menu within Collaboration module

1. After selecting the 'comment' field, this screen appears (Figure 10), enabling you to compose the text for adding a comment to the forum.

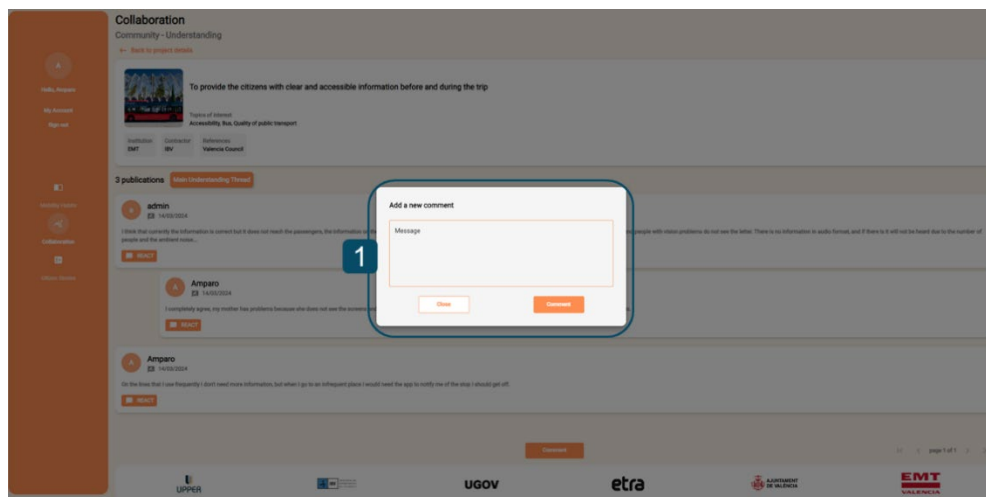


Figure 10: Window for comments sending in the Forum

The following screen illustrates how comments and reactions are integrated into the forum/community, as correspondingly presented in Figure 11:

1. It indicates the user's location on the platform and provides the option to return to the list of projects.
2. It summarises project information.
3. It displays the number of posts and highlights the most significant threads.
4. It offers the possibility to set distinct levels for comments and reactions to comments, allowing up to 5 levels of reactions (comment to another comment).

5. Clearly marks new comments independently from other reactions.
6. It enables the creation of new comments



Figure 11: Comments and reaction presented in the Forum

### 5.2.4. Collaboration – Ideation phase – Share ideas activity - COLLABORATOR role

This page is accessed from the "See details" section within the Collaboration module or project description. It displays project information, including the Title, Topics of interest, PROMOTERS, active and inactive Collaboration Phases, Dates, How to participate, and Access to activities. Please note that the information provided by the U-GOV platform regarding this functionality is subject to change; specifications about phases and activity descriptions will be finalized during upcoming validations.

Specifically, access to the "Share Ideas" activity can be found in the "Upload Files" section within the Project content page. The nomenclature of this section will be reviewed.

The functionalities of this page, correspondingly presented in Figure 12, are as follows:

1. Indicates the user's current location on the platform.
2. Project Description: Title, Topics of interest, PROMOTERS (institution, contractor, or entity of reference).
3. Phases: Understanding, Ideation, and Validation (only the Ideation phase is currently activated).
4. Date: It indicates the project/activity end date.
5. How can I participate? It provides details on project participation methods. Details to be finalised.
6. Upload Files: It provides access to the "Share Ideas" activity. Specifications about the activity are pending. Currently, this section allows users to upload image files. Future enhancements will enable the addition of comments or audio to explain ideas/images.

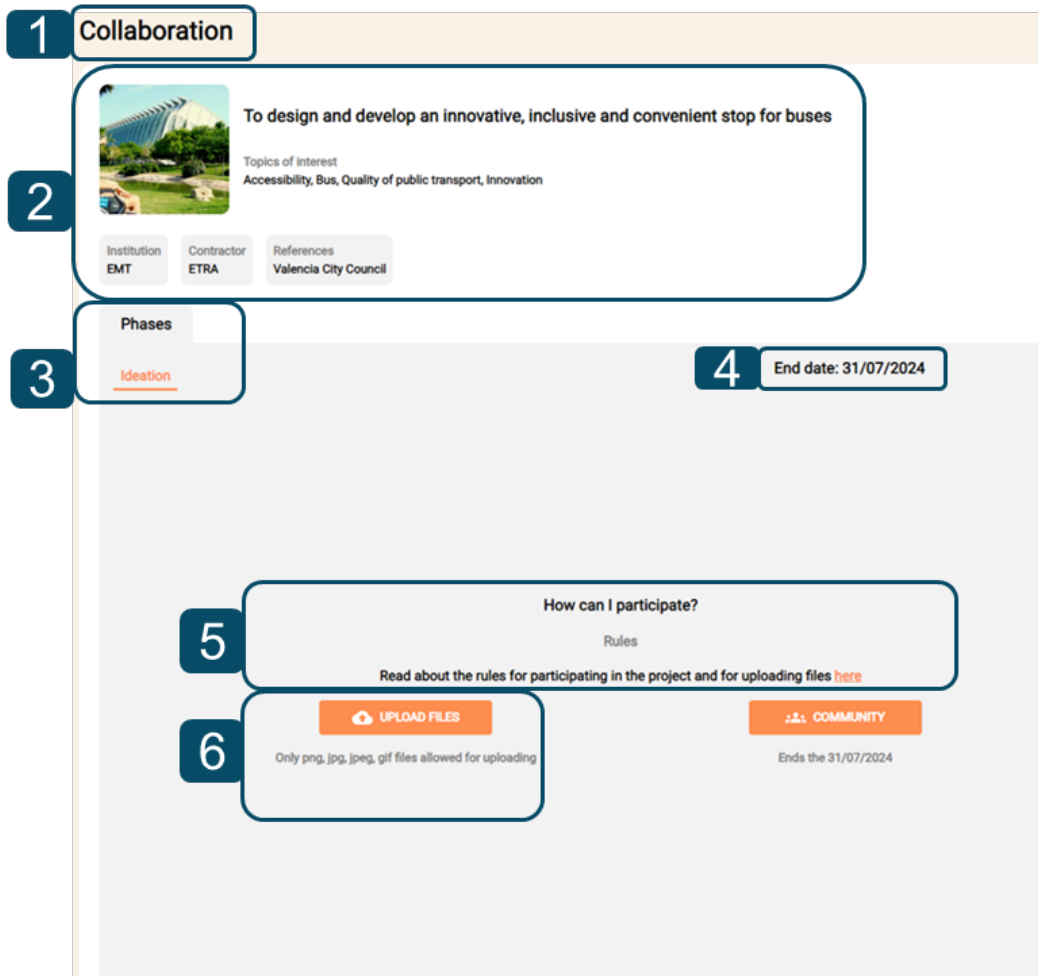


Figure 12: Menu for ideas sharing

### 5.2.5. Collaboration – Validation phase – Survey activity - COLLABORATOR role

The survey activity can be accessed through the 'See details' field on the Collaboration content page or project description. This page (Figure 13) facilitates filtering and selecting projects 1. and displays pertinent project details 2.: Title, Topics of interest, PROMOTERs and Collaboration Phases (with Validation currently active).

The information provided by the U-GOV platform regarding this functionality is subject to changes; specific details about phases and activity descriptions will be finalized during subsequent validation processes.

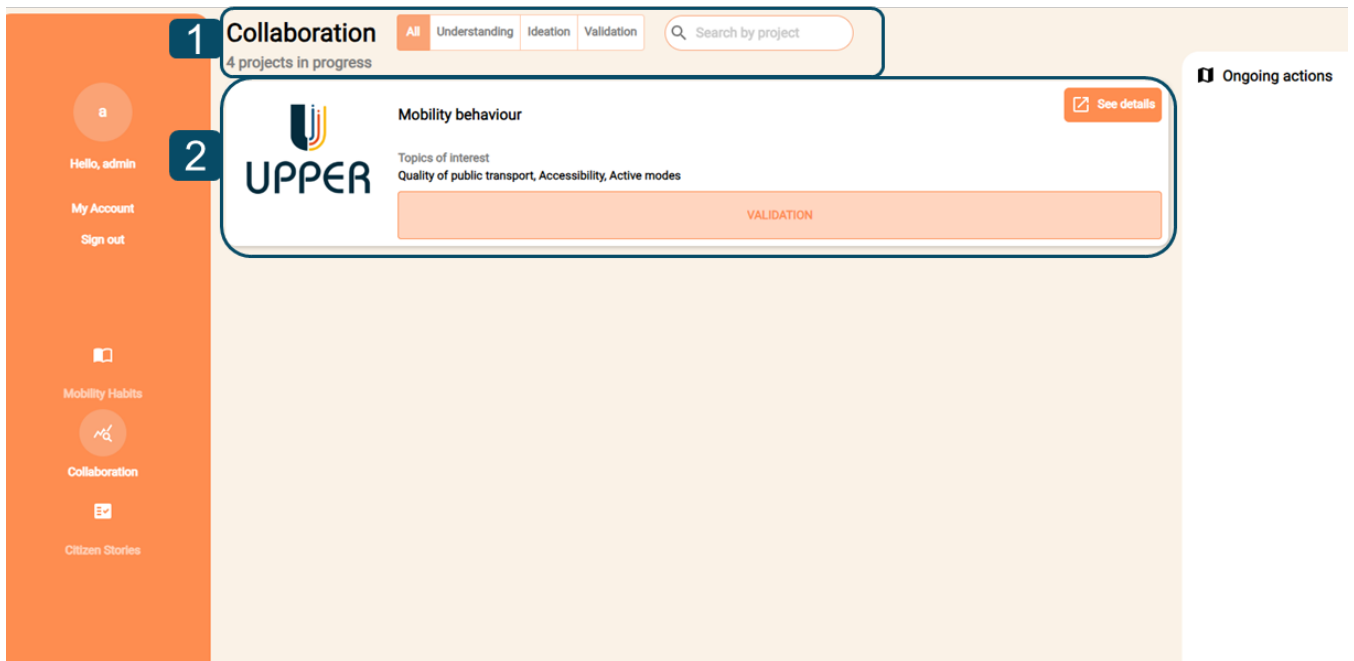


Figure 13: Access to survey activity

Once on the project Collaboration module is open, the following functions are available, as correspondingly presented in Figure 14:

1. Location Indicator: It shows the user's current position on the platform.
2. Project Description: It includes the project title, topics of interest, and information about PROMOTERs (institution, contractor, or reference entity).
3. Phases: This section outlines the project phases, which may include Understanding, Ideation, and Validation (note: only the Validation phase is currently activated). Additionally, the end date of the project is displayed.
4. How to Participate: It provides details on how users can participate in the project. This section has not been yet defined.
5. Do/Take Survey: It offers access to the survey activity.

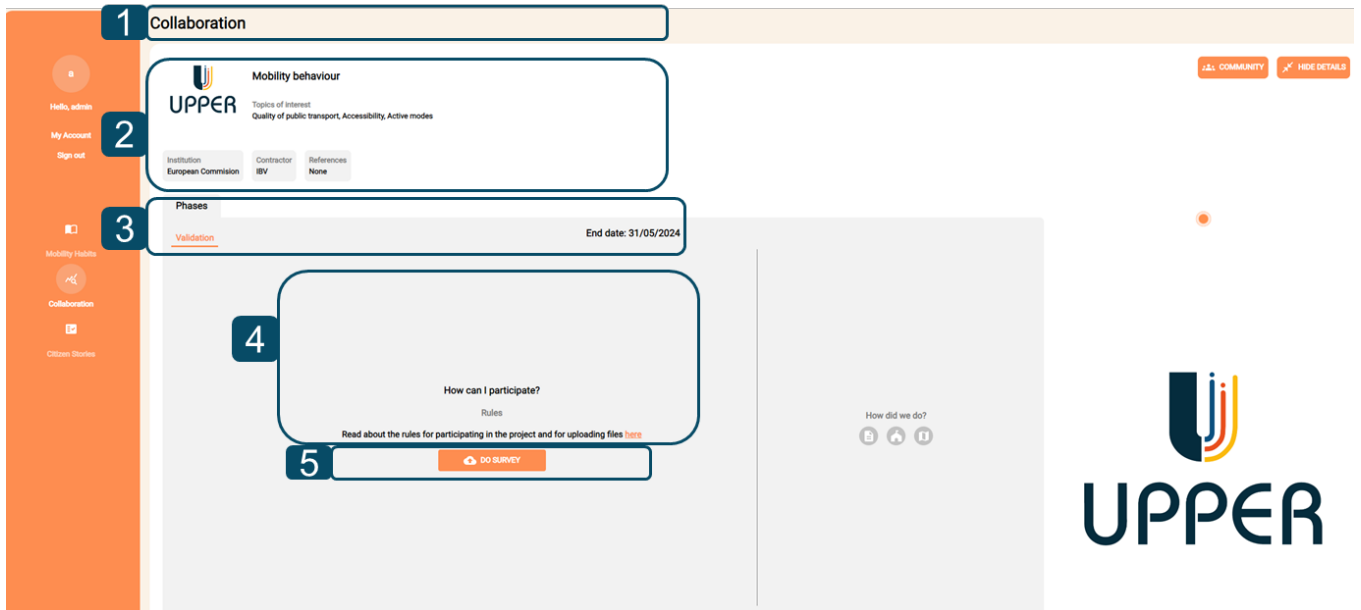


Figure 14: Survey definition menu

Once the COLLABORATOR accesses the "Do/Take Survey" option (Figure 15), they can navigate back 1, and the integrated survey within the platform will appear 2.

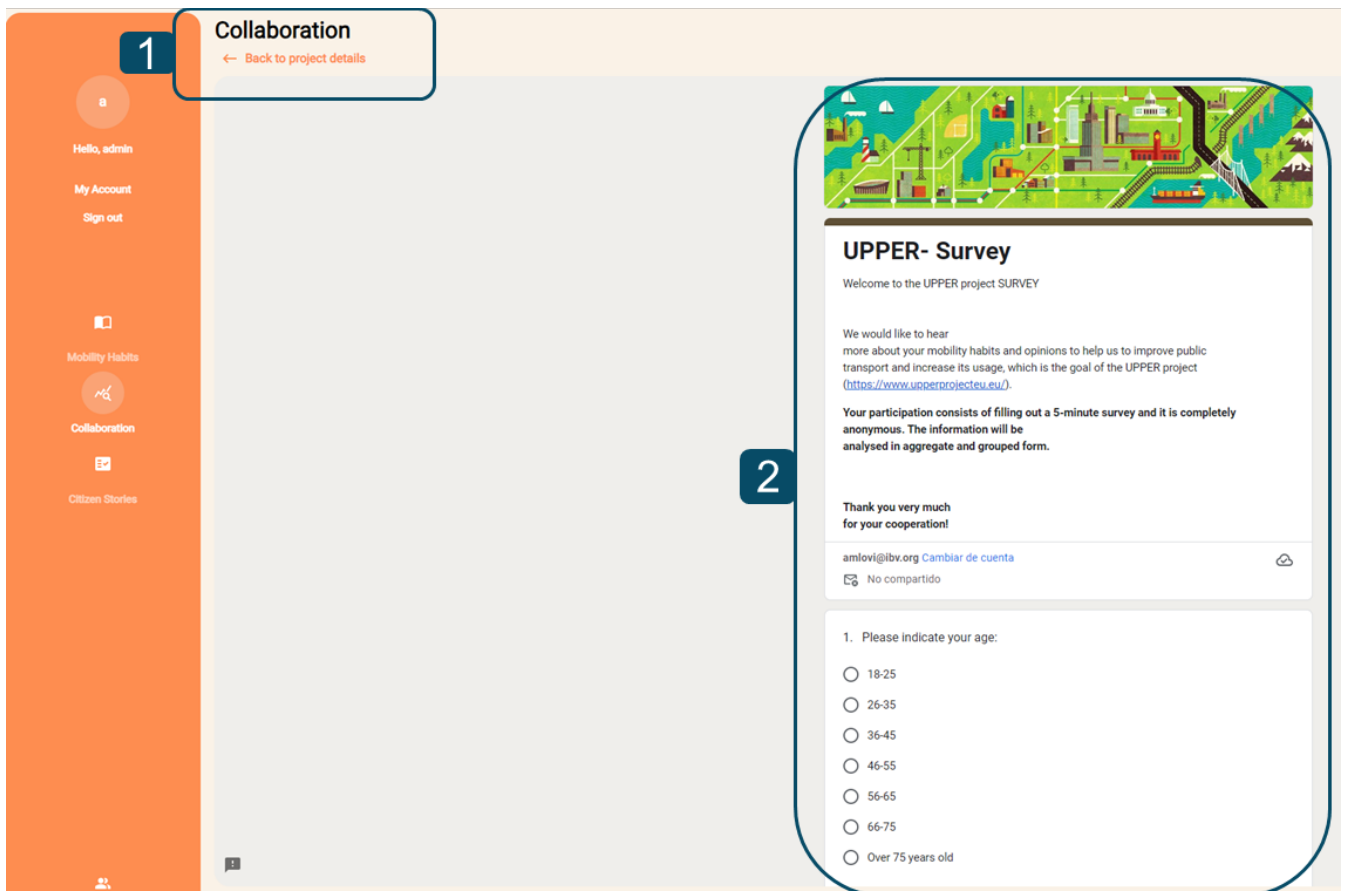


Figure 15: Do survey option screen

### 5.2.6. Citizen stories – Project details - COLLABORATOR role

This page is accessed from the "See details" option on the Citizen Stories content page or Completed Projects. It displays project information such as Title, Reviews, Topics of Interest, PROMOTERs, Project Information, Access to Reviews, Project Location, and an option to Return to the main project page (Hide Details).

The information presented by the U-GOV platform regarding this functionality is at a conceptual level. It currently does not support interaction with project details, ratings, and comments, which will be implemented in the next development stage.

Specifically, the functionalities of this page include, as correspondingly presented in Figure 16:

1. Identifying the user's location within the platform menu.
2. Project Description: Title, Reviews, Keywords, PROMOTERs (institution, contractor, or reference entity modality).
3. Information and dissemination material related to completed projects.
4. Project location and images.
5. Hide Details: Return to the Citizen Stories main screen

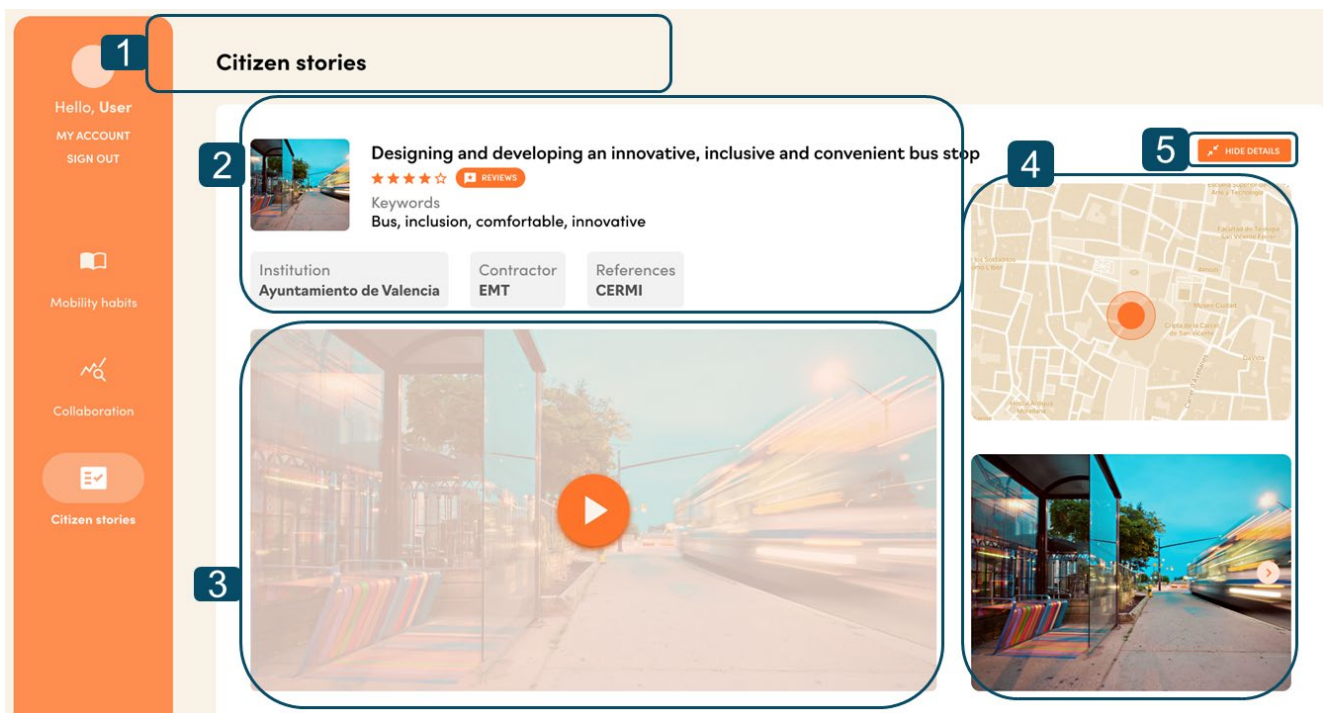


Figure 16: Project details within Citizen stories module

### 5.2.7. Citizen Stories – Project review - COLLABORATOR role

This page can be accessed from the 'Reviews' field of the selected Completed project. It displays various project details, including the Title, Reviews, Topics of Interest, PROMOTERs, Project Information, Access to Reviews, Project Location, and an option to Return to the main project page (Hide details).

The information provided on this page by the U-GOV platform is at a conceptual level. It currently does not support interaction with project details, ratings, or comments, as these features will be developed in subsequent stages.

Specifically, the functionalities of this page include, as correspondingly presented in Figure 17:

1. Indicating the user's location on the platform and enabling a return to the list of projects.
2. Project Description: Title, Average Review Score, Keywords, PROMOTERS (institution, contractor, or entity of reference).
3. Number of reviews.
4. Average evaluation of the project by COLLABORATORS and citizens, along with the number of participants contributing to each rating.
5. Write a Review: it allows users to rate the project and provide comments or assessments.

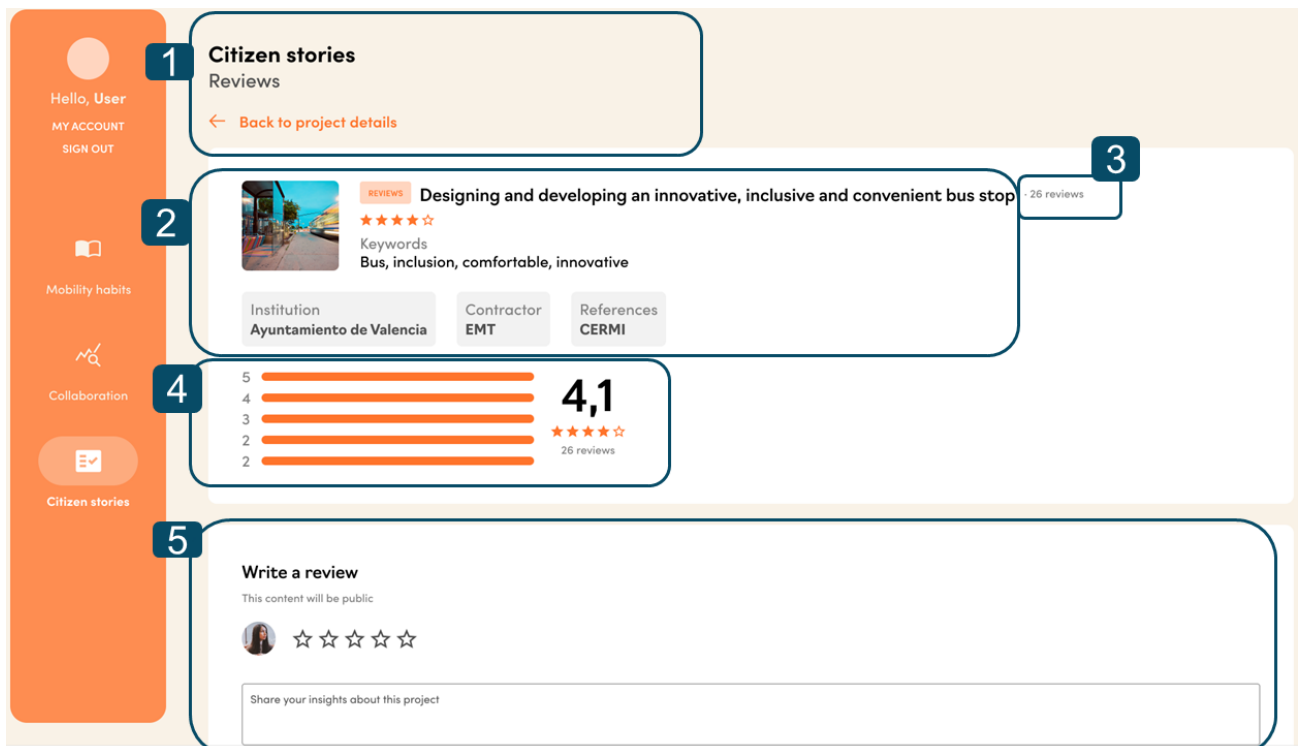


Figure 17: Reviews within Citizen stories module

### 5.2.8. Administration – PROMOTER role

This page corresponds to the functionalities of project planning for the PROMOTER, which are necessary for participating in the city's mobility challenges.

The project creation page can be accessed through the "Administration" tab, located at the bottom of the matrix on the screen's left side. This page offers essential features for planning and defining projects.

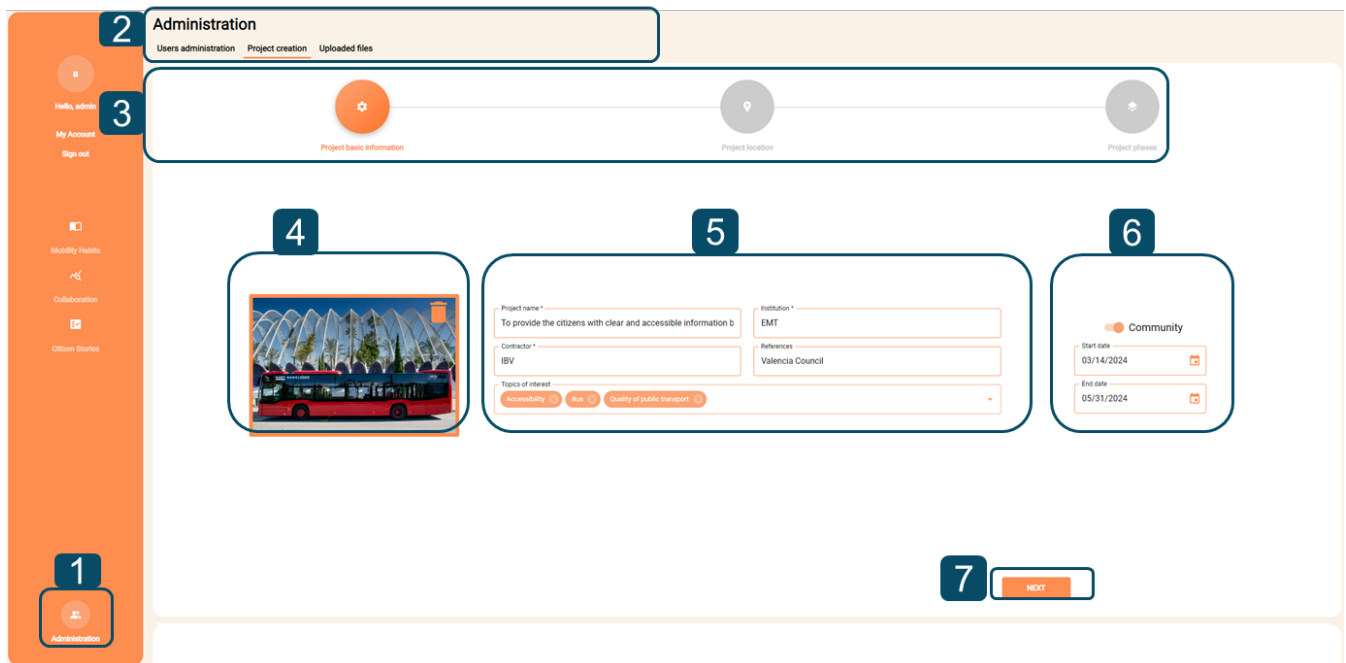
The information currently displayed on the U-GOV platform is subject to change; further details regarding project phases or descriptions will be finalized during validation processes.

Currently, the development of these functionalities is at a functional stage, allowing interaction with filters and fields to define active phases, activities, and their respective dates and deadlines.

This section will undergo modifications to align its contents and processes with user-friendly criteria. Specifically, terms used, selection buttons and icons, activity description fields, and editing options will be reviewed and updated. For instance, the creation of a "My Projects" section will enable users to modify activities and provide quick access to created projects, along with activity description fields and statements.

The Administration page offers the following functions, as presented in Figure 18:

1. To access to the PROMOTER's content block.
2. Functional menu of the content block, including Users Administration (for inviting COLLABORATORS to activities), Project Creation (for creating and planning projects and activities), and Uploaded Files (for storing information generated during activities).
3. Project creation menu with three phases: Project Basic Information, Location, and Phases.
4. Possibility to add the visual identity of the project (image file).
5. Inputting general project information such as Project Name, Institution, Contractor, References, and selection of topics of interest. The project description field is pending implementation.
6. Activation of a general forum activity (named Community) for the project, including starting date and end date.
7. To access to the next step in activity planning.



The screenshot shows the 'Administration' section of the UPPER platform. The main navigation bar includes 'Administration', 'Project creation', and 'Uploaded files'. The 'Project creation' section is active, showing a progress bar with three steps: 'Project basic information', 'Project location', and 'Project phases'. The 'Project basic information' step is currently selected and contains a form with the following fields:

- Project name \***: To provide the citizens with clear and accessible information b
- Institution \***: EMT
- Contractor \***: IBV
- References**: Valencia Council
- Topics of interest**: Accessibility, Quality of public transport

The 'Community' section is also visible, with fields for 'Start date' (03/14/2024) and 'End date' (05/31/2024). A 'NEXT' button is located at the bottom right of the form.

Figure 18: Menu for PROMOTER role definition

In this planning phase (project location, Figure 19), the project's location within the city is delineated 1. across three tiers (citywide, district-specific, or pinpointed). Furthermore, the possibility to return to amend general data is provided 2.



Figure 19: Location of the intervention

The final step, 'Project Phases' allows for the definition of planned activities (Figure 20). In this screen, activities for the 'Understanding' phase are outlined as follows:

1. Select the phases in which activities will be conducted.
2. Project Date: To establish the project's timeframe, including start and end dates.
3. Community: To activate the 'Community' activity forum and set start and end date. A new field for defining discussion topics or questions is pending to implement.
4. File Upload: To activate the 'Share Ideas' activity and specify accepted file types. A field for defining discussion topics or questions from which ideas are expected is pending to implement.
5. Survey: To activate the 'Survey' activity and add the questionnaire link. A field for defining the survey's purpose and introduction is pending to implement. The survey is planned to be conducted using Google Forms.
6. Create Project: As the final step, this option allows for project creation. It is recommended to review all phases, activated activities, and dates before proceeding.

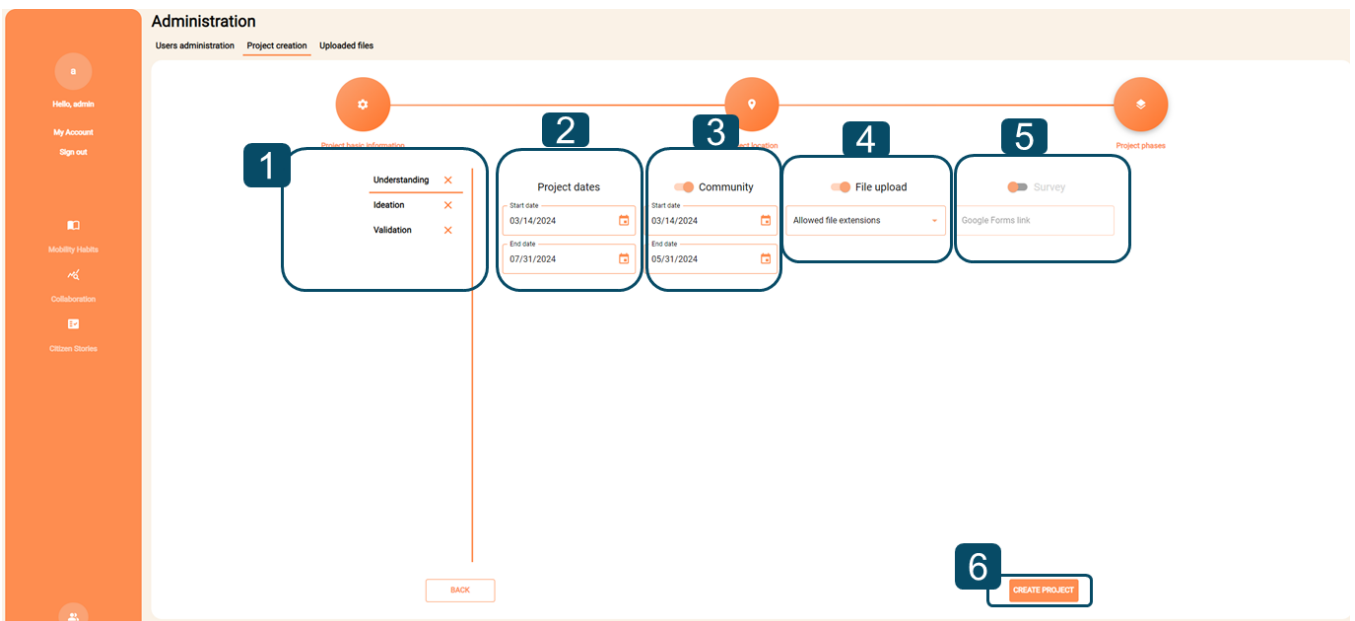


Figure 20: Project definition in the Understanding phase

Regarding the activities of the "Ideation" phase, the following features are available, as correspondingly presented in Figure 21:

1. Function Menu of the Content Block:
  - a. Users Administration: This feature allows PROMOTERs to invite COLLABORATORs to participate in activities.
  - b. Project Creation: Users can create and plan projects and activities using this feature.
  - c. Uploaded Files: This feature enables users to store information generated during activities.
2. The Ideation phase consists of three activities:
  - a. Community: This feature enables the activation of the "Community" forum activity, allowing users to set start and end dates. A pending implementation includes a field for defining the question or topic of discussion.
  - b. File Upload: This feature allows the activation of the "Share Ideas" activity and enables users to establish the type of file accepted. A pending implementation includes a field to define the question or topic from which ideas are expected.
  - c. Survey: This feature enables the activation of the "Survey" activity and provides the option to add a link to the questionnaire. A pending implementation includes a field to define the purpose and a project introduction. The survey is planned to be conducted using Google Forms.
3. Create Project: This final step allows users to create the project. It is advisable to review all phases, activated activities, and dates before proceeding with project creation.

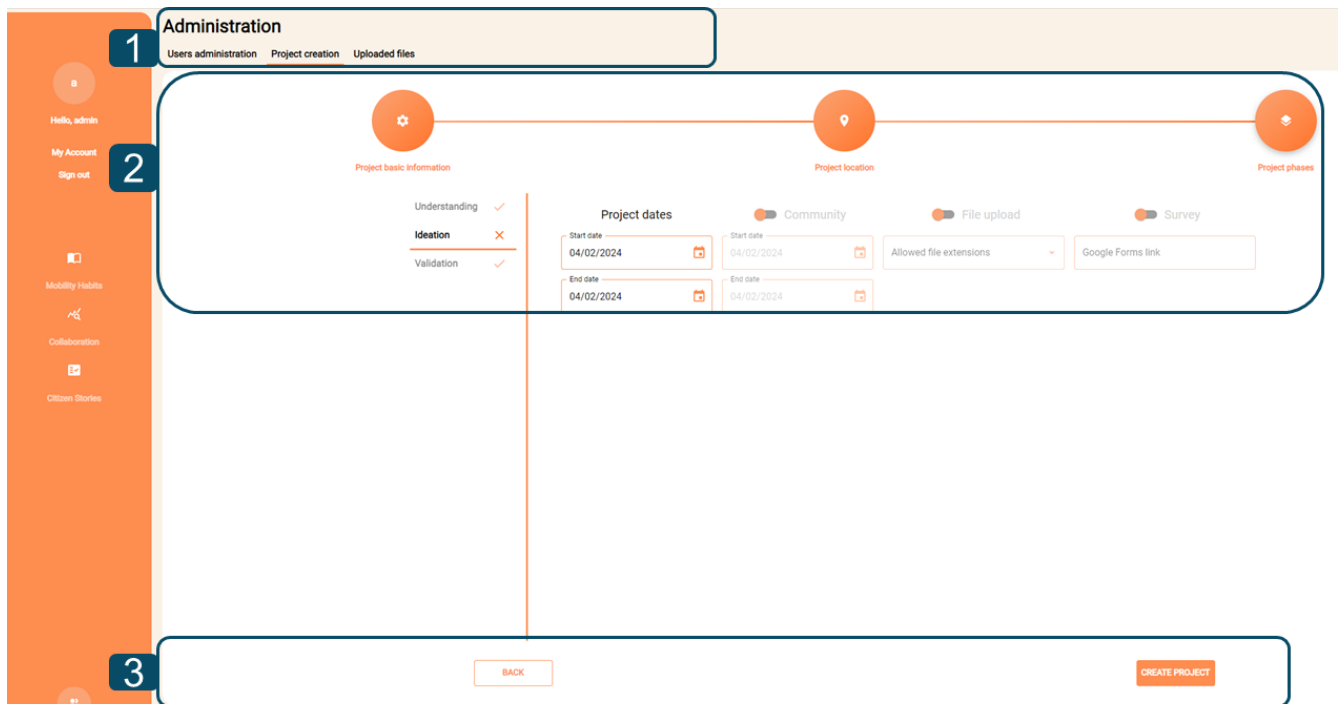


Figure 21: Project definition in the Ideation phase

Regarding the activities of the "Validation" phase, the following items are included, as correspondingly presented in Figure 22:

1. Content block function menu:
  - a. Users' administration: This allows inviting COLLABORATORS to activities.
  - b. Project creation: This allows creating and planning projects and activities.
  - c. Uploaded files: This allows storing the information generated in the activities.
2. The Validation phase comprises three activities:
  - a. Community: This enables the activation of the activity forum "Community" and setting a start and end date. Pending implementation includes a field to define the question or topic of discussion.
  - b. File upload: This enables the activation of the activity "Share Ideas" and establishes the type of file accepted. Pending implementation includes a field to define the question or topic from which ideas are expected.
  - c. Survey: This enables the activation of the activity "Survey" and adding the link to the questionnaire. Pending implementation includes a field to define the purpose and a project introduction. The survey is planned to be conducted using Google Forms.
3. Create project: As this is the final step, it allows creating the project. It is advisable to review all phases, activated activities, and dates before proceeding with the creation.

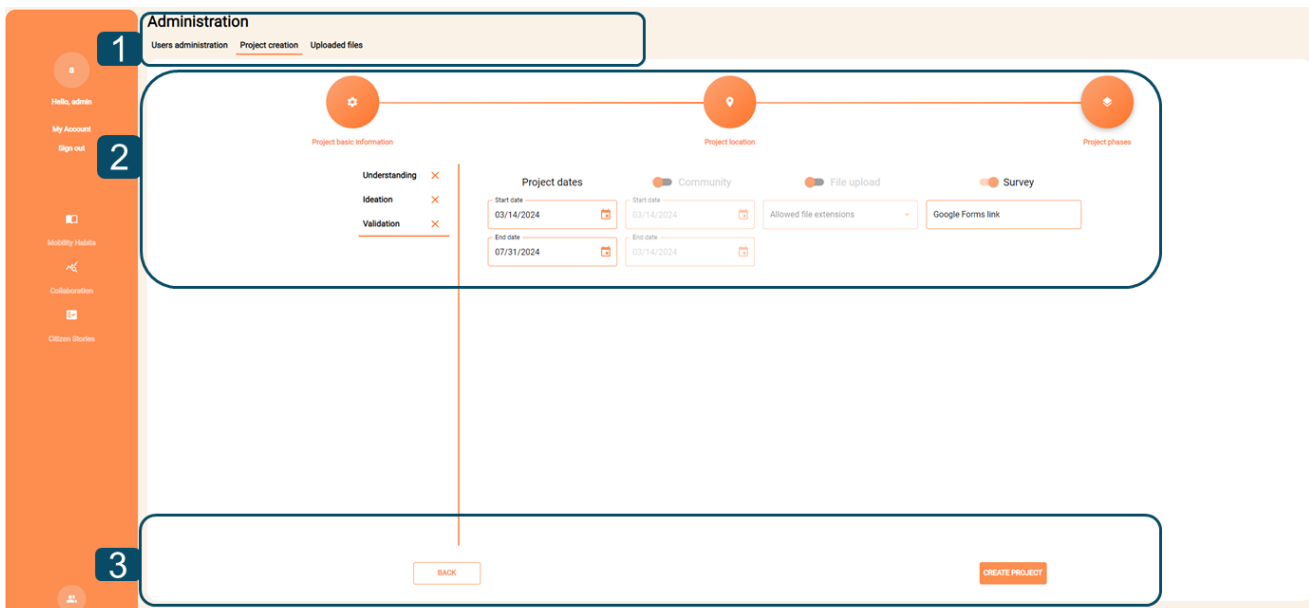


Figure 22: Project definition in the Validation phase

The last feature, 'Uploaded files' (Figure 23), enables users to store the outcomes of their activities (1).

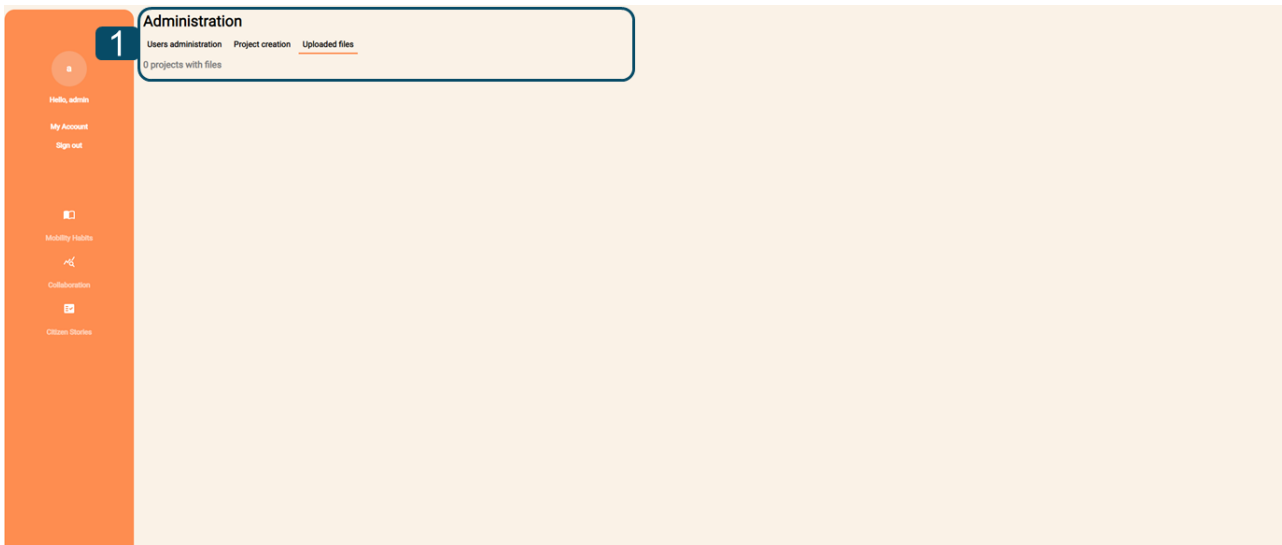


Figure 23: Menu to store project's outcomes

## 6. Data Management

### 6.1. Importing Data

The user can upload different types of files in the community forum. On the one hand, images with the following extensions: .jpg, .jpeg, .png and .gif. On the other hand, text files with these extensions: .txt, .pdf and .docx. The types of files allowed, as well as the extensions, are specific for each project and will be selected and limited by the PROMOTERS when the project is created. Although the application checks if the files uploaded are within the allowed

format, by checking both the extension and the file signature, the PROMOTERS will be the ones in charge of manually checking if the uploaded images are suitable for all audiences.

In addition, the PROMOTERS can upload an image to be a project's icon in the project creation process. The list of extensions can be further extended or limited in the settings file of the project for a specific instance or city. In this way, each city is able to have their own list of allowed extensions. The modified extensions will still be checked in the uploading process to ensure that the file extension is correct, but the file signature check will require to add an extra method for checking the new extension.

## 6.2. Exporting Data

Collecting data about user interactions with the application is important for the PROMOTERS. In this regard, it is a key aspect to provide a convenient way of exporting this data in a widely known, appropriate format so that it can be easily processed and analyzed. For that purpose, data coming from the collaboration surveys will be available for downloading in a further version, in the form of an excel spreadsheet, which can be then used by the PROMOTERS to inspect the data from the users.

## 7. Development timeline

The development of the U-GOV tool is planned as following:

	2023												2024								2025								
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	
<b>Tool ideation</b>	■	■	■	■																									
<b>Requirements identification</b>				■	■	■	■	■	■	■	■																		
<b>1st development phase and release of 1st version</b>										■	■	■	■	■	■	■	1st version												
<i>Development of core functionalities</i>										■	■	■	■	■	■	■													
<i>Bilateral meetings with cities to prioritize developments</i>												■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>2nd development phase and release of 2nd version</b>																													2nd version
<i>Development of remaining functionalities</i>																	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Testing and validation by horizontal partners</i>																		■	■	■	■	■	■	■	■	■	■	■	■
<i>Fine-tuning of the tool</i>																													
<b>Deployment in the cities</b>																													

From ideation to deployment, the development of this tool goes through several phases:

- **“Tool Ideation”** (M1-M4): In the initial phase, the focus was on refining the tool's definition and outlining its essential functions. This involved a thorough analysis of proposed measures by cities and the identification of functionalities crucial for supporting cities in implementing these measures. The culmination of this ideation phase was the creation of a comprehensive product card. This document provided a clear and detailed description of the tool, a catalogue of core functionalities, insights into potential beneficiaries, and a mapping of measures that could leverage the tool's capabilities. This product card served as a key resource for cities and transport operators, facilitating a deeper understanding of the tool's potential impact and benefits.
- **“Requirements Identification”** (M4-M10): The requirements gathering process for the tool was carried out collaboratively, involving the tool developers themselves, developers of other tools within the project (in case of interaction between tools), as well as intermediate users (cities, transport operators, and transport authorities). To define requirements in detail, a series of workshops were conducted, followed by the utilization of the Volere methodology, which entails iterative validation and revision of different requirements by all partners. The outcome of this process was a list of requirements (technical, legal, and operational), section 5. [Functionalities/Content of U-GOV](#), agreed upon by all parties involved. Deliverable D2.4 documents the results of this phase.

- **“1<sup>st</sup> Development Phase and Release of 1<sup>st</sup> Version”** (M10-M16): During this phase, the core interface and functionalities of the tool have been developed. Concurrently, bilateral meetings with city representatives have taken place to prioritize certain features based on the unique needs of their measures. By the time this deliverable is submitted, this phase will have been concluded.
- **“2<sup>nd</sup> Development Phase and Release of 2<sup>nd</sup> Version”** (M16-M24): During this phase, the remaining functionalities will be developed. Concurrently, the tool will undergo a rigorous testing and validation by designated project horizontal partners, who will offer valuable feedback on its usability. Furthermore, the tool developers will refine existing features, addressing any identified bugs or issues from the initial release, and integrating feedback collected from both horizontal partners and intermediate users.
- **“Deployment of the Tool in the Cities”** (M22-M28): Starting in month 22, the tool will be gradually deployed across cities, following a comprehensive strategy encompassing training and support. Fine-tuning efforts will persist until month 28, guided by user feedback, ensuring optimal functionality and user satisfaction.