

Deliverable 2.2

Participatory methods to capture mobility needs and future expectations from CCAM process

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Executive Summary

This report outlines the participatory framework and methodologies developed by the SINFONICA project to capture mobility needs and future expectations for Connected Cooperative and Automated Mobility (CCAM). The framework aims to systematically gather insights from diverse groups of citizens and stakeholders, particularly focusing on vulnerable and under-researched groups.

The report begins with an overview of the SINFONICA project, detailing its objectives, the methodologies employed, and the intended audience, setting the context for understanding the project's goals and the structure of the report. It delves into the concept of participatory research within the context of CCAM, explaining the various participatory and qualitative methods used, highlighting their benefits and applications. This theoretical foundation supports the participatory approach adopted in the project.

An overview of the SINFONICA participatory framework is presented, detailing its design and implementation. This framework integrates various participatory methods to achieve the project's objectives, offering insights into its theoretical and operational aspects. Detailed guidelines for data collection are provided, focusing on the three main methods selected by SINFONICA: interviews, focus groups, and workshops. Each method addresses a specific target group. The guidelines include tips for effective implementation and specific questionnaires and programmes, serving as a valuable resource for practitioners and researchers.

SINFONICA employed a bottom-up approach to engage European citizens, with a special focus on vulnerable users. This process was facilitated through the establishment of Groups of Interest (GoIs) in Trikala, Hamburg, Noord-Brabant, and the West Midlands. The participatory techniques—interviews, focus groups, and workshops—were developed collaboratively and iteratively refined based on feedback. The guidelines collaboratively devised and detailed in this deliverable have not only been conceived with but also tested in the four local contexts, thanks to the active involvement of the GoI. The specifics of what occurred in practice and the feedback received from citizens and stakeholders, which will contribute to the project's final findings, are not the focus of this report. For a comprehensive understanding, this deliverable should be read in conjunction with other project outputs, namely D2.1, D3.1, D3.2, and D3.3.

What is clear is that thanks to these guidelines the project identified specific mobility needs and preferences, uncovering hidden barriers to mobility and providing a nuanced understanding of socio-cultural factors influencing transportation choices. The iterative feedback process and the practical guidelines developed ensure that the findings are applicable and beneficial for a broad range of stakeholders involved in CCAM.

Finally, by leveraging these participatory methods, SINFONICA has created a robust framework that can be replicated in various contexts, ensuring that the voices of all users, especially the vulnerable, are heard in the development of future mobility solutions.

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Abbreviations

Abbreviation	Meaning
CCAM	Connected Cooperative and Automated Mobility
FG	Focus Group
Goi	Groups of Interest
PR	Participatory Research

1 Introduction

The SINFONICA project, part of the Horizon Europe programme, develops innovative strategies, methods, and tools to engage CCAM users, providers, and other stakeholders. Its goal is to gather their needs, concerns, and desires regarding CCAM and support the development of innovative solutions through a cooperative approach.

SINFONICA is dedicated to designing and deploying CCAM services in the realm of public and shared road passenger transport that are inclusive and accessible, benefiting the entire population. The project prioritizes a participatory approach to tackle inclusivity and accessibility challenges, involving citizens, transport operators, public administrations, service providers, researchers, and vehicle and technology suppliers, with a special emphasis on individuals with mobility challenges.

The SINFONICA framework is based on a participatory approach designed for local and regional authorities and those interested in developing and deploying inclusive, equitable, and accessible CCAM solutions. This approach has been co-created and tested with the SINFONICA Groups of Interest (GoIs) created in four locations across Europe: Trikala (GR), Hamburg (DE), the Province of Noord-Brabant (NL), and the metropolitan area of West Midlands (UK). In each local context, the GoIs involve different categories of people with mobility challenges, citizens, and stakeholders.

All in all, the project aims to collect and systematise knowledge on CCAM to co-create decision support tools for designers and decision-makers, promoting an inclusive, sustainable, and equitable deployment of CCAM solutions. At its core, SINFONICA consists of a wide community of actors across Europe, through which the project's activities are tested and evaluated, enabling the reuse and empowerment of the knowledge provided at the local level.

Ultimately, SINFONICA seeks to enhance the understanding of society, citizens, users, and stakeholders to improve processes and delivery in demonstration projects and real deployments of CCAM.

1.1 Purpose and Structure of the Document

This deliverable aims to **outline the participatory framework developed by the SINFONICA project**, with a specific focus on the participatory methods designed and implemented to capture mobility needs and future expectations for CCAM, **along with practical guidelines** for replicating these methods. The application of the guidelines on the ground and iterative refinement of these methods by SINFONICA partners and the Groups of Interest in particular, ensure that the final guidelines presented in this deliverable can be effectively used by various stakeholders (see section 1.2) in the future.

The development of the guidelines is part of Task T2.2 of the SINFONICA project: Participatory Methods to Capture Mobility Needs and Future Expectations from CCAM. This task aimed **to support the Groups of Interest in implementing qualitative data collection methods to systematically gather, understand, and structure the needs, desires, and concerns related to CCAM from future users, providers, and other stakeholders**. These stakeholders include citizens, transport operators, public administrations, service providers, researchers, and vehicle and technology suppliers. A focus is given to vulnerable user groups with special mobility needs.

The qualitative data collection primarily relies on community-based research, ensuring that the final methods and tools result from a co-creation effort involving all parties engaged in CCAM design and deployment. The approach employs a **mix of methods** in the following order: focus groups with citizens, semi-structured interviews with representatives/end users from vulnerable groups, and a series of three co-creation workshops involving a wider set of participants, including users, experts, CCAM developers, and policymakers.

The **practical guidelines to guide local participatory processes**, involving a broad and diverse range of future CCAM users and stakeholders is the final practical output of the task and subject of the present deliverable D2.2.

Deliverable D2.2 description: Participatory methods to capture mobility needs and future expectations from CCAM process. The report will present the practical guidelines to implement the participatory methods in the four groups of interest (focus groups, interviews, and workshops).

In the following, we give an overview of the individual chapters of this report and how they relate to the task and deliverable description.

- Chapter 1 provides an overview of the SINFONICA project and the purposes of the report. It outlines the methodology that led to the final outcomes and specifies the audience to whom the document is addressed. This chapter sets the stage by giving readers a clear understanding of the **project's goals, context, and the overall structure** of the report.
- Chapter 2 - Participatory Methods in CCAM - delves into the concept of participatory research, particularly in the context of Connected, Cooperative, and Automated Mobility (CCAM). It explains what participatory research entails, explores **various participatory and qualitative methods used in research**, and highlights the benefits and applications of these methods to inform the SINFONICA framework. This chapter is crucial as it provides the theoretical foundation for the participatory approach adopted in the project.
- Chapter 3 - SINFONICA's Participatory Framework - presents an **overview of the SINFONICA participatory framework**. It describes the design and implementation of the framework, detailing how it integrates various participatory methods to achieve the project's objectives. This chapter is essential for understanding the structural and operational aspects of the participatory approach specific to SINFONICA.
- Chapter 4 - Practical Guidelines for Data Collection - offers the detailed practical guidelines for data collection, focusing on the three main methods selected by the SINFONICA project: **interviews, focus groups, and workshops**. Each section provides general information, tips for effective implementation, and specific questionnaires and programmes. This chapter is particularly valuable for practitioners and researchers who need to apply these methods in the field, ensuring consistency and effectiveness in data collection.
- Chapter 5 concludes the report by summarising the **key points and recommendations** derived from the SINFONICA project. It encapsulates the main findings and provides direction for future research and implementation. This chapter ties together the insights from all previous chapters.

1.2 Methodology

SINFONICA employed a **bottom-up approach to capture the mobility needs of European citizens**, with a special focus on vulnerable users and under-researched groups. This process was facilitated through the establishment of Groups of Interest (GoIs) in four different European contexts: Trikala (Greece), Hamburg (Germany), Noord-Brabant province (Netherlands), and the West Midlands metropolitan area (United Kingdom).

The aim was to **directly engage citizens and stakeholder representatives from various societal segments in a participative process**, resulting in a comprehensive inventory of knowledge maps detailing the expectations, concerns, and desires of users and implementers (road operators, public authorities, industries) regarding CCAM.

The practical methodologies for implementing the participatory techniques identified in the project —namely **interviews, focus groups, and workshops**—were devised through a collaborative co-creation exercise involving all partners and tailored to meet specific local needs of the Groups of Interest.

Ready-to-use **guidelines were developed and iterated multiple times**, starting in June 2023, incorporating feedback from partners at various stages and reporting on their use on the ground.

To ensure effective implementation, **training sessions** were conducted for GoIs, including an interactive in-person session during the project Steering Committee meeting in Reggio Emilia on September 25, 2023, which employed role-playing techniques. The finalised guidelines for interviews and focus groups were distributed on October 6, 2023.

There were **three rounds of data collection** for each Group of Interest:

- First round of data collection: October-December 2023
- Second round of data collection: January-March 2024
- Third round of data collection: April-June 2024

An assessment was conducted to **refine and adjust the approach at the end of each round**, to better align with local practices. Following feedback from the first round of data collection in December 2023, adjustments were made to the initial guidelines. Local implementers suggested incorporating more open-ended questions in the interviews to encourage free conversation and fostering more spontaneous discussions in the focus groups, as opposed to the previously suggested ranking exercises. No changes were made at the end of the second round.

For the third and final round of data collection (April-June 2024), guidelines for a highly interactive series of three stakeholder workshops were provided. No changes were made to the initial guidelines proposed.

Feedback indicated that these guidelines (for interviews, focus groups, and workshops) effectively facilitated GoI participatory activities within their local contexts.

The guidelines were **developed in English and then translated** into the other national languages: German, Greek and Dutch.

1.3 Intended Audience

This work is aimed at ***all those who have an interest in the CCAMs of the future and how to make them more inclusive, equitable and accessible*** to the largest part of the population. The report proposes the participation techniques defined and adopted by SINFONICA to collect data on people's preferences and attitudes towards mobility in the present, today's technology and the future with CCAMs. The proposed guidelines can be adopted in full or in part depending on the needs. The following are examples of actors potentially interested in this work.

Representatives of the CCAM Industry such as technology developers and suppliers, vehicle manufacturers, and service providers. These stakeholders can use the guidelines to implement participatory methodologies across diverse user groups and stakeholders to understand the perspectives of future users, thereby adapting new technologies to their real needs. Startups and SMEs will benefit by gaining insights into market opportunities and requirements. The results obtained from applying participatory methodologies can provide valuable guidance on designing CCAM solutions that meet the needs of various users and offer a comprehensive checklist of considerations.

Public Administration, including municipalities, provinces, regions, and Local Transport Authorities, will find these guidelines essential for adopting reliable stakeholder engagement methodologies. They will be guided on how to initiate discussions with citizens and define participatory processes. This will help in adjusting legislation and local regulations to accommodate the digital transition in the mobility sector. These guidelines are particularly beneficial for local and regional authorities with limited CCAM experience, aiding in the preparation for future deployment that meets citizens' needs.

The Research Sector will also benefit from these guidelines by integrating social considerations into innovation studies and projects, leading to the development of innovative products. Researchers will gain enhanced knowledge on the assessment and evaluation of CCAM solutions from a socio-economic perspective.

1.4 Interrelations

This deliverable should be read in conjunction with other outputs from SINFONICA. Each piece contributes to the comprehensive bottom-up approach SINFONICA employs to understand mobility needs and future expectations for CCAM. The following deliverables are particularly linked to D2.2, with brief explanations of the complementary information they provide:

- D1.1 Mobility needs and requirements of European citizens: identifies **relevant user groups** for SINFONICA.
- Internal Report on Work Package 1, Task 1.4: details the definition of research groups and the **creation of Groups of Interest**.
- D2.1 Engagement guidance for CCAM solutions: offers guidelines to support **local engagement activities** of the Groups of Interest, which are essential for applying the guidelines of the present deliverable.
- Internal Report on Task 2.3 **Surveys on the user factors** that affect the future deployment of CCAM: complements the qualitative data collection strategy of this deliverable with a quantitative method to capture user expectations of CCAMs.



- D3.1 Report for activities in the Groups of Interest: describes the **practical implementation** of the participatory methodologies outlined in this deliverable within the four Groups of Interest.
- D3.2 Evaluation of engagement and data collection activities: provides feedback on the **validity of the methodologies** set out in the current deliverable.
- D3.3 Data analysis, enrichment, and systematisation: supplied **reporting templates so the data are collected in a systematised way** in order to avoid errors, ensure consistent data formats, normalised in common numerical scales. Moreover, the reporting templates assisted in the organisation and structure of data to be consistent, in a logical manner thus guarantee easy access and usability.
- D7.2 Ethics and Data Management Plan: includes details on the data expected to be acquired/generated during the SINFONICA project and outlines how to manage it. It also provides a handbook on managing ethical issues, including the **informed consent forms** for participants to sign before their involvement in the research.

2 Participatory Methods in CCAM

2.1 What is Participatory Research?

Participatory research (PR) methods represent a transformative approach to conducting research, where the emphasis is on **active engagement and collaboration with those directly affected by the issues under study**, aiming for practical and actionable outcomes (Cargo & Mercer, 2008). PR emphasizes partnerships between researchers, stakeholders, community members, and individuals with firsthand experience, making them active collaborators in the research process (Jagosh et al., 2012). Unlike traditional research methods, which often position participants as passive subjects, **participatory methods involve stakeholders, community members, and end-users as co-creators in the research process** (Vaughn & Jacquez, 2020).

Participatory methods are techniques for collecting and generating data that involve people throughout the research process. **Unlike traditional research designs, PR uses methods and tools that promote participatory and democratic engagement**, shared decision-making, and mutual learning. The core principle of PR is meaningful participation, allowing individuals to voice their opinions throughout the research process and be recognised as valuable contributors (Abma et al., 2019).

Stakeholder **participation can vary at each step of the research process**, offering many ways to share decision-making in each research task. For example, specific methods may be developed or adapted for forming research partnerships or co-designing research questions, or for data collection, analysis, interpretation, dissemination, and for implementing changes (Creswell et al., 2017).

2.2 Participatory and Qualitative Methods in Research

Research methods are typically divided into quantitative methods (e.g., surveys, questionnaires), qualitative methods (e.g., interviews, focus groups), or a mix of both. Participatory research is a collaborative approach that can be used alongside both qualitative and quantitative methods. In PR, these techniques ensure that stakeholders and community members are included in decision-making processes. This is especially valuable in fields like community development, urban planning, public health, and technology design, where diverse perspectives are crucial.

Qualitative research methods are based on disciplines such as psychology, sociology, and anthropology. They focus on obtaining data through open-ended and conversational communication. **These methods aim to understand "what" people think and "why" they think so**, revealing the behaviour and perception of a target audience concerning a particular topic. The results of qualitative methods are descriptive, allowing for easy inferences from the obtained data (Bryman, A. (2016)). **Participatory and qualitative research methods often overlap**, yet they have distinct purposes and applications. Participatory methods are specifically designed to involve stakeholders in the research process actively. They are particularly useful in applied settings where the goal is to effect change or implement solutions based on the research findings. Qualitative methods, on the other hand, are primarily concerned with understanding phenomena from the perspective of the participants, focusing on depth and detail of the data.

As the field of participatory research evolves, the number and diversity of methods continue to grow. This expansion reflects the **increasing recognition of the value of stakeholder engagement**

and the need for research that is both context-sensitive and actionable. This collaborative approach not only enhances the quality and impact of the research but also empowers participants, fostering a sense of ownership and trust in the research outcomes (Creswell et al., 2017).

The following table showcases a list of the **most commonly used participatory methods**. Each method offers distinct advantages and can be tailored to suit various research contexts and objectives.

Table 1 - Participatory methods in research

Method	Description	Application	Advantages
Workshops and Focus Groups	Small group discussions facilitated by a moderator to explore specific topics in depth.	Gather detailed insights, generate ideas, build consensus among participants.	Promote in-depth discussion, allow for clarification of ideas, build group cohesion
Participatory Design	Involving stakeholders directly in the design process of products, services, or systems.	Ensure that needs and preferences of end-users are met in technology development, urban planning, and service design.	Ensures designs are user-centered, increases user satisfaction, fosters innovation.
Public Meetings and Forums	Open gatherings where community members can discuss issues, ask questions, and provide input.	Gather input on policies, projects, or community concerns.	Promotes transparency, allows for diverse viewpoints, can build community trust
Citizens' Juries	Small groups of citizens selected to examine an issue in-depth and provide recommendations.	Gather informed opinions on specific issues in policy-making and public administration.	Promotes informed decision-making, includes diverse perspectives, enhances democratic legitimacy
Online Platforms and Digital Engagement	Tools used to engage stakeholders and collect feedback via digital means.	Reach a wider audience, particularly those who may not attend in-person events.	Increases accessibility, allows for real-time feedback, engages tech-savvy people.

Source: This table has been compiled by the author using information derived from multiple sources, including Creswell, J. W.; 2017; Bryman, A. 2016; Bens, I. 2017. The data has been synthesised to provide a comprehensive overview of the main participatory methods used in research, drawing on various references to ensure accuracy and relevance.

The following table showcases a list of the **most commonly used qualitative methods**. Each method offers distinct advantages and can be tailored to suit various research contexts and objectives.

Table 2 - Qualitative methods in research

Method	Description	Application	Advantages
Interviews	One-on-one conversations aimed at gathering detailed information from individuals.	Gain deep insights into individual perspectives, experiences, and needs.	Provides rich, detailed data, allows for follow-up questions to clarify responses
Focus Groups	<i>See above</i>	<i>See above</i>	<i>See above</i>
Ethnographic Research	Involves immersive observation and interaction with participants in their natural environment.	Used to understand cultural practices, behaviors, and social interactions.	Provides deep contextual understanding, captures complex social dynamics.
Content Analysis	Systematic analysis of communication content, such as texts, media, and documents.	Used to identify patterns, themes, and meanings in qualitative data.	Allows for analysis of large volumes of data, can reveal hidden meanings.
Surveys and Questionnaires¹	Structured tools designed to collect both quantitative and qualitative data from respondents.	Gather broad-based input on specific issues or assess the needs and preferences of a target population.	Gather broad-based input on specific issues or assess the needs and preferences of a target population.

Source: This table has been compiled by the author using information derived from Bryman, A. 2016 - *Social Research Methods*. Oxford University Press. The data has been synthesised to provide a comprehensive overview of the main qualitative methods used in research.

The following is a more extensive description of the participatory qualitative research methods used in SINFONICA for data collection.

In-Depth One-on-One Interview

Conducting in-depth interviews is a common qualitative research method where **a personal interview is conducted with one respondent at a time**. This method is conversational, allowing for detailed exploration of the respondent's perspectives. It provides a valuable opportunity to gather **precise data on people's beliefs and motivations**. In-depth interviews can be conducted face-to-face or over the phone, typically lasting from half an hour to two hours or more. Face-to-face interviews offer the advantage of reading respondents' body language, aiding in understanding their responses (Kvale & Brinkmann, 2009; Patton, 2015).

¹ Surveys and questionnaires can be used in both participatory and qualitative research, but they are more commonly associated with quantitative research.

Interviews, as a qualitative research technique, involve asking open-ended questions to elicit data from respondents about a specific subject. The interviewer, often a subject matter expert, aims to understand respondent opinions through a well-structured series of questions and answers. Unlike focus groups, which involve small groups of 6-10 individuals, and surveys, which are quantitative, **interviews maintain a conversational tone and are conducted with a sample from a population** (Rubin & Rubin, 2012; Seidman, 2019).

Focus Groups

A focus group is a commonly used qualitative research method for data collection, typically involving 6-10 respondents from the target market. Its main aim is to answer the “why,” “what,” and “how” questions. Focus groups, although more expensive compared to other online qualitative methods, are **highly useful for explaining complex processes, market research on new products, and testing new concepts** (Barbour & Morgan, 2017; Cyr, 2019).

In essence, a focus group assembles a small selection of people to discuss a specific topic, making it distinct from a group interview. The interactive nature of a focus group sets it apart from individual or group interviews. During a group interview, the researcher primarily focuses on participants' responses to their questions. In contrast, focus groups **emphasize group interaction and dynamics as part of the research interest** (Barbour & Morgan, 2017; Savin-Baden & Howell, 2013). The interaction between participants should invoke a group discussion, allowing them to share and compare their opinions and perspectives. This interaction generates new insights for both participants and researchers regarding the reasoning behind people’s thoughts (Barbour & Morgan, 2017).

A focus group creates a social context in which people form their opinions, helping researchers understand group dynamics and opinion construction. It **can be empowering for participants**, enabling them to elaborate on and discuss topics that might be limited in surveys or in-depth interviews. Individual responses are shaped by the social setting of the focus group and the input from other participants (Cyr, 2019). The interactive nature and group setting of focus groups make it easier to discuss difficult and complex issues or facilitate discussions within vulnerable groups (Cyr, 2019). This environment encourages participants to **articulate their visions and share ideas on challenging topics**.

Opinion Surveys

Opinion surveys are a valuable tool for obtaining a representative view of how certain issues are experienced. These surveys typically derive data from household surveys, enabling the **collection of perceptions, opinions, and priorities that might otherwise be difficult to gather** or whose representativeness might be questioned. In instances where household surveys are not organised, a stratified sample survey can be conducted. This stratification ensures that the **sample accurately represents the broader population**, accounting for various demographic and socio-economic factors (Groves et al., 2009). The questions should be straightforward, related to the daily lives of the inhabitants, and primarily closed-ended to facilitate easy analysis (Dillman et al., 2014).

The design of an opinion survey involves crafting questions that elicit specific information about the respondents' experiences and opinions. These surveys **should be simple and directly relevant to the participants' daily experiences**. Closed-ended questions are preferable for quantitative analysis, while a few open-ended questions can provide deeper insights into specific issues (Dillman et al., 2014). Opinion surveys are particularly useful in participatory processes where stakeholder input is essential for informed decision-making. They provide a structured method to capture a broad range

of views and experiences, ensuring that the voices of various community segments are heard. This approach can enhance the legitimacy and effectiveness of the participation process by grounding it in empirical data (Babbie, 2020).

Workshops

Workshops are a qualitative research method often used for collecting in-depth data through collaborative and interactive sessions. These sessions typically bring together a diverse group of participants to **engage in activities, discussions, and exercises aimed at exploring specific topics, generating ideas, and solving problems**. Workshops are particularly valuable in contexts where the goal is to harness the collective knowledge and experience of participants to gain deeper insights and foster innovation (Krueger & Casey, 2014; Bens, 2017).

Workshops are usually structured events with clearly defined objectives and outcomes. They can vary in duration from a few hours to several days, depending on the complexity of the topic and the goals of the research. Workshops provide a **platform for participants to explore new concepts**, share their perspectives, identify and address specific problems or challenges, and collaboratively develop innovative solutions (Bryman, 2016). They facilitate the exchange of knowledge and expertise among participants, enriching the research process with diverse viewpoints (Creswell & Poth, 2017). By engaging participants in collaborative discussions, workshops help build consensus on key issues and develop a shared understanding.

2.3 Benefits and Applications of Participatory Methods in CCAM

Participatory Research (PR) offers numerous benefits, primarily its **relevance to real-world contexts**. The results of PR can be effectively applied within specific communities or sectors beyond academic settings, addressing complex problems through collaborative inquiry and achieving tangible, real-world impact (Balazs & Morello-Frosch, 2013; Bush et al., 2017; Cargo & Mercer, 2008; Warren et al., 2018). Its proven effectiveness has led to the increasing adoption of PR across various disciplines (Reason & Torbert, 2001).

Participatory Research (PR) is particularly useful in the development and implementation of new technologies. By actively involving end-users and stakeholders in the research process, **PR ensures that technological innovations are aligned with the needs, preferences, and expectations of those who will ultimately use them**. This collaborative approach not only enhances the relevance and usability of new technologies but also fosters greater acceptance and adoption among users. Moreover, PR helps identify potential issues and challenges early in the development process, allowing for iterative improvements and more robust solutions.

The application of the method to the concept of Connected and Automated Mobility (CCAM) is therefore of particular interest. CCAM has emerged as a promising solution to address the complexities and challenges of modern transportation systems. From digital mobility to self-driving cars and smart transportation networks, CCAM holds the potential to revolutionize how we move. It is therefore **crucial not to overlook the needs and expectations of CCAM future users**, which represents the most critical element of any transportation system.

As highlighted in the analysis behind the formulation of Cluster 6 of the CCAM Partnership document on the Strategic Research and Innovation Agenda (SRIA) 2021-2027², the successful deployment of CCAM largely depends on the societal benefits it can generate and its adoption by users. To achieve these benefits, the development, deployment, and regulation of **CCAM must be grounded in a genuine understanding of the societal context, specific needs, impacts (both positive and negative), and costs.**

Considering the full range of users and societal aspects is essential for offering CCAM **services that are relevant, appreciated, acceptable, and appropriate** for achieving social, economic, and environmental objectives. Being the focus of SINFONICA public and shared transport by road, this includes road users who may be affected by CCAM mobility services but do not currently play a direct role in them, as well as individuals with different income levels or varying digital experiences. Ensuring a comprehensive analysis of needs and expectations at both micro and macro levels is critical.

Integrating participatory methodologies is therefore fundamental to ensuring CCAM truly serves the people it intends to benefit. These methodologies help engage final users and capture their expectations, fears, desires, and special needs. Traditional data collection methods, while valuable, often fall short in capturing the nuanced preferences and concerns of diverse communities, especially those with reduced mobility or special needs. SINFONICA offers a more holistic approach by providing a platform for direct engagement with citizens, enabling stakeholders to gain invaluable insights into their mobility patterns, challenges, and aspirations.

Large-scale participatory processes that target future users, and specific groups from different demographics, socioeconomic backgrounds, and those with special mobility needs **ensure that the voices of a wide array of people are heard**, helping to understand their behavioural patterns, preferences, and habits related to mobility. As a result, CCAM can be designed to be inclusive, responsive to various expectations and concerns, and accessible to all.

In addition, engaging citizens and stakeholders through participatory methods fosters the co-creation of solutions. **Citizens can offer innovative ideas and local knowledge that may not be apparent to planners and developers alone**, leading to more robust and user-friendly automated mobility systems. They also help prioritize different aspects of automated mobility, such as acceptability, availability, accessibility, and affordability.

Furthermore, involving citizens early in the planning and development phases of CCAM-related projects is crucial for **building trust and fostering acceptance**. Citizens are more likely to support initiatives that address their needs and concerns, leading to smoother implementation and adoption.

All in all, participatory methods are therefore essential for capturing citizens' expectations regarding automated mobility and incorporating diverse perspectives into decision-making processes. By actively involving stakeholders and community members, these methods help ensure that **decisions are more equitable, and reflective of the actual needs and preferences of the community**. Furthermore, they promote inclusivity, build trust, identify priorities and foster innovation.

^{2 2} <https://www.ccam.eu/wp-content/uploads/2023/11/CCAM-SRIA-Update-2023.pdf>

3 SINFONICA's Participatory Framework

SINFONICA has established a comprehensive participatory framework to engage citizens and relevant stakeholders in designing and creating an inclusive Cooperative, Connected, and Automated Mobility (CCAM) transport system. This framework employs a participatory data collection strategy that integrates innovative co-creation methodologies within relevant environments. By **combining qualitative and quantitative methods**, SINFONICA ensures that the final results reflect the needs and perspectives of users through a process of co-creation and co-definition with key interest groups.

3.1 Overview of the Framework

The **participatory process of data collection is central to SINFONICA's approach**. The goal is to capture the mobility needs, desires, concerns, and expectations of citizens regarding CCAM. This is achieved through open dialogues with CCAM deployers and decision-makers at various levels of governance, ensuring that the process is tailored to the specific needs of each group of interest.

The following picture illustrates the participatory research process adopted by SINFONICA, highlighting the relationship between the present deliverable D2.2 (data collection) and the overall SINFONICA research process. It reveals the step-by-step approach and the interconnections among different phases and deliverables as described in [Section 1.4](#).

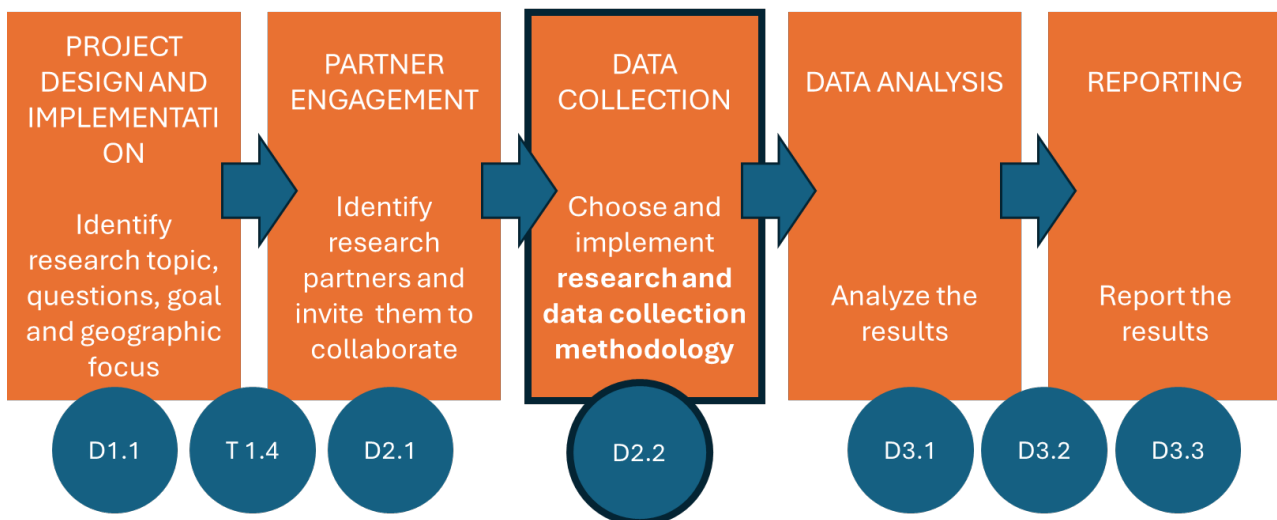


Figure 1 - Community based participatory process model in SINFONICA

SINFONICA employs a bottom-up approach to identify and address the mobility needs of European citizens, with a **special focus on vulnerable users and under-researched groups**. This inclusive method ensures that the voices of all citizens, particularly those from marginalised communities, are heard and considered in the development of CCAM solutions.

At the outset of the project, consensus has been reached on the social groups with special mobility requirements that need to be engaged in the research. These groups include the elderly, disabled

individuals, migrants, and people living in rural areas. By engaging a broad spectrum of the population, SINFONICA aims to gather diverse opinions and perspectives on CCAM³.

3.2 Design and Implementation of the Data Collection Strategy

The qualitative data collection methods designed and implemented by the SINFONICA project include a mix of techniques, **carefully selected to gather diverse data from various stakeholders and different types of potential CCAM final users**. These methods encompass interviews, focus groups, and workshops.

- **Semi-Structured Interviews with vulnerable groups:** The interviews aim to understand the specific needs and requirements for daily mobility, focusing on issues such as transport poverty. This method is chosen to gather detailed information from individuals with special mobility needs, as **interviews in participatory research offer the most personalised and in-depth exploration of personal experiences and perspectives**. By interviewing citizens from vulnerable groups, researchers can uncover hidden barriers to mobility, identify specific preferences for automated mobility solutions, and gain n-depth knowledge i of the socio-cultural factors influencing transportation choices.



- **Focus Groups with citizens:** These are used to capture the mobility needs of the local population, understand their appreciation of the current mobility supply, identify barriers encountered in their daily lives, and gather suggestions for improvement. Focus groups serve as **dynamic forums for collective discussion and idea generation**. In the context of shaping the future of CCAM, they provide a platform to explore complex issues, exchange diverse perspectives, and co-create innovative solutions.



- **Series of Co-Creation Workshops with stakeholders:** These workshops involve a wide range of participants (users, experts, CCAM developers, policymakers) to co-create solutions. Workshops represent an interactive and participatory approach to problem-solving. In the realm of automated mobility, they **offer a space for stakeholders to envision the future of transportation, prototype new ideas, and collaboratively design user-centred solutions**. The workshops follow a *crescendo*, discussing the mobility of the present, exploring the potential of CCAM in solving current problems, and ultimately envisioning the future together.



- 1st Workshop: Conduct a critical analysis of current mobility, discuss the findings from focus groups and interviews, and identify barriers and potential solutions.
- 2nd Workshop: Investigate the potential of CCAM to meet mobility needs by discussing expectations, desires, and concerns.

³ For further information, see SINFONICA Internal Report on the activities carried out within Work Package 1, T1.4- Definition of the Research groups and creation of Groups of Interest
SINFONICA D2.2 - Participatory methods to capture mobility needs and future expectations from CCAM process

- 3rd Workshop: Co-define the requirements for inclusive, equitable, and accessible CCAM deployment, considering the needs of users and the abilities and constraints of developers, operators, and policymakers.

By employing a participatory framework that integrates qualitative research methods, SINFONICA ensures that the development of CCAM systems is inclusive, addressing the real-world needs and concerns of diverse user groups.

In a co-creation exercise with the Groups of Interests, the SINFONICA project discussed and agreed upon the activities, target categories, and schedules for its participatory methods. **Each method is tailored to specific target groups and implemented in multiple rounds to gather thorough data.**

Interviews were conducted across three rounds with decreasing participant numbers in subsequent rounds to enhance understanding:

- 1st Round: five participants per vulnerable group category
- 2nd Round: three participants per vulnerable group category
- 3rd Round: two participants per vulnerable group category

Focus Groups were organised in three rounds with different emphases:

- 1st Round: four age-based focus groups
- 2nd Round: three focus groups categorised by income levels and transportation modes
- 3rd Round: two focus groups focused on public transport access

Workshops involved various stakeholders including service providers, government bodies, industries, non-profits, academic institutions, and others. Conducted in three rounds, each workshop engaged 20-30 participants from diverse stakeholder groups to facilitate comprehensive discussions and feedback.

The table provides a comprehensive view of the structured and systematic approach the SINFONICA project employed to gather diverse and inclusive data through targeted participatory methods, ensuring a wide range of perspectives and insights. The overview is the result of the co-creation work carried out in Task 1.4 among SINFONICA research partners and the Groups of Interests.

Table 3 - Overview of participatory activities in SINFONICA (result of task 1.4)

ACTIVITY	TARGET	CATEGORIES	SCHEDULE
Interviews	User with mobility challenges (in italics additional optional categories)	Elderly	<ul style="list-style-type: none"> • 1^o Round: 5 users for each category • 2^o Round 3 users for each category • 3^o Round: 2 users for each category
		People with cognitive disabilities	
		Digital vulnerable people	
		Gender-related vulnerabilities	
		Youth	
		<i>People living in rural areas</i>	
		<i>University students/young people</i>	
		<i>Cyclist associations</i>	
		<i>People with physical disabilities</i>	
		<i>Migrants</i>	

ACTIVITY	TARGET	CATEGORIES	SCHEDULE
		<i>Low-income people</i>	
Focus groups	Citizens	<ul style="list-style-type: none"> 6-10 people between 26 and 35 years old. 6-10 people between 36 and 45 years old. 6-10 people between 46 and 65 years old. 6-10 people + 66 years old. 	1° round: 4 focus groups
		<ul style="list-style-type: none"> 6-10 people with low-income. 6-10 people with medium income. 6-10 people with high income. <p><i>(focus also on assessing the car ownership)</i></p>	2° round: 3 focus groups
		<ul style="list-style-type: none"> Drivers Pedestrians/cyclists. Public transport users <p><i>(focus also on assessing the level of income)</i></p>	
		<ul style="list-style-type: none"> 6-10 people with easy access to public transport (city centre) + high frequency. 6-10 people living far from public transport stop (suburbs) + low frequency. 	3° round: 2 focus groups
Workshops	Stakeholders (20-30 participants)	<ul style="list-style-type: none"> Service providers. Government. Industry. Non-profit organisation and representative bodies. Universities and knowledge institutions. Others (according to local mapping and innovation clusters). 	1° round: 1 workshop
			2° round: 1 workshop
			3° round: 1 workshop

4 Practical Guidelines for Data Collection

The project has developed comprehensive guidelines to assist local partners in effectively implementing participatory methods within their communities according to a common format. These **guidelines ensure a standardised approach while capturing the diverse needs of citizens**. For each methodology adopted by SINFONICA, the guidelines provide **general information** about the purpose and format of the research, designed as a 'brief' for potential outsourcing to external agencies. Additionally, they include a **list of tips and insights for effective implementation**, drawn from previous experiences. The guidelines also encompass the **questionnaires and programmes** provided to local partners to ensure coordinated and uniform execution. Templates for reporting were distributed to facilitate common data collection and cross-analysis of results. These guidelines are accessible in deliverable D3.2.

4.1 Interviews

4.1.1 General Information

Purpose of the interview: The interviews examine a range of characteristics of travel behaviour and special mobility needs and preferences. They also analyse how and whether people use digital technology associated with transport and attitudes towards automated vehicles. The results of the interview series will help designers, developers and policy makers to consider special needs and requirements and thus design inclusive and flexible digital and automated transport solutions that can be used by as wide a range of people as possible.



Interview topics: The interviews examine issues such as transport habits, use of technology in transport, motives behind transport choices, special mobility needs, knowledge/experience about CCAM and future expectations. Demographics such as age, gender and education will also be collected.

Interview format: The interview should be conducted *one-to-one and preferably face-to-face*. It is suggested to find a calm place with limited distractions (e.g. in a hall test approach or in-home interviews). This can help respondents to feel comfortable and more willing to participate honestly and authentically.

Type of questions: The questionnaire is comprised of both open-ended and self-report questions according to the *semi-structure interview* method. The questionnaire needs to be run as is (subject to translation) for comparability with other interviews.

Length: Interviews were around *30-40 minutes* long.

Translation: The questionnaire is in English. It should be translated into local language.

Reporting response data: To ensure the effective reporting and analysis of data collected during, the project team provided a predefined template. Responses should be systematically coded by the interviewer into pre-defined categories for multiple-choice and Likert-style questions, which facilitates organised data analysis. For open-ended questions, answers should be provided in written text, capturing the qualitative insights expressed by participants.

It is advisable to take detailed notes during the interview to capture the context and nuances of the discussion. These notes should then be transcribed into a machine-readable format to enhance the shareability and usability of the data.

Sampling: SINFONICA considered representatives of users with special needs belonging to at least 5 different categories: 1. Elderly; 2. Cognitive Disabilities; 3. Digital Vulnerable People; 4. Women and gender related vulnerabilities; 5. Young (18-25). In addition, the following categories were considered: Migrants; Single parent families; Rural inhabitants; Cyclists; Physical disabilities; Low income; University students.

Sample size: 5 interviews for each category during the first round, 3 interviews for each category during the second round and 2 interviews for each category during the third round.

Timescale: three rounds of data collection were implemented: Oct – Dec 2023; Jan– March 2024; Apr – June 2024.

4.1.2 Tips for Effective Interviewing



Initial briefing for external companies: When briefing external companies conducting the interviews, provide a clear and thorough introduction to the project and its objectives to ensure consistency.

Printed questionnaire: It is advisable to conduct the interview with a printed copy of the questionnaire. This makes it easier for the interviewee to read the questions and follow along.

Familiarity with the questionnaire: The interviewer must be thoroughly familiar with the questionnaire to effectively guide the conversation. This ensures a smooth flow and comprehensive coverage of all topics.

Knowledge of SINFONICA: If outsourcing the interviews, ensure that the interviewer has a deep understanding of the SINFONICA project. This knowledge is crucial for providing context and answering any questions the interviewee may have.

Value all responses: All types of answers are valuable, whether they are detailed, brief, argumentative, or uninformed. Each response provides insight into the interviewee's perspective.

Face-to-Face preference: Interviews are designed for face-to-face situations. Conducting interviews over the phone is not recommended as non-verbal communication is lost, and it becomes difficult to show pictures or multiple-response placards needed to explain CCAM concepts.

Clear and simple introduction: The introduction should be quick, simple, and clear, especially when speaking to vulnerable people. Ensure the purpose and process of the interview are easy to understand.

Trust in volunteers: Trust in the enthusiasm of the participants. They are volunteering their time because they want to share their opinions and experiences.

European dimension: Emphasize the European dimension of the research. Highlighting this can help public administrations play a more neutral role and underscore the broader impact of the study.

Interviewer flexibility: The interviewer has some flexibility. If the respondent has already addressed a particular question, there is no need to ask it again. This keeps the conversation natural and efficient.

Avoiding acronyms: Try to avoid using the acronym CCAM. Instead, use the provided alternative term to ensure clarity and understanding.

Target audience: The interview is designed for end users, not representatives. Skip questions that are specific to individual preferences and habits if they are not relevant to the interviewee.

No right or wrong answers: Emphasize that there are no right or wrong answers. The goal is to understand what the participants think and feel, and to learn from their experiences. This approach encourages open and honest communication.

4.1.3 The Questionnaire

The questionnaire is divided into six sections, each focusing on a specific aspect of mobility habits, travel behaviour, attitudes towards technology in the transport sector, and perspectives on the future of Connected Cooperative Automated Mobility (CCAM).



Section A - Travel Behaviour and Transport Use, with the objective to understand the current transportation habits and preferences of respondents.

Section B - Motives behind transport choices, with the objective to identify the primary factors influencing transport mode choices.

Section C - Special Needs, with the objective to understand limitations and recommendations related to transport services.

Section D - Use of Technology and Digital Devices (for transport), with the objective to assess the role of technology in respondents' transport habits.

Section E - Familiarities with the CCAM Concepts, with the objective to gauge awareness and experience with CCAM systems.

Section F - Feelings, Emotions, Attitudes Toward Autonomous Vehicles with the objective to capture spontaneous reactions to the concept of future CCAM and explore the perceptions and imaginations that people have regarding autonomous vehicles.

Section G – Socio Demographics with the objective to correlate responses to various demographic categories and backgrounds.

The complete set of questions, including response options and instructions for interviewers, is provided in [Annex 7.1](#). Some questions are also supported by *showcards* displaying the full set of response options for interviewees.

Section A - Travel Behaviour and Transport Use

The purpose of the first set of questions is to understand the current travel habits and the modes of transport people use regularly. The responses help gain insights into daily mobility patterns and preferences of the population, which are crucial for designing effective and user-centred transportation solutions. Special attention is paid to the use of public transport as a driving factor for the future use of CCAM applied to public transportation (the focus of SINFONICA).

The questions:

1. Transport Modes:

Question A1: What kind of transport modes do you use for your regular journeys?

Here, we gather information about the various modes of transport the respondent uses, such as personal vehicles, public transport, cycling, walking, or shared mobility options.

Follow-up A1.1: If they don't use Public Transport, ask Why:

This follow-up seeks to understand barriers or reasons for avoiding public transport, such as cost, convenience, or accessibility issues.

Follow-up A1.2: If they mentioned shared mobility in Other, then ask: Which one

If shared mobility is mentioned, we delve deeper to specify the type (e.g., car-sharing, bike-sharing, ride-hailing services).

2. Distance to Frequent Destination:

Question A2: What is the approximate distance from home to your most frequent destination?

This question helps us gauge the typical travel distance and potentially infer the suitability of different transport modes.

Section B - Motives behind transport choices

This section aims to understand the reasons behind transportation choices and the priorities setting when selecting modes of transport. Additionally, it seeks to determine whether preferences align with actual transportation choices.

The questions:

1. Priority Motives:

Question B1: In general, for your regular travels, what do you prioritize when choosing how to move?

Respondents rank their top three priorities, such as cost, convenience, speed, environmental impact, or safety.

2. Meeting Priorities:

Question B2: Do you feel that the priorities just stated are met by the type of transportation you use on a regular basis (answer to A1)?

This checks if their chosen modes of transport align with their ranked priorities.

Section C - Special Needs

This section aims to understand the limitations that people may encounter during their regular travels and to identify specific challenges that may influence their mobility experiences. Furthermore, it analyses how these limitations affect daily life and which products or services can support and overcome specific limitations. Feedback from people with special mobility needs is particularly interesting and can help to develop more inclusive and accessible transport solutions.

Among the limitations, an additional question on digital issues was included as it is of particular interest for SINFONICA.

The questions:

1. Extent of Limitations:

Question C1: Thinking about your regular travels: to what extent do you feel limited by the following aspects? (from 1 to 5 where 1 means 'not at all' and 5 means 'completely')

Respondents rate how limited they feel by various factors such as physical accessibility, cost, or lack of options.

Follow-up C1.1: Do you feel limited because of any other reasons? If so, please specify:

This open-ended question captures additional limitations not listed.

Follow-up C1.2: If they mentioned difficulties because of digital issues (last two options), then ask: Why?

Here, we explore the specific digital challenges they face, such as difficulty using apps or lack of digital literacy.

2. Recommendations:

Question C2: Are there any transport products or services that you would recommend? What is it about it that you particularly like?

Respondents can share positive experiences and suggestions for transport services they find effective.

Section D - Use of Technology and Digital Devices (for transport)

This section aims to understand people's use of technology and digital devices, specifically in the context of mobility and transportation. Responses help gauge how technology influences travel behaviour, the comfort level with digital tools, and preferences regarding mobility-related applications. Of particular interest is access to digital devices, the experience with transport-related apps, and the overall interest and confidence in using technology for travel planning and ticket purchases.

The questions:

1. Access to Devices:

Question D1: Do you own or have access to a: (list of devices)

This question establishes whether respondents have access to digital devices like smartphones or computers.

2. App Usage:

Question D2: (Only if they reply 'Yes' to D1) Do you have mobility/transport-related App(s) that you use regularly?

This question identifies the use of transport-related apps.

Follow-up D2.1: If yes: How often?

Frequency of app usage is captured here.

Follow-up D2.2: What is it about these App(s) that you particularly like or dislike? Would you recommend any of them?

Respondents can express their opinions on specific features they find useful or problematic.



apps, highlighting

3. Interest in Technology:

Question D3: In general, what is your level of technology? Rate the following sentences from 1 to 'strongly disagree' and 5 means 'strongly agree'

interest towards 5, where 1 means

This rates the respondent's overall interest and comfort with technology.

4. Confidence in Using Technology:

Question D4: (Only if they reply 'Yes' to D1) How confident are you that you can successfully perform an action on your computer, smartphone, or tablet, such as plan an unfamiliar, local public transport journey or buy a ticket online? (from 1 to 5, where 1 means 'not at all' and 5 means 'completely')

This measures confidence in performing specific digital tasks.

5. Handling Personal Data:

Question D5: (Only if they reply 'Yes' to D1) How do you deal when asked to provide personal detail when signing up to an App and/or to a mobility digital service (e.g. to subscribe to a car-sharing/bike-sharing scheme; to make online payments for e-tickets; etc...)?

Respondents' comfort levels with sharing personal data for digital services are explored.

Section E - Familiarities with the CCAM Concepts

This section aims to explore participants' awareness and experiences with CCAM. It is suggested beginning with **a brief introduction to the concept of CCAM**. While the SINFONICA project provides a general definition*, each Group of Interest (GoI) or local context can tailor their introduction to highlight relevant local experiences and current projects. This approach will help interviewees better understand the topic of discussion.

* DEFINITION PROVIDED BY SINFONICA: *In recent years, new types of buses and cars has started to become available. Some vehicles are "connected" and "cooperative" and use technology to talk to each other and infrastructure such as traffic lights. Another example are "automated" or "driverless" vehicles. These can also perform some or all of the tasks carried out by a driver, for instance keeping the vehicle at a certain speed or within a lane. There are some systems which detect obstacles using cameras or radar. It is expected that vehicles will be able to drive themselves, perhaps initially in certain places or when the weather is good. Collectively, we call these new types of transport Connected Cooperative Automated Mobility or CCAM.*



The questions:

1. Awareness:

Question E1: Were you aware of the presence of these highly digital and autonomous forms of mobility in your region/city mobility system?

This question assesses initial awareness of CCAM.

2. Experience:

Question E2: Have you ever used them?

Determines if respondents have practical experience with CCAM.

Follow-up E2.1: If they used CCAM, ask: Can you briefly share your experience?

Experiences and feedback on using CCAM systems are collected.

Section F - Feelings, Emotions, Attitudes Toward Autonomous Vehicles

This section delves into people's thoughts and emotions regarding highly digital and autonomous forms of mobility – the CCAM. They serve to understand the initial reactions, deeper attitudes, and specific concerns related to autonomous vehicles. Comfort levels in different scenarios are explored, as well as preferences for security features, willingness to travel under various conditions, and suggestions for accommodating special mobility needs. Additionally, opinions on the comparative advantages of autonomous vehicles over current public transport and priorities for future automated mobility systems are requested.

The insights from this section will help shape the development and implementation of autonomous vehicle technology, ensuring it meets the needs and addresses the concerns of all users.

The questions:

1. Immediate Attitude:

Question F1: How would you express in one word your first immediate attitude towards these highly digital and autonomous forms of mobility?

This question captures the first word that comes to mind regarding autonomous mobility.

2. Ranked Attitudes:

Question F2: Please rank the first three (among the following) words that best represent your attitude towards these highly digital and autonomous forms of mobility (include the one you mentioned in the previous question if it's in the list)

Respondents rank their top attitudes towards autonomous vehicles from a given list.

3. Feelings in Specific Scenarios:

Question F3: How would you feel travelling in an autonomous vehicle with strangers and without the presence of a staff member?

Assesses comfort levels in autonomous vehicles under specific conditions.

Question F4: How would you feel travelling in an autonomous vehicle without the presence of a staff member and something goes wrong?

Evaluates reactions to potential emergencies in autonomous vehicles.

4. Security Features:

Question F5: If there is no staff present, what security features would make you feel safer?

Identifies desired security measures in autonomous vehicles.

5. Willingness to Travel:

Question F6: Would you be willing to travel in an autonomous vehicle:

Explores willingness to use autonomous vehicles under various conditions.

6. Special Features for Special Needs:

Question F7: Can you imagine specific features of autonomous vehicles for certain categories of people with special mobility needs?

Suggestions for accommodating special mobility needs in autonomous vehicles are solicited.

7. Comparative Advantages:

Question F8: Compared to current public transport, which advantages do the self-driving buses have and will they improve the service?

Opinions on the advantages of self-driving buses over traditional public transport are gathered.

8. Future Priorities:

Question F9: For the future digital and automated mobility, how would you prioritise the following characteristics? Please rank the options.

Respondents rank the importance of various features for future automated mobility systems.

Section G - Socio Demographic

This section aims to gather essential socio-demographic information about the respondents. Understanding these aspects helps contextualize their mobility behaviours and attitudes toward transport and technology. Responses contribute to a comprehensive analysis of how different demographic factors influence mobility patterns and preferences.

The questions:

G1. Please give your age (in years):

G2. What best describes your gender?

G3. Does your household own a car and/or a motorbike, and/or a bike?

G4. What is the highest degree or level of school you have completed?

G5. What is your current employment status?

G6. Including yourself, how many people live in your household?

G7. What is your net monthly household income (in €)?

G8. What is your current nationality (or nationalities)?

G9. What type of area do you live in?

4.2 Focus groups

4.2.1 General Information

Purpose of the Focus Group: the Focus Groups (FG) examine a range of characteristics of travel behaviour and motives behind transport choices. They also analyse attitudes towards CCAMs. The results of the FG series will help designers, developers and policy makers to consider citizens' needs and requirements and thus design inclusive and flexible digital and automated transport solutions that can be used by as wide a range of people as possible.



Focus Groups topics: Focus Group discussions examine topics such as transport habits and challenges, motivations behind transport choices and attitudes towards technology. Gathering and reflecting on feelings and emotions towards CCAM, at different levels of automation, are central to the discussion, as well as the priority elements they would choose for future CCAM. Demographics such as age, gender and education will also be collected.

Length: Focus Group is around 120 minutes long.

Translation: The programme/questions are in English. They should be translated into local language.

Reporting response data: To ensure the effective reporting and analysis of data collected during the focus groups, the project team provided a predefined template. Responses should be systematically coded into pre-defined categories for multiple-choice and Likert-style questions, which facilitates organised data analysis. For open-ended questions, answers should be provided in written text, capturing the qualitative insights expressed by participants.

During the focus group sessions, it is advisable to take detailed notes to capture the context and nuances of the discussion. These notes should then be transcribed into a machine-readable format to enhance the shareability and usability of the data. This approach ensures that all collected information is easily accessible and can be efficiently integrated into the overall analysis and reporting process.

Sampling: SINFONICA considered representatives of users according to different characteristics:

Citizens of different ages: 1) 26-35 years old; 2) 35-45 years old; 3) 46-65 years old; 4) +66 years old.

Citizens with different levels of income: 1) Low income; 2) Medium income; 3) High income.

Citizens living in areas with different access to public transportation: 1) People with easy access to public transport; 2) People living far from public transport stops.

Sample size: 6-10 participants for each sample group. 4 focus groups for each category related to age during the first round; 3 focus groups for type of income during the second round; and 2 focus groups for living areas during the third round. In your invitations consider that possible no-show rate is around 10-20%, so you can invite a few more participants than the maximum number.

Timescale: three rounds: Oct – Dec 2023; Jan– March 2024; Apr – June 2024.

4.2.2 Tips for an Effective Running of the Focus Groups



Prepare an initial briefing for external companies. Ensure that when briefing external companies or organisations about the focus group, they understand the objectives, methodology, and ethical considerations of the SINFONICA project. The initial briefing sets the tone for how the focus group should be conducted in alignment with project goals.

Be clear about the European dimension of the research: it will help public administrations to play a more neutral role. Emphasize the European dimension of the research to all stakeholders involved, including participants and external companies. This clarity helps public administrations maintain a neutral stance and supports the project's overarching goal of inclusivity and impartiality.

Arrange for a comfortable room in a convenient location. The room should have a door for privacy and table and chairs to seat a circle of up to 12 people (10 participants and the moderator and assistant moderator). Ensure the focus group venue is comfortable and accessible for participants, located conveniently with parking or near public transportation. The room setup should accommodate the group comfortably, with adequate seating and privacy to facilitate open discussion.

Arrange for food. Provide refreshments during the focus group session to enhance participant comfort and engagement. Basic refreshments like beverages and light snacks contribute to a relaxed atmosphere, encouraging interaction and discussion.

Schedule focus groups during evenings or weekends to accommodate participants who have daytime commitments such as work. This scheduling flexibility ensures a diverse and representative group of participants can contribute to the research.

Employ a structured team approach for conducting focus groups, involving a moderator and an assistant moderator. The moderator guides the discussion, while the assistant manages logistics such as note-taking, material handling, and recording. Collect responses in a format conducive to efficient data analysis, ensuring accuracy and thorough documentation.

Make sure the moderator knows SINFONICA very well. It is crucial that the moderator leading the focus group on behalf of an external company or organisation is well-versed in the specifics of the SINFONICA project. This includes understanding the project's aims, methodology, target audience, and the importance of participatory research methods.

Make sure the moderator knows the programme and questionnaire of the Focus Group very well. The moderator should have a deep understanding of the questionnaire used in the focus group. This knowledge enables them to effectively guide the discussion, ensuring all relevant topics are covered while keeping the conversation flowing naturally and addressing any participant queries.

The *moderator* should:

- **Trust people's enthusiasm: they are volunteers and want to give their opinion.** Recognize and appreciate that participants in the focus group are volunteers who are enthusiastic about sharing their opinions and insights. Their willingness to participate contributes valuable perspectives to the research process.
- **Try to avoid the use of the acronym CCAM** (we have provided an alternative: *highly digital and autonomous forms of mobility*). Minimize the use of technical jargon such as CCAM (Connected

Cooperative Automated Mobility) during the focus group discussions. Instead, use simpler terms or the alternative provided to ensure that all participants can easily understand and engage in the conversation.

- **Count on all types of answers:** even if they are argumentative or uninformed. Encourage an open environment where all participant responses are valued, regardless of whether they are argumentative, uninformed, or unconventional. Each viewpoint contributes to a richer understanding of the topic being discussed.
- **Value the contributions of all participants:** they all have something to offer no matter what their education, experience, or background; it is important to foster an inclusive environment that respects diverse viewpoints.
- **Be sure to emphasize that there are no right or wrong answers to your questions.** You are only interested in what the participants think and feel and in learning from them and their experiences. Reassure participants that there are no correct or incorrect answers to the questions posed in the focus group. Emphasize that their personal opinions, thoughts, and feelings are valuable contributions to the research, fostering an environment of openness and honesty.
- **Be able to listen attentively with sensitivity and empathy.** Listen actively to participants' perspectives, demonstrating empathy and sensitivity to their experiences and opinions.
- **Be able to listen and think at the same time:** Process information in real-time while maintaining focus on guiding the discussion effectively.
- **Be able to keep personal views and ego out of the setting:** Maintain neutrality and objectivity throughout the discussion, prioritising participant perspectives over personal opinions.
- **Be able to relate to but also give authority:** Establish rapport with participants while maintaining authority to guide the discussion effectively.
- **Appropriately manage challenging group dynamics:** Navigate any potential conflicts or dynamics within the group, ensuring a constructive and respectful atmosphere conducive to meaningful discussion.

4.2.3 The Programme

The programme consists of two parts, each designed to engage participants in discussions about their travel habits and future mobility preferences.

The **first part** is very talkative and gets participants to talk about their travel habits, motivations behind transport choices, trust and use of digital services, as well as attitudes, feelings and fears towards new forms of transport, which are very digital and increasingly automated. Several rounds of questions are proposed that retrace the questionnaire prepared for the interviews, from which the moderator can draw inspiration for the formulation of the questions. Namely:



- **Travel Habits:** Participants are invited to discuss their regular travel habits, including the forms of transportation they use daily or weekly and the reasons behind their choices. They explore factors such as cost, time, comfort, and safety that influence their decisions. The conversation is guided by questions A1 and B1 from the interview questionnaire.

- **Travel Limitations:** Next, the discussion shifts to any limitations participants feel in their travel. Each person is asked to identify one or two challenges they face, with a detailed exploration of how these issues affect their daily lives and travel decisions. This part of the conversation is guided by question C1 from the interview questionnaire.
- **Technology Use:** The conversation then turns to technology, where participants share their experiences with smartphones, computers, and tablets. The discussion assesses their confidence in using the internet for information and services, their trust in technology for transportation, and their views on artificial intelligence and privacy concerns. This discussion is guided by section D of the interview questionnaire.
- **Automated Transportation:** Participants are shown a presentation or video about CCAM to provide context. The group discusses their experiences with automated transportation, beginning with a simple round of YES/NO answers about whether they have tried it. The conversation continues with their impressions of self-driving buses, including perceived advantages, concerns, and conditions for their use. This discussion draws on sections E and F of the interview questionnaire.

The **second part** is an exercise intended to get participants to think for themselves about the future mobility, to state their priorities and preferences and to discuss trends in the way they expressed their opinions. The pretext is the 4 As, the four global sets of mobility needs that must be met to achieve equity in transport: Availability, Accessibility, Affordability and Acceptability (Arup, Urban Transport Group, 2022). The exercise is conceived in two phases: the first looks at the priority given to 'A's as macro-categories of mobility needs, the second delves into the characteristics of As, more punctual aspects of a transport service.



- The process begins with a thorough explanation of the individual elements within each 'A,' offering participants a clear understanding of their characteristics and significance.
- Participants are then invited to contribute additional suggestions, identifying other important elements they believe should be considered. This input helps to broaden the discussion and ensures that all relevant aspects are addressed.
- To prioritize these elements, each participant is asked to select the one they consider most crucial and write it on a green post-it note. They then place their post-it on a designated board, creating a visual representation of the group's priorities.
- Following this activity, the moderator leads a discussion comparing the choices for each 'A.' Participants explore common trends, significant differences, and the underlying reasons for their selections. This discussion aims to uncover how these priorities align with their needs and preferences.

At the end, participants are given the opportunity to add any additional thoughts about the increasingly technological and autonomous nature of travel to ensure that any overlooked aspect is addressed.

See [Annex 7.2](#) for a detailed programme of the Focus Group.

4.3 Workshops

4.3.1 General Information

Purpose of the workshop series: The series of three workshops aim at gathering together the stakeholders involved in the design, development, and implementation of CCAM for public and shared transport by road, policy makers and users' representatives. These workshops use insights gathered from interviews and focus groups with European citizens to address common mobility barriers, particularly for those with special mobility needs. Participants are expected to discuss expectations, desires, and concerns regarding CCAM deployment, while also considering the capabilities and limitations faced by developers, operators, and policymakers.



Workshops topics: The sequence of workshops and the topics to discuss are the following.

- ❖ 1st workshop: **critical analysis of the mobility of the present** – discussing the findings of the focus groups and the semi-structured interviews. Identify the most common barriers encountered in daily and/or occasional mobility and jointly imagine potential solutions, with special focus on technological solutions.
- ❖ 2nd workshop: **investigation on the CCAM potential to meet mobility needs** – discussing the findings of the focus groups and the semi-structured interviews in what concerns expectations, desires and concerns of future CCAM.
- ❖ 3rd workshop: **co-definition of the requirements for an inclusive, equitable and accessible CCAM deployment**. This step considers the needs of the users, while taking into account the abilities and constraints that developers, operators and policy makers face.

Gathering and reflecting on feelings and emotions towards CCAM, at different levels of automation, are central to the discussion, as well as the priority elements participants would choose for future CCAM.

Participants: The number of participants expected is 20-30 for each workshop. A list of categories of participants has been proposed in Task 1.4 and include:

Public Transport operators, Mobility providers. Private ride hauling companies, (Autonomous) vehicles' manufacturers, (Autonomous) vehicles' suppliers, ITS solutions' providers, AI providers, Drivers' associations, Trade associations, Cyclists' associations, Environmental associations, Consumers' associations, Universities, Research centres, Experts in the field, Innovation cluster (start-ups, young people interested in CCAM and smart cities), Others according to local stakeholders' mapping.

Translation: The programme/questions are English. They should be translated into local languages.

Reporting response data: A report with the key findings and main conclusions of the respective workshops.

4.3.2 Tips for an Effective Organisation of the Workshops

Select the **right venue**, which should:



- Have the appropriate technical infrastructure, such as power sockets, audiovisual equipment (projectors, videos, microphones), internet access, etc.
- Be easily accessible preferably by public means of transport.
- Be quiet, have sufficient space, appropriate lighting, air circulation and temperature conditions.
- Have chairs and tables that can be arranged in round tables/coffee tables style.
- Have a setting that provide every participant with the opportunity to see each other and the screens easily, avoiding the creation of a sense of hierarchy among the participants.

Consider the **roles of the different persons**:

- The *moderator* is responsible for the direction, guidance and facilitation of all the implemented procedures. The moderator will present the necessary steps for the conduction of the workshop, he/she will coordinate them, and he/she will summarize the obtained outcomes.
- The *rapporteur* will observe the discussion having as target to summarize the main ideas identifying the main barriers, presenting the proposed solutions and highlighting the main points of agreement and disagreement.
- The *rest of participants*, who are requested to participate actively in the discussion through questions, comments, examples, ideas and disagreements to benefit the discussion with their accumulated experience in the specific filed.

Don't forget to bring all the **necessary material** for the interactive sessions, such as pencils and papers, copies of printed material, flipcharts and markers for highlighting ideas and comments, etc...

Agree on the **rules of the workshop**, which will help to run and conduct the meeting smoothly. Some issues for arrangements can be the following:

- Start and end of the workshop on time.
- Equal opportunity to everyone for participation.
- Confidentiality regarding the participants' attitudes and statements.
- Respect the break times.
- Turn off mobile telephones.

Consider and carefully **plan the three different phases of the workshop**, which consist of the:

Introduction: the period from the arrival of the participants to the beginning of the main presentation and activities.

- Prepare for a registration procedure of the participants and provide badges with name.
- Introduce the moderator, the rapporteur and the participants pinpointing their role.
- Present the outline and the agenda of the workshop.
- Analyse the objectives and the activities of the workshop.

Conduction: it involves the main presentation and activities. During the conduction of the workshop the role of the moderator is considered as crucial. Among suggestions to be followed:

- To create a friendly atmosphere and help participants to feel comfortable.

- To be creative and utilize the humor in order to make your activities more entertaining.
- To be enthusiastic motivating the participants for a more effective involvement.
- To appreciate participants' contributions and statements.
- To encourage any input, feedback and proposals.
- To try not to judge or criticize.
- To respect the right of each member for participation and remember that every opinion counts.
- To keep track of time. Try to avoid unnecessary deviations from the timetable of the agenda.
- To allow adequate time for reflection and discussion.
- To be aware of similarities and differences among the ideas of the participants.

Closure: it includes the summary, the evaluation and the ending.

- To summarize the main findings of the workshop.
- To give the opportunity to the participants to react to the obtained outcomes. This can be achieved either with a formal procedure or through some simple questions.
- To provide the opportunity to the participants to sum up.
- To revisit the agenda to identify any issues possibly forgotten to deal with during the conduction of the workshop.

4.3.3 The Series of Workshops

Workshop 1

Theme: Critical analysis of the mobility of the present. Identify the most common barriers encountered in daily and/or occasional mobility and jointly imagine potential solutions, with special focus on technological solutions.

Suggested title: "Are citizens happy with the way they move? Habits, limits and barriers to mobility, and potential solutions"

The programme:

The programme begins with institutional introductions and brief presentations of the SINFONICA project and the workshop's specific objectives. The core of the workshop features two interactive sessions.

In **Interactive Session 1 is a plenary and engages participants in a dynamic and participatory discussion.** The session starts with a live poll, using tools like Mentimeter or Slido, or traditional paper questionnaires, to collect real-time opinions. Participants guess how citizens responded to various questions from the interviews and focus groups on transport habits, limitations, and attitudes towards technology and privacy (sections from A to D). Once the guesses are made, the participants' predictions are compared with actual responses from the interviews and focus groups. This leads to a discussion on the similarities and differences between assumptions and real data, delving into each question individually.



Interactive Session 2 involves group dialogues organised in parallel round tables designed to facilitate brainstorming and collaborative problem-solving. Each table, hosting 3 to 5 groups of up to 10 people, discusses potential solutions to improve local mobility and make it more inclusive and accessible. Participants start by writing their individual ideas and answers on post-it notes, which are then shared and discussed within their groups. This collaborative discussion refines and expands the initial suggestions.



The workshop concludes with each table presenting their plans and priorities to the larger group, fostering a sense of shared purpose and commitment to enhancing local mobility.

See [Annex 7.3](#) for the detailed programme of Workshop 1.

Workshop 2

Theme: Investigation on the CCAM potential to meet mobility needs

Suggested title: “How can technology help address mobility challenges? Expectations, desires and concerns in the era of advanced digital and autonomous transportation”



Purpose of workshop 2: Workshop n°2 will specifically analyse citizens' reactions to questions about awareness of CCAM (Connected, Cooperative, and Automated Mobility) and their emotions and expectations regarding its integration into our everyday transportation. This examination will focus on sections E and F of the interview and focus group questionnaires. The aim is to assess both the technological and human aspects of advancing CCAM and ensuring that technology serves human needs effectively.

The Programme

The programme begins with institutional introductions and brief presentations of the SINFONICA project and the workshop's specific objectives. The core of the workshop features two interactive sessions.

In the first interactive plenary session, participants engage in a dynamic and thought-provoking activity discussing actual data from the citizen interviews and focus groups. Like in workshop 1, the session kicks off with a live poll where participants guess how citizens responded to questions about automated mobility systems (CCAM), such as public awareness of CCAM in their area, attitudes towards these technologies, and features of autonomous vehicles for people with special mobility needs – sections E and F of the interviews and focus groups. After the live polling, the real responses are revealed and compared with participants' guesses, highlighting surprises and discrepancies. The session then discusses on the most unexpected findings, the impact of emotional feedback on the advancement of automated transport, and how technology can better address future mobility needs.



In the second interactive session, participants are organised into round tables to explore public acceptance of automated transport. At first individuals write down their thoughts on what could enhance acceptance of CCAM and then discuss these ideas at their tables. The goal is to create a commonly agreed list of benefits that automated transport could offer for future mobility needs. Afterwards,



participants focus on identifying obstacles to acceptance, sharing their thoughts, and developing a common list of challenges. The moderator ensures that key issues like trust, safety, security, and transparency are addressed in the discussions. This session promotes a thorough examination of both the advantages and challenges of automated transport through collaborative group dialogue.

See [Annex 7.4](#) for the detailed programme of Workshop 2.

Workshop 3

Theme: Co-definition of the requirements for an inclusive, equitable and accessible CCAM deployment. Consider the needs of the users as well as the abilities and constraints that developers, operators and policy makers face.



Suggested title: “Advancing digital and autonomous transport together: Co-defining inclusive, equitable and accessible deployment”

Purpose of Workshop n°3: it specifically draws upon insights gathered from the broader citizen consultation, with a particular emphasis on feedback from individuals facing mobility challenges. During the workshop, user representatives engage in direct dialogue with designers, manufacturers, and policymakers to articulate their requirements and expectations regarding CCAM. The aim is to reach a consensus on a set of requirements that align with the needs of all stakeholders, ensuring feasibility and convenience for everyone involved.

Programme

The programme begins with institutional introductions and brief presentations of the SINFONICA project and the workshop's specific objectives. The key results from the first two workshops are also presented. Also in this case, the core of the workshop features two interactive sessions, which are reversed compared to the previous WSs: the first is organised in parallel round tables, and the second one in plenary.

In the first interactive session, participants are divided into 3 to 5 round tables, each with up to ten people, ensuring a diverse mix of stakeholders. The exercise centres around **envisioning the ideal digital and automated transport system of the future**. Each table begins by exploring the four key characteristics of accessibility, affordability, availability, and acceptability, discussing their attributes in depth. Participants then identify any missing elements from the current models, reflecting on mobility challenges and benefits and obstacles of CCAM discussed in previous workshops. They prioritize these characteristics based on the insights gained. Each table is assigned to focus on a specific group with unique mobility challenges, such as the elderly, people with disabilities, women, or rural populations. They develop tailored solutions and recommendations, resulting in a set of prioritised features for future CCAM that addresses the unique needs of their assigned group.



In the second interactive plenary session, participants come together to review and discuss key findings from recent focus groups and the previous interactive session. The discussion then moves to reflect on the most surprising findings from the investigation, inviting participants to share what they found unexpected and why. Participants **evaluate the proposed CCAM services from various perspectives, considering factors such as cost, design, safety, and service provision**. The session concludes with the creation of a **final list of 'never without' features**—non-negotiable elements





that any CCAM service must include to effectively meet the needs of all users. This process ensures a comprehensive and agreed-upon set of requirements for future CCAM services.

See [Annex 7.5](#) for the detailed programme of Workshop 2.

5 Conclusions

The primary objective of the SINFONICA project was to develop and validate innovative participatory methods to capture diverse mobility needs and expectations for Connected, Cooperative, and Automated Mobility (CCAM) in public and shared transport on roads. This report presents the participatory framework conceived by the project, detailing the methodologies employed, the data collected, and the key findings derived from extensive stakeholder engagement during field application.

The experience of the SINFONICA partners, particularly the four local authorities that applied the project's guidelines—Trikala (GR), Hamburg (DE), the Province of Noord-Brabant (NL), and the metropolitan area of West Midlands (UK)—revealed that the participatory methods tailored for the project, including interviews, focus groups, and workshops, effectively captured a wide range of mobility needs and expectations. **These methods facilitated rich, qualitative insights that might have been missed by purely quantitative approaches.**

The combination of qualitative and quantitative⁴ data collection methods, provided a comprehensive understanding of stakeholder perspectives. **While interviews allowed for deep, individual insights, focus groups and workshops fostered dynamic discussions that highlighted both common themes and divergent views.**

Engaging a diverse group of stakeholders—including policymakers, transport providers, civil society associations, and end-users—proved crucial in ensuring that the final recommendations derived from the project reflect real-life perspectives. **This approach helps make CCAM solutions inclusive and equitable.** Also, the high level of stakeholder participation demonstrated the community's interest and investment in the future of mobility.

The participatory methods used were **adaptable across different local contexts, as demonstrated by their successful application in varied geographic and socio-economic settings.** Minimal adjustments were necessary to accommodate cultural differences, such as translating measurements to pounds and miles instead of euros and kilometres for the UK partner.

While a comprehensive overview of the guidelines' implementation, an analysis of their efficacy and effectiveness, and the extensive data collected will be included in closely related project deliverables (see **D3.1**, **D3.2**, and **D3.3**), it has been clear from the outset that **these guidelines were well received and successfully implemented in local contexts, with strong participation.** This positive response suggests that policymakers should systematically integrate participatory methods into CCAM projects to ensure that solutions meet the needs of all community members, particularly underrepresented groups.

The SINFONICA project has demonstrated the **critical importance of stakeholder engagement in developing CCAM solutions.** By ensuring that diverse voices are heard and considered, we can create more inclusive, equitable, and effective mobility solutions for the future. **Continued investment in participatory methods will be key to the ongoing success of CCAM initiatives.**

⁴ As detailed in the SINFONICA Internal report from task 2.3 – Milestone 12: Common guidelines for users' survey



Future research should focus on **developing standardised participatory methods** that can be easily replicated in different contexts. Additionally, exploring the long-term impacts of participatory approaches on project outcomes would be valuable.

Prioritising the voices and experiences of citizens in shaping the future of automated mobility is imperative. **Participatory methodologies are powerful tools for engaging communities, co-creating solutions, and ensuring that CCAM interventions are rooted in the lived realities of the people they serve.** By embracing a participatory approach, SINFONICA aims to pave the way for a more inclusive, equitable, and sustainable transport future.

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7 Appendices

7.1 English Version of the Questionnaire

To be filled by the interviewer, before or after the survey:

PARTICIPANT DETAILS	
Participant: (give a number, no name)	HF45M*
Date of interview:	
SINFONICA partner:	
Location of the interview:	

* Coding is made of four elements:

1. Municipality/province: H – Hamburg; T – Trikala; W – West Midlands; N – Noord Brabant
2. Gender: M – Male; F – Female; O – Other
3. Age: number of years
4. Group category: E - Elderly; CD - Cognitive Disabilities; D - Digital Vulnerable People; W - Women and gender related vulnerabilities; Y - Young (18-25); M – Migrant; S - Single parent family; R - Rural inhabitant; C – Cyclist; PD - Physical Disabilities; L - Low income; U - University students.

Example: HF45M = Hamburg, female, 45 years old, migrant

Section A - Travel Behaviour and Transport Use

A1 - What kind of transport modes do you use for your regular journeys?

Note to the interviewer: let the respondent talk freely about their transport habits and fill the table with the information you gather. If they hesitate you can propose some of the options. Don't list them one by one! No need to show them.

		Work		Education	Shopping	Social activities	Leisure/ Sport	Others
		Paid-work	Care-work					
Public transport	Bus							
	Metro							
	Tram							
	Train							
	Other							
Private car	As a driver							
	As a passenger							
Office/campus transport	Private shuttle							
	School bus							

	Other							
	Taxi							
	Motorbike							
Bike	Normal bike							
	Speed Pedelecs							
	Cargo bike							
	Electric bike							
	Walk							
	Other, specify							

A1.1 - If they don't use Public Transport, ask *Why*:

Open Question:

A1.2 - If they mentioned shared mobility in Other, then ask: *Which one*

Note to the interviewer: let the respondent talk freely and fill the table with the information you gather. If they hesitate, you can use as a reference the following options. Don't list them one by one! No need to show them.

- Car sharing (on-street car hire via the internet or an app) (e.g. Bluemove, Zipcar)
- Carpooling (sharing car journeys so that multiple people travel in the same vehicle) (e.g. BlaBlaCar)
- Taxi services that are booked digitally (e.g. Cabify, Uber)
- On-street bike hire (e.g. Nextbike, Lime)
- On-street scooter or motorbike hire (e.g. Yego, Lime)

•

A2 - What is the approximate distance from home to your most frequent destination?

Note to the interviewer: ask them to consider the most frequent purpose/destination of their trips. No need to show the response options.

<ul style="list-style-type: none"> • <input type="checkbox"/> 0 - 5 kilometers <input type="checkbox"/> 6 - 15 kilometers <input type="checkbox"/> 16 - 30 kilometers <input type="checkbox"/> More than 30 kilometers <input type="checkbox"/> Don't know 	<p>For TfWM - 1 km = 0.62 miles</p> <ul style="list-style-type: none"> <input type="checkbox"/> under 3 miles <input type="checkbox"/> 3-9 miles <input type="checkbox"/> 10- 20 miles <input type="checkbox"/> Over 20 miles <input type="checkbox"/> Don't know
--	---

<input type="checkbox"/> I only know how long it takes: _____ —	<input checked="" type="checkbox"/> I only know how long it takes: _____ —
--	---

•

Section B - Motives behind transport choices

B1 – In general, for your regular travels, what do you prioritise when choosing how to move? Please rank the first three among the following mobility motives:

Note to interviewer: mention the motives one by one. Use Showcard 1.

Time savings	Availability at any time	Safety & Security
Travel costs	Reliability	Environmental reasons
Reachability	Comfort	Health-related reasons
Cleanness	Other _____	

1	
2	
3	

B2 – Do you feel that the priorities just stated are met by the type of transportation you use on a regular basis (answer to A1)?

Section C - Special Needs

C1 - Thinking about your regular travels: to what extent do you feel limited by the following aspects? (from 1 to 5 where 1 means 'not at all' and 5 means 'completely')

In this question, we define "limited" as wanting to travel more but feeling unable to.

Note to interviewer: list the aspects one by one and ask to indicate to what extent the feel limited. Use Showcard 2

	Not at all limited	Slightly limited	Moderately limited	Very limited	Completely limited	Don't know/
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						Prefer not to answer
	1	2	3	4	5	/
The cost of the travel						
Availability of transport services (e.g. bus, trains or shared vehicles)						
Availability of infrastructure (e.g. bus stops or bike lanes)						
Concerns about the safety and security of the transport services						
Difficulty using the available transport due to special needs or disabilities						
Difficulty in <i>planning a trip</i> due to digital-related issues (such as not understanding an app or website to look up for information or buy a ticket, availability of a smartphone or lack of smartphone data)						
Difficulty <i>while travelling</i> due to digital-related issues (such as not understanding how to use digital or mobile tickets, or unlocking rental bikes)						

C1.1 - Do you feel limited because of any other reasons? If so, please specify: _____

Comment

C1.2 – If they mentioned difficulties because of digital issues (last two options), then ask: Why?

Open question:

C2 - Are there any transport products or services that you would recommend? What is it about it that you particularly like?

Open question:

Section D - Use of Technology and Digital Devices (for transport)

D1 - Do you own or have access to a:

	Yes	No	Don't know/ Prefer not to answer
Computer (laptop or desktop)			
Smartphone - This is a mobile phone with a touchscreen that can access the Internet and run downloaded programmes -apps.			
Tablet - This is a small portable computer that uses a touchscreen but is not a smartphone. This includes eBook readers.			

D2 – (Only if they reply ‘Yes’ to D1) Do you have mobility/transport-related App(s) that you use regularly?

- No
- Don't know/Prefer not to answer
- Yes, specify the name of the App(s)

D2.1 - If yes: How often?

Note to the interviewer: you can propose few of the options below to help the respondent

- Many times in a day
- Every day or almost every day
- At least once a week
- Less than once a week but at least once in the last 3 months
- I last did this more than 3 months ago
- I have never done this
- Don't know/Prefer not to answer

D2.2 - What is it about these App(s) that you particularly like or dislike? Would recommend any of them?

SINFONICA D2.2 - Participatory methods to capture mobility needs and future expectations from CCAM process

Open question:

D3 – In general what is your level of interest towards technology? Rate the following sentences from 1 to 5, where 1 means ‘strongly disagree’ and 5 means ‘strongly agree’

Note to interviewer: ask to indicate to what extent they agree or disagree with the statements in the table below. If they answer ‘strongly agree’ to question 1, then skip the other questions. Use Showcard 3

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know prefer not to answer
	1	2	3	4	5	
1- I have little to no interest in new technology						
2- I am excited by the possibilities offered by new technologies						
3- I try new products before my friends and neighbours						
4- I often purchase new technology products, even though they are expensive						

Comment

D4 - (Only if they reply ‘Yes’ to D1) How confident are you that you can successfully perform an action on your computer, smartphone or tablet, such as plan an unfamiliar, local public transport journey or buy a ticket online? (from 1 to 5, where 1 means 'not at all' and 5 means 'completely')

Not at all confident	Very little confident	Moderately confident	Very much confident	Completely confident	Don't know/Prefer not to answer
1	2	3	4	5	/

Comment

D5 - (Only if they reply 'Yes' to D1) How do you deal when asked to provide personal detail when signing up to an App and/or to a mobility digital service (e.g. to subscribe to a car-sharing/bike-sharing scheme; to make online payments for e-tickets; etc...)?

I don't sign up	I sign up only if the app/service increases my accessibility to the transport system and the efficiency of my travels (e.g. trip planning, online ticketing – Moovit, Waze)	I sign up no matter what	I don't know/Prefer not to answer
-----------------	---	--------------------------	-----------------------------------

Comment

Section E - Familiarities with the CCAM Concepts

Make a brief introduction on the concept of CCAM, using the following definition:

In recent years, new types of buses and cars has started to become available. Some vehicles are "connected" and "cooperative" and use technology to talk to each other and infrastructure such as traffic lights. Another example are "automated" or "driverless" vehicles. These can also perform some or all of the tasks carried out by a driver, for instance keeping the vehicle at a certain speed or within a lane. There are some systems which detect obstacles using cameras or radar. It is expected that vehicles will be able to drive themselves, perhaps initially in certain places or when the weather is good.

Collectively, we call these new types of transport Connected Cooperative Automated Mobility or CCAM.



E1 - Were you aware about the presence of these highly digital and autonomous forms of mobility in your region/city mobility system?

- Yes
- No
- Don't know/Prefer not to answer

E2 - Have you ever used them?

- Yes

- No
- Don't know/Prefer not to answer
-

E2.1 *If they used CCAM, ask: Can you briefly share your experience?*

Section F - Feelings, Emotions, Attitudes Toward Autonomous Vehicles

F1 – How would you express in one word your first immediate attitude towards these highly digital and autonomous forms of mobility?

Open question:

F2 - Please rank the first three among the following words that best represent your attitude towards these highly digital and autonomous forms of mobility (include the one you mentioned in the previous question if it's in the list below)

Note to interviewer: list all the attitudes and use Showcard 4

Confidence	Calm	Fear
Curiosity	Scepticism	Interest
Unsafety	Excitement	Freedom
Uncertainty	Easiness	Indifference
Trust	Distrust	Other (specify) _____

1	
2	
3	

Comment

F3 - How would you feel travelling in an autonomous vehicle with strangers and without the presence of a staff member?

Open question:

F4 - How would you feel travelling in an autonomous vehicle without the presence of a staff member and something goes wrong?

Open question:

F5 - If there is no staff present, what security features would make you feel safer?

Note to interviewer: you can provide few examples from the list below if people do not speak spontaneously.

Open question:

- Ability to see a person in the control room monitoring the service
- CCTV cameras
- Help buttons allowing you to talk to someone in control room
- Passenger rating system so you can give feedback on fellow passengers
- Strong light for deaf people so they can keep talking with sign language

•

F6 - Would you be willing to travel in an autonomous vehicle which is:

Note to interviewer: list all the options and use Showcard 5

- Private (only available to you and travel companions)
- Semi-public (available to people with similar mobility needs such as older people, people with disabilities, women, etc.)
- Public (open to anyone)
- Don't know, prefer not to reply

•

F7 – Can you imagine specific features of autonomous vehicles for certain categories of people with special mobility needs?

Open question:

F8 - Compared to current public transport, which advantages do the self-driving buses have and will they improve the service?

Note to interviewer: list all the options and use Showcard 6

	YES	NO	Neutral	Don't know/Prefer not to answer
Time savings				
Travel costs				
Reachability				
Availability at any time				
Reliability				
Comfort/Convenience				
Safety & Security				
Environment				
Health				
Other....				

F9 – For the future digital and automated mobility, how would you prioritise the following characteristics? Please rank the options.

Note to interviewer: list all the options and use Showcard 7

- cost (affordability)
- quality and comfort (acceptability)
- ease of access and use (accessibility)
- ease of getting from A to B (availability)

Do you want to comment on your ranking?



Section G - Socio Demographics

G1. Please give your age (in years):

- It is: _____
- Prefer not to answer

G2. What best describes your gender?

- Female
- Male
- Prefer to self-describe as _____
- Prefer not to answer

•

G3. Does your household own a car and/or a motorbike, and/or a bike?

- Yes, a car
 - How many? N° _____
- Yes, a motorbike
 - How many? N° _____
- Yes, a bike
 - How many? N° _____
- Prefer not to answer

G4. What is the highest degree or level of school you have completed?

- Master degree or higher
- University
- High school
- Secondary school
- Primary school
- No qualifications
- Prefer not to answer

G5. What is your current employment status?

- Employee
- Self-Employed
- Unemployed
- Retired
- Other (Specify: _____)
- Prefer not to answer

•

G6. Including yourself, how many people live in your household?

•

N° _____

Of which, how many children?

N° _____

•

G7. What is your net monthly household income (in €)

- Below 2.000€
- 2.000 – 4.000€
- 4.000€ - 8.000€
- More than 8.000€
- Prefer not to answer

For TfWM 1 EUR = 0.86 GBP

- <£20,000 pa
- =>£20,000 <= £40,000 pa
- >£40,000 <= £80,000 pa
- >£80,000
- Prefer not to answer

G8. What is your current nationality (or nationalities)?

You can use different wordings for this and the next question. Alternatives are: What was your nationality/nationalities at birth?

- Name _____
- Prefer not to answer



G9. What type of area do you live in?

You can ascertain type of area using zipcode if you prefer.

- Urban
- Suburban
- Rural

Note to interviewer: at the end of the interview, ask for other comments related to the topic, suggestions, proposals or some other specific things the interviewee would like to mention that is not yet discussed.

(Time permitting) Is there anything that I have not covered that you think is relevant to add?

Comment

Showcards

Showcard 1



B1 – In general, for your regular travels, what do you prioritise when choosing how to move? Please rank the first three among the following mobility motives:

Time savings	Availability at any time
Travel costs	Reliability
Reachability	Comfort
Safety & Security	Health-related reasons
Environmental reasons	Cleanness
Other _____	

1	
2	
3	

Showcard 2

C1 - Thinking about your regular travels: to what extent do you feel limited by the following aspects? (from 1 to 5 where 1 means 'not at all' and 5 means 'completely')

	Not at all limited	Slightly limited	Moderately limited	Very limited	Completely limited	Don't know/ No answer
	1	2	3	4	5	/
The cost of the travel						
Availability of transport services (e.g. bus, trains or shared vehicles)						
Availability of infrastructure (e.g. bus stops or bike lanes)						
Concerns about the safety and security of the transport services						
Difficulty using the available transport due to special needs or disabilities						
Difficulty in <i>planning a trip</i> due to digital-related issues (such as not understanding an app or website to look up for information or buy a ticket, availability of a smartphone or lack of smartphone data)						
Difficulty <i>while travelling</i> due to digital-related issues (such as not understanding how to use						

digital or mobile tickets, or unlocking rental bikes)						
---	--	--	--	--	--	--

Showcard 3

D3 – In general what is your level of interest towards technology? Rate the following sentences from 1 to 5, where 1 means ‘strongly disagree’ and 5 means ‘strongly agree’

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know prefer not to
	1	2	3	4	5	
1- I have little to no interest in new technology						
2- I am excited by the possibilities offered by new technologies						
3- I try new products before my friends and neighbours						
4- I often purchase new technology products, even though they are expensive						

Comment

--

Showcard 4

F2 - Please rank the first three among the following words that best represent your attitude towards these highly digital and autonomous forms of mobility (include the one you mentioned in the previous question if it's in the list below)

Confidence	Calm	Fear
Curiosity	Scepticism	Interest
Unsafety	Excitement	Freedom
Uncertainty	Easiness	Indifference
Trust	Distrust	Other (specify) _____

1	
2	
3	

Showcard 5

•

F6 - Would you be willing to travel in an autonomous vehicle which is:

- Private (only available to you and travel companions)
- Semi-public (available to people with similar mobility needs such as older people, people with disabilities, women, etc.)
- Public (open to anyone)
- Don't know, prefer not to reply

Showcard 6

F8 - Compared to current public transport, do you think that CCAM will improve the following transport characteristics?

	YES	NO	Neutral	Don't know/ no answer
Time savings				
Travel costs				
Reachability				
Availability at any time				
Reliability				
Comfort/Convenience				
Safety & Security				
Environment				
Health				
Other....				

Showcard 7

F9 – For the future digital and automated mobility, how would you prioritise the following characteristics? Please rank the options.

- cost (affordability)
- quality and comfort (acceptability)
- ease of access and use (accessibility)
- ease of getting from A to B (availability)

7.2 Detailed programme for the Focus Groups

PART 1 – Rounds of Questions

The time spent on this part should be around +/- 50 minutes.

Start with a **Tour de Table**: Ask participants to introduce themselves by stating their name and sharing a brief sentence about themselves. This helps break the ice and encourages open communication.



Make the following rounds of **Questions**:

Topic	Hints for discussion	Guiding questions
Travel habits: What form of transportation do you use in your regular (daily/weekly) travels? Why?	Encourage participants to discuss their travel behaviour and why they choose certain transport options (e.g., cost, time, comfort, safety). Probe into their decision-making process and preferences. If they don't use public transport, explore the reasons behind this choice.	Use questions A1 and B1 from the interview questionnaire as a basis, but let participants express their thoughts freely without suggesting options.
Travel limitations: Do you feel limited in the way you travel?	Ask participants to name one or two challenges they encounter in their mobility. Discuss these challenges in detail, including how they impact their daily lives and travel choices.	Refer to question C1 from the interview questionnaire. Avoid providing options to allow for more genuine responses.
Technology Use: What is your relationship with technology?	Discuss participants' use of smartphones, computers, and tablets. Assess their confidence in using the internet for information and services. Explore their trust in technology for transport, their views on AI, and any privacy concerns they may have.	Use Section D of the interview questionnaire to guide the discussion.
Display information about CCAM (PPT presentation and/or local video)		
Automated Transportation: Have you ever tried a automated transportation and how was it? What do you see as the advantages and	Begin with a round of YES/NO answers about whether they have tried automated transportation. Discuss their impressions, noting similarities and differences in opinions. Delve into their willingness to use self-driving buses, perceived benefits, and concerns or conditions for their use.	Refer to Sections E and F of the interview questionnaire for detailed inquiries.

concerns of self-driving buses?		
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Roles:

- The Moderator facilitates the discussion by asking questions and ensuring that all participants have the opportunity to share their views.
- The Assistant takes notes on participants' responses, using tables for questions A1 and C1 to mark key points, and records main outcomes on a flip chart.

Material:

- Flip chart;
- Flipchart markers.

PART 2 - Exercise 'Create your digital and automated transport of the future'

The time spent on this part should be around +/- 50 minutes.

Considering the challenges discussed before (question on travel limitations) participants think about future mobility, state their priorities and preferences, and discuss trends. This is framed around the "4 As" (Availability, Accessibility, Affordability, and Acceptability).



Step 1: Prioritising the 4 As

Explain the rules of the exercise: Briefly outline how the exercise will proceed and what is expected from the participants.

Describe the four 'A's: Provide a clear explanation of Availability, Accessibility, Affordability, and Acceptability, and why these aspects are crucial for equitable transport.

Discuss and prioritize the 'A's: Engage participants in discussing the 'A's and their importance. Ask them to rank these based on their personal priorities. This can be done through various interactive methods such as:



Figure 2 - The four As (Arup, Urban Transport Group, 2022)

- **Spontaneous opinions:** Encourage participants to share their thoughts openly.
- **Tour de table:** Go around the table, allowing each participant to state their priorities.
- **Written rankings:** Ask participants to write down their rankings.
- **Hand-raising:** Have participants raise their hands for the most and least important 'A'.
- **Colored post-its:** Use post-its of different colors to indicate first (green), second (blue), third (pink), and last (yellow) choices.

Discussion: Compare the rankings and discuss any commonalities or glaring differences and explore the reasons behind their choices, understanding what makes one aspect more important than another for different participants.

Roles:

- **Moderator:** Guides the discussion, asks questions, and ensures balanced participation.
- **Assistant:** Collects and organizes opinions, writes them on a board, or arranges post-its as per the participants' inputs.

Materials:

- **Poster with a quadrant (Annex 1):** For visualising the rankings.
- **Poster with descriptions of the four 'A's (Annex 2):** For participants' reference.
- **Post-its:**
 - Green for first choice/highest priority.
 - Blue for second choice.
 - Pink for third choice.
 - Yellow for last choice.

Step 2: Detailing the 'A's

Explain individual elements of each 'A': Provide detailed descriptions of the characteristics within each 'A'.

Invite additional suggestions: Ask participants to suggest other important elements they think should be considered.

Prioritize elements: Have participants write the element they consider most important on a post-it and place it on the board.

Discussion: Compare the choices for each 'A' and discuss any common trends or significant differences. Also, understand the reasons behind participants' selections and how they align with their needs and preferences.

Roles:

- **Moderator:** Leads the discussion and keeps it focused.
- **Assistant:** Collects post-its and organizes them according to the participants' inputs.

Materials:

- **Poster with each 'A' and its characteristics (Annex 3):** For detailed discussions.
- **Post-its:** Green post-its for each participant to write their top priority.

Closure

Conclude the session by asking participants if there is anything they would like to add regarding the increasingly technological and autonomous ways of traveling. Ensure that any aspects not covered during the focus group are addressed, allowing for a comprehensive discussion.

7.3 Detailed programme for Workshop 1

Suggested title: “Are citizens happy with the way they move? Habits, limits and barriers to mobility, and potential solutions”

Timing (minutes)		Topic
Min	Max	
10	20	Welcomes and introductions.
10	20	Institutional speeches (local authority, public transport operators etc...)
10	20	Presentation of SINFONICA and the specific study (task 2.2 – task 3.1-3.4)
40	60	Interactive session 1: mobility habits, limits and real and perceived barriers.
20	30	<i>Comfort break</i>
50	70	Interactive session 2: ideas for a better and more inclusive mobility
10	30	Report from round tables
10	30	Conclusions and way forward
Total		
160	280*	<i>* depending on the length, a lunch break should also be considered.</i>

Interactive session 1: Plenary

Live-poll among participants + discussion.



- ❖ Make participants guess how citizens responded to the interviews and focus groups.
- ❖ Use live-polling methods such as *Mentimeter*⁵ or *Slido*⁶ (or similar) or use any other way you might know to collect individual opinions (e.g., use a paper questionnaires).
- ❖ Compare responses guessed by the participants with the ones resulting from the citizens’ participation (interviews and focus groups).
- ❖ Take only some of the questions from the interviews, as follows:
 - Question A1: what do you think is the means of transport mostly used by the respondents in the city/region (provide the list)?
 - Question B1: what do you think is the main reason behind the transport choices of the respondents (provide the list)?
 - Question C1: according to you, what are the main limitations to transport that the respondent highlighted (provide the list)?
 - Question D3: how much do you think citizens trust technology (provide the list)?

⁵ <https://www.mentimeter.com/features/live-polling>

⁶ <https://www.slido.com/>

- Question D5: how much do citizens care about privacy (provide the list)?

❖ Discuss in plenary around the following topics:

- What is for you the most surprising result from the investigation, and why?
- Do you think the barriers/limitations that came out from the consultation are more perceived (due to fear, self-esteem, trust, etc..) or real (lack of infrastructure, high costs, poor services, etc...)?
- Do you think technology can be an asset to solve local mobility limits and barriers?
- How important is it for you that society is increasingly digital?

Interactive session 2: Parallel Round Tables

Group dialogue among participants organised in parallel round tables.



- ❖ Organise 3 to 5 tables, with max 10 people each.
- ❖ Make participants discuss about ideas for potential solutions using *structured brainstorming techniques*, as follows:
- ❖ Provide 15 minutes for individual answers (post-its) and then discuss them with the rest of the table.
- ❖ According to the answers, write a concise planning of intervention/list of priorities to improve local mobility and making it more inclusive and accessible.

Questions:

- From the point of view of your individual functions, how can you contribute to making mobility more inclusive?
- Besides your own contribution, what else is needed to improve local mobility?

Note to the moderator: check if digitalisation/automation is mentioned among the answers and if not, raise the point.

7.4 Detailed programme for Workshop 2

Suggested title: “How can technology help address mobility challenges? Expectations, desires and concerns in the era of advanced digital and autonomous transportation”

Timing (minutes)		Topics
Min	Max	
10	20	Welcomes and introductions.
10	20	Institutional speeches (local authority, public transport operators etc...)
15	25	Presentation of SINFONICA and the specific study (task 2.2 – task 3.1-3.4) + Results workshop 1
15	25	Keynote speech/ introduction to CCAM: what is it and examples of solutions already available (from the local context/from abroad/both)
60	75	Interactive session 1
20	30	<i>Comfort break</i>
50	70	Interactive session 2
10	30	Report from round tables
10	30	Conclusions and way forward
Total		
200	325*	<i>* depending on the length, a lunch break should also be considered.</i>

Interactive session 1: Plenary

Live-poll among participants + discussion.

- ❖ Make participants guess how citizens responded to the interviews and focus groups.
- ❖ Use live-polling methods such as *Mentimeter*⁷ or *Slido*⁸ (or similar) or use any other way you might know to collect individual opinions (e.g., use a paper questionnaires).
- ❖ Compare responses guessed by the participants with the ones resulting from the citizens’ participation (interviews and focus groups).
- ❖ Take only some of the questions from the interviews, as follows:
 - Question E1: were you aware about the presence of CCAM in your region/city mobility system?
 - Question F2: rank the first three words that best represent your attitude towards CCAM (provide the list from the questionnaire)



⁷ <https://www.mentimeter.com/features/live-polling>

⁸ <https://www.slido.com/>

- Question F7: Can you imagine specific features of autonomous vehicles for certain categories of people with special mobility needs?
- Question F9: For the future digital and automated mobility, how would you prioritise the following characteristics? (provide the list from the questionnaire)

❖ Discuss in plenary around the following topics:

- What result from the investigation surprised you the most, and what makes it so surprising?
- In your opinion, does the emotional feedback from citizens serve as an encouraging, discouraging, or neutral factor in the advancement of automated transport?
- How can we guide technology progress to better fulfil the requirements of mobility?

Interactive session 2: Parallel Round Tables

Group dialogue among participants organised in parallel round tables.



- ❖ Organise 3 to 5 tables, with max 10 people each.
- ❖ 1st round: Facilitate participant discussion on the key factors that could bolster public acceptance of automated transport as a solution to mobility challenges
 - Provide 15 minutes for individual answers (post-its) and then discuss them with the rest of the table.
 - Based on the responses gathered, develop a common *list of benefits* that CCAM can provide to address citizens' future mobility needs.
- ❖ 2^o round: Facilitate participant discussion on the key obstacles that could prevent public acceptance of automated transport as a solution to mobility challenges
 - Based on the responses gathered, develop a common *list of challenges* that CCAM can bring in future mobility.

Note to the moderator: check if *trust, safety & security, transparency* are mentioned in the discussions/list and if not, raise the points.

7.5 Detailed programme for Workshop 3

Suggested title: “Advancing digital and autonomous transport together: Co-defining inclusive, equitable and accessible deployment”

Timing (minutes)		Topics
Min	Max	
10	20	Welcomes and introductions.
10	20	Institutional speeches (local authority, public transport operators etc...)
15	25	Presentation of SINFONICA and the specific study (task 2.2 – task 3.1-3.4) + Results workshop 1 and 2
60	75	Interactive session 1
20	30	<i>Comfort break</i>
60	75	Interactive session 2
10	30	Conclusions and way forward
Total		
185	275*	* depending on the length, a lunch break should also be considered.



The interactive sessions are reversed compared to the previous WSs: the first is organised in parallel round tables, and the second one in plenary

Interactive session 1: Parallel Round Tables

Group dialogue among participants organised in parallel round tables.

Organise 3 to 5 tables, with max 10 people each.

Ensure that table participants represent a good mix of stakeholders.

Exercise: Create your ideal digital and automated transport (CCAM) of the future.

Discussion Points:

- **Present the 4 As and Their Characteristics:** Detail the 4 As (Accessibility, Affordability, Availability, Acceptability) and discuss their attributes.
- **Identify Missing Elements:** Encourage participants to suggest any elements they feel are missing from the current model.
- **Reflect on Mobility Challenges and CCAM Benefits/Obstacles:**
- Recall the mobility challenges identified in the previous workshop (WS1).
- Discuss the benefits and obstacles of Connected, Cooperative, and Automated Mobility (CCAM) from WS2.



- ❖ **Prioritise the characteristics for future CCAM transport based on these insights.**
- ❖ **Specific Group Focus:**
 - Assign each table to focus on one specific group with mobility challenges (e.g., elderly, people with disabilities, women, rural populations).
 - **Discuss** and develop solutions tailored to the needs of the assigned group.
- ❖ **Outcome:** Each table will produce a set of recommendations and priorities for the future of digital and automated transport, focusing on the unique needs of their assigned group.

Interactive session 2: Plenary

Presentation of Results:

- Summarise the key findings from the FG series.
- Report on the outcomes of Interactive Session 1, highlighting the main points from each table.



Plenary Discussion Topics:

- **Surprising Findings:** Question: What result from the investigation surprised you the most, and what makes it so surprising? Encourage participants to share their thoughts and reactions.
- **Feasibility of CCAM Services:** Question: To what extent are the resulting CCAM services feasible from your individual perspectives (considering costs, design, safety conditions, service supply, etc.)? Facilitate a discussion on the practicality and implementation challenges of the proposed services.

Consensus Building:

- **Common CCAM Service:** Question: Can you agree on a common CCAM service which is inclusive, equitable, and accessible for all? Guide the group towards identifying shared priorities and essential elements.
- **Final list of 'Never Without':** Create a final list of non-negotiable features or principles that the CCAM service must include to ensure it meets the needs of all users. **Outcome:** The session will aim to produce a consensus on the most crucial aspects of CCAM services, resulting in a comprehensive and agreed-upon list of requirements that ensure inclusivity, equity, and accessibility.

For more information

SINFONICA Project Coordinator

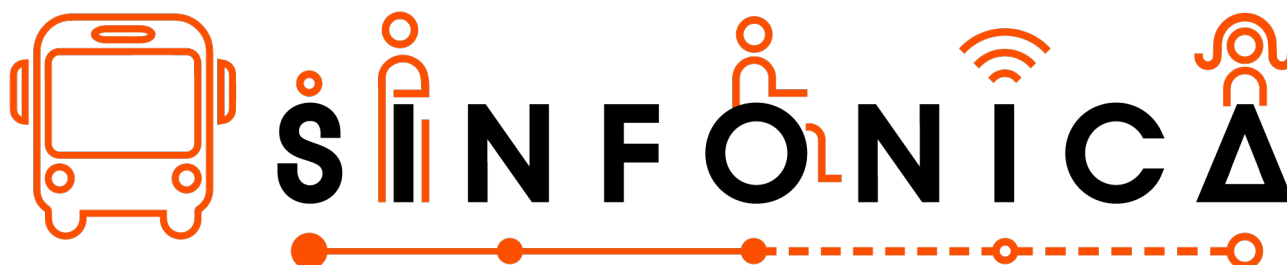
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