

SmartUrbanity

Framework Blueprint

Deliverable 2.2

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List of Abbreviations

AAP	Accessibility Analysis Platform (Note: implemented through the Access Hub interface and its analytical environment, Access Atlas.)
AR	Augmented Reality
CEA	Citizen Engagement App (Note: working name of the Access Together app.)
CO₂	Carbon dioxide
DSS	Decision Support System (Note: refers to the decision-support functionality provided by the Accessibility Analysis Platform; not a separate application.)
DUT	Driving Urban Transitions Partnership
EU	European Union
GA	Grant Agreement
GIS	Geographical Information System
ICT	Information and Communication Technology
KVKK	Law on the Protection of Personal Data (Türkiye)
MaaS	Mobility as a Service
MaaS4Italy	National Mobility as a Service initiative in Italy
NGO	Non-Governmental Organisation
PEC	Posta Elettronica Certificata (Certified Electronic Mail, Italy)
SWOT	Strengths, Weaknesses, Opportunities, Threats
WP	Work Package



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Executive Summary

Deliverable D2.2 documents the participatory process carried out under **Task 2.2 – Framework Development** and consolidates the results of stakeholder workshops conducted in the SmartUrbanity pilot locations: Rome, Lyon, Karlsruhe, İzmir, and Thurgau (Greater Zurich Area). The objective of this deliverable is twofold: to validate and refine the project's digital framework through real-use feedback, and to provide consolidated, comparable inputs to guide the further technical development of the Citizen Engagement App (Access Together), the Accessibility Analysis Platform (implemented through Access Hub and its analytical environment, Access Atlas), and the decision-support functionality provided by this platform.

A common workshop methodology was applied across all pilots, combining structured presentations, moderated discussions, and interactive tools such as questionnaires, mind-mapping, SWOT analysis, and dotmocracy. This ensured consistency while allowing adaptation to local contexts. Workshops engaged a broad mix of stakeholders, including citizens, civil society organisations, urban authorities, mobility agencies, researchers, and project partners. The methodology enabled systematic collection of both qualitative insights and basic quantitative indicators, supporting cross-city comparison.

Across all pilot cities, stakeholders converged on several core requirements. First, **traceability and feedback** emerged as critical conditions for trust and sustained engagement. Participants consistently stressed that citizen input must lead to visible, structured responses and must not disappear into fragmented administrative processes. Second, **inclusiveness and accessibility by design** were identified as essential. All tools are expected to support diverse user needs, including people with disabilities, older adults, users with limited digital skills, and those facing temporary mobility constraints. Third, stakeholders emphasised the importance of **data quality and verification**, calling for structured reporting, validation mechanisms, and avoidance of unmoderated free-text inputs.

Component-specific findings further clarified design directions. The Access Together app (Citizen Engagement Application) is expected to support low-effort reporting of both real-time events and structural mobility barriers, combined with transparent feedback loops and optional, non-competitive gamification. The Decision Support System (DSS) is understood as the decision-support role of the Accessibility Analysis Platform, acting primarily as an evidence-structuring and prioritisation function that



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aggregates citizen input with objective indicators, aligns with institutional workflows, and supports explainable decision-making rather than acting as a separate reporting channel. The Accessibility Analysis Platform, implemented via Access Hub and Access Atlas, is expected to represent accessibility as a multidimensional, situational condition, integrating reliability, safety, route continuity, and multimodal usability through configurable user profiles and filters.

Overall, Deliverable D2.2 provides a validated methodological framework, a consolidated set of functional requirements, and a conceptual framework blueprint derived from stakeholder evidence. These results form a robust basis for the continued refinement and alignment of the SmartUrbanity framework within WP2, ensuring consistency between project objectives, user needs, and institutional constraints.



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1. Introduction

The purpose of Deliverable D2.2 is twofold. First, it documents the participatory process used to validate and refine the project's digital framework, as defined under Task 2.2. Second, it consolidates and synthesises the outcomes of the stakeholder workshops conducted to date, including the lessons learned during the first implementations of the methodology.

Task 2.2 is designed to connect framework development with real use contexts through structured engagement activities. Workshops act as interfaces between the technical work and the needs, expectations and behaviours of stakeholder groups such as citizens, urban authorities, mobility actors, researchers and civil society organisations. Their role is to ensure that each component of the framework—Citizen Engagement, Accessibility Analysis Platform and the Decision Support System—is assessed and refined using evidence gathered in a consistent and comparable manner.

This deliverable therefore includes:

- A description of the participatory methodology applied across pilot cities, including the organisation of workshops, stakeholder groups involved and the interactive tools used.
- A synthesis of the results received from the workshops carried out to date.
- The main lessons learned from the implementation of the methodology, including procedural, organisational and content-related insights that inform the next stages of framework development.
- The consolidated inputs needed for the continued refinement of the project's digital framework.

By incorporating both the methodological design and the analysed results of the workshops already completed, Deliverable D2.2 provides a basis for further technical work in WP2 and ensures alignment between stakeholder feedback and the ongoing development of the SmartUrbanity framework. It does not include detailed user research artefacts such as personas, journey maps or usability evaluations. The outputs of D2.2 serve as input for these subsequent user-centred design and validation activities.



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2. Methodological Approach

Task 2.2 applies a participatory, human-centred methodology to validate and refine the project's digital framework integrating three main components. To do so, the following methodological steps are taken:

- Stakeholder identification
- Workshop organisation
- Workshop agenda and tools

2.1. Stakeholder identification

Workshops and feedback activities target a mix of stakeholders, including:

- Urban authorities – city planners, transport and mobility agencies, technical departments.
- Citizen groups – neighbourhood associations, youth groups, accessibility advocates, disadvantaged groups, local influencers.
- Mobility actors – public and private mobility providers, micro-mobility operators.
- Researchers and civil society – universities, think tanks, NGOs, and SMEs.
- Project partners – involved in facilitating discussions and capturing insights.

The stakeholders were identified based on the project's inception report, the past experience of the project partners from similar project activities and insights from the pilot leaders. This list serves as a valuable guideline for cities organising the pilots.

Concrete identification and naming of the relevant stakeholders will be the task of each pilot leader. This allows every pilot city to engage the most relevant local actors - directly involved in mobility planning, community initiatives, or accessibility efforts - ensuring that participants genuinely reflect the city's specific context, needs, and priorities.

2.2. Workshop organisation and timeline

The idea was to hold one workshop in every pilot location that discusses the main elements of the framework. As requested by the project partners, the first workshop was held in Rome, and the agendas of the rest were refined based on the lessons learned from the Rome workshop.



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The workshops foreseen under Task 2.2 were organised later than originally planned. The sequence remained the same, but the dates were adjusted to reflect the actual availability of pilot cities, and the preparation needs of the beneficiaries. The revised and finalised timeline is presented below.

Preparation phase

- September–December 2025: SZTAKI prepared the core templates, including the participant list, minutes of meeting and registration form. Pilot leaders provided input to ensure that the templates and guiding questions reflected the needs of each pilot city.
- December 2025: SZTAKI held an online coordination meeting with the pilot leaders to review the workshop structure, align expectations and check that all materials were ready for use.

Pilot workshop in Rome

- 13 January 2026: Citizen Engagement App workshop held at the *Centro di Aggregazione Giovanile*, Municipio XII. This was the first implementation of the Task 2.2 methodology. (13 participants: citizens + NGOs).
- 25 February 2026 - Morning: Decision Support System workshop held at the *Council Hall of Municipio XII*. (11 participants: public decision-makers, mobility agencies, police, technical offices)
- 25 February 2026 – Afternoon: Accessibility Analysis Platform workshop held at the same venue. (12 participants: 8 citizens/NGOs + 4 institutional actors)
- Immediately after the workshop: CTLup prepared the workshop minutes, outputs summary and submitted the signed participant list together with photo documentation.

Workshops in other pilot cities

- 10 February 2026 at the Karlsruhe Town Hall, covering all three components (in-person). An additional workshop was held online (replicating the first one in structure) in Karlsruhe on 13 February 2026, because two representatives from the Public Transit Authority (KVV) could not attend the physical session



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- 13 February 2026: The Lyon workshop was held based on the same structure as Rome but all three components were held on the same day (in-person).
- 18 February 2026 at Ege University in Bornova (İzmir), covering all three components in a single full-day workshop with citizens, municipal actors and professional bodies (in-person).
- 20 March 2026: The Thurgau (Greater Zurich area) workshop - covering all three components in a single online workshop (online).

Finalisation phase

- After each workshop: Pilot leaders prepared and submitted the workshop minutes, outcome summaries and signed participant lists.
- April 2026: SZTAKI consolidated all inputs, synthesised lessons learned and prepared the draft deliverable and sent out this document to project partners for preliminary review

2.3. Workshop agenda and tools

The building blocks of the framework around the workshops were organised are:

- Citizen Engagement App (CEA; Access Together, enabling citizen reporting and feedback.)
- Accessibility Analysis Platform (AAP; implemented through the Access Hub interface and its analytical environment, Access Atlas.)
- Decision Support System platform (DSS; refers to the decision-support functionality provided by the Accessibility Analysis Platform and does not constitute a standalone application.)
- Integration of these components into a single framework, including gamification (Focusing on coherent data flows, traceability of citizen input, and feedback mechanisms across components.)

The workshops were separated into main topics based on relevant stakeholders. Since the topics involved different stakeholders, some topics were held in parallel.

Workshops were hosted and organised by the pilot leaders and will be held in local languages. The suggested agenda is shown below; however, as agreed with the pilot leaders, minor deviations were allowed (e.g., holding parallel sessions sequentially), provided that the desired outputs could be generated.



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During the workshops, the pilot leaders take the role of moderators, guiding the discussions and ensuring that each thematic component of the framework is thoroughly explored. Stakeholder ideas and comments are gathered during the dedicated discussion segments for each session, after which the pilot leaders summarise key insights and draft preliminary conclusions for each session (Appendix A: Workshop outputs template).

To ensure consistent workshops across all pilot cities, moderators were encouraged to follow the moderation best practices below.

Dos:

- Allow participants to freely express their thoughts and opinions.
- Encourage everyone to write down their ideas while others are speaking.
- Remain neutral and impartial throughout the discussion.

Don'ts:

- Do not allow any single participant to dominate or monopolise the conversation.
- Avoid using technical jargon or overly complex language that may be difficult for some participants to understand.
- Moderators should not express personal bias or influence the direction of the discussion.

Practical arrangements and documentation

To ensure consistent implementation across pilot cities, the following practical elements were prepared for each workshop:

- Sufficient printouts of the questionnaires and participant lists.
- Spare pens for participants.
- Large sheets of paper or whiteboards and coloured pens for mind-mapping and SWOT exercises.
- Coloured stickers for dotmocracy, using different colours for citizens and experts.
- Empty sheets of paper for group work activities.

The workshop organiser is responsible for completing the outputs template and ensuring that the signed participant list and photographic documentation are included in the workshop package.

To support smooth workshop delivery, the following roles were assigned:



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- Presenter: delivers the presentation and answers factual questions.
- Moderator: facilitates discussions and ensures a balanced contribution from participants.
- Secretary: prepares minutes and manages documentation, including the participant list and questionnaires.

Proposed agenda

Welcome

- 15 min: welcome, introduction

Session 1a. Citizen Engagement App

- 15 min: presentation of the Citizen Engagement App
- 45 min: discussion (moderated by pilot leader)

Session 1b. Decision Support System platform and integration

- 15 min: presentation of the Accessibility Analysis Platform
- 45 min: discussion (moderated by pilot leader)

Joint Session. Accessibility analysis platform and closing

- 15 min: presentation of the Decision Support System platform
- 45 min: discussion (moderated by pilot leader)
- 15 min: conclusions and closing

Note: as per the request of some participants, Session 1a. and Session 1b. can be held on separate dates.

Session 1a: Citizen Engagement App

Stakeholders: citizen groups, local civil society organisations, and project partners

Approach: bottom-up perspective focusing on user needs and engagement drivers

This session introduces the Citizen Engagement App as the entry point to the project from the citizen's perspective. The aim is to explore how local communities can be encouraged to participate actively and how the features can best support inclusive engagement.



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Content:

- Presentation of the Citizen Engagement App outlining key functionalities and intended use cases.
- Moderated discussion led by the pilot leader to collect impressions, expectations, and improvement ideas.
- Interactive Q&A to clarify concepts and allow participants to give feedback.
- Questionnaire completion, developed by SZTAKI and tailored with input from pilot leaders, to capture user preferences, mobility habits, and demographic information.
- The recommended group size for this session is 10–20 participants. Larger groups reduce effectiveness of interactive exercises such as mind-mapping.

Tools:

- Participant list completed by all participants; citizens do not need to provide company information.
- Questionnaire completed before or during the workshop. It gathers basic mobility preferences and demographic indicators and supports interpretation of qualitative results, especially given the expected small sample size. (see the citizen questionnaire in Appendix C: Citizen questionnaire template). Pilot organisers compiled the questionnaire results to a summary document shown in Appendix D: Citizen questionnaire summary template.
- Mind-mapping materials: large sheet of paper or whiteboard and coloured pens. The exercise starts from a central question and branches into categories proposed by participants.

Indicative agenda:

- | |
|---|
| <ul style="list-style-type: none">• 5 min: Welcome and short introduction.• 5–10 mins: Participants complete the participant list and, where feasible, the questionnaire.• 5 mins: Presentation of the session topic and its relevance for the framework.• 10 mins: Moderated Q&A focusing on user expectations and initial feedback.• 30 mins: Mind-mapping exercise to collect user motivations, barriers and priorities. |
|---|

Session 1b: Decision Support System (DSS) Platform and Integration

Stakeholders: decision-makers (urban authorities, mobility agencies), mobility operators, and project partners

Approach: top-down perspective focusing on planning needs, data requirements, and integration pathways

This session presents the Decision Support System: an extension of the Accessibility Analysis Platform from the viewpoint of institutional actors who shape urban mobility and planning decisions. The objective is to understand how the DSS can support evidence-based planning and how it can be integrated into existing decision-making processes.

Content:

1. Presentation of the Accessibility Analysis Platform and its DSS extension, highlighting potential use cases for planners and mobility providers.
2. Moderated discussion led by the pilot leader to gather initial reactions, concerns, and expectations.
3. SWOT exercise, where participants individually map ideas related to the guiding questions (using provided worksheets).
4. Quick feedback round to assess whether the collected ideas reflect a meaningful and usable output from the session.

Tools:

- Participant list template to be completed by all stakeholders.
- SWOT sheets completed by expert subgroups organised according to thematic expertise (e.g., policy, transport, social sciences, technology). Each group documents strengths, weaknesses, opportunities and threats.
- Whiteboard for clustering and discussing group results in plenary.

Indicative agenda:

- | |
|---|
| <ul style="list-style-type: none">• 5 mins: Welcome and introduction.• 5 mins: Completion of the participant list by all stakeholders.• 15 mins: Presentation related to this session's topic and its relevance for planning processes.• 10 mins: Moderated Q&A to clarify initial impressions and questions.• 25 mins: SWOT exercise conducted in small expert groups. |
|---|

Session 2: Accessibility Analysis Platform (Joint Session)

Stakeholders: all participating groups (citizens, civil society, authorities, mobility actors, researchers, and project partners)

This joint session brings together both citizens and decision-makers to explore the Accessibility Analysis Platform from multiple perspectives. The aim is to understand how different user groups can use the platform to assess city accessibility, identify inequalities or barriers, and propose targeted interventions. The session also provides space to discuss issues such as data usability, privacy, and inclusiveness. Although the session was conducted jointly, inputs from citizens and decision-makers were collected, analysed, and reported separately. Citizens primarily focused on everyday usability, perceived safety, and concrete barriers affecting daily mobility, while decision-makers emphasised data reliability, traceability, and the feasibility of integrating accessibility indicators into existing planning and administrative workflows. Areas of convergence and divergence between these two perspectives were documented and informed the subsequent synthesis of requirements.

Content:

1. Presentation of the Accessibility Analysis Platform explaining key functionalities, data layers, and potential applications for both everyday users and planners.
2. General Q&A, allowing participants to raise questions, express their points of views, and discuss opportunities for enhancing the platform's value and accessibility. To support comparability across pilot cities, the Q&A in this joint session focuses on the functionalities of the platform rather than on local city-specific issues. The questions raised and the proposed answers form the basis for the subsequent dotmocracy exercise. Typical guiding questions include:
 - What types of filters should be available on the maps?
 - What kinds of heatmaps are most useful?
 - How should citizen feedback be collected?
 - Which additional features should be prioritised?
 - What types of user data would participants be willing to share?

Tools:



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- Participant list completed by all stakeholders; the company field is optional for citizens.
- Dotmocracy: the moderator writes questions and answer options from the Q&A onto a whiteboard. Each participant receives 3–5 stickers per question. Citizens and experts use different colours. Participants place stickers next to preferred options and may briefly explain their choices. The distribution of stickers is compared across stakeholder groups to identify alignment or divergence of priorities.

Indicative agenda:

- 5 mins: Welcome and brief introduction to the joint session and its objectives.
- 15 mins: Presentation of the Accessibility Analysis Platform, including key functionalities, data layers and potential applications.
- 15 mins: Moderated Q&A focusing on platform functionalities, user needs, data usability, privacy and inclusiveness, generating inputs for the dotmocracy exercise.
- 25 mins: Dotmocracy exercise to prioritise requirements across stakeholder groups based on questions raised during the Q&A.

2.4. Data Collection

From each pilot workshop the following data were requested:

- Participant list (Appendix B: Participant list template)
- Citizen questionnaire (Appendix C: Citizen questionnaire template)
- Workshop summaries (Appendix E: Pilot report – Rome, Appendix F: Pilot report – Lyon, Appendix G: Pilot report – Karlsruhe,

- Appendix H: Pilot report – İzmir, Appendix I: Pilot report – Thurgau (Greater Zurich Area))
- Photo documentation of the workshops (including SWOT sheets, dotmocracy results, worksheets for mind maps)



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3. Processing the results and lessons learned

This section consolidates the outcomes of the stakeholder workshops carried out under Task 2.2 – Framework Development. The purpose of the workshops was to validate and refine the main components of the SmartUrbanity digital framework (the Citizen Engagement App, Accessibility Analysis Platform, and Decision Support System) based on user feedback from the stakeholders at the pilot cities. Through these activities, beneficiaries collected evidence on user needs, expectations and operational constraints to ensure that the framework reflects real use contexts.

The workshops provided a consistent structure for gathering comparable results across pilot cities. All pilots applied the workshop structure defined in the ‘Workshop agenda and tools’ document and adapted it to local contexts without changing the core messages. Comparability is ensured through the use of standardised guiding questions, a consistent component structure, and common reporting templates, which enable findings to be analysed and synthesised across pilots despite differences in format and methods. These differences are limited to the format of implementation and the selection of participatory tools but result in comparable structured qualitative outputs aligned with the common workshop template. The deviations from the original template are summarised in Table 1.

Table 1 Workshop formats and methods across pilot cities

Pilot	Format	Methods applied
Rome	In-person (separate sessions)	Moderated discussion; Mind mapping (CEA); SWOT (DSS); Dotmocracy (AAP); Questionnaire
Lyon	In-person (single combined workshop)	Moderated discussion; Questionnaire; Transcript-based analysis (no structured tools such as mind mapping, SWOT, or dotmocracy applied)
Karlsruhe	In-person + online session	Moderated discussion; Mind mapping (CEA); SWOT (DSS); Dotmocracy (AAP); Questionnaire
İzmir	In-person (single full-day workshop)	Moderated discussion; Mind mapping (CEA); SWOT (DSS); Dotmocracy (AAP); Questionnaire
Thurgau (Greater Zurich Area)	Online	Moderated discussion; Dotmocracy (AAP); Online idea collection platform (functionally equivalent to structured input collection); Limited use of questionnaire

The summaries included in the following subsections present the results at each pilot location using a uniform structure. For each city, the analysis covers:

- the workshop context,
- findings from the Citizen Engagement App session,
- findings from the DSS session,
- findings from the Accessibility Analysis Platform session, and
- cross-cutting lessons.

This structure enables direct comparison across locations and supports the consolidation of requirements for the framework blueprint. It also ensures transparent traceability between stakeholder feedback and an empirical basis for refining functionalities. They also highlight city-specific constraints that must be considered during technical development and future validation activities.

3.1. Rome workshop

Workshop context and organisation

The stakeholder workshop took place on 13 January 2026 at the Centro di Aggregazione Giovanile, within the territory of Municipio XII of Rome, the administrative subdivision serving as the local governance body for the SmartUrbanity Rome pilot. The workshop was organised and facilitated by Sapienza University of Rome. It served as the first implementation of the series of workshops in this activity. It followed an extended focus-group format lasting from 06:00 pm to 08:30 pm and brought together 13 participants, including residents of the pilot area and members of several local associations involved in public space maintenance, neighbourhood committees, digital training and school mobility initiatives. Participants first completed the questionnaire before being introduced to the project framework by the local academic team. The session adopted an exploratory approach: rather than testing predefined functionalities, participants were encouraged to articulate needs, concerns and ideas freely to support early-stage conceptualisation of the Citizen Engagement App. A collaborative mind-mapping exercise concluded the meeting, providing structured information for further thematic analysis.

In addition to the Citizen Engagement workshop, two further stakeholder workshops were conducted on 25 February 2026 at the Council Hall of Municipio XII (Via Fabiola 14): one dedicated to the Decision Support System (DSS), involving 11 public decision-makers and technical actors, and a joint session on the Accessibility Analysis Platform



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(AAP) with 12 participants, including both citizens and institutional representatives. These sessions extended the participatory process to operational and analytical components of the SmartUrbanity framework.



Figure 1 Rome workshop

Access Together App – key findings

The workshop placed strong emphasis on understanding the mobility context of the pilot area and how this shapes expectations for a citizen-centred reporting and engagement tool. Participants described their district as highly dependent on private cars due to public transport being perceived as infrequent and unreliable, particularly in the evenings. The pedestrian network was viewed as fragmented and often constrained by steep elevation changes and numerous stairways. Although these stairways can significantly shorten walking times when accessible, many stairways are closed or in poor condition, limiting their usefulness. Participants also noted the presence of unused or under-utilised spaces that could act as pedestrian shortcuts if appropriately redesigned.

Against this background, the discussion on the Citizen Engagement App focused on which mobility experiences participants consider relevant to report and how such inputs could support local decision processes. During the warm-up discussion referencing familiar apps (Waze, Moovit and Google Maps), participants stated that they are willing to contribute to civic-oriented data collection when the tool provides clear public value. They acknowledged the usefulness of real-time information in existing apps but noted important gaps, including the lack of safety-oriented routing options and the absence of comfort or accessibility-related indicators.

Participants agreed that the SmartUrbanity app should allow reporting of both immediate events and more persistent mobility issues. The discussion quickly shifted from short-term disruptions to structural obstacles that affect daily mobility. These can be summarised as follows:

- **Short-term issues:** bus crowding, delays and punctuality problems.
- **Structural issues:** potholes, architectural barriers, closed streets or stairways, malfunctioning traffic lights and limited bike-sharing coverage.
- **Contextual conditions:** unused or inaccessible urban spaces that could support walkability if opened or repurposed.

Many elements were linked to the needs of vulnerable groups, especially older adults and children, for whom reliable and safe neighbourhood mobility is essential.

A consistent theme throughout the discussion was the need for a transparent and traceable feedback mechanism. Participants emphasised that reports should not “disappear into a void”, a phrase used to describe their experiences with existing municipal channels. They expect each submitted report to follow a visible status flow: received, acknowledged, awaiting authorisation, in progress and resolved, supported by a clear history of updates. This was described as necessary for trust and sustained engagement. Transparency in data handling was highlighted: participants were open to profiling only when it serves clearly defined purposes, such as personalised alerts or recommendations, and when data-use explanations are written in accessible terms.

The mind-mapping activity further clarified functional expectations. Participants emphasised operational simplicity:

- short and efficient reporting interactions,
- option to submit a preliminary report and add details later,
- a user interface that remains intuitive across all levels of digital literacy.

They expressed interest in features that recognise recurring personal routines (e.g. commuting patterns), provide notifications tailored to neighbourhood conditions and allow users to form communities around shared mobility interests such as school mobility or park-based cycling. Additional ideas included integrating publicly available mobility data and providing optional health-oriented functionalities, for example tracking running or cycling circuits.

Gamification was considered acceptable when aligned with objectives. Participants suggested small rewards, occasional incentives and recognitions such as “citizen of the month”, and benefits linked to school mobility programmes. They clearly rejected any form of open chat or discussion forum, preferring structured and action-oriented mechanisms that avoid problems associated with unmoderated digital conversations.



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Decision Support System platform and integration – key findings

The DSS workshop in Rome brought together public decision-makers, technical staff and mobility agencies for an in-depth discussion on how the SmartUrbanity DSS could support local administrative practices. The session confirmed that mobility decisions in Rome are shaped not only by infrastructure and service provision but also by the everyday experiences of residents and the constraints faced by institutions. Participants emphasised that the DSS should integrate objective indicators (e.g., accessibility levels, infrastructure conditions) with subjective perceptions (e.g., safety concerns, lived experience of mobility barriers), since both influence how interventions are understood and accepted by residents. A central message from municipal actors was that the DSS must help manage the fragmentation of current reporting channels. Offices today receive inputs through phone calls, email, PEC, protocol systems and informal exchanges, each requiring manual assessment and often duplicating information. In this environment, the value of the DSS lies not in generating more individual reports but in structuring, filtering and aggregating dispersed citizen inputs into interpretable evidence. Technical actors made clear that their priority is receiving information in aggregated, geolocated and categorised formats that help identify recurring territorial patterns rather than isolated complaints. Participants also stressed that decision-making is shaped by safety priorities, regulatory obligations, budget availability and the administrative division of competences. Any DSS must reflect these constraints to avoid unrealistic expectations. For example, maintenance interventions depend on the classification of a street and available resources, while school transport decisions require complex coordination of routes, beneficiary categories and attendance systems. These insights point to the need for a DSS that aligns evidence with institutional logic rather than attempting to bypass it. The discussion also highlighted the importance of interoperability with existing municipal platforms, including the city's traffic control systems and national initiatives such as MaaS4Italy (aiming to promote sustainable and user-centric travel by integrating various public and private transportation services across Italian cities). Mobility agencies expressed a preference for tools that provide clear summaries of issues before they reach political decision-makers, helping reduce conflict and supporting more informed engagement with citizens. The workshop concluded that the DSS should be conceived as an evidence-structuring and interpretation layer, capable of connecting citizens' experiences with operational and strategic decision-making needs, rather than as a parallel reporting platform.



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Accessibility Analysis Platform – key findings

The joint session on the Accessibility Analysis Platform (AAP) brought together citizens, NGOs and decision-makers to discuss how accessibility should be represented in the Rome pilot area. The discussions showed that accessibility is not perceived as simple geographical proximity but as a combination of reliability, safety, route continuity, usability and multimodal coordination. Participants emphasised that real accessibility is tied to whether people feel confident navigating routes, whether pedestrian areas are continuous and safe, and whether public transport information is available, accurate and reliable. The dotmocracy exercise revealed clear priorities. Participants from both groups gave the highest importance to timetable reliability, safe routes for all users and end-to-end multimodal planning. The presence of sidewalks, path edges and real-time updates on construction activities were identified as essential components for assessing whether a route is genuinely usable. The discussion highlighted that accessibility is experienced differently across demographic groups and specific mobility situations. Age, the use of strollers, trolleys or mobility aids, as well as gender and lighting conditions emerged as the most relevant profiles to be represented in the platform. Participants noted that overlapping categories (e.g., age and children) should be handled carefully to avoid redundancy while still capturing differentiated needs. Feedback processes were also a central theme. Both citizens and decision-makers prioritised competence-based routing, visible responsibility assignment, and differentiated response types depending on whether an issue concerns planning, maintenance or programming. This confirms the need for the AAP to link accessibility assessments with meaningful institutional follow-up, ensuring that contributions enter clear administrative pathways. The session showed that participants expect the platform to support not only visualisation but also a shared language that can make accessibility issues intelligible across different stakeholder groups.

Cross-cutting lessons from Rome

Across all three Rome workshops, several themes consistently re-emerged. First, participants stressed the need for clear, structured, traceable and meaningful feedback mechanisms. In every session, stakeholders highlighted frustration with current reporting practices where inputs disappear into multiple uncoordinated channels. Rome's administrative context is characterised by a proliferation of reporting sources, and both citizens and public actors see value in a system that consolidates and structures information rather than multiplying entry points. Second, the workshops



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underlined the importance of aligning bottom-up inputs with institutional constraints. Local offices emphasised that decisions depend on safety rules, regulatory frameworks, budget availability and divisions of responsibility. Citizens, meanwhile, stressed lived experience, perceived safety and usability. The Rome sessions showed that SmartUrbanity tools must mediate between these perspectives by integrating objective and subjective evidence into a coherent analytic framework. Third, inclusiveness emerged as a shared priority. Discussions across sessions highlighted the needs of older adults, users with mobility aids, school-age children and vulnerable groups. Participants repeatedly emphasised that accessibility and mobility cannot be captured through abstract demographic categories alone; rather, they must reflect practical mobility situations, such as pushing a stroller, navigating stairways or managing long walking distances in a hilly urban environment. Finally, the Rome workshops demonstrated that the added value of SmartUrbanity lies in its capacity to support interpretation and prioritisation, not simply data collection. Stakeholders across all groups confirmed that tools should help reveal territorial patterns, clarify responsibilities and make decision processes more transparent and explainable.

3.2. Lyon workshop

Workshop context and organisation

The Lyon stakeholder workshop took place online on 13 February 2026 and followed the common SmartUrbanity structure with separate sessions for the Citizen Engagement App and the Decision Support System, followed by a joint discussion on the Accessibility Analysis Platform. Participation varied per session: the citizen-focused discussion involved ten individuals, including both residents and decision-makers; the DSS session involved two decision-makers; and the joint accessibility session again gathered ten people from mixed backgrounds. The workshop relied on moderated discussion rather than interactive tools, but the conversation was recorded and transcribed to ensure systematic analysis. The thematic coding of transcripts allowed the organisers to consolidate stakeholder needs in a structured manner consistent with the Task 2.2 framework.



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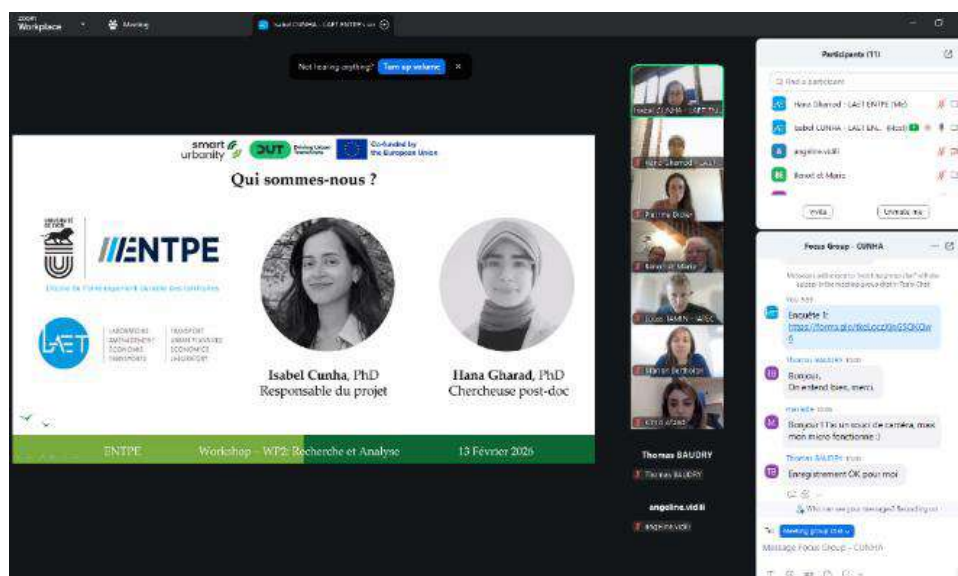


Figure 2 Lyon workshop

Citizen Engagement App – key findings

The discussion on the Citizen Engagement App revealed clear expectations regarding usability, relevance and transparency. Participants repeatedly stressed that the app must minimise the effort required from citizens:

- Reporting should be quick, ideally completed in five to ten seconds.
- The interface should remove unnecessary steps.
- Short interaction cycles were described as a prerequisite for adoption and sustained engagement.

Long-term use, according to participants, depends on the app's reliability and operational stability. Any technical friction, delay or inconsistency risks discouraging users and undermining reporting activity.

Participants stressed that the app must clearly distinguish itself from the many existing municipal or community reporting tools by offering a focused and meaningful set of functions that respond to actual mobility problems rather than duplicating general-purpose complaint apps. In concrete terms, they want the app to include:

- Reporting of location-specific mobility obstacles, such as broken lifts, blocked pedestrian routes, missing or damaged accessibility features, or unsafe infrastructure conditions.



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- Input on perceived travel experience, including feelings of safety, comfort, waiting times, or the ease of navigating multimodal journeys.
- Support for multimodal mobility, so that reports and app guidance reflect the reality that trips often combine walking, public transport, cycling and shared mobility.
- Clear added value over existing tools, including transparent feedback loops, consistent status updates on reported issues and a unified place to capture both physical conditions and user experience.

Concerns about battery consumption and data privacy were strong. Participants were cautious about sharing trajectory-based data and several users indicated they were only comfortable submitting localised information linked to specific points or addresses. Transparency regarding data processing, retention and storage was a central requirement. Participants expect clarity on what data is collected, why it is collected and how it contributes to the broader decision-making chain of the project.

In terms of content, users identified several mobility challenges they face in Lyon:

- Non-functional accessibility infrastructure such as broken lifts.
- Safety issues, particularly in relation to poorly monitored parking areas.
- Public transport reliability, especially long waiting times
- Inconsistent availability of shared bicycles and micromobility.

Proximity, safety and time efficiency are the factors that matter most when navigating the city.

Participants also emphasised that the app must be accessible to a wide range of citizens, including older adults, people with low digital literacy and immigrants who rely on multilingual support. They saw potential in gamification but underlined that it must serve more than entertainment; it should highlight the collective benefit of reporting, encourage contributions from groups that face mobility constraints and remain inclusive beyond younger audiences.

Decision Support System Platform and integration – key findings

The DSS session revealed that decision-makers had difficulty understanding how the system operates internally and how data flows through it. This lack of clarity reduced their ability to evaluate whether the DSS can meaningfully support their workflows.



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Participants stressed that the system must integrate real-world constraints and existing operational procedures, particularly the way municipalities handle requests for interventions originating from citizens, companies and internal strategic plans.

Decision-makers expressed interest in a DSS that combines quantitative metrics with qualitative user feedback. They saw value in multidimensional accessibility indicators, including the mapping of citizen comments to capture perceived travel experience. They also emphasised that infrastructure assessments need to be situated within regulatory frameworks. For instance, identifying non-compliant sidewalks requires clear reference to accessibility norms. Economic analysis was identified as another essential dimension: decision-makers want to understand the expected impact and urgency of interventions to justify resource allocation.

Prioritisation emerged as a dominant theme. Participants highlighted that any decision support tool must include transparent reasoning that can be communicated to the public. This includes explaining why certain interventions are prioritised over others, particularly when citizen expectations differ from available municipal capacities. The DSS should help streamline these decisions and reinforce a consistent, evidence-based approach.

Accessibility Analysis Platform – key findings

During the joint session, participants described accessibility in Lyon as a multidimensional issue touching on safety, affordability, time efficiency and comfort. Safety encompassed both the physical safety of infrastructure and broader environmental aspects such as lighting and neighbourhood conditions. Economic accessibility was viewed as essential to ensuring affordable mobility for all social groups. Participants also stressed the relevance of comfort and travel speed, including during adverse weather, as factors that influence the overall accessibility of services and opportunities.

Specific vulnerable groups were identified, including older people, individuals with limited digital skills, low-income groups and those sensitive to heat or cold. Participants considered it important that the platform provides insights enabling targeted support for these groups, often through local associations that act as intermediaries. Citizens also requested clearer definitions of “services” and “points of interest”, noting that these concepts are sometimes difficult to interpret. The platform’s value for everyday decision-making was emphasised repeatedly, with users showing interest in applying it to residential decisions such as choosing a new home based on personalised accessibility needs.



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Participants saw high potential in advanced visualisation tools, including accessibility heatmaps that can be filtered according to service type, social group or specific aspects like safety and speed. They also noted the importance of reliability and responsiveness, as the platform may rely on large and dynamic data sources. Fast updates, scalability and the capacity to incorporate temporary conditions - such as construction works or traffic issues - were considered essential. Finally, users requested multilingual support to broaden the platform's accessibility to non-native speakers.

Cross-cutting lessons from Lyon

Across all sessions, participants highlighted similar expectations: tools should be reliable, fast and straightforward to use. They expect clear feedback loops, particularly in relation to the reporting of barriers, and want visibility into how their contributions influence actual interventions. The importance of personalised and inclusive design emerged consistently, with emphasis on vulnerable groups and the need to adapt features to different capabilities and mobility patterns. A broader insight from Lyon is that accessibility is not merely a physical or infrastructural challenge; it encompasses economic, temporal and social dimensions that should be reflected in the SmartUrbanity framework. These findings help clarify functional and methodological requirements for the next stages of framework development.

3.3. Karlsruhe workshop

Workshop context and organisation

The Karlsruhe workshop was conducted in two parts: an in-person session held at the Karlsruhe Town Hall on 10 February 2026, followed by a shorter online session on 13 February 2026 for members of the transport association who could not attend physically. The in-person workshop gathered a diverse group of participants, including citizens, staff from the City Planning Office, representatives of the Industrial Planning Office, the Association for the Self-Help of People with Physical Disabilities, and the Public Transport Authority. The online component involved two colleagues from the transport association and followed the same methodological structure as the in-person session.



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The workshop began with a joint introduction to the 15-minute city concept and the SmartUrbanity digital tools, after which participants were divided into two groups for consecutive sessions on the Citizen Engagement App and the Decision Support System. Each thematic discussion lasted one hour. Participants reconvened after the break for a plenary presentation of intermediate results to ensure a shared understanding across groups. The final part of the programme brought all attendees together for a joint session on the Accessibility Analysis Platform, using a structured dotmocracy exercise to prioritise requirements. The workshop concluded with a short summary and standardised feedback survey. The online session replicated this process in condensed form, using a two-stage approach that allowed remote participants to provide independent input before reacting to the outcomes of the in-person workshop.



Figure 3 Karlsruhe workshop

Citizen Engagement App – key findings

The discussion focused on clarifying functional requirements, identifying accessibility needs and determining conditions for trust and sustained use. Participants approached the topic by first co-creating a shared mind map of the main thematic areas: features, impact, accessibility, app requirements, gamification, data protection, trustworthiness, and visualization before elaborating specific insights within these categories.

A substantial part of the discussion centred on trip-recording functions. Participants recommended enabling users to specify the purpose of their trips to improve the value



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of collected mobility data. They also proposed options to initiate recordings via widgets or smartwatches and supported automatic trip detection to reduce manual effort. Concerns related to connectivity were raised repeatedly, particularly regarding the need for offline trip recording with later upload, as well as the question of whether trip capture would be restricted to the city boundaries.

Issue reporting was another major topic. Participants emphasised the need for accurate spatial reporting, noting that manual address input may lead to inaccuracies. The ability to place a pin directly on a map was seen as a more precise alternative. They also suggested adding functionality to rate the quality of infrastructure, avoiding duplication of reports by allowing users to view existing issues and distinguishing between short-term problems and long-term structural deficiencies. Several stakeholders highlighted the value of forwarding specific reports directly to relevant authorities such as the public transport agency for damaged bus stops and raised the question of who would moderate submissions to ensure quality control. Concerns were expressed about the risk of receiving many irrelevant reports if moderation is inadequate. Participants also emphasised the need for a structured feedback mechanism, including timely responses and notifications once issues are resolved.

General usability requirements included a simple interface, multilingual options, and low battery consumption. Participants stressed that the app should not duplicate functionality that is already available through existing local tools such as KA-Feedback. They also questioned whether the quantity of trip recordings and survey data would be sufficient for meaningful analysis and how data would be weighted for representativeness. Accessibility considerations were prominent: support for screen readers, voice-based reporting and options for entering trips or issues without a smartphone were explicitly requested, reflecting the needs of users with disabilities or limited access to mobile devices.

Trust, transparency and data protection formed another core theme. Participants indicated that clear institutional anchoring, e.g. visible involvement of KIT or the City of Karlsruhe would improve trust. They requested options for entering data without creating accounts and emphasised voluntary provision of demographic information, although they acknowledged that the benefits should be clearly explained to encourage contributions. Visualisations and statistics were also of strong interest. Participants expressed the desire to view personal statistics, including heatmaps of their own trips, carbon footprints, and summaries of travel patterns and mobility types. They also requested aggregate mobility statistics for Karlsruhe, including modal split, most-travelled streets, CO₂ savings and temporal summaries. Discussion focused on whether such information should be presented on maps or as lists.



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Gamification was considered useful for encouraging regular engagement, but participants noted the need to define what constitutes a “useful” report if points or rewards are tied to reporting activity. They also cautioned that competitive features could distort mobility behaviour and therefore undermine data quality, suggesting careful consideration of any incentive structures. Gamification ideas included awarding points for useful reports, offering rewards for daily use, and enabling users to compare their progress with friends or other users, while noting that competitive elements should not distort mobility behaviour.

Decision Support System platform and integration – key findings

The DSS session began with a general introduction to the conceptual design of the platform, followed by a SWOT analysis to identify expectations, weaknesses and potential risks. Participants first discussed overarching functional needs, highlighting that the DSS must incorporate weather and climate conditions such as temperature and rain because mobility patterns and perceived travel times depend on these factors. They also emphasised that the tool should reflect street-greening measures and their effects, given the city’s heat-action planning. Modal shift indicators, usability of urban space and distinctions between objective and perceived travel time were also identified as important. Participants expressed interest in using the platform to share proposed measures with citizens and to gather structured feedback in cooperation with citizen associations.

The SWOT analysis identified several strengths:

- Support quantitative decision-making by enabling prioritisation and structured comparison of measures.
- Supply planners with objective indicators for discussion.
- Link more easily to other datasets or models than current paper-based processes allow.
- Fast production of isochrone visualisations and clear depictions of public transport infrastructure were also seen as advantages.

Weaknesses centred on representativeness, feasibility and complexity.

- The platform may offer limited value relative to the effort required to develop and maintain it.



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- Concern that younger people would not be captured due to restrictions related to the Citizen Engagement App, reducing the DSS's coverage of relevant user groups.
- Participants doubted that all relevant contextual factors influencing interventions could be represented in the tool.
- Participatory procedures demand strong moderation.
- Citizens may oversimplify decisions if the platform cannot display all necessary variables.
- Participation through small, supervised focus groups might be more effective than open public participation.

Opportunities included:

- improved consensus-building between citizens and policymakers,
- better visibility of climate impacts,
- more efficient decision processes by complementing existing travel demand models.
- potential to accelerate regulatory adaptation by offering quick assessments of expected effects,
- the platform could also inform citizens directly about the effects of different measures, increasing transparency and acceptance.

Risks involved:

- the exclusion of vulnerable or younger groups,
- challenges in demonstrating results of small-scale measures,
- the possibility of oversimplifying the communication of outcomes to citizens,
- the platform might become overly focused on the 15-minute city and fail to represent factors outside this conceptual scope,
- participants noted that citizen participation will require strong moderation, as communication can be challenging and heterogeneous inputs may require significant effort to process.



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Accessibility Analysis Platform – key findings

The joint session began with an introduction of the platform, followed by a structured dotmocracy enabling participants to propose, cluster and prioritise requirements. Accessibility emerged as the dominant theme, participants requesting comprehensive depiction of accessible paths, stops, vehicles and barrier-free public transport information. They also emphasised the need to represent “perceived barriers”, including usability of facilities, accessibility of destination buildings and challenges encountered in public offices. Both citizens and decision-makers underlined the importance of transparency regarding the reasons for routing decisions.

Safety-related requirements were also highly prioritised. Participants asked for mapping of visibility, conflict points, near-accidents, evening safety, and the quality of street lighting. They requested indicators for waiting times at crossings and interchanges, topography, and route connectivity, along with differentiated accessibility levels reflecting deficiencies for specific population groups. Weather, shading and suitability for children were additional aspects raised. The attractiveness of walking and cycling routes was also discussed.

Infrastructure-related needs included systematic evaluation of the path’s quality and destination quality, along with detailed information on destination facilities such as ramps and bicycle parking. Winter maintenance of bike paths, suitability for cargo bikes and availability of e-bike charging stations were mentioned. Participants expressed a strong desire for personalisation, including filters for age, mobility impairments, temporary constraints, transport modes, lighting conditions and destination types. Time-of-day filters and analyses of activity accessibility within set time windows were also suggested.

Regarding user profiles, participants requested differentiation among mobility aids, emphasising that “wheelchair users” constitute a heterogeneous group with varying needs. While fine-grained distinctions were seen as beneficial, concerns were also raised about usability and feasibility. This was considered useful but difficult for users to estimate reliably, illustrating the tension between personalisation and usability. Participants mentioned optional profile elements such as age, gender, specific needs (e.g., travelling with children) and adjustable walking speeds. The possibility of saving user profiles for reuse was also suggested.

Finally, participants stressed the need for structured participation within the Citizen Engagement App to facilitate high-quality input for the Accessibility Analysis Platform, including meaningful reporting categories and the ability to input short-term measures such as road closures.



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Cross-cutting lessons from Karlsruhe

Across all sessions, participants consistently emphasised the need for transparent, reliable and easy-to-use tools. Whether discussing the Citizen Engagement App, the DSS or the Accessibility Analysis Platform, they stressed that users must understand how data is collected, how it flows between components and how it influences planning decisions. Clear institutional responsibility such as visible involvement of KIT or the City of Karlsruhe was repeatedly mentioned as essential for trust.

A second overarching theme was the challenge of balancing the granularity of information and usability. Participants welcomed personalisation options in all three tools, but they were cautious about overly complex interfaces or fine-grained distinctions that could overwhelm users. Similar concerns emerged in the DSS discussions, where participants noted that not all decision-relevant factors can be represented without risking oversimplification.

Inclusiveness also played a key role. Participants highlighted the importance of accommodating users with disabilities through screen-reader compatibility, voice input or alternative reporting channels and of ensuring that groups not captured by the CEA (such as people under 18) are not excluded from the broader decision process.

Finally, participants from all sessions stressed that SmartUrbanity tools should complement, not duplicate, existing local systems such as the KA-Feedback platform. They encouraged strong integration between components: CEA reports should feed into AAP analyses, and both should provide meaningful inputs to the DSS. Across sessions, the strongest recurring expectation was the availability of clear and reliable feedback features across all tools. In addition, the workshop also queried the participants about the perceived usability of the application.

The table below summarises the key requirements identified during the joint workshop session.

Table 2 Requirement summary from Karlsruhe

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Unclear
Citizen Engagement App						

Do you think the trip-route procedure is easy to understand?			3	6	2	2
Do you expect to fit this tool into your daily routine?	1	3	5	4		
Accessibility Analysis Platform						
Do you think that this tool could be useful in supporting accessibility analysis tasks?			1	9	3	
Do you think the output appears relevant for planning decisions and planning tasks?		1	4	7		1
Decision Support System						
Do you think the integration of citizen input is clear and meaningful?		1	4	6	2	
Do you believe the outputs are suitable for strategic decision-making?			4	7	2	

3.4. İzmir workshop

Workshop context and organisation

The İzmir workshop was held on 18 February 2026 at the Ege University Civil Engineering Department in Bornova, bringing together citizens, municipal representatives and professional bodies. Participants included members of the City Transportation Planning Office, the City Council Committee on Disabilities, the Chamber of Civil Engineers, the İzmir Planning Agency, municipal representatives and university researchers, with participation numbers varying by session (15 for the Citizen Engagement App, 10 for the DSS, and 20 for the joint Accessibility Analysis Platform session). The sessions followed the standard structure, beginning with an introduction to the 15-minute city concept and the aims of the pilot.



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Each session included a short presentation followed by structured discussion guided by predefined questions. A prepared survey supported the Citizen Engagement App session, while the DSS session combined Q&A with SWOT analysis. The Accessibility Platform session applied dotmocracy to prioritise requirements. Across all sessions, participants relied heavily on concrete local mobility experiences, including challenges related to heavy traffic, pedestrian comfort, accessibility and the varying needs of different demographic groups.



Figure 4 Izmir workshop

Citizen Engagement App – key findings

The Citizen Engagement App discussion began with an examination of İzmir's mobility context, characterised by high traffic demand and the need for neighbourhood-level accessibility improvements. Participants emphasised that the app should make everyday mobility problems more visible, ensure that citizen inputs contribute to more equitable planning and support the shift toward more human-centred transport choices. They stressed that the app should not only gather data from citizens, but it should be co-developed with them, reflecting diverse needs, especially those of visually and physically impaired residents.

The discussion on meaningful experiences to report centred on real-time information, which participants considered essential for understanding current city conditions. Notifications on traffic accidents, temporary closures and roadworks were identified as key use cases. Participants compared the expected functionality to Google Maps but asked for a design more sensitive to accessibility and neighbourhood-level detail. Reliability and rapid feedback loops were seen as central to regular engagement: users indicated they were more likely to contribute when reports lead to visible action, and the system provides timely updates on how issues are handled. Some proposed a

weekly leader-board as a motivational element, though this suggestion was not universally endorsed.

Trust and data quality were major concerns. Several participants raised questions about how false or misleading real-time reports would be handled and stressed the need for verification mechanisms. Suggestions included validation by authorised municipal personnel or a system allowing nearby users to confirm reported events. Regarding accessibility for different needs, participants emphasised the necessity of inclusive design, such as voice-command interfaces for visually impaired users and dedicated interface modes tailored to disability groups.

The mind-mapping exercise generated several proposals across features, personalisation, environmental context, feedback mechanisms and gamification. Participants proposed showing users their carbon footprint, saving common routes and preferred transport modes, and linking the app with the ESHOT public transport application (local public transport app for İzmir). They also suggested integrating personal health-related information, such as air-quality alerts for asthma patients. Feedback expectations focused on receiving notifications when issues they submitted were resolved, and on ensuring active participation by the relevant authorities in processing and confirming reports. Gamification ideas included challenges with coupons or discounts for public transport and bike rental services.

Decision Support System platform and integration – key findings

The DSS session gathered municipal officials, planning professionals and representatives of disadvantaged and youth groups. The introductory presentation outlined the system's purpose: assessing policy scenarios, visualising impacts on a map, supporting communication between decision-makers and citizens and promoting evidence-based planning. The discussion highlighted that the platform must be able to integrate and interpret diverse data sources, including citizen input.

Participants debated the spatial resolution at which citizen data should be aggregated. Some argued that neighbourhood-level aggregation supports strategic planning more effectively, while others stressed the operational necessity of street-level detail, noting that neighbourhood-scale records are not digitised in current municipal systems, creating potential barriers for integration. Regarding evidence requirements, participants stated that georeferenced photos or short videos accompanying citizen reports would be essential to support verification and interpretation.



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Participants agreed that the DSS would be most valuable early in the decision-making cycle, especially for problem definition and identification of potential interventions. Incorporating demographic and social context into the system's analytical framework was also recommended to ensure equitable interpretation of citizen inputs. However, several barriers to adoption were identified. These included

- limited municipal datasets,
- internal governance bottlenecks and
- the lack of standardised procedures for data handling and decision-making

The subsequent SWOT analysis generated a structured assessment of the DSS.

Strengths included:

- the system's potential to enhance inclusivity,
- its ability to reach diverse user groups, and
- the fact that it offers a no-cost, digital environment for transparent planning.

Weaknesses focused on:

- digital inequalities,
- potential misalignment between citizen expectations and institutional processes, and
- the multidisciplinary expertise required for effective implementation.

Opportunities were linked to:

- increasing visibility of the 15-minute city concept,
- improving transparency through traceability of planning actions, and
- the potential to make urban planning more understandable to the public.

Threats included:

- potential institutional conflicts,
- political changes that may disrupt continuity,
- resistance to new technologies, and
- the risk that decision-makers might not consistently use DSS outputs.

Accessibility Analysis Platform – key findings



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The AAP session emphasised that accessibility should be understood broadly, covering physical, digital and environmental aspects. Participants identified critical infrastructure elements that the platform should display, including internal accessibility features of buildings, such as accessible restrooms, and highlighted the importance of universal design features such as colour-blind and epilepsy-friendly display modes.

Safety emerged as a major theme. Participants requested route filters reflecting perceived safety, including options specifically relevant for women and other vulnerable groups during evening hours. They also prioritised barrier-free routing for baby strollers, wheelchairs and users with limited mobility, noting that features such as curb heights and continuous sidewalk transitions must be captured systematically.

Data reliability was seen as essential for AAP credibility. Participants recommended enabling users to upload photos under privacy-compliant rules to verify reported information. They also suggested implementing rating systems, city-wide survey tools and mechanisms to indicate whether accessibility issues change over time.

Participants recognised the tension between personalisation and privacy, particularly in relation to user profiles. Saving mobility preferences was considered beneficial, but concerns were raised about sharing sensitive data such as age, gender or health conditions. A final theme was the importance of cooperation with local administrations to ensure awareness, adoption and long-term viability of the platform.

Cross-cutting lessons from İzmir

Several themes recurred across all three sessions. First, verification and reliability were central concerns. Participants repeatedly emphasised that real-time and structural data must be trustworthy, whether used in citizen reporting, DSS analysis or accessibility mapping. Second, inclusiveness is a core requirement in İzmir, particularly due to the active involvement of disability committees and youth groups. Expectations for accessible design and diverse user profiles were explicit across sessions. Third, participants stressed the need for transparent feedback loops and visible action by authorities; trust is conditional on clear communication, timely updates and traceable status changes. Finally, integration with existing municipal systems and alignment with local administrative workflows were seen as essential for sustained use and institutional uptake.



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3.5. Thurgau (Greater Zurich Area) workshop

Workshop context and organisation

The Zurich Greater Area workshop took place online on 24th March 2026 from 10:00 to 12:00. It was organised by ZHAW and brought together citizens, decision-makers and local stakeholders. Participation varied by component: 10 participants in the Citizen Engagement App session, 5 in the DSS session and 10 in the joint Accessibility Analysis Platform discussion. The workshop followed the standard structure used in other pilot cities. Participants contributed both through live discussion and through a dedicated workshop website where they submitted approximately 20 ideas across the three components.

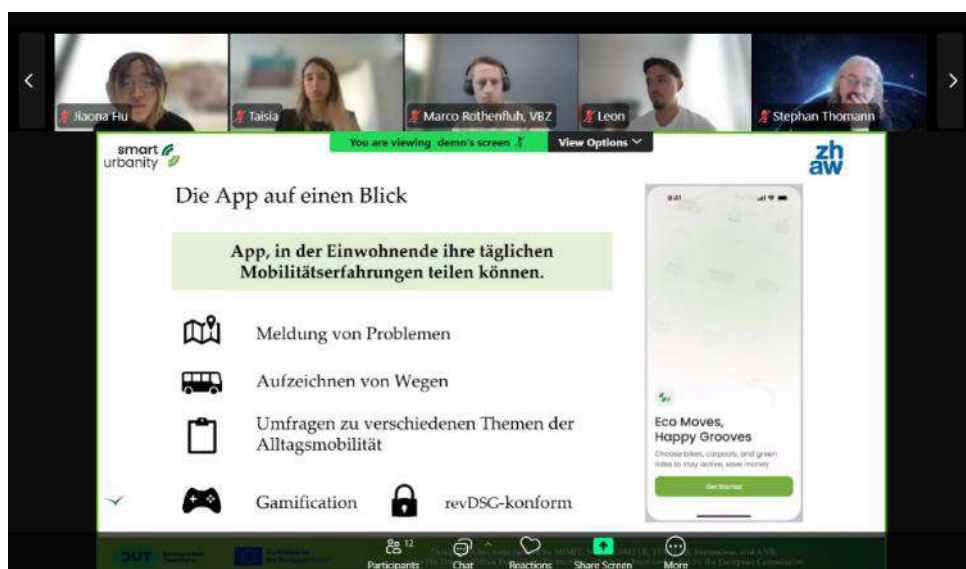


Figure 5 Thurgau workshop

Citizen Engagement App – key findings

Discussions in Zurich emphasised trust, inclusivity, personal relevance and meaningful incentives.

Participants highlighted a strong interest in personalised visualisations showing effects of their own mobility choices, such as CO₂ saved, calories burned or time gained or lost depending on route choices. This type of personal impact feedback was considered a strong motivator for continued use. They also requested contextual guidance such as “which modes to avoid at certain times”.

A second theme concerned community-building. Participants expressed interest in features enabling neighbourhood engagement, such as mapping community centres or allowing residents to create or join local meetups. Citizens saw value in using the app not only for reporting but also for supporting local social life in line with 15-minute city principles.

Accessibility and inclusivity were raised repeatedly. Participants noted that older adults and less digitally engaged residents may be underrepresented unless the app offers simplified, low-threshold modes of participation. Trust in the tool was positively linked to its academic origin (ZHAW), with several participants indicating that Swiss institutional branding makes the app more trustworthy.

Gamification received substantial attention. Participants provided multiple incentive proposals, including seasonal leaderboards, small rewards (e.g. SBB (Swiss rail company) ticket vouchers), progressive challenge systems, and even AR-based exploration rewards. Importantly, they stressed that gamification must stay fair and avoid coercive or overly competitive dynamics. Personalised profiles should be optional: users should receive relevant suggestions without being forced to disclose personal data. Finally, participants suggested incorporating information beyond mobility (e.g. LGBTQ+ friendly, child-friendly or pet-friendly places), reflecting a more holistic understanding of neighbourhood quality.

Decision Support System – key findings

Participants acknowledged the potential of the DSS but stressed the need for clarity, explainability and simplicity.

The DSS was understood as a tool for evaluating mobility measures through data integration from the CEA, AAP, official sources and simulations. Stakeholders emphasised that scenario results must be clearly presented, ideally one option at a time, supported by straightforward cost-benefit comparisons rather than complex dashboards.

Acceptance (emerged as a central theme: results must be verifiable and understandable for different types of users, otherwise institutional adoption will be limited. Participants emphasised the need for transparent, real-time visualisation, including dynamic scenario adjustments and zoom functionalities from regional to street level. Static outputs would not meet expectations.

The interface must remain intuitive, without clutter or advertising. Participants warned that many competing digital tools already exist; therefore, SmartUrbanity



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must ensure clear added value. A notable idea proposed connecting DSS features with the CEA, where advanced DSS functions become available once a citizen has contributed enough data, creating a meaningful link between personal participation and system capability.

Finally, decision-makers stressed that the DSS must align with legal and institutional procedures in Switzerland. It should support (not replace) formal decision processes and integrate constraints (legal approvals, public consultations). Overcomplexity or misalignment with institutional workflow would hinder adoption.

Accessibility Analysis Platform – key findings

The AAP session provided insights into user expectations around reliability, inclusivity and data quality.

Participants stressed that the platform must provide reliable, up-to-date information, with fast updates, otherwise users trust will be undermined. Concerns were raised about moderation: enabling photo uploads carries risks of inappropriate content, which requires additional well-defined moderation protocols.

Gamification emerged again, with the idea of dynamic point allocation for reporting issues in under-represented areas to increase spatial coverage and encourage equitable participation. Participants proposed real-time community validation, similar to Waze, where nearby users confirm or reject a reported barrier. This would increase data reliability and reduce duplicates.

Users also asked for context-specific features, such as weather-based prompts encouraging active mobility under good conditions. They highlighted the importance of including infrastructure layers such as road steepness or elevator locations, which are critical for many user groups but are missing from standard maps.

Overall, participants called for a platform that captures how different population groups experience accessibility, supports meaningful data verification, includes infrastructural detail that matters in practice, and maintains a moderated, safe environment.

Cross cutting lessons from Thurgau

Across components, participants emphasised:

- the strong demand for personalised visualisations and meaningful feedback,



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- the need for verification mechanisms to ensure high-quality contributions,
- the importance of inclusivity, especially for older adults and digitally limited users,
- the potential of gamification if implemented carefully and tied to civic engagement,
- the requirement for simple and intuitive interfaces for both citizens and decision-makers, and
- the need for tools that strengthen trust, supported by transparent data use and institutional branding.

3.6. Summary of the main findings

This section consolidates the main findings from the stakeholder based on the workshop reports presented in above sections and Appendix E: Pilot report – Rome, Appendix F: Pilot report – Lyon, Appendix G: Pilot report – Karlsruhe,



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Appendix H: Pilot report – İzmir, Appendix I: Pilot report – Thurgau (Greater Zurich Area).

For each of the three components (Citizen Engagement App, Decision Support System and Accessibility Analysis Platform), the subsections below highlight relevant and converging requirements and city-specific nuances.

Citizen Engagement App

The workshops confirm that the Citizen Engagement App must support three primary functions:

- capturing relevant mobility experiences,
- providing structured and traceable feedback, and
- supporting inclusive and low-effort user interaction.

Reporting scope and data relevance: Across all cities, stakeholders converged on the need for the app to capture both:

- Real-time events:
 - crowding, delay, route blockages, accident, wrong signals (Rome, İzmir)
 - real-time service reliability indicators (Lyon, İzmir)
- Structural and infrastructural issues:
 - potholes, architectural barriers, inaccessible or closed stairways, missing sidewalks, unsafe crossings (Rome, İzmir, Lyon, Karlsruhe)
 - non-functional accessibility infrastructure such as broken lifts (Lyon)

Stakeholders want clear categories, enabling differentiation between:

- short-term disruptions and
- long-term structural barriers (Karlsruhe, Rome).

Verification and data quality: A recurring requirement for mechanisms to ensure data credibility, including:

- photo/video uploads for verification (İzmir)
- proximity-based confirmation (“users nearby validate the report”) (İzmir)
- viewing existing reports to avoid duplicates (Karlsruhe)



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- avoiding “free-text forums” or chats (Rome) in favour of structured fields to reduce noise and moderation requirements.

Feedback loops: All pilots stressed traceable, multi-step feedback, including:

- status changes (received → acknowledged → authorised → in progress → resolved) (Rome, Lyon, Karlsruhe)
- notifications when issues are resolved (Rome, Lyon, İzmir)
- visibility of the responsible office (Rome)
- competence-based routing (Rome, Karlsruhe),
- ensure that contributions do not disappear into an administrative void.

Ease of use: stakeholders were explicit that the app must be low-effort:

- reporting in 5–10 seconds (Lyon)
- quick report + later completion (Rome, Karlsruhe)
- offline recording with later upload (Karlsruhe)
- persistent login and routines (Rome).

Accessibility and inclusion

- screen-reader compatibility, voice input (Karlsruhe, İzmir)
- simplified interfaces for impaired users (İzmir, Rome, Thurgau)
- multilingual interfaces (Karlsruhe, Lyon).
- community-oriented functions such as local meetups, community centres, and neighbourhood social connections.

Gamification elements: this topic emerged in all workshops, with consistent requests for non-competitive, civic-purpose incentives. In short, gamification must reinforce civic behaviour, not competition:

- occasional symbolic rewards (Lyon: coffee; Rome: recognition)
- discounts for sustainable transport (Rome, İzmir)
- daily streaks, seasonal challenges or engagement patterns (Rome)
- personal mobility statistics such as CO₂ saved, calories burned or time gained as motivating features. (Thurgau)



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- non-competitive incentives such as public transport rewards (Thurgau)
- AR-based exploration tasks (Thurgau)
- school-oriented rewards (bike-to-school, Piedibus) (Rome)
- community-level achievements (Rome)
- avoid competitive leaderboards if they distort behaviour (Karlsruhe)

Decision Support System

The DSS is expected to act as an evidence-structuring and prioritisation tool rather than a new reporting channel.

Data integration and aggregation:

- aggregation of citizen inputs into interpretable, geolocated and categorised evidence (Rome, Lyon, İzmir)
- integration of objective indicators (e.g. accessibility norms, costs, modal shift, climate) with subjective perceptions (Rome, Lyon, Karlsruhe)
- interoperability with existing municipal systems (Rome)
- need for clear and explainable visual outputs to ensure acceptance among different user types (Thurgau)

Prioritisation logic:

- transparent prioritisation criteria (Lyon)
- safety-based filtering (Rome, Karlsruhe)
- distinction between planning and maintenance issues (Rome)
- cost-impact assessment (Lyon)
- routing issues to the competent office (Rome)

Data quality and verification

- need for documentation accompanying reports, e.g., photos, videos (İzmir)
- avoiding overload from individual, unverified complaints (Rome)
- youth under-representation risk due to app restrictions (Karlsruhe)

Institutional and workflow alignment



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- mapping evidence to existing internal processes
- respecting budgetary and regulatory limits (Rome)
- must align with formal decision-making procedures and legal requirements (Thurgau)
- careful handling of citizen expectations to avoid misinformation-based conflicts (Rome)
- structured, moderated participation rather than open forums (Karlsruhe)

Accessibility Analysis Platform

Stakeholders across pilots defined accessibility as practical, situational and multidimensional.

Core accessibility dimensions:

- reliability (Rome, Lyon, Karlsruhe, İzmir)
- safety (all cities)
- route continuity (Rome, Karlsruhe)
- multimodal integration (Rome, Lyon)

User profiles and filters

- age (Rome, Karlsruhe, Lyon)
- mobility aids (Karlsruhe, Rome, İzmir)
- gender, especially regarding safety and lighting (Rome, İzmir)
- strollers / temporary mobility constraints (Rome, Karlsruhe)
- weather-sensitive mobility considerations (Thurgau)

Visualisation and mapping requirements

- mapping of accessible paths, stops and vehicles (Karlsruhe, Lyon)
- near-accident/conflict points, lighting conditions, safety features (Karlsruhe, İzmir)
- inclusion of an elevation map (Thurgau)
- real-time updates on construction works (Rome)
- heatmaps with advanced filters (Lyon)



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Data validation and traceability

- photo-based validation (İzmir)
- moderation protocols for user-uploaded photos to avoid inappropriate content (Thurgau)
- competence-based routing of accessibility-related reports (Rome)
- clear explanation of why certain routes are suggested over others (Karlsruhe, Lyon)
- Waze-style confirmation where nearby users validate or reject reported obstacles (Thurgau)

Cross-cutting requirements

Across all four pilot cities, the following cross-cutting requirements emerged:

- Traceability: Users want visible, multi-step progress indicators for all contributions (Rome, Lyon, Karlsruhe, İzmir).
- Inclusion and accessibility: All components must support users with differing abilities, digital skills, languages and mobility constraints.
- Data quality and verification: Reliable evidence requires structured inputs, verification mechanisms and avoidance of unmoderated free-text contributions.
- Avoiding duplication: Tools should integrate and rationalise existing reporting infrastructures, not create parallel channels.
- Evidence-based prioritisation: Tools must transparently communicate how data is interpreted and how priorities are determined.
- Alignment with local institutional processes: Framework components must fit municipal workflows, competences and constraints.

3.7. Stakeholder feedback integration

The consolidated findings across the workshop imply several framework-level adjustments: Findings are presented as structured requirements and stakeholder inputs, not as design specifications. The requirements below are derived from stakeholder feedback and are indicatively prioritised using a Must–Should–Could



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classification. This prioritisation reflects stakeholder emphasis and does not represent a formal implementation roadmap.

- The framework must adopt a shared data structure that accommodates both objective indicators (e.g., infrastructure condition, accessibility metrics, service reliability) and subjective indicators (e.g., perceived safety, comfort, lived accessibility constraints). In addition, there is a need for personalised analytics (e.g., CO₂ saved, time gained) to be supported within the shared data structure. Value arises from combining these two forms of evidence in a consistent way, and from ensuring that reports can be aggregated into meaningful territorial patterns. This requires harmonised reporting categories, validated inputs and clear rules for avoiding duplication. [Must]
- Need for interoperability with existing municipal systems: Cities already work with multiple reporting channels and information systems. The DSS must therefore function as an evidence-structuring layer that can interface with maintenance systems, mobility management platforms, traffic control centres or national initiatives, rather than as an additional reporting pipeline. Prioritisation logic within the DSS must reflect actual administrative constraints such as safety rules, competences, available budgets, and also fit within the formal legal and procedural requirements of the municipalities. [Must]
- Strong emphasis on traceable feedback across all workshops means that a standardised feedback workflow is required across components. Status evolution, designating the competent office and differentiated handling of planning versus maintenance issues must be captured in a common framework logic. The AAP must also support these workflows by linking identified barriers to appropriate administrative paths. Community-confirmation mechanisms are also suggested to support data validation without increasing administrative workload. [Must]
- The framework must embed accessibility-by-design. The AAP needs a defined set of user profiles and filters that reflect common mobility conditions (e.g., age, mobility aids, gender-related safety, temporary constraints). These profiles should be comparable across cities while avoiding unnecessary category proliferation. Equivalent accessibility requirements (such as screen-reader compatibility or simplified input modes) must apply to the CEA, too. [Must]



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- Gamification should be designed as a configurable, lightweight module supporting civic engagement rather than competition. Stakeholders expressed interest in incentives linked to sustainable mobility or community initiatives, while warning against mechanisms that distort behaviour. The framework should therefore specify clear principles that can be adapted locally. [Could]
- Finally, the workshops underline the need for methodological guidance. Cities will require clear instructions on verifying user input, interpreting subjective indicators and linking CEA reports to AAP filters and DSS prioritisation logic. Clear moderation rules for user-uploaded photos or content to maintain trust and ensure safe participation are also required. This guidance is necessary to achieve consistent and safe implementation across pilot cities and ensure that technical components align with administrative decision processes. [Should]

Implementation and governance aspects such as component ownership, change management and versioning are addressed in WP1. The requirements identified here serve as input to subsequent technical development and coordination activities within WP3.

4. Workshop citizen survey and statistics

Table 3 Participant and questionnaire overview per pilot

Pilot	Total participants	Participant groups	Eligible	Completed	Response rate	Missing data / notes
Rome	13 + 11 + 12	Citizens, NGOs, public authorities	13 (CEA session)	3	23%	Low response due to workshop format and participation conditions



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Lyon	10 / 2 / 10	Citizens and decision-makers	10	7	70%	Questionnaire applied only in CEA session
Karlsruhe	~14 (+2 online)	Mixed (citizens, authorities, organisations)	13	13	100%	Minor missing demographic entries
İzmir	15 / 10 / 20	Citizens, municipal actors, organisations	15	15	100%	Full completion
Thurgau	10 / 5 / 10	Mixed stakeholders	~10	10	100%	Questionnaire integrated with online input

The table above summarises participant numbers and questionnaire use across pilots based on available workshop documentation. Questionnaires were administered during the Citizen Engagement App sessions.

Table 4 Gender distribution

	Male	Female	Other	Not disclosed
Rome	0	3	0	0
Lyon	2	5	0	0
Karlsruhe	7	6	0	0
İzmir	8	7	0	0
Thurgau	5	5	0	0

Table 5 Highest level of education

	Elementary	High school or eq.	College degree	Graduate degree	Not disclosed
Rome	0	1	0	2	0
Lyon	0	7	0	0	0
Karlsruhe	0	2	2	9	0
İzmir	2	8	5	0	0
Thurgau	0	0	3	7	0

Table 6 Age demographics

	18-24	25-34	35-44	45-54	55-64	65+
Rome	0	0	0	3	0	0
Lyon	0	3	3	0	1	0
Karlsruhe	0	9	1	2	0	1
İzmir	2	10	2	0	1	0
Thurgau	1	4	3	0	1	1

Table 7 Commute length

	Short (<15 min)	Moderate (15-30 mins)	Long (>30 mins)	Not disclosed
Rome	1	1	1	0
Lyon	1	5	1	0
Karlsruhe	7	4	1	1
İzmir	0	6	9	0
Thurgau	0	6	4	0

Table 8 Modes used

	Public transport	Walking	Bicycle	Car	Shared mobility	Other
Rome	1	1	1	2	0	0
Lyon	7	2	3	3	0	0
Karlsruhe	13	12	11	10	0	0
İzmir	14	0	9	15	1	2 (Motorcycle)
Thurgau	10	10	6	5	0	0

Table 9 Trip planning applications used

	Local app	Google Maps	Waze	Other
Rome	0	2	1	0
Lyon	5	7	1	1
Karlsruhe	7	11	1	6
İzmir	2	15	0	0
Thurgau	2	8	3	1

Missing features listed

Rome

- Information on regulations for access to the city or to certain areas of the city.

Lyon

- Multimodal support (better handling of multimodal trips).
- Weather integration (linking route guidance with weather).
- Information on mode choice including cost, energy use, and ecological impacts.



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- Real-time public transport schedule changes (Google Maps does not reflect sudden changes).
- Better alternatives within the TCL network and improved “fluidity” of information.

Karlsruhe

- Optional Automatic Trip Recording: An option to automatically record trips (including transport mode, trip purpose, start, and end points), with the ability to edit the recorded data afterward.
- Non-App Reporting: The ability to report problems without needing to use an app (e.g., via a website or other alternative channels).

İzmir

- More accurate travel time estimates, including identification of time periods when travel times increase.
- Dynamic route suggestions that update according to traffic and network conditions.
- Better pedestrian support, including effective pedestrian routing, and pedestrian-oriented routes.
- Support for motorcycle- and bicycle-specific routes.
- More accurate and complete map data, including all relevant roads and correct location data.
- More accurate public transport information, especially bus schedules and public transport travel time estimates.
- Proper handling of transfers in public transport, including transfer times in travel time calculations.
- Better representation of infrastructural information (e.g., cul-de-sacs and other infrastructural constraints).
- Clearer route descriptions for users.
- Integration of weather conditions along the route.



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Thurgau

- No specific missing features were reported in the citizen questionnaire; needs were captured qualitatively during the workshop discussions.



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5. Framework blueprint

The framework presented here is derived from the workshop results and the identified system requirements.

The framework consists of three interacting functional components:

- Citizen Engagement App: data collection
- Accessibility Analysis Platform: data processing and visualisation
- Decision Support System: evidence aggregation and prioritisation

The following diagram describes the functional structure and data flow of the SmartUrbanity framework based on stakeholder input collected during the workshops. It represents a conceptual blueprint and does not constitute a detailed technical system architecture. The detailed description of each functional element is described.

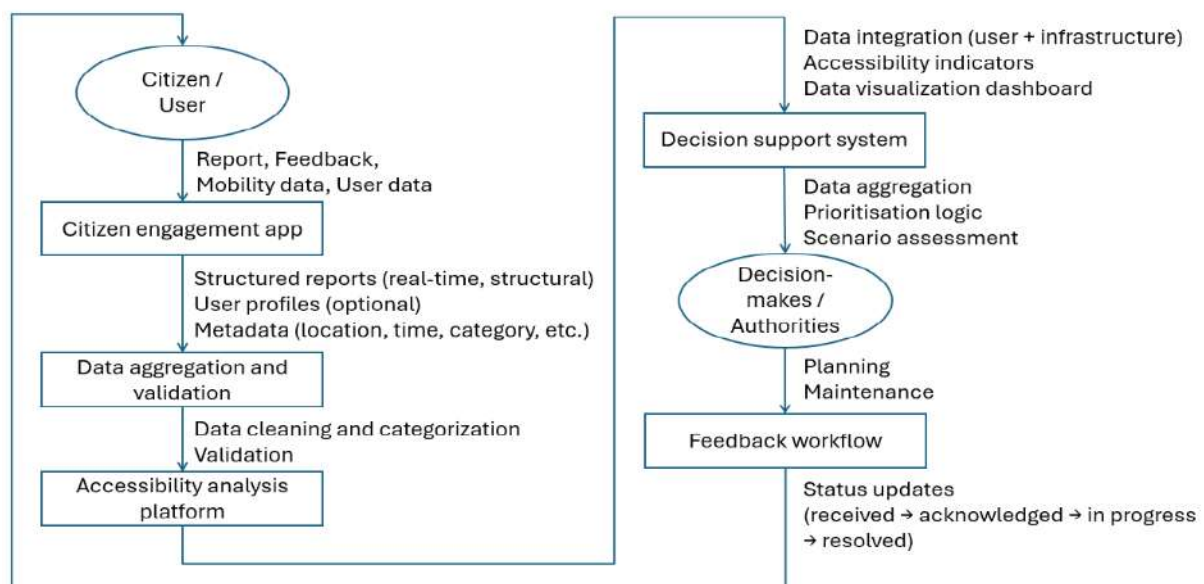


Figure 6 Framework blueprint

Citizen / User

The citizen represents the primary source of input to the framework. Stakeholder workshops confirmed that users contribute both objective and subjective information.

Inputs include:

- Reports on mobility issues
- Feedback on infrastructure and services

- Perceived accessibility (e.g. safety, comfort)
- Optional user profile information

The workshops highlighted that participation depends on:

- low effort reporting
- perceived usefulness
- clear feedback from authorities

This block reflects the role of citizens as data providers and evaluators of outcomes.

Citizen Engagement App (CEA)

The Citizen Engagement App structures user input into a consistent format.

Main functions:

- Capture real-time and structural mobility issues
- Provide simple and accessible reporting interfaces
- Collect optional contextual information (profiles, preferences)
- Facilitate gamification elements
- Display maps, stats, issue status, etc.

Key requirements derived from workshops:

- reporting must be fast and low effort
- structured input preferred over free text
- no open discussion forums
- support for accessibility and multilingual use

Data Aggregation and Validation

This block ensures that user input becomes reliable and usable.

Functions:

- Cleaning and standardisation of reports
- Categorisation into predefined types
- Validation through:
 - photo evidence
 - user confirmation
 - duplication checks



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Workshop findings strongly emphasised:

- the need to avoid unverified inputs
- the importance of structured categories
- minimisation of noise and duplication

This layer converts raw input into consistent, comparable data.

Accessibility Analysis Platform (AAP)

The AAP integrates different data sources to produce accessibility insights.

Functions:

- Combine user-generated data with infrastructure and contextual data
- Compute accessibility indicators
- Provide visualisation (maps, heatmaps, filters)

Key characteristics derived from workshops:

- accessibility is multidimensional: reliability, safety, route continuity, multimodal usability
- strong need for personalised filters: age, mobility constraints, environmental conditions

The platform supports:

- analysis of patterns
- identification of barriers
- communication of results

This block forms the analytical core of the framework.

Decision Support System (DSS)

The DSS translates analysed data into actionable insights for authorities.

Functions:

- Aggregate data into meaningful evidence
- Apply prioritisation logic
- Support scenario assessment

Important clarification from workshops:

- DSS is not a new reporting tool
- it is an evidence-structuring layer



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Key requirements:

- transparent prioritisation criteria
- integration with institutional constraints: budgets, regulations, responsibilities
- explainable outputs

The DSS connects analysis with real-world decision-making processes.

Decision-makers / Authorities

This block represents institutional actors responsible for action.

Roles:

- evaluate prioritised issues
- assign responsibility
- implement interventions

Types of actions:

- maintenance (short-term)
- planning (structural changes)

Workshops emphasised:

- decisions are constrained by: legal frameworks, administrative processes, available resources

This block ensures that data leads to operational outcomes.

Feedback Workflow

The feedback workflow closes the loop between citizens and authorities providing status of the tracked issues. (received → acknowledged → in progress → resolved)

Key requirement (strongest cross-cutting finding):

- reports must not disappear into a “black box”

Functions:

- provide status updates
- ensure transparency
- build trust

This workflow is critical for:

- sustained participation
- perceived impact



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6. Summary

This deliverable has presented the participatory methodology and results of the stakeholder workshops conducted under Task 2.2 in five SmartUrbanity pilot locations. Using a harmonised workshop structure, the project gathered comparable evidence on user needs, expectations, and constraints related to the three core digital components of the SmartUrbanity framework.

The analysis shows strong convergence across cities despite differing local contexts. Stakeholders consistently highlighted the need for tools that are simple to use, inclusive by design, and capable of producing traceable and meaningful feedback. The findings confirm that citizen engagement mechanisms must prioritise clarity, low interaction effort, and visible outcomes to sustain participation. At the same time, institutional actors stressed that digital tools must respect existing legal, organisational, and budgetary constraints and support, rather than bypass, established decision-making processes.

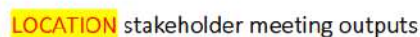
The workshops clarified that accessibility should be treated as a practical and differentiated concept, shaped by safety, reliability, usability, and personal mobility situations, rather than by proximity alone. Participants across all pilots expressed a strong interest in visualisation tools that make accessibility differences visible across population groups while remaining understandable and operational for planners.

In addition to qualitative insights, the citizen questionnaires provided a basic statistical overview of participant profiles, mobility habits, and tool usage across pilot cities. While sample sizes remain limited, these data support the interpretation of workshop discussions and reinforce the qualitative findings.

In conclusion, Deliverable D2.2 confirms the relevance of the SmartUrbanity framework and provides clear, evidence-based guidance for its further development. The consolidated lessons and requirements presented in this report ensure continuity between stakeholder inputs and the subsequent technical work, strengthening the project's capacity to deliver usable, credible, and context-aware digital tools for sustainable urban mobility planning.



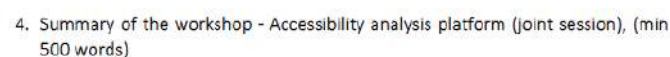
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- location:

	Citizen Engagement app	Decision support system platform and integration	Accessibility analysis platform (joint session)
number of participants:			
type of participants:			

3. Summary of the workshop - Decision support system platform and integration, (min 500 words)



- list of participants: scanned document
- photos: of the event and of the final material

Figure 7 Stakeholder workshop outputs template



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Appendix B: Participant list template



SmartUrbanity project

Stakeholder workshop – list of participants

LOCATION, DATE

Name	Company	Email	Signature

Figure 8 Participant list template

Appendix C: Citizen questionnaire template



SmartUrbanity project

Stakeholder workshop – citizen questionnaire

LOCATION, DATE

1. I allow the researchers to process and collect my data within the smartUrbanity project in an anonymized way: YES / NO
2. Year of birth: / prefer not to say
3. Gender: female / male / other / prefer not to say
4. Highest level of education: elementary / high school or equivalent / college degree (Bachelor's) / graduate degree (Master's or Doctorate) / prefer not to say
5. What type of vehicle do you use for and how often (please list all of them, e.g., driving 2x/week, cycling 1x/week, train 1x/month):
.....
6. How long is your typical commute?
7. What kind of navigation or trip planning apps do you use and how often please list all of them, (e.g., Google Maps 2x/week, Waze 1x/week, Mapy.com 1x/month):
.....
8. What features do you miss from these applications?
.....

Figure 9 Citizen questionnaire template



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Appendix D: Citizen questionnaire summary template



Citizen questionnaire summary

Location:

Date:

Aggregated demographic data

Number of participant filled					
Gender count	M	F	Other	Not discl.	
Highest level of education count	Elementary	High school or eq.	College degree	Graduate degree	Not disclosed

User specific data

Responder 1

Year of birth			
Vehicle types and frequency			
Type	Frequency	Unit	
example: Car		3 week	
Bicycle		1 month	
Bus		5 week	
(add rows if needed)			
Typical commute length (min)			
Navigation apps and frequency			
Type	Frequency	Unit	
example: Google Maps		3 month	
Waze		2 week	
(add rows if needed)			
Missing features			

Figure 10 Citizen questionnaire summary template

Appendix E: Pilot report – Rome

Rome stakeholder meeting outputs

1. meeting information: date, location, number and type of participants

	Citizen Engagement App	Decision Support System platform and integration	Accessibility Analysis Platform (joint session)
date	13 January 2026	25 February 2026	25 February 2026
location	Rome, Centro di Aggregazione Giovanile Piazza Pietro Merolli	Rome, Sala del Consiglio del Municipio XII, Via Fabiola 14	Rome, Sala del Consiglio del Municipio XII, Via Fabiola 14
number of participants:	13	11	12 (8 + 4),
type of participants:	Citizens and representatives of NGOs active in the pilot area	Public decision-makers and technical actors from the pilot area and the broader Rome administration, including politicians, technical directors, the Rome Mobility Agency, and local police	A mixed group of public decision-makers, technical actors, citizens, and NGO representatives from the pilot area and the broader Rome context

2. Summary of the workshop - Citizen Engagement App (min. 500 words)

The focus group took place on 13 January 2026 at the “Centro di Aggregazione Giovanile”, Piazza Pietro Merolli (Rome), from 18:00 to 20:30, and aimed to collect citizens’ needs, expectations and suggestions to inform the definition of the SmartUrbanity citizen app, with specific reference to the Rome pilot (beta pilot for the first validation of digital tools and models).

From 18:00, participants were welcomed and registered, followed by the administration of the initial (baseline) questionnaire.

From 18:20, Sapienza introduced the project framework, presenting the Driving Urban Transitions (DUT) partnership and the partners involved in the Rome pilot (Sapienza, Movesion, Municipio XII, RRSC and CTLup). This was followed by a round of introductions involving both citizens and the project team members.



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Participants included residents from the pilot area and activists from local associations. The represented associations and activities were heterogeneous, including: maintenance of public green spaces, neighbourhood committees, architecture and urban design, digital training, as well as school mobility initiatives (e.g., Piedibus and school streets).

At 18:37, Sapienza introduced the concept of the 15-minute city, starting from the challenges associated with car-centric mobility models. A spontaneous discussion was triggered when the project's guiding question ("How do we choose what to do and what to prioritise?") was presented, together with a visual example of a 15-minute city intervention promoted by the Municipality: a steep staircase intended to connect two different elevations and reduce pedestrian travel times.

One participant highlighted accessibility issues related to this intervention, which was perceived as poorly suited to neighbourhood characteristics, especially in light of the ageing resident population. In relation to this point, it should be noted that part of the pilot area includes one of the highest shares of older residents in Rome, with specific needs in terms of accessibility and the usability of public space.

At 18:50, an overview of the SmartUrbanity project was presented, with reference to its main features and the "citizen-centred" principle. The relevance of data collection was emphasised both for model calibration and for decision support, with the aim of accounting for differentiated needs across population groups and integrating top-down and bottom-up approaches.

Subsequently, the project tools were introduced at a general level, without entering into the details of app functionalities. Considering the experience of the Municipio XII representative in conducting focus groups for digital development, an exploratory approach was adopted to encourage participants' idea generation, without constraining the discussion to a predefined set of features.

At 19:00, the guided discussion began, moderated by Municipio XII in collaboration with Sapienza, Movesion and RRSC. This discussion aims to collect structured inputs in relation to four key questions:

1. Which experiences are worth collecting (what/when/for whom)?
2. Which information/feedback would participants like to see in the app (and with what timing)?
3. For whom should the app be simple and accessible?
4. Which conditions would increase trust in the app (privacy and transparency)?



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The discussion was initiated using mobility apps already familiar to participants, as a warm-up activity to clarify the scope of the SmartUrbanity app (what it could be, and what it will not be) and to introduce, in a concrete manner, the potential of gamification mechanisms to support engagement.

Relevant examples and considerations emerged based on apps currently in use:

- Waze: participants appreciated the community dimension and the perception of immediate usefulness of contributions (“my contribution produces an effect”). However, an ethical concern was raised regarding some features (e.g., speed camera reporting).
- Moovit: participants valued the user interface and information on the estimated arrival time of the vehicle at the selected stop.
- Google Maps: one participant highlighted its usefulness for everyday planning (particularly for independent travel by minors), but also limitations in multimodality and, above all, in indicating the safety level of walking routes. Interest also emerged in routing options that do not exclusively prioritise the fastest or shortest path, by including alternative criteria (e.g., safety, comfort, accessibility).

In the discussion about which data to collect and which reports to enable, participants’ attention gradually shifted from real-time information (e.g., bus crowding/punctuality) to structural and infrastructural issues, including: potholes, architectural barriers, closed streets, malfunctioning traffic lights, closed stairways, public transport service perceived as infrequent in the evening, as well as bike-sharing service areas perceived as inadequate because they interrupt connections between neighbourhoods. Unused urban spaces were also mentioned as potentially supporting pedestrian connections.

A strong willingness to contribute to civic-oriented data collection emerged, accompanied by the perception that forms of recognition (not necessarily monetary) are legitimate. The feedback considered most important concerns formal acknowledgment / case handling by the responsible authority: participants expressed interest in a system that updates the status of reports (e.g., received/acknowledged, awaiting authorisation, progress/resolution), supported by a traceable history that makes evolution over time visible and reduces the perception of “reports disappearing into a void”.



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With regard to the idea of integrating a forum or digital chat, a clear shared position emerged: to avoid spaces based on “chat/words”, and instead privilege concise, structured, action-oriented mechanisms.

One participant suggested that for some types of reports, the app could include functionalities similar to forms of collective support (e.g., expressing priority/endorsement), interpretable as a sort of “referendum” on initiatives or choices, for instance to support the acquisition of a right-of-way needed to create a pedestrian connection.

However, concerns also emerged: (i) not all decisions can be reduced to a binary format (yes/no); (ii) for some interventions, especially those related to accessibility for people with reduced mobility, the issue was framed as a need/requirement, rather than an option subject to preference.

Regarding trust, privacy and transparency, participants were broadly supportive of profiling, provided it is clearly intended to deliver useful suggestions and alerts consistent with different needs across users/groups.

About regular app use, the need for operational simplicity emerged strongly, articulated in concrete requirements: short questions, minimal time required, a light contribution flow, and the possibility to complete reports in two phases (e.g., quick submission + later completion). The importance of conducting usability testing with real users and maintaining an ongoing dialogue with citizens was also emphasised, to ensure the tool is genuinely accessible.

At 20:06, a general presentation of the project’s planned functionalities and the rules of the mind-mapping exercise was provided. Participants then carried out the activity through the collaborative construction of an idea map.

The meeting ended at 20:30. From the analysis of the resulting map (with four main branches pre-set by the team), proposals and suggestions emerged in the following areas: App functionalities, Feedback, City/environment impact, and Gamification.

App functionalities

- Staying logged in
- Usability and ease of use
- Navigation: updates and reports
- Creating individual routines



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- Usage patterns (e.g., “going to work”, “going for a walk”, “no specific purpose”)
- Proposing solutions
- Notifications when entering another neighbourhood where reports differ
- Grouping users into communities
- Integrating publicly available mobility data
- Creating sport circuits (running/cycling)
- How much time / when you live in your neighbourhood

Feedback

- No “smiley faces” 😊
- Work progress status
- Visible final outcomes
- Daily feedback on neighbourhood issues
- Notifications every time a given number of identical reports are created

City/environment impact

- Adjusting public service hours based on needs
- Architectural barriers
- Safety (well-lit streets, lack of sidewalks, etc.)
- Information on local markets
- Sustainable supermarkets
- CO₂ saved
- Transparency in communication between institutions
- Engaging and informing local mobility managers

Gamification

- Occasionally a prize (e.g., a coffee)
- Daily streak
- Discounts on bike-sharing and e-scooter rentals
- Rewards for children who bike to school



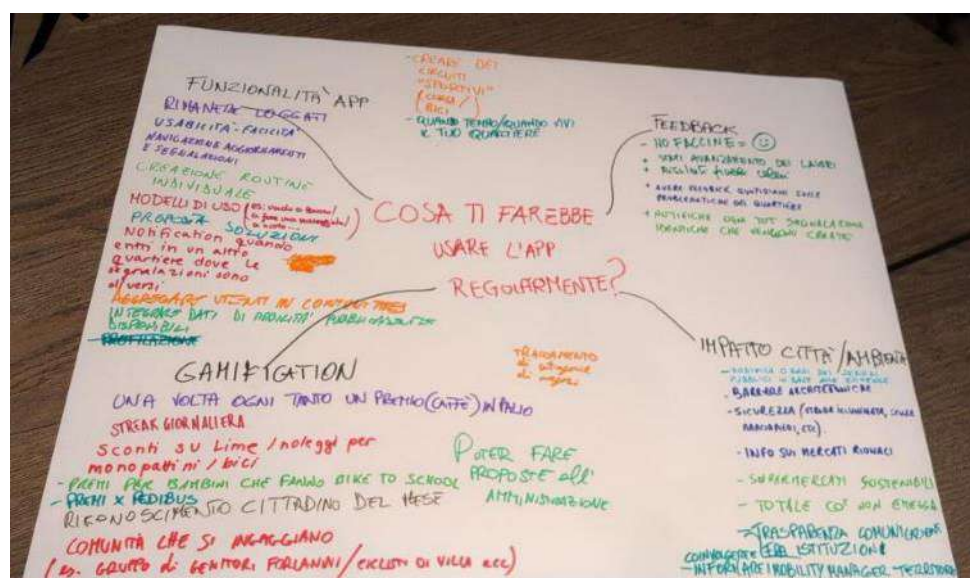
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- Rewards for Piedibus
- "Citizen of the month" recognition
- Communities that engage (e.g., school parents' group, park cyclists)
- Being able to submit proposals to the administration
- Tracking categories of shops

Ex-post comment. The contents emerging from the map converge on four recurring strands: (i) simplicity and continuity of use (persistent login, routines and usage patterns), (ii) concrete informational return (progress status, visible outcomes, notifications and traceability of reports), (iii) attention to tangible urban impacts (accessibility, safety, proximity services and environmental indicators), and (iv) engagement mechanisms based on prizes, recognition and a community dimension.

The meeting also provided useful indications for interpreting the Rome pilot context: a marked dependence on private cars was confirmed, associated with public transport perceived as infrequent and unreliable, and with a pedestrian network perceived as inadequate. Elevation changes and the presence of numerous stairways were also highlighted; when accessible, these significantly reduce walking travel times. Finally, the relevance of shortcuts potentially useful to enable shorter walking routes emerged, but these are often not usable because they are not publicly accessible.

The discussion revealed that citizens are willing to contribute data and local knowledge, but their engagement strongly depends on perceivable impact and institutional responsiveness. Participants repeatedly stressed that contributions should lead to visible outcomes, not disappear into administrative processes.



3. Summary of the workshop - Decision Support System platform and integration (min. 500 words)

The focus group dedicated to the Decision Support System (DSS) platform and its potential integration into existing administrative processes took place on 25 February 2026 at the Council Hall of Municipio XII (Via Fabiola 14, Rome), from 11:00 to 13:45. The meeting involved representatives from the Municipality of Rome, Municipio XII, technical agencies dealing with mobility and urban services, and project partners.

From 11:00, participants were welcomed and registered. At 11:15, Sapienza opened the meeting by introducing the SmartUrbanity project and the partners involved in the Rome pilot, followed by a short round of introductions among participants. At 11:25, Sapienza presented the conceptual framework of the project, the 15-minute city approach, and the objectives of the meeting, with particular attention to the role of the DSS platform as a tool to support urban decision-making.

The discussion was formally opened at 11:50 and moderated by a representative of Municipio XII.

During the initial intervention, the Councillor for Mobility of the Municipality of Rome emphasised that the concept of the 15-minute city should not be understood only in terms of infrastructure provision, but also in relation to the daily experience of residents. In his words, “the 15-minute city should not be measured only in kilometres of asphalt, but in people’s lived experiences.” The intervention highlighted the relevance of integrating objective data with subjective experiences in order to connect policy decisions with the everyday conditions experienced by citizens. Several elements were mentioned in this context, including the presence of economic and personal constraints affecting mobility choices, the practical difficulties of implementing urban transformations, the importance of proximity and the idea of the “1,000 steps”, and the need to maintain a continuous dialogue with the territory. The Councillor also stressed that mobility policies should not be treated as neutral, since different groups experience urban space in different ways. In this context, he explicitly appreciated the SmartUrbanity logic of linking “the problem I experience” with “the solution I adopt” through the combination of objective and subjective evidence. He also underlined the importance of participation and real-time data, the potential role of gamification in encouraging citizen engagement, and the need to make both objective and subjective evidence transparent. The intervention additionally recalled that public funding rules constrain what administrations can and cannot do, and that one of the priorities of the project should be to listen to the territory and to each individual experience. From a strategic perspective, attention was also drawn to the



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importance of ensuring interoperability between the SmartUrbanity system and existing urban mobility platforms, such as the municipal traffic control centre or initiatives related to MaaS4Italy.

An intervention by Movesion followed, focusing on the definition of priorities and on the strategic choices required to translate the project framework into operational tools.

The representative from Roma Servizi per la Mobilità contributed a technical perspective on urban mobility management. Particular emphasis was placed on the importance of integrating services and improving territorial accessibility. It was noted that, when evaluating potential interventions, priorities are determined according to defined rules and that user safety must remain the primary concern. The discussion also highlighted that, in practice, the concept of the 15-minute city often translates into efforts to bring services closer to residents while at the same time improving the functioning of mobility systems. From a data perspective, it was emphasised that decision-makers are generally not interested in isolated individual reports but rather in statistical and aggregated information capable of describing territorial patterns. At the same time, participants recognised the importance of considering citizens' perceptions of interventions, as these perceptions can influence acceptance of changes and may sometimes reflect fear of change or resistance to new policies. According to the mobility agency representative, a useful digital tool should therefore help decision-makers manage and interpret the often conflictual relationship between citizens and urban transformation processes, supporting the identification of solutions rather than merely collecting complaints. The representative also stressed the importance of maintaining contact with citizens while ensuring that safety remains the primary criterion in the prioritisation of interventions.

The President of Municipio XII underlined the challenges related to public debate, noting that discussions about mobility policies are sometimes influenced by misinformation circulating in the public sphere. The importance of protecting vulnerable groups and ensuring accessibility to key urban nodes was highlighted, together with the need to develop new forms of bottom-up engagement with residents.

Further operational insights emerged from the contributions of several municipal offices. The representative of the Local Police explained that the administration currently receives and processes a large number of citizen reports, often through multiple channels. Because personal contact information of officials is publicly available through transparency regulations, citizens frequently send formal requests directly to individual officers via certified email, even when the issue is outside the



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competence of the Local Police. In such cases, however, the administration is still required to respond. Participants agreed that the current reporting landscape is characterised by a proliferation of channels that are not integrated with each other, and that the system is often perceived as too rigid from the citizens' perspective.

Similar considerations were raised by the Municipal Maintenance Office. According to the representative, reports arrive through a variety of sources, including email, certified email (PEC), official protocol systems, the municipal contact centre (060606), web platforms, phone calls, and direct interactions with citizens in public spaces. Each report must be evaluated and followed up on, either by scheduling an intervention or by carrying out an on-site inspection. Priority decisions are mainly based on the classification of the street and on the expected traffic volume, while available budget resources also play a decisive role. The office emphasised that properly documented reports are particularly useful in order to avoid unnecessary inspections.

Additional contributions came from other municipal departments. The School Office explained that school transport services mainly concern two categories of beneficiaries: children with disabilities, whose needs are individually addressed, and children living in areas not served by public transport. The office also described the organisational complexity involved in planning routes each year, managing attendance through a dedicated app, and handling reduced fares and late applications during the school year. Human-related issues were also mentioned, including conflicts among children and cases where operators were not always considered adequate. An additional point raised concerned areas where public transport does exist but is perceived as infrequent or unreliable; in some cases, students may have to take buses as early as 6:30 in the morning.

The Municipal Commerce Office reported that the administration has limited visibility on private services operating in the territory. The information available is mainly related to legally required classifications, such as general retail or food and beverage activities, and often relies on generic ATECO codes. As a result, the administration cannot easily identify in detail which services are actually offered by individual businesses, and these data are not currently integrated into a broader territorial information system.

Following the open discussion, participants carried out a SWOT exercise aimed at identifying strengths, weaknesses, opportunities, and threats associated with the SmartUrbanity approach. The SWOT exercise was discussed from the perspective of three stakeholder groups: Roma Servizi per la Mobilità (RS), technical and operational



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municipal services (T+V, including the Maintenance Office and Local Police), and functional municipal services (F, including the School Office and Commerce Office).

SWOT Dimension	RS – Roma Servizi per la Mobilità	T+V – Maintenance Office + Local Police	F – School Office + Commerce Office
Strengths	Less conflictual relationship with citizens	Interface for interaction with citizens; geolocated reports with photos; categorisation of reports	Direct but structured reporting; geolocation enabling quantifiable data
Weaknesses	Difficulty in guaranteeing feedback to citizens	Expectations that cannot always be fulfilled	Digital divide
Opportunities	Providing synthesis before issues reach decision-makers	Grouping reports by street and type; helping citizens understand responsibilities	Avoiding data fragmentation and integrating data from other platforms
Threats	Risk of political instrumentalisation or misuse of reports	Need to clearly define the type and limits of feedback provided to citizens	Risk of report abuse

The meeting concluded at 13:45.

Ex-post comment. The workshop clarified several practical and institutional conditions that are relevant for the design of the SmartUrbanity Decision Support System. A first recurring point concerned the current fragmentation of reporting practices: participants described an administrative context in which citizen inputs already arrive through multiple non-integrated channels, creating a significant workload for public offices. In this context, the added value of a digital tool is not to generate further isolated reports, but to help organise, filter and synthesise dispersed information in a way that is useful for decision-making.

A second key element concerned the type of information considered most relevant by administrations and technical actors. Participants repeatedly stressed that individual reports are less useful than aggregated and interpretable evidence capable of revealing



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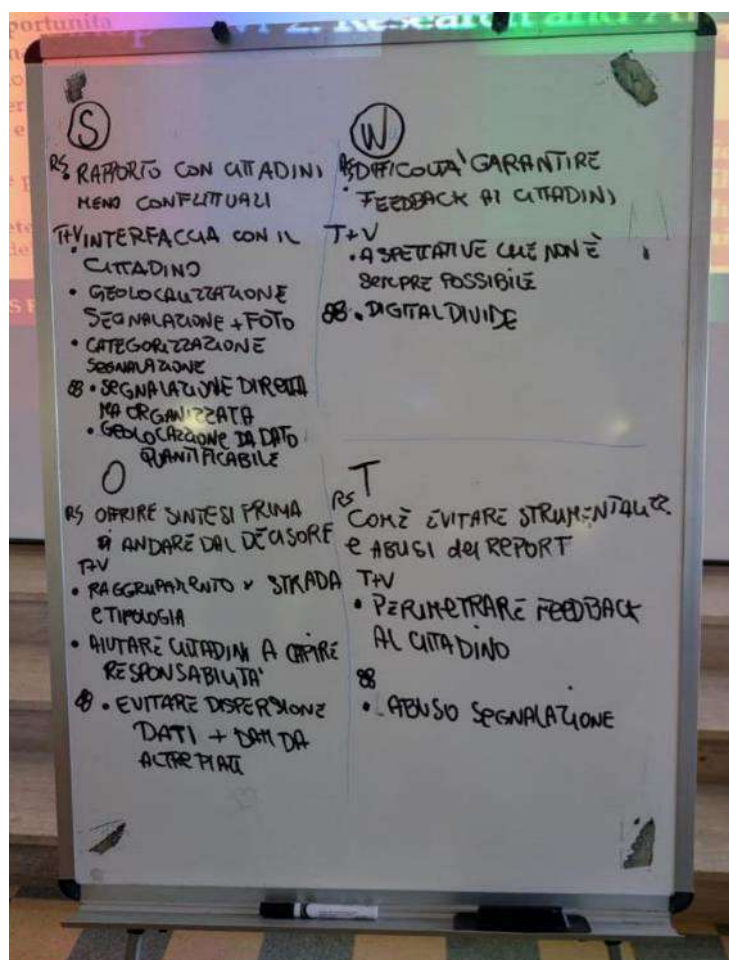
territorial patterns, recurring problems and differences across areas. At the same time, the discussion confirmed that subjective perceptions should not be treated as marginal, since they affect how interventions are experienced, accepted and sometimes contested by residents. The workshop, therefore, reinforced the importance of combining objective and subjective information within a common analytical framework.

Finally, the discussion highlighted that urban decisions are not made based on citizen demand alone, but are shaped by safety priorities, regulatory constraints, funding and budget limitations, and institutional responsibilities. Within this context, the role expected from the DSS is not that of a simple reporting platform, but rather that of a support tool capable of structuring evidence, improving interpretation, and helping administrations connect citizens' experiences with possible intervention scenarios and policy evaluation.

The workshop confirmed that the SmartUrbanity DSS should not be conceived as a parallel reporting channel, but as an evidence-structuring and interpretation layer capable of connecting dispersed inputs, territorial patterns, and institutional constraints in support of more transparent and explainable prioritisation.



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4. Summary of the workshop - Accessibility Analysis Platform (joint session) (min. 500 words)

The joint focus group dedicated to the Accessibility Analysis Platform took place on 25 February 2026 at the Council Hall of Municipio XII (Via Fabiola 14, Rome), from 14:30 to 17:00. The session brought together both decision-makers and citizens, to discuss how an Accessibility Analysis Platform could support a shared understanding of urban accessibility conditions, user needs, and possible priorities for action in the Rome pilot area. The workshop involved a mixed group of 12 participants, including citizens and NGO representatives from the pilot area (8), as well as decision-makers and technical stakeholders from the pilot area administration and the wider Rome context (4). In contrast with the morning workshop, which focused more specifically on the Decision Support System and its institutional integration, the afternoon session was designed as a joint participatory exercise in order to facilitate dialogue between administrative actors and local stakeholders around a common set of accessibility-related questions.

Participants were welcomed and registered between 14:30 and 14:45. At 14:48, Sapienza introduced the meeting and presented the SmartUrbanity project to the participants, with specific reference to the overall project objectives, the partners involved in the Rome pilot, and the purpose of the workshop. At 15:00, the guiding question of the session was introduced: “How do we decide what to do and what to prioritise?” This was followed by a brief presentation of the 15-minute city concept in the context of Municipio XII and by an introduction to the Access Lab and the general rationale of the Accessibility Analysis Platform.

The presentation clarified that the purpose of the platform is not only to visualise accessibility conditions conventionally, but also to explore how different groups of people may experience access differently, depending on their needs, constraints, and travel conditions. The question-and-answer session that followed focused in particular on the type of data collected within SmartUrbanity, the methods of data collection, the intended uses of these data, and the transparency guarantees associated with the process. This exchange appeared particularly important in a mixed session involving both citizens and public actors, as it helped establish a common understanding of the project logic before moving to the participatory exercise.

At 15:20, the Dotmocracy exercise was introduced and explained as the main participatory method of the workshop. The method was presented as a way to define priorities, facilitate comparison across perspectives, and support the identification of shared priorities. Participants were invited to discuss and vote on three core questions related to the future Accessibility Analysis Platform. For the purposes of the exercise, votes from citizens and decision-makers were recorded separately. It should also be noted that one decision-maker left the workshop before the third question, resulting in a lower number of red votes in the final round.

The first question addressed what matters most for accessibility in everyday life and work. The discussion highlighted that accessibility is not perceived only in terms of geographical proximity, but also in terms of reliability, safety, and continuity of experience. The item that received the highest number of votes overall was timetable reliability (6 votes in total, equally distributed between citizens and decision-makers), followed by safe routes for everyone, also in planning (5 votes), and end-to-end planning for multimodality (4 votes). Additional points raised during the discussion included the importance of real-time updates, for example, on construction works, and information about the existence of sidewalks or path edges, which are essential to understand whether a route is actually usable. Overall, this part of the workshop showed that participants interpret accessibility not simply as the theoretical



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possibility of reaching services, but as the practical possibility of moving with confidence, predictability, and safety.

The second question concerned which user profiles and filters should be included first in the analysis. This discussion produced particularly relevant results because participants moved beyond abstract categories and referred to concrete mobility conditions and differentiated needs. The most voted item overall was age (6 votes), followed by use of trolleys, strollers, wheelchairs, and walkers (5 votes), and gender (3 votes). Other items receiving votes included cyclists, weather conditions, commercial routes, and routes for visually impaired users. The discussion also referred to children and women in relation to lighting and safety, obstacles affecting people with disabilities, pedestrian access to bus stops, and risk aversion. One participant explicitly observed that some proposed categories partly overlapped or could be seen as nested within one another, for example, age and children, suggesting that the future platform should avoid overly redundant filters and clarify the relationship between broad demographic categories and more specific user situations. What emerged clearly is that the participants did not frame accessibility only through broad demographic labels, but through specific situations of vulnerability, care, bodily effort, and daily mobility practice. This provides useful guidance for the future design of filters and user profiles within the platform.

The third question focused on how feedback should function in order to lead to concrete and traceable action. This part of the exercise generated one of the clearest convergences between citizens and decision-makers. The most voted priorities were different response types depending on the problem (5 votes) and visibility of the office responsible for the case (5 votes). Additional votes were assigned to routing or assignment by competence, guided reporting flows, verified identity combined with user-friendliness, urgency ranking, and spaces for suggestions. The discussion showed that participants do not expect feedback to be limited to a generic acknowledgment of receipt. Instead, they envision a structured and traceable process in which reports are categorised, directed to the competent office, differentiated according to the type of issue involved (for example maintenance, planning, or programming), and followed by visible progress or response. This is particularly significant because it mirrors concerns already raised in the previous workshops, especially the need to avoid both administrative opacity and the perception that reports disappear into an institutional void.

The voting patterns also made it possible to compare the perspectives of citizens and decision-makers. Citizens tended to prioritise reliability, safety, and usability of everyday routes, with particular attention to age-related needs and practical mobility



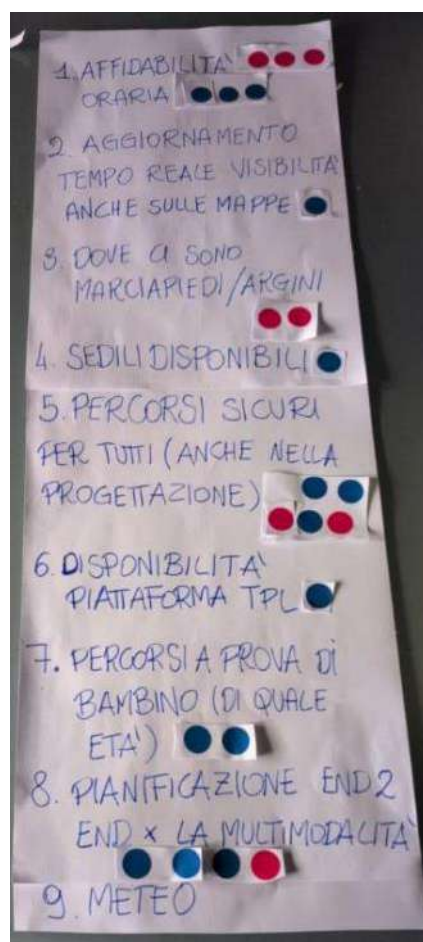
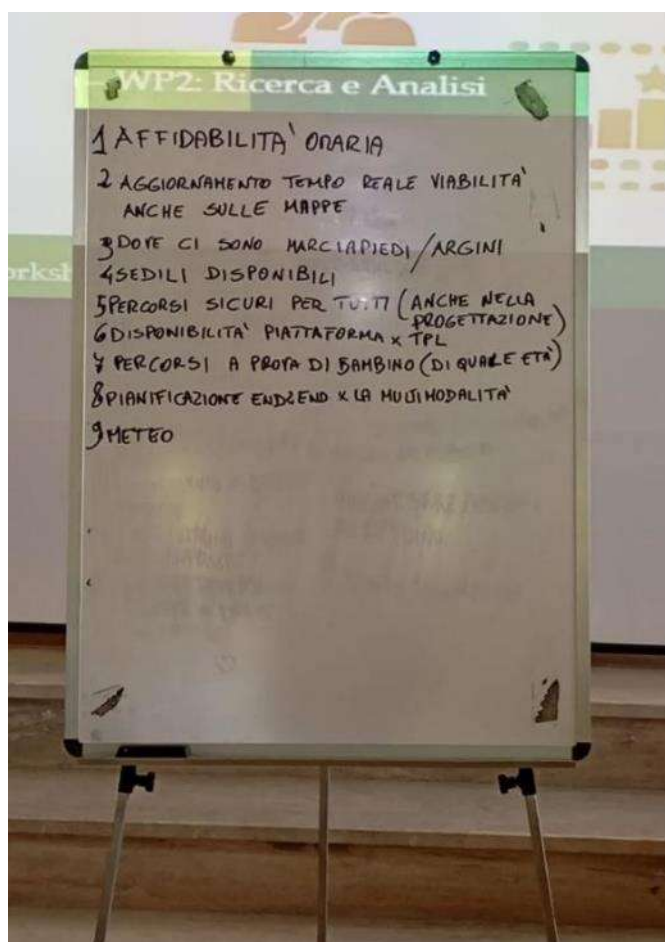
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situations such as the use of strollers or walkers. Decision-makers, by contrast, placed relatively more emphasis on system reliability, route legibility, and administrative traceability, highlighting the importance of tools capable of structuring and routing information within institutional processes. Despite these differences, the exercise revealed strong convergence on several core priorities: reliability of mobility systems, safety and accessibility of routes, and the need for transparent and traceable feedback mechanisms.

The meeting concluded at 17:00. Dotmocracy results are reported below. One citizen left before the voting exercise, and one additional citizen and one decision-maker were no longer present for Question 3.

1. What matters most for accessibility in your daily life / in your work?

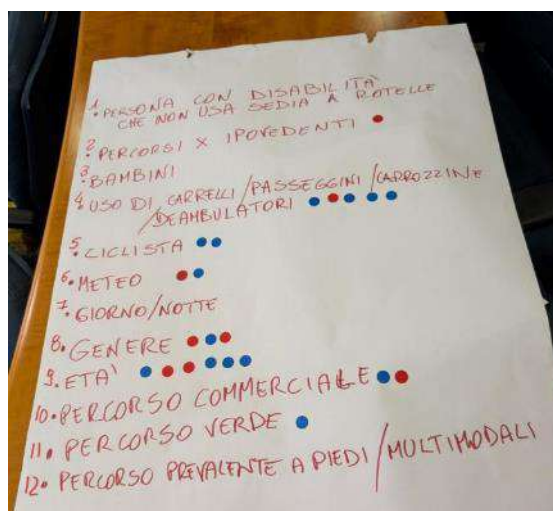
Priority / item	Citizens (B)	Decision-makers (R)	Total votes
Timetable reliability	3	3	6
Real-time updates, visibility also on maps	1	0	1
Where sidewalks / edges are present	0	2	2
Available seats	1	0	1
Safe routes for everyone (also in planning)	3	2	5
Availability of public transport platform	1	0	1
Child-friendly routes (depending on age)	2	0	2
End-to-end planning for multimodality	3	1	4
Weather	0	0	0



**2. Which user profiles should be included (indispensable) in the analysis?
Which filters would you use first on the maps?**

Priority / item	Citizens (B)	Decision-makers (R)	Total votes
Person with disability not using a wheelchair	0	0	0
Routes for visually impaired users	0	1	1
Children	0	0	0
Use of trolleys, strollers, wheelchairs, walkers	4	1	5
Cyclist	2	0	2

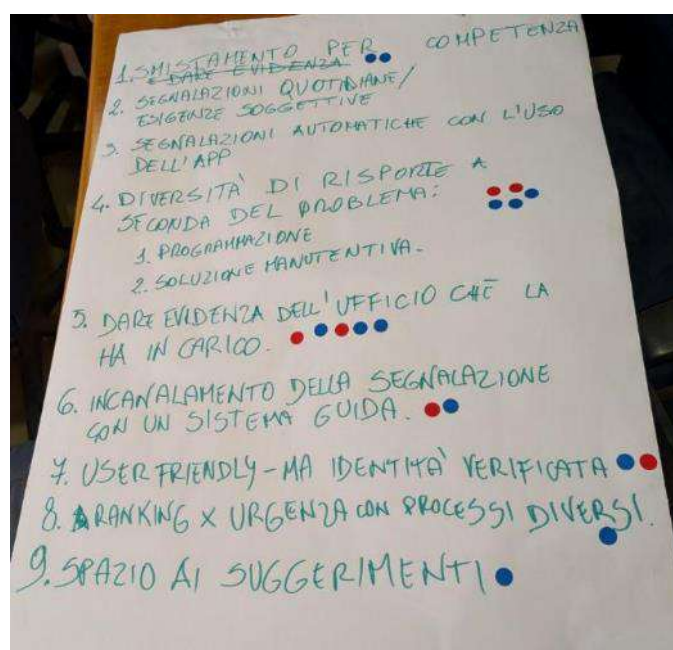
Priority / item	Citizens (B)	Decision-makers (R)	Total votes
Weather	1	1	2
Day / night	0	0	0
Gender	1	2	3
Age	4	2	6
Commercial route	1	1	2
Green route	1	0	1
Predominantly walking / multimodal route	0	0	0



3. How should feedback work so that it leads to concrete and traceable actions?

Priority / item	Citizens (B)	Decision-makers (R)	Total votes
Routing / assignment by competence	2	0	2
Daily reports / subjective needs	0	0	0
Automatic reports through app use	0	0	0

Priority / item	Citizens (B)	Decision-makers (R)	Total votes
Different types of responses depending on the problem: 1 planning 2 maintenance solution	3	2	5
Visibility of the office responsible for the case	3	2	5
Channelling the report through a guided system	1	1	2
User friendly but verified identity	1	1	2
Urgency ranking with different processes	1	0	1
Spaces and suggestions	1	0	1



Ex-post comment. The joint session provided useful evidence that the Access Lab can function as a shared space between lived experience and institutional reasoning. First, the workshop confirmed that accessibility is understood by participants as a practical and differentiated condition shaped by reliability, safety, route continuity, and multimodal usability, rather than by proximity alone. Second, the discussion on profiles and filters reinforced the importance of representing accessibility through concrete user situations and mobility constraints, including age, care-related burdens, and differentiated physical capacities. At the same time, the observation that some categories partly overlapped suggests that the design of future filters should balance inclusiveness with analytical clarity, avoiding unnecessary redundancy. Third, the

feedback discussion showed that both citizens and decision-makers attribute high importance to administrative traceability, competence-based routing, and differentiated response processes. Overall, the Dotmocracy exercise suggests that the platform has the potential to support a common language across stakeholder groups, making accessibility differences more visible while also clarifying how citizen inputs may connect to structured administrative action.

5. Appendices:

- list of participants: scanned document
- photos: of the event and of the final material

Appendix F: Pilot report – Lyon

Lyon - stakeholder meeting outputs

1. meeting information: date, location, number and type of participants

date: 13/02/2026

location: Online

	Citizen Engagement App	Decision Support System platform and integration	Accessibility Analysis Platform (joint session)
number of participants:	10	2	10
type of participants:	Citizens & Decision makers	Decision makers	Decision makers & Citizens

2. Summary of the workshop - Citizen Engagement App

The workshop was hosted online on February 13, from 10:00 am to 12:00 pm, bringing together participants from diverse backgrounds to share their perspectives on urban mobility. The workshop was moderated by two researchers, who facilitated engaging discussions and collected valuable insights while ensuring a smooth and inclusive virtual experience for all attendees. The session was recorded and transcribed. The transcripts were coded and the analysis followed the thematic analysis of the main topics discussed.

The discussions encompassing the Citizen Engagement Application revealed critical insights into user expectations, primarily centred on speed and ease of use. To ensure



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and increase adoption, the reporting feature must be streamlined; participants indicated they would engage only if the reporting process could be completed within a short timeframe, such as a 5 to 10-second window. Furthermore, discussions revealed that long-term user retention (incentivising repetitive use) is contingent upon the application's reliability and operational efficiency.

A key finding was the necessity of closed-loop communication, where users are proactively notified once their reported issues, such as barrier removals or infrastructure repairs, have been resolved. Additionally, the platform must support multimodal transport options to be truly inclusive. To facilitate ease of use, participants emphasised the requirement for comprehensive tutorials and detailed documentation to clarify the application's technical functions.

Given the abundance of similar tools, participants expressed confusion regarding which application to use for reporting mobility challenges, barriers and other issues. Consequently, the application must clearly demonstrate its added value compared to existing solutions to maximise user engagement. Participants appreciate the scope of the application that broadens from merely reporting physical mobility barriers to capturing the perceived travel experience.

While participants demonstrated a marked reluctance to disclose trajectory-based data, they exhibited a much higher predisposition toward reporting localised information, such as specific mobility barriers and addresses. This hesitation appears to be rooted in concerns regarding device resource consumption (specifically battery life) and data privacy. Currently, they find a lack of transparency regarding data collection protocols, analysis methodologies, and storage infrastructure.

From the discussion, participants reported the following as significant issues related to mobility barriers:

- **Infrastructure and Accessibility Failures:** A major concern is the presence of non-functional accessibility infrastructure, such as broken lifts at transport hubs or stations.
- **Security and Parking Concerns:** Users highlighted safety risks and a lack of security in many parking areas, alongside the general difficulty of locating available parking spots near the destination.
- **Service Reliability and Availability:** Participants frequently experienced long waiting times and inconsistent reliability within the public transport network. Additionally, the inconsistent availability of mobility resources, such as bicycles, was noted as a barrier to efficient mobility.



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These reported pains underscore that for users, the most critical factors are proximity, security, and the minimisation of both travel and waiting times.

Furthermore, the participants emphasised the importance of having a user-friendly interface, particularly for elderly people, low-income individuals, and immigrants, taking into account language diversity. Participants also highlighted that gamification strategies should be more clearly defined to engage a broader range of users, not only young people, and should explicitly address the specific barriers faced by people with mobility impairments or limited physical capabilities, as well as those using baby strollers or wheelchairs.

3. Summary of the workshop - Decision Support System platform and integration

The initial presentation of the Decision Support System presented significant challenges for participants regarding its internal mechanics and data processing methodologies. This lack of clarity hindered their ability to evaluate the tool's functional utility for decision-makers.

To enhance the system's effectiveness, participants proposed the integration of multidimensional accessibility indicators, combining quantitative metrics such as the volume of cyclists per zone with qualitative user feedback. Specifically, mapping user comments was suggested as a method to capture the perceived travel experience.

A central theme in the discussion was the necessity of aligning the DSS with real-world operational procedures for managing intervention requests. These tasks often originate from various streams, including municipal urban management plans, corporate entities, and individual citizens. Consequently, the participants highlighted the importance of synthesising planned interventions with citizen-driven inputs to ensure the system remains reliable and efficient. From the intervention decision-making, the following factors are paramount:

- **Adherence to Normative Standards:** Evaluating infrastructure, such as sidewalks, against accessibility norms (e.g., standard width and height) to identify non-functional assets.
- **Economic and Impact Analysis:** Utilising cost-benefit analyses to define intervention strategies, with a specific focus on the urgency of the intervention and its projected effect on overall accessibility.
- **Transparent Prioritisation:** Establishing a clear hierarchy for interventions, supported by comprehensive explanations to justify why specific actions are prioritised over others.

4. Summary of the workshop - Accessibility analysis platform (joint session)



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Discussions regarding the accessibility platform first addressed the multidimensional nature of accessibility, with participants identifying several critical pillars for equitable mobility. Central to these findings was the concept of security and safety, which encompasses the safety of physical infrastructure, the security of the surrounding environment, and the safety of traffic conditions to ensure the protection of citizens. Furthermore, the research highlighted the necessity of economic accessibility, emphasising the provision of affordable mobility options for all social groups.

Beyond physical and financial constraints, the accessibility of services, from the point of view of the participants, is intrinsically linked to temporal efficiency, travel speed, and user comfort, even during periods of moderate weather. A significant focus was also placed on social inclusivity, with participants identifying specific vulnerable cohorts, including older adults, individuals with limited digital literacy, low-income populations, and climate-vulnerable groups who face unique barriers to mobility. To address these gaps, decision-makers emphasized the importance of a well-defined strategic framework to target these diverse demographics, specifically identifying the pivotal role of local associations as intermediaries in reaching and engaging these priority groups.

Participants also stressed that the definition of "services" and "points of interest" needs to be clarified, as many citizens found these concepts difficult to grasp. They indicated that clearer explanations and practical examples would help users better understand what falls under each category and how these elements relate to their daily mobility experiences.

Participants underscored the practical utility of the application for citizens, particularly as a tool to inform housing decisions and relocation strategies based on personalised accessibility requirements. By allowing users to align their housing choices with personalised accessibility requirements such as proximity to educational and healthcare facilities, the platform addresses a core priority of personalised accessibility. Furthermore, participants expressed a strong interest in features such as accessibility heatmaps with possible advanced filtering by services, aspect and social groups. To ensure these benefits are realised, participants highlighted that the application must maintain a high level of reliability and efficiency.

Concerning the platform features and operational requirements, participants emphasised the critical importance of platform reliability and the capacity to effectively report dynamic events such as traffic conditions and construction activities. Due to the platform's dynamic nature and the large volume of data involved, it is also



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important to guarantee the speed of reported information, reaction, and the scalability of the platform. The discussion also underscored the need for the prioritisation of reported barriers and the ability for users to assign personalised priorities to services based on their specific mobility needs, such as proximity and security. Finally, to foster social inclusiveness, the platform must accommodate non-local language speakers through multilingual support.

5. Appendices:

- list of participants: scanned registration forms and group picture
- photos: of the event and of the final material



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Appendix G: Pilot report – Karlsruhe

Karlsruhe stakeholder meeting outputs

1. Meeting information: date, location, number, and type of participants

date: 10.02.2026; 09:00-13:00 | 13.02.2026; 10:00-11:30

location: Town hall Karlsruhe | online

	Citizen Engagement App	Decision Support System platform and integration	Accessibility Analysis Platform (joint session)
number of participants:	7+2*	7+2*	14+2*
type of participants:	Citizens, City planning office, Industrial Planning Office, Association for the Self-Help of People with Physical Disabilities, Public Transit Authority	Academic research, Politics, City planning office, Industrial Planning Office, Federal Innovation Office, Public Transit Authority	~

* Two participants from online format

We started the workshop on time at 9 o'clock by welcoming all participants and introducing them to one another. This was followed by a short introduction to the concept of the 15-minute city and the SmartUrbanity project. In particular, we focused on the introduction of the three digital tools that are developed within the project and are the focus of the workshop. Participants were assigned to a single group based on their personal and professional backgrounds. After the introductory session, we clarified open questions and explained how we split the participants into two groups for the consecutive sessions of the Citizen Engagement App (CEA) and the Decision Support System (DSS). For each session, a total of 1 hour was scheduled before participants gathered in the main room for a coffee break. After the coffee break at 10:45, we introduced the results from each session to all participants, so that everyone had the same understanding of the tools. Finally, we held an additional session on the Accessibility Analysis Platform (AAP) with all participants. We closed the workshop with a brief summary of the results and collected feedback via the standardized surveys. At 12:30, we ended the workshop and invited the participants to a joint lunch at the town hall canteen.



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Additionally, since the partners from the transport association were unable to participate, an exclusive digital workshop was conducted with two colleagues from the transport association in an online session. As in the in-person workshop, participants were introduced to the core topic and the relevant tools and were guided through the full set of methodological steps. To make the feedback process both robust and efficient, we used a two-stage approach: first, we collected participants' input independently, and only then did we present the key outcomes of the in-person workshop so they could build on, complement, and refine them in a focused second step.

2. Summary of the workshop - Citizen Engagement App (min. 500 words)

We began the first session with a brief overview of the Citizen Engagement App (CEA) and its planned features. Participants were then given the opportunity to ask questions about the app's functionality. Afterwards, we started a discussion about desired key features and app requirements, using a mind map to guide our methodological approach. The method involved guiding questions on helpful features, motivation for regular use, trustworthiness, accessibility for different people, as well as needs and gamification elements.

First, we collected the main categories as a group to create a shared mind map. These included features, impact, accessibility, app requirements, gamification, data protection, trustworthiness, and visualisations and statistics. Next, participants wrote down their ideas individually for each of the main categories. Afterwards, everyone presented their ideas, which we then grouped into topics in the mind map. Finally, the results were discussed as a group.

One of the main topics of discussion was the app's core functionalities. First, we discussed the features for recording trips. Participants suggested that including the purpose of the trip would improve the quality of the collected data for further analysis. To increase the number of recorded trips, the following features were proposed: starting a trip via a widget or smartwatch and enabling automatic trip detection. Participants also asked whether trips could be recorded without an internet connection and uploaded later. This was particularly mentioned in the context of poor internet connections and non-smartphone users. Furthermore, there were concerns that recordings would be limited to within the city boundaries.

The features of the issue reporting tool were then discussed. Participants noted that reporting issues via address input could result in inaccuracies. It was proposed that allowing users to set a pin directly on the map would be a more precise alternative. In



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addition, the participants think that a mechanism to report the quality of the infrastructure would be useful. They also asked if it would be possible to view other users' reported issues in the map to avoid duplication. Furthermore, a structured feedback mechanism that includes timely responses and notifications when issues are resolved was considered an important motivator for ongoing usage. Additionally, it was considered useful to differentiate between short-term issues and long-term infrastructural problems for filtering and processing reports. Furthermore, it would be useful for transport companies if issues were forwarded directly to the relevant parties (e.g., reporting damaged public transport stops to the local public transit authority). Finally, participants asked who would be responsible for quality control and for moderating the submitted issues. There were concerns that the app could result in a large number of unrelated problem reports.

The next step was to discuss several general requirements for the app. These included multilingual support and a simple, intuitive design that displays only the essential information. Minimising battery consumption was also considered important. Participants also emphasised the importance of avoiding redundant structures, such as functions that overlap with those of existing platforms (e.g., KA-Feedback, a local app for reporting issues like waste, infrastructure, or traffic problems). Furthermore, the participants questioned whether we would have enough data from the trip recordings and surveys to ensure the data was representative. This also raised the question of how we would weigh the data.

Accessibility was identified as a key concern. To support visually impaired users, it was suggested that the app should be compatible with screen readers and offer the option to report issues via voice input. Participants also suggested enabling the entry of recorded trips and issues without the need for a mobile device, to ensure broader access.

Trustworthiness and data protection were considered essential for achieving user acceptance. Transparent communication about how data is used, and recognisable institutional branding such as that of KIT or the City of Karlsruhe, were considered important trust-building measures. Furthermore, the participants wanted the option of entering data without creating a user account. They also emphasised that information such as the users' gender and age should be provided voluntarily, but that the benefits should be clearly explained to encourage users to do so. Additionally, industrial planning offices would like access to the collected data.

Participants expressed an interest in visualising and analysing statistics on individual and overall mobility in Karlsruhe. Individual statistics could include a carbon



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footprint calculation, an assigned 'mobility type', a heatmap showing trips made, and the total number of trips made by each mode of transport. Overall mobility statistics for Karlsruhe could include information such as the modal split of users, the streets most frequently tracked, average trip length, CO₂ savings, and monthly or weekly summaries and statistics on reported and resolved issues. The participants also discussed whether these statistics should be visualised as layers on a map or as a list of different categories.

Finally, the use of gamification elements as potential incentives for sustained engagement was discussed. Suggestions included awarding points for useful issue reports, offering rewards for daily use, and enabling users to compare their progress with friends or other users. This raised the question of what constitutes a useful report and who would evaluate them. However, it was noted that competitive comparisons could influence mobility behaviour and potentially reduce data accuracy. This effect should be carefully considered.

3. Summary of the workshop - Decision Support System platform and integration (min. 500 words)

We started the session with a brief introduction to the current conceptual ideas of the Decision Support System (DSS). While the session's methodological core was a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), we began with a general discussion of the tool and the preferred functionalities. Thereby, we sought a deeper, shared understanding of the tool before starting the SWOT analysis. One of the core functionalities all participants require is consideration of weather (temperature, rain, etc.) and climate conditions, as mobility behaviour and perceptions, e.g., of travel time, strongly depend on these factors. Moreover, the location and effects of street greening should be reflected in the DSS. Both dimensions are important for deriving measures aligned with the heat action plan, a strategic, political plan to reduce health risks from extreme heat. According to the indicators other than climate impact that the DSS should represent, participants emphasised the modal shift and changes in the attractiveness and usability of space. Moreover, a distinction between objective and subjective travel time was identified as an important aspect that should be reflected in the DSS. Lastly, the participants also discussed the functionality to share potential measures with citizens and collect their feedback in a participatory format. To realise this functionality, participants need close contact with citizens' associations to achieve high-quality, less subjective feedback.



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After that first discussion feedback about the DSS platform was collected during the workshop through the use of a SWOT-Analysis. The session was structured around key questions about what the platform would need to offer to be considered reliable and usable, how citizens' contributions could be integrated into current planning processes, at which stage of the decision-making process this tool would be useful and what the biggest obstacles to introducing such a tool would be in the workflows.

The main strengths identified in the workshop were that the platform could serve as a basis for quantitative decision-making. Here, the platform enables setting priorities for different measures and comparing them quantitatively. The platform can be used to provide key indicators as decision-making arguments (e.g., perceived travel time). Because the tool operates digitally rather than on paper, as is the current practice in city planning offices, it can easily be linked to other data or models. Another strength mentioned was that isochrone visualisations could be done easily and quickly. Moreover, the availability of the infrastructure of different public transport stops could also be visualised more easily.

Some weaknesses of the platform were also identified. For example, the platform is a high-effort project with a possible small return. It's also hard to ensure that all age and user groups, especially the most vulnerable, are reached. The participants highlighted that the link to the AA platform and CEA solely attracts people over 18 years old, as younger people are not allowed to participate in the app. Therefore, the DSS will most probably disregard the perspective of people younger than 18 years old. When implementing measures, there are a lot of obstacles and influencing factors that may not be possible to represent or integrate. Regarding that weakness, the participants emphasised the accessibility-related measures of the DSS, disregarding, e.g., legal or technical barriers. Additionally, participants perceive a weakness in the insufficient moderation of measures with citizens within the participatory format, as this process is considered time-consuming and complex. Citizens may arrive at simplified decisions without taking the full picture into account, also because the platform cannot represent all relevant decision variables, as mentioned previously. Therefore, instead of an openly accessible form of participation, participants consider establishing exclusive focus groups to be more targeted. Furthermore, they expect a comprehensive explanation of the measures, including all advantages and disadvantages, even if these do not directly originate from the DSS.

Important opportunities the system can provide include facilitating consensus among different groups of citizens and between politicians. Moreover, the climate impact of measures can be assessed and visualised, which isn't the current practice, though it is an important aspect. Citizens can be informed directly about the effects of different



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measures. The participants also highlighted potential synergies with travel demand models. While the latter are powerful tools that enable detailed analysis, the DSS may provide easier access to simpler indicators, enabling quick analysis of at least the direction of effects of certain measures. In that regard, the DSS could support a faster decision process by allowing quicker regulatory changes, as the expected effects can be anticipated more easily. Additionally, there are opportunities to compare results or integrate transport demand models. As mentioned before, participation through a closely supervised focus group could also be advantageous, and in that sense, a chance for the DSS.

The platform also entails risks, such as insufficient consideration of certain vulnerable groups, especially younger people, as mentioned before. Moreover, because it is a larger-scale project, the results of small-scale measures can be hard to demonstrate, and the quality of those results even harder to assess. The tool is very complex; therefore, making it easy to use can be difficult. The handling of citizen participation is difficult and will need strong moderation. Within participation formats, communication can be challenging and lead to heterogeneous results, requiring significant effort to achieve. Communication of measures can be oversimplified, failing to show the full scale of effects. Moreover, the simplification may lead to overly simplistic communication of results, especially to uninformed people, who may forget to consider aspects not covered by the DSS. Because the platform is designed this way, not every expectation can be met. It's also possible that the platform is overly focused on the 15-minute city and that aspects outside its scope can be disregarded without notice.

4. Summary of the workshop - Accessibility Analysis Platform (joint session) (min. 500 words)

The last session brought together all citizens and decision makers. First, we presented the main ideas of the planned Accessibility Analysis Platform (AAP) and answered questions about the tool. Afterwards, the Dotmocracy method was used to systematically collect and prioritise requirements and expectations for the AAP. Participants first individually generated ideas based on the provided guiding questions and noted their requirements and wishes for the AAP. These contributions were then clustered thematically in order to structure the wide range of inputs. In a subsequent step, each participant received up to twelve adhesive dots to distribute among the clustered ideas according to their perceived importance. Multiple dots could be allocated to a single idea, allowing participants to emphasize particularly



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relevant aspects. Afterwards, the results were discussed in the group. In the results presented here, the number of dots is indicated in parentheses, with the votes of decision-makers shown on the left and those of citizens on the right. This differentiation enables the identification of both shared priorities and differences in perspective between the two groups.

One of the most prominent themes emerging from the session is accessibility. General accessibility requirements received considerable attention, especially from citizens (3 | 7). These relate to the presentation of accessibility of paths, modes of transport, stops, and vehicles within the platform. The visualisation of public transport accessibility, including barrier-free access, was also emphasised primarily by citizens (0 | 4), indicating a strong expectation that the tool should integrate public transport information with detailed accessibility data. In addition to physical barriers, “perceived barriers” were raised as a feature for the tool (0 | 4), again exclusively prioritised by citizens. These include aspects such as the accessibility of destination buildings, the usability of facilities such as wheelchair-accessible toilets, and barriers encountered when visiting public offices or institutions. Closely related to this is the participants’ demand for transparency into the reasons for barrier-free routing, ensuring that users understand why certain routes are recommended.

Beyond accessibility, participants identified a wide range of functional requirements. Particularly highly prioritised was the mapping of traffic safety aspects (4 | 2), such as visibility, the possibility of reporting conflicts or near-accidents (2 | 1), and safety during evening hours, including aspects such as street lighting and the presence of other people (0 | 1). Furthermore, participants asked for the mapping of waiting times at crossings (3 | 1) and transfers (2 | 1), topology (1 | 2), connectivity between routes (1 | 0), and differentiated accessibility levels in case of deficiencies (1 | 1). Notably, the concept of perceived accessibility differentiated by route type and population group (2 | 2) received equal support from both groups. Other functional aspects included costs of mobility options, shading, and climate or weather considerations (1 | 0), as well as specific mobility requirements for children, such as sufficiently wide sidewalks and safe crossings. Moreover, participants proposed to include the attractiveness of walking or cycling routes.

Infrastructure-related aspects were further discussed within the session. The evaluation of path quality (4 | 3) and destinations (3 | 0) suggests an interest in systematic quality assessment of both decision makers and citizens. Information about infrastructure at destinations, such as bicycle parking facilities or ramps, was equally valued by both groups (2 | 2). Additional aspects included winter



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maintenance of cycle paths, the suitability of cycle paths for cargo bikes (0 | 1), and charging facilities for e-bikes.

Within the group, the discussion of filter options revealed a strong desire for personalisation. Proposed filters included age groups, mobility impairments, temporary constraints such as carrying luggage, type and size of destinations, specific transport modes, street lighting, and the distinction between everyday and non-everyday destinations. The possibility of differentiating by time of day received some support from decision-makers (1 | 0), while the option to analyse the accessibility of certain activities within a defined time window was highlighted by citizens (0 | 1).

Participants additionally discussed user profiles and the specification of user characteristics. The most strongly prioritised aspect in this category was the differentiation of detailed user types, particularly regarding mobility aids (4 | 6). Participants pointed out that “wheelchair” is not a homogeneous category and that a more precise distinction could significantly improve routing results. At the same time, concerns were raised about the feasibility and complexity of implementing very fine-grained distinctions, raising the question of whether simplified on/off categories might be more practical. Other suggested profile elements such as age, gender, the indication of specific needs (e.g., travelling alone or with children), and user-defined walking speeds (0 | 1). The latter was recognised as potentially useful but difficult for users to estimate accurately, illustrating the tension between personalisation and usability. Moreover, participants expressed a desire to save their mobility profile, for example, by using their email address (1 | 0).

Finally, the topic of standardised participation was raised repeatedly. Meaningful feedback categories within the CEA to facilitate evaluation in the AAP were prioritised (3 | 1), and the possibility to report barriers or measures in a structured manner was highlighted. In particular, it should be possible to introduce short-term measures, such as road closures, into the platform.

5. Appendices:

- list of participants: scanned document
- photos: of the event and of the final material



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Appendix H: Pilot report – İzmir

İzmir stakeholder meeting outputs

1. Meeting information: date, location, number and type of participants

date: 18.02.2026

location: Ege University Civil Engineering Department, Bornova/İzmir

	Citizen Engagement App	Decision Support System platform and integration	Accessibility Analysis Platform (joint session)
number of participants:	15	10	20
type of participants:	Citizens, City Transportation Planning Office, City Council Committee on Disabilities, Chamber of Civil Engineers	City Council Committee on Disabilities, City Council Youth Assembly, City Transportation Planning Office, İzmir Planning Agency, Representatives of Municipality, Academic researchers	City Council Committee on Disabilities, City Council Youth Assembly, City Transportation Planning Office, İzmir Planning Agency, Representatives of Municipality, Academic researchers, Citizens, Chamber of Civil Engineers

2. Summary of the workshop - Citizen Engagement App (min. 500 words)

Participants, including citizens, city council members, and City Transportation Planning Office representatives, arrived and were welcomed for registration starting at 13:00. The presentation began at 13:10, followed by the distribution of a prepared survey to be collected later. The session began with a discussion of İzmir's role as a pilot region and the importance of the 15-minute city concept, which focuses on human-centered transportation. Participants discussed how this concept could help reduce the heavy traffic demand observed in metropolitan areas and improve people's access to daily needs.

It was highlighted that the SmartUrbanity project aims to make local residents' everyday transportation problems visible, to leverage citizens' experiences for collective benefit, and to create fairer, more reliable, and above all, more accessible neighbourhoods. The importance of developing and testing the project not only for



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citizens but with citizens was emphasised. Then, the features of the Citizen Engagement App were introduced. One participant asked whether submitted reports would be visible to other citizens, suggesting that real-time visibility could be useful. Another participant proposed that the reporting categories be more specific, noting that the needs of visually and physically impaired individuals may differ and therefore deserve separate evaluation categories.

At 13:40, the Q&A session began. The discussion focused on the following questions:

- Which experiences are worth collecting (what/when/for whom)?
- What would motivate you to contribute regularly?
- Which conditions would increase trust in the app (privacy and transparency)?
- What could make the application more accessible for people with different needs?
- What kind of feedback would you expect?

Regarding the first question, participants strongly emphasised the need for real-time data, noting that such information would allow people to instantly understand what is happening in the city and plan their transportation accordingly. They suggested that notifications about traffic accidents or roadwork along a selected route would be beneficial. Participants referenced applications such as Google Maps when discussing how to improve the app's functionality and user-friendliness.

Responses to the question about motivating regular contributions emphasised the importance of taking noticeable action after reports are submitted, providing users with timely feedback, and making real-time data publicly available. Some participants mentioned that a weekly leader-board could increase interest and engagement.

Regarding trust in the application, one participant asked what actions would be taken if false or misleading real-time data were submitted, pointing out the potential negative effects on citizens. Another participant suggested that authorised personnel or local government officials could prevent false reporting and share verified updates as instant notifications. Another suggestion was to introduce a confirmation process that would allow citizens currently near a reported incident to validate its accuracy via a pop-up notification.

When discussing accessibility for different user needs, one participant emphasised the importance of ease of use and specialised interfaces for people with disabilities. For example, a voice-command interface could support visually impaired users.



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At 13:55, the gamification activity began. After explaining the activity, participants were asked to write their ideas on a mind map. The session concluded at 14:10. Analysis of the mind map revealed proposals and suggestions related to App Features, Feedback, Personalisation, City/Environmental Impact, and Gamification. Suggestions included:

- Showing users the carbon footprint generated through their mobility choices.
- Saving frequently used routes and vehicle types and providing real-time maintenance or incident information.
- Sending notifications when reported issues are resolved.
- Ensuring the active participation of relevant transit authorities.
- Allowing users to confirm whether a reported issue has been addressed.
- Providing personalised experiences, such as enabling individuals with asthma to view areas with high air pollution.
- Integrating the application with the ESHOT mobile app.
- Including game-based challenges that offer coupons or discounts for public transport or bicycle rental services.

3. Summary of the workshop - Decision Support System platform and integration (min 500 words)

The Decision Support System (DSS) session was held between 14:15 and 15:20. Participants included local government officials, planning agency representatives, and committee members representing disadvantaged and youth groups. Beginning at 14:15, participants were welcomed and registered on the participant list.

The session began with brief introductions of the participants, who came from various professional backgrounds. At 14:25, the presentation began with an overview of the 15-minute city concept, the SmartUrbanity project, and the role of İzmir as a pilot site. Next, the DSS was introduced. The presentation focused on key features such as the system's operational structure, its ability to observe the effects of various scenarios using incoming data, viewing data-driven impacts on a map interface, maintaining communication between decision-makers and citizens, and the potential importance and added value of the system. Then, more technical details regarding the functioning of the DSS were presented.



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During the discussion, one participant proposed the inclusion of a data filter that would visualise the location and density of shaded areas, emphasising that such a feature is essential for the pedestrian-oriented framework of a 15-minute city.

The Q&A session began at 14:45. Through the questions posed to the participants and the answers received, the aim was to identify what features should be included in the application and what needs to be done regarding its operation. The following questions were posed:

- What would make this platform credible and usable in your urban planning?
- What kind of evidence or indicators do you need to plan and adopt a policy?
- At which stage of your decision-making process could a tool like this be most useful?
- What are the main barriers to adopting such a tool in your workflows?
- How could citizen input realistically be integrated into your current workflows?

Regarding the question of what would enhance the platform's credibility and usability within urban planning workflows, participants consistently highlighted the importance of integrating citizen-generated data into the system. However, a methodological debate arose concerning the appropriate spatial resolution of incoming data. One group argued that neighbourhood-level data aggregation would be more meaningful for strategic planning because street-level data may be too detailed for higher-level decision-making processes. Conversely, other participants emphasised the operational usefulness of street-level inputs, noting that neighbourhood-scale records are not currently digitised within local government information systems. This institutional limitation could hinder data integration, visualisation, and subsequent analytical procedures.

In response to the question about what type of evidence or indicators are needed to support policy planning and adoption, participants emphasised the importance of supplementing citizen reports with georeferenced photographs or short videos taken when the issue occurs. These multimedia inputs were considered essential for helping decision-makers verify the situation, assess if the problem matches the written description, and understand the nature and severity of the issue.

When asked at which stage of the decision-making process the DSS would be most beneficial, participants generally agreed that it would be most valuable during the initial diagnostic phase, specifically in identifying and defining the problem and generating preliminary solution pathways.



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Regarding the main barriers to adopting such a tool within institutional workflows, participants pointed to data governance challenges. These include the limited availability of existing municipal datasets and procedural bottlenecks within local government structures. The absence of clear internal protocols, for example, could lead to delays or inconsistencies in the decision-making process.

One participant also suggested incorporating the social and demographic profile of the area into the system's analytical framework, as these factors could influence the interpretation of reported issues and the effectiveness of proposed solutions.

Following these discussions, the workshop continued with the assessment phase in which participants were asked to provide more systematic feedback on the DSS platform. To capture a comprehensive understanding of its potential integration into local planning processes, a SWOT analysis was conducted. This exercise aimed to identify the platform's strengths and weaknesses, as well as the opportunities it may create and the potential threats or risks associated with its adoption.

The identified strengths of the DSS platform include its capacity to encourage inclusivity by reaching a wide range of user groups and addressing various mobility and accessibility needs at the same time. Participants emphasised that involving diverse stakeholders, including citizens, local authorities, and community representatives, enhances the platform's credibility and relevance. They also considered the fact that the tool is free of charge a significant advantage. The platform's digital structure was also viewed as a key strength because it enables efficient data collection, real-time information exchange, and user-friendly interaction within contemporary urban planning environments.

The weaknesses primarily centred on structural and procedural limitations that could hinder the effective adoption of the DSS platform. Participants pointed to issues of digital inequality, noting that citizens' varying levels of access to digital tools and technological proficiency may restrict equitable participation. Additionally, constraints within the design and implementation processes, particularly the misalignment between decision-making stakeholders and citizen expectations, were identified as potential obstacles. Finally, participants emphasised that developing and operating such a platform requires a multidisciplinary approach involving expertise in urban planning, data science, and governance. This multidisciplinary approach may increase the system's complexity and coordination needs.

The opportunities associated with the DSS platform were largely linked to its potential to increase the dissemination of, and public understanding of, urban planning processes. Participants noted that the 15-minute city concept could significantly



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enhance its visibility and societal relevance. Additionally, they emphasized the platform's ability to improve traceability, which enables citizens and decision-makers to track the progress of planning actions and policy outcomes transparently.

The threats identified in relation to the DSS platform were primarily related to governance and institutional continuity. Participants highlighted the possibility of conflicts related to authority, particularly when decision-making responsibilities are not clearly defined among institutions. Potential changes in administrative or political leadership were also identified as threats because such shifts may disrupt the continuity of platform adoption and long-term commitment. They also noted that difficulties during the project adoption phase, such as resistance to new technological tools or reluctance to modify existing workflows, could pose obstacles. Finally, participants expressed concern that decision-makers might not consistently consider the outputs generated by the DSS. They stressed that neglecting these insights could undermine the platform's effectiveness and credibility.

4. Summary of the workshop - Accessibility Analysis Platform (joint session) (min. 500 words)

The Accessibility Analysis Platform presentation was held on February 18, 2026, between 15:30 and 17:00, bringing together decision-makers and citizens for a joint session. First, building on the foundational discussions from the previous sessions, the features to be developed within the framework of the 15-minute city concept and the Decision Support System (DSS) were summarised. Then, the core concept and planned functionalities of the Accessibility Analysis Platform (AAP) were presented.

Following the AAP presentation, a Q&A session was initiated to gather feedback and suggestions on the platform's features and overall usability from participants. The following questions were asked:

- Which accessibility aspects matter most in your daily life or work?
- Which profiles should be considered when analysing accessibility?
- What type of maps or indicators would you trust?
- How should citizen feedback be included in reading accessibility?
- What data would you be willing (or not willing) to share?

The Dotmocracy method was employed to determine which features should be prioritised. During this process, citizens and experts were given coloured stickers to make a comparative assessment of the two groups' expectations. Participants used the stickers they were given to mark the ideas they considered most valuable, providing



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brief notes that explained their reasoning. This approach revealed the logic behind the participants' prioritisation and systematically revealed the similarities and differences between the decision-maker groups. In the following sections, the results are presented with the number of votes shown in parentheses: citizen votes appear on the left, and decision-maker votes appear on the right.

An important outcome of the session was the recognition that accessibility should not be limited to physical infrastructure but should also include digital and environmental aspects. Participants suggested that the application should allow for pinning critical infrastructure (5 | 6) and providing data on the internal accessibility of businesses, such as the availability of accessible restrooms (6 | 4). From a digital inclusivity perspective, there was a strong recommendation to integrate specific modes for colour blindness or epilepsy (4 | 4), ensuring that all indicators, colours, and signs meet universal design standards for these user groups.

Regarding urban safety and inclusive mobility, participants emphasised the need for filters that more accurately reflect the everyday experiences of different user groups. They proposed a perceived safety route filter that highlights routes where women and other vulnerable users feel safer, especially in the evening (5 | 3). Additionally, they recommended a barrier-free route filter for baby strollers, wheelchairs, and individuals with mobility impairments (6 | 4), which should incorporate criteria such as appropriate curb heights and fully accessible sidewalk transitions.

The success of the platform was linked heavily to the reliability of its data. To verify the accuracy of reported information, it was suggested that users could upload instant photos (4 | 4) within the framework of KVKK rules, ensuring data validity without violating privacy. Furthermore, participants advocated for a rating and review system (3 | 1) where experiences could be shared, and a mechanism to survey users (2 | 4) through the app to gather aggregate data on city-wide transportation trends.

The conflict between personalisation and data privacy was a key topic of discussion regarding user registration. Although saving a mobility profile (2 | 1) was considered beneficial for a personalised experience, participants raised concerns about sharing sensitive information (5 | 1), such as age, gender, marital status, and education level.

Finally, participants discussed using data to identify regions with high concentrations of disabled or vulnerable groups to inform the placement of specialised sports and entertainment facilities, such as "disabled-friendly parks" (6 | 3). To ensure the tool's long-term viability and reach, participants emphasised the importance of cooperation with local administrations (4 | 5) to raise public awareness and popularise its use.

5. Appendices:



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- list of participants: scanned document
- photos: of the event and of the final material



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Appendix I: Pilot report – Thurgau (Greater Zurich Area)

Zurich Greater Area stakeholder meeting outputs

1. meeting information: date, location, number and type of participants

date: 24 February 2026 (10:00 – 12:00)

location: Zurich (CH), Online

	Citizen Engagement App	Decision Support system platform and integration	Accessibility Analysis Platform (joint session)
number of participants:	10	5	10
type of participants:	Citizens & Decision Makers & Stakeholders	Decision Makers & Stakeholders	Citizens & Decision Makers & Stakeholders

2. Summary of the workshop - Citizen Engagement app (min. 500 words)

The SmartUrbanity workshop in Zurich greater area took place on 24 March 2026. After a short welcome and a general introduction to the SmartUrbanity project and the concept of the 15-minute city, the presenter moved into presenting the Citizen Engagement App (CEA). The presentation was given in English by Dr. Valerio De Martinis, even though the slides had been prepared in German. English slides were also made available for participants with limited German knowledge. The participants learned what the app is, how it works, and why their input matters. They were shown that the app allows residents to report mobility problems by pinpointing a location and uploading a photo, to track their travel routes with information about the mode of transport used, and to answer surveys on various everyday mobility topics. The gamification features such as earning points and completing small challenges were also presented to make participation more engaging and motivating, without pushing people toward any mobility behaviour. After the introduction, participants were split into two breakout rooms. Citizens discussed the app in the Citizen Room, speaking in English, while stakeholders and public decision-makers gathered in the Stakeholder Room, speaking German. Both groups were encouraged to interact with the project's workshop website at <https://amirsarrafzadeh.github.io/smarturbanity-workshop/> and leave their ideas, questions, or concerns in the Citizen Engagement App section. Anonymous contributions were also welcome. During this phase, participants were



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active and engaged. By the end of the Citizen Engagement App discussion, approximately 12 ideas, comments, and concerns had been submitted to the website, a strong result that showed genuine interest from the group. Looking at what was shared, several key themes emerged. One strong theme was around visualisation and personal impact. Participants said they would be more motivated to use the app regularly if they could see statistics about their own mobility, for example, how much CO₂ they saved during a trip, or how many calories they burned. One participant specifically mentioned: "I like the idea of showing visualisations or statistics, maybe lost time without the 15-min urbanity or saved emissions." Another suggested adding information about which transport mode to avoid at a given time of day. A second major theme was social connection and community. Several participants expressed interest in features that help people connect with their neighbours. For example, one person suggested that the app could show where local community centres, squares, or clubs are, and another proposed a social function that lets users create and join local meetups. This reflects a real desire for the app to go beyond data collection and become a tool for building neighbourhoods life with a genuine 15-minute city spirit. Inclusivity and accessibility were also raised as important concerns. One participant clearly stated that older people may not be able to use a smartphone app or may use it in a very limited way. This means that the needs of less digitally connected residents could be underrepresented in the data. This is an important challenge for the project to address. On the topic of trust and branding, there was positive feedback. Participants felt that knowing the app was developed by ZHAW, a Swiss university, was an advantage. The Swiss institutional identity of the app was seen as a reason to trust it. One participant suggested actively promoting the app through creative outdoor channels, mentioning the Working Bicycle platform as a possible partner for mobile advertising in Switzerland. Gamification generated lively discussion. Ideas ranged from a ranking system with seasonal resets and prizes for the top three users, to loyalty-style rewards such as SBB bus tickets for regular use. One proposal was to offer a short-distance SBB ticket every ten days of app use, or a train ticket for every sixty days. Participants also suggested augmented reality (AR) features where users could earn rewards by exploring new locations. These ideas show that people are open to creative incentive systems, if they feel fair and do not push them into competition with each other. The idea of creating a personal profile came up as both an opportunity and a sensitivity. Participants liked the idea of receiving personalised recommendations based on their profile, for instance, suggestions tailored to their daily routine or their neighbourhood. However, they were clear that creating a profile should never be a requirement. The app should work just as well for prefer to stay anonymous. Finally, one participant raised the dimension of social inclusivity beyond



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mobility, suggesting that the app could include information about child-friendly locations and pet-friendly areas. This is a broader vision of what a 15-minute city means not just about transport, but about feeling safe, welcome, and at home in your neighbourhood. Overall, the CEA session was one of the most active parts of the workshop. The high number of website submissions around 12 reflects that participants had many thoughts to share and felt comfortable doing so. The discussion showed that people in the Zurich region are interested in digital participation tools, but care about trust, simplicity, inclusivity, and the ability to see the real-world impact of their contributions.

3. Summary of the workshop - Decision support system platform and integration (min. 500 words)

The Decision Support System (DSS) session began with an introduction in the general room. Dr. Valerio De Martinis introduced the tool and explained what a DSS is and how it would work within the SmartUrbanity project. The DSS was presented as a tool designed for decision-makers, urban planners, transport authorities, and policy professionals who need to evaluate the impact of different mobility measures before implementing them. It works by combining data from multiple sources: official transport and land-use data, citizen reports from the Citizen Engagement App, and simulation outputs. The introduction explained clearly that the DSS is not a standalone tool. It is built on top of the information collected through the Citizen Engagement App and the Accessibility Analysis Platform. When a city wants to understand the likely effect of introducing a new bus line, reducing car access in a neighbourhood, or adding a new cycling path, the DSS helps visualise and compare the expected outcomes. It uses interactive maps and scenario comparisons to make this analysis transparent and accessible. Participants also learned that the DSS is designed to bring citizens into the decision-making process, not just as data providers, but as participants in a conversation. Through a digital forum built into the system, decision-makers can share planned measures with the public, and citizens can respond with feedback. This makes the whole planning process more open and easier to understand for everyone involved. After the introduction, the discussion split: stakeholders and decision-makers continued in the Stakeholder Room, while citizens stayed in the Citizen Room to continue reflecting on the Citizen Engagement App. During this phase, four ideas and concerns were submitted to the workshop website in the DSS section. The feedback and discussion revealed several important insights. First, participants, particularly those from a planning and policy background, acknowledged that the DSS concept is powerful, but they were realistic about the



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complexity of the topic. One contribution summarised this well, noting that the DSS should present results clearly, with cost-benefit analysis, and that it is better to discuss one solution at a time rather than overwhelming users with twenty options at once. The DSS, according to this view, should support a vision rather than try to solve every technical detail at once. A second concern was around acceptance and control. Participants noted that simulation and optimisation are not bad things in themselves, but the results must be verifiable and explainable. If a planner or politician cannot understand why the system recommends a certain measure, they will not trust it. The idea of "Akzeptanz", acceptance in German, came up as a core principle. The tool must be introduced gradually and at the right level for different types of users. Visualisation was identified as essential. Decision-makers want to see results in real time, including both the analytical process and the outcome. Static reports are not enough. The DSS needs to be dynamic and visually show changes as different parameters are adjusted. The ability to zoom in and out from a city-wide view down to a specific street was also raised as important. One participant noted that not every local change needs to be shown at the macro level, and that zooming functionality is key for practical use. The interface design was another area of discussion. It was clear to participants that the DSS must have a friendly, intuitive interface with no advertising. If the tool feels complicated or cluttered, decision-makers will not adopt it. One contributor linked the DSS directly to the Citizen Engagement App, suggesting that advanced DSS features such as detailed scenario comparisons could be unlocked gradually for users who have contributed enough data through the app. The example given was unlocking this feature after 50 recorded trips. This idea of a progressive unlocking system connects the two tools in a meaningful way and creates additional motivation for citizens to contribute. One honest reflection from a participant was that there are already many apps and digital platforms that people use in their daily lives. Getting people or institutions to adopt a new tool is very difficult, regardless of how good it is. This challenge of digital fatigue and competition from existing platforms is something the project needs to take seriously as it develops the DSS. Participants also noted that the DSS should address the legal framework around data use and decision-making. In Switzerland, decisions that affect public infrastructure come with formal processes and legal requirements. The DSS can support these processes, but it must operate within them, not try to replace or shortcut them. Overall, the DSS discussion showed that participants from the Zurich Greater Area pilot understand the potential of this tool, but want it to be simple, trustworthy, and well-integrated into existing workflows. The message from the room was clear: the DSS is only as good as the confidence people have in it. If it is too complex, too abstract, or not clearly connected



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to real decisions, it will not be used. But if it is designed well, it has real potential to make urban planning more participatory, evidence-based, and fair.

4. Summary of the workshop - Accessibility Analysis Platform (joint session) (min. 500 words)

The Accessibility Analysis Platform (AAP) session was held in the general room, with all participants coming together for a joint discussion. This was the final tool presented during the workshop, and it was introduced once again by Dr. Valerio De Martinis. The session wrapped up with closing remarks.

The AAP was introduced as a web-based interactive map that can be opened in any browser, with no installation needed. Its main purpose is to show where accessibility problems exist in a city or region, and to help users understand who is affected. It does this by combining official data such as public transport schedules and road network information with aggregated data collected through the Citizen Engagement App. The result is a tool that gives both citizens and decision-makers a shared picture of how well different parts of a city or region are connected and reachable.

A key message of the presentation was that accessibility is not the same for everyone. A person using a wheelchair experiences the city differently from a daily commuter. An elderly person has different needs regarding safety and travel time than a young student. A parent pushing a pram faces different barriers than a cyclist. The AAP is designed to make these differences visible not just to researchers, but to everyone who uses the platform.

Unlike the Citizen Engagement App and the DSS, the Accessibility Analysis Platform session was held with all participants together in the General virtual room. This made the discussion broader and more diverse, with voices from both citizens and decision-makers contributing at the same time.

Four ideas and concerns were submitted to the workshop website during and after this session. The feedback reflected a range of practical and thoughtful perspectives.

One concern raised was about reliability and real-time data. Participants noted that for the map to be genuinely useful, it must be updated quickly and accurately. Outdated information can lead to wrong conclusions and erode trust. One participant specifically wrote: "The Accessibility Analysis Platform map should be reliable and real-time." This is a high bar to set, but it reflects what users need.

A second interesting idea came from someone who raised the point about safety in participation. They noted that while citizen reporting adds great value to the platform,



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there is also a risk. If users can upload photos, there is a chance that inappropriate content such as disturbing images could appear. This is a moderation challenge that needs to be thought through carefully as the platform is developed.

The concept of gamification within the accessibility platform also came up. One participant suggested that earned points could vary over time, for example, rewarding contributions to areas or issues that are currently under-reported. This would encourage users to explore and report beyond their own immediate neighbourhood, making the dataset richer and more representative.

A very practical and locally relevant idea was the suggestion of a radar-style confirmation system. In this model, when one person reports a problem such as a construction site blocking a path other user in the area can confirm or reject the report. This is like how existing apps like Waze or traffic radar tools work. It would improve data quality and reduce false or duplicate reports, while also encouraging community participation.

Another creative suggestion was to integrate weather information into the platform. One participant explained that elderly people are sometimes hesitant to go outside when the weather is bad. If the platform could show when conditions are particularly good for walking or cycling, it could gently encourage people to use active transport and perhaps show a pop-up message inviting them to step outside instead of driving. This human-centred idea goes beyond simple accessibility analysis and connects to the project's broader goal of promoting sustainable and healthy mobility.

Finally, a participant suggested adding detailed infrastructure layers to the map. Specifically, they mentioned including road steepness and the location of elevators. These are exactly the kind of details that matter enormously for certain groups, wheelchair users, elderly people, parents with prams but are often missing from standard mapping tools. Including them would make the AAP genuinely more useful than what is already available publicly.

The joint session format worked well. By bringing citizens and decision-makers into the same room for this final discussion, the workshop created a shared moment of reflection. Both groups had already spent time thinking about the tools separately, and the AAP session gave them a chance to speak to each other and find common ground.

The session closed the substantive part of the workshop on a positive note. Participants had engaged seriously with all three tools, and the combination of website-based idea submission and live discussion produced a useful set of inputs. In total, across all three tools, participants submitted around 20 contributions to the



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workshop website a meaningful body of feedback that the ZHAW team can now analyse and use to inform the further development of the SmartUrbanity platform.

The workshop concluded with a thank-you from the team and a reminder that participants could continue submitting ideas anonymously on the website at any time.

5. Appendices:

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