



MS3. Creation and organization of Group of Interest

Internal Report on the activities carried out within Work Package 1, T1.4- *Definition of the Research groups and creation of Groups of Interest*

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Executive Summary

This document is a summary of the activities carried out within SINFONICA “WP1-Setting the SINFONICA framework” in relation to “Task 1.4- Definition of the research groups and creation of groups of interest”.

SINFONICA is a project funded under the Horizon Europe program with the aim of developing a functional, efficient, and innovative strategies, methods and tools to engage CCAM users, citizens, providers and other stakeholders. In order to achieve this objective, SINFONICA will develop a participatory approach aimed at supporting the co-creation of activities to assess future potential users’ expectations, desires and concerns toward CCAM.

In this sense, “T1.4- Definition of the research groups and creation of groups of interest” is part of the SINFONICA project with the aim of creating the Groups of Interest and defining the Research Areas.

To this end, the activities of T1.4 concerned the definition of the different categories of people and organizations with the aim of including them in the SINFONICA participatory framework. Specifically, T1.4 made it possible to define different categories of people with mobility challenges, citizens representatives and stakeholders.

In particular, the groups of people with mobility challenges have been identified in the Groups of Interest of Trikala, Hamburg, Noord Brabant and West Midlands, including the Elderly, People with cognitive disabilities, Digital Vulnerable People, Gender-related vulnerable people, Youth, plus different specific categories for each Group of Interest. The latter will be involved in the co-creation process through interviews, which will be conducted in three rounds to gather as much information as possible about their expectations, desires and concerns towards ITS, C-ITS, and AV systems.

As regards the citizens’ representatives, they will be involved in the participatory process through nine Focus Groups, which will be carried out in three rounds. In the first round, citizens will be identified based on age classes in 4 Focus groups, while in the second the focus will be more oriented towards identifying citizens representatives on the basis of wealth level in 3 Focus groups (high-income, medium-income, low-income). Within the third round, citizens will be involved in 2 Focus Groups focusing on transport habits in association with proximity to public transport services and the frequency with which they are used.

Finally, the different categories of stakeholders have been identified among Service Providers, Government, Industry, Non-profit organizations, Universities and Research institutions. They will be involved in the participatory process thanks to the organization of three workshops, that will focus on specific categories of stakeholders among the aforementioned fields.



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Acronyms and abbreviations

Abbreviation	Description
AV	Automated Vehicle
CCAM	Cooperative, Connected and Automated Mobility
C-ITS	Cooperative Intelligent Transport Systems
EU	European Union
Gol	Group of Interest
ICT	Information and Communication Technology
IoT	Internet of Things
ITS	Intelligent Transport Systems
WP	Work Package



1. Introduction

SINFONICA is a project implemented within Horizon Europe program with the aim of developing a functional, efficient, and innovative strategies, methods and tools to engage CCAM users, citizens, providers and other stakeholders. Through the adoption of a participatory approach, SINFONICA will focus on the implementation of a co-creation framework with different objectives.

First, the approach developed in the project aims to define the different potential future users' groups, in order to assess their current needs in a capillary way. For these reasons, within the co-creation framework used in SINFONICA, different categories of people with mobility challenges, citizens and stakeholders have been considered, as well as people and organizations that might have different interests and desires in implementing innovative CCAM solutions.

Secondly, among the different categories of future potential CCAM users, there have been identified those which can be considered as more vulnerable to exclusion, i.e., those who might experience barriers in transport, and comprise different groups, like low-income or unemployed people, elderly, people with disabilities, people who suffer social barriers related to the LGBTQIA+ sphere, young people, or people living in rural areas¹.

The identification of different categories of people and organizations that will be involved in the SINFONICA participatory approach has allowed to deepen the different aspects that might influence the implementation of CCAM solutions, such as Autonomous Vehicles (AV), ITS and C-ITS systems, and IoT technologies among the European transport system. In particular, the adoption of a strong participatory approach will bring a better understanding of the challenges that CCAM implementation will face in the future.

This report aims to assess the progress carried out within SINFONICA "*T1.4- Definition of the research groups and creation of Groups of Interest*", which regarded the activities aimed at defining the groups of people with mobility challenges, their categorization and definition, the stakeholders and the citizens' representatives that will be included in the participatory process. Furthermore, the report analyses the co-creation approach used for creating the Groups of Interest, their characteristics and needs. In particular, the Groups of Interest will be managed by the four realities of Trikala, Hamburg, Noord Brabant, and West Midlands and will include the different categories of people with mobility challenges, citizens and stakeholders that will constitute the potential future CCAM users². Finally, this report provides an overview of the work carried out to define the knowledge baseline for the methods and the channels that will be used in the SINFONICA participatory framework.

¹ Deliverable 1.2 - CCAM vocabulary and stakeholders needs-and requirements for CCAM solutions. Available at: <https://sinfonica.eu/download/#Publications>

² Deliverable 1.2 - CCAM vocabulary and stakeholders needs-and requirements for CCAM solutions. Available at: <https://sinfonica.eu/download/#Publications>



1.1 SINFONICA overview

SINFONICA project is part of Horizon Europe program and is aimed to develop functional, efficient, and innovative strategies, methods and tools to engage CCAM users, providers and other stakeholders. More specifically, the project aims to involve citizens, such as people with mobility challenges, transport operators, public administrations, service providers, researchers, vehicle and technology suppliers, to collect their needs, concerns and desires toward CCAM, and support the development of innovative CCAM solutions in a more cooperative way.

Thus, SINFONICA will support the implementation of knowledge on CCAM in order to co-create final decision support tools for designers and decision makers that will enhance an inclusive, sustainable and equitable deployment of CCAM solutions. SINFONICA's core is represented by the wide community of actors across Europe through which the project's activities will be tested and evaluated, allowing to reuse and empower the knowledge provided by SINFONICA at local level³.

1.2 Purpose of this document

This report aims to describe and deepen the activities carried out in the context of "*T1.4- Definition of the research groups and creation of Groups of Interest*", whose objective is to define the categories of people who will compose the Groups of Interest based in Trikala, Hamburg, West Midlands and Noord Brabant and formulate the Research areas under investigation.

In particular, the creation of the Groups of Interest is part of the participatory approach adopted in SINFONICA, with the aim of understanding in a capillary way the needs, desires and concerns toward CCAM of the different categories of people and organizations, such as people with mobility challenges, citizens and stakeholders, that will constitute the potential future users of CCAM solutions. More specifically, *T1.4* followed a step-by-step co-creation process with the scope of disentangling the various aspects concerning the definition of the Groups of Interest, categorizing the citizens and the organizations in order to identify the ones with major mobility challenges and their needs, on one hand, the stakeholders and citizens representatives that will be involved in the following phases of the SINFONICA participatory framework, on the other.

To this end, *T1.4* analysed the categories of future potential users, and thus made it possible to analyse the characteristics relating to the various groups of people with mobility challenges, citizens and stakeholders in order to provide the tools more suited to the development of CCAM technologies capable of meeting current mobility needs more effectively. Finally, *T1.4* intended to provide the tools necessary to speed up the processes of introducing CCAM technologies, deepening the various aspects concerning the perception of citizens on the use of these technologies in daily life, the risks that can be perceived by users on the use of AV, people's understanding of IoT and IoV technologies and the degree of confidence citizens have in the concrete implementation of the CCAM.

³ For more information, please check: <https://sinfonica.eu/>



1.3 Intended audience

The main target group of this report is all partners and stakeholders involved in the SINFONICA project, with the final aim is to achieve a comprehensive view of the results of the co-creation process followed in *T1.4*. This report intends to provide a common well-defined framework aimed at creating Groups of Interest, to foster the involvement of all representatives of the society to get a comprehensive and concise view of the needs, requirements and priorities related to CCAM, thus providing a strong baseline to other CCAM-related research projects and deployments.

Furthermore, this document is intended to provide a knowledge baseline of the SINFONICA project to all the people and organizations, such as stakeholders, researchers and public administrations that are interested in dealing with CCAM.

Finally, this document is thought for all those who are interested in studying and reproducing the co-creation framework adopted in SINFONICA and who intend to take inspiration for the categorization and segmentation of people with mobility challenges, citizens and stakeholders.

1.4 Structure of the document

In order to provide an in-depth view of the activities carried out under *“T1.4- Definition of the research groups and creation of Groups of Interest”*, the report is structured as follows:

- The first chapter provides overview of the SINFONICA project and the purposes of the report, as well as the audience to whom the document is directed.
- The second chapter is aimed at describing the general framework within which the activities of *T1.4* were developed in the SINFONICA project. In particular, the objectives of SINFONICA and the role of *T1.4* in carrying them out are described. The chapter is divided in two parts, where the first part provides an overview of SINFONICA, its ambition, and the participatory approach adopted to reach the objectives set by the project. The second part provides an overview of *“T1.4-Definition of the research groups and creation of Groups of Interest”*, the objectives of the Task and the approach adopted within the SINFONICA framework.
- The third chapter is dedicated to deepening the co-creation and co-definition approach followed within *“T1.4- Definition of the research groups and creation of Groups of Interest”* and to describing the phases through which this process was concretely applied to define the Groups of Interest and the Research Areas.
- In the fourth and fifth chapters, the groups of people with mobility challenges, the citizens representatives and the stakeholders' users' groups have been defined and the Research areas have been identified.
- The last chapter provides an overview of the results achieved at the end of *“T1.4- Definition of the research groups and creation of Groups of Interest”*.

The report has been structured in accordance with the following scheme:

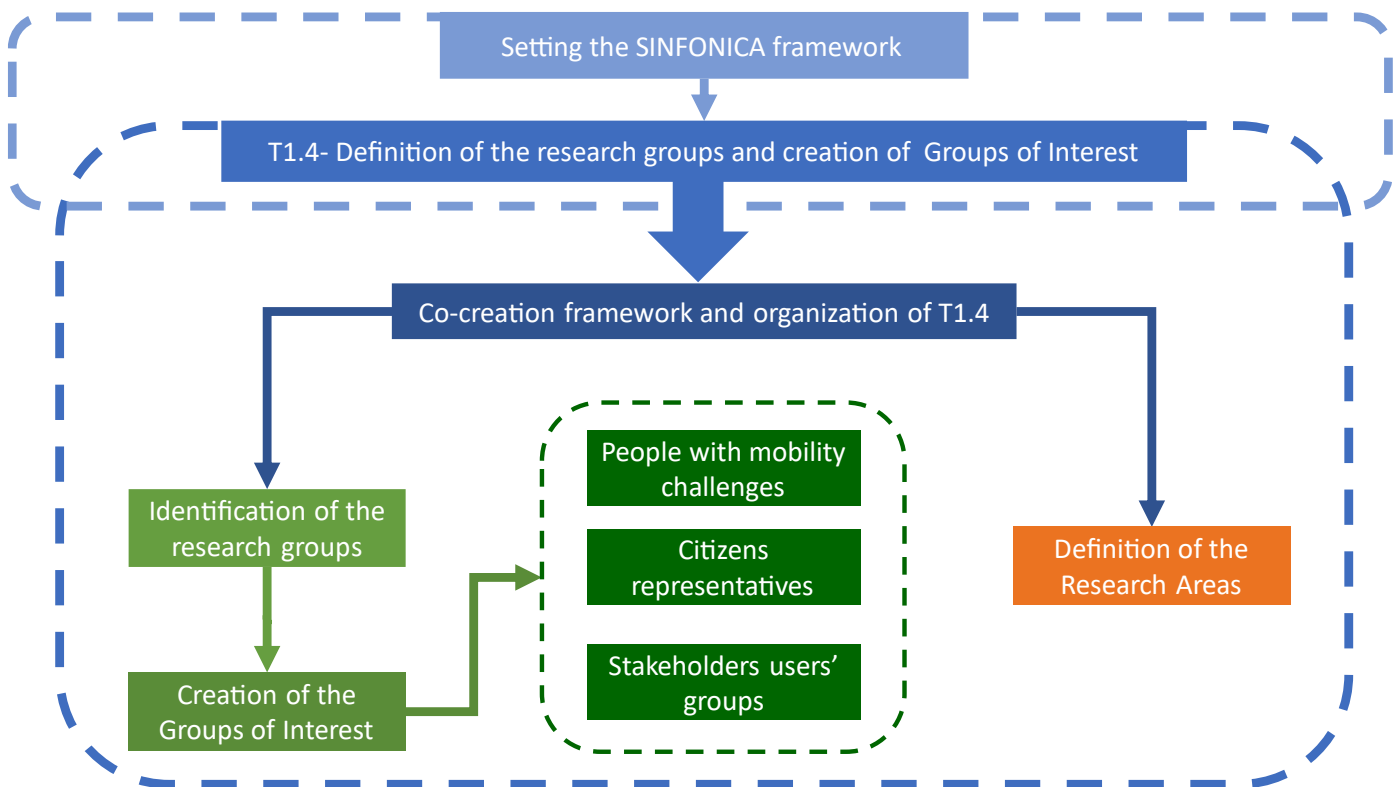


Figure 1. Organization of the activities carried out within “T1.4-Definition of the research groups and creation of the Groups of Interest”.

2. Setting the SINFONICA Framework

SINFONICA has the final ambition to foster the understanding of society, citizens, users and stakeholders enabling improved processes and delivery in demonstration projects and real deployments of CCAM.

For this reason, the SINFONICA framework is based on a participatory approach, where the main activities are carried on by co-creation and co-definition processes between the SINFONICA partners and Gols. The Groups of Interest that will be defined with this process will involve different categories of people with mobility challenges, citizens and stakeholders in four realities across Europe, i.e., the cities of Trikala and Hamburg, the Province of Noord-Brabant, and the metropolitan area of West Midlands.

The composition of each Gol is heterogeneous and reflects the different needs and desires around CCAM, including representatives of public administrations, associations of people with mobility challenges, citizens and various stakeholders. The methodology of co-creation of these groups takes into account the necessity of including all the representatives of the categories identified in the co-creation process, selecting the specific categories in the four different contexts of Trikala, Hamburg, Noord Brabant and West Midlands in order to guarantee different perspectives and points of view



at the geographical level, at the level of digital advancement, at the level of experience and interactions with the CCAMs.

2.1. T1.4 – Definition of the SINFONICA research groups and creation of the Gols

Among the objectives set within the SINFONICA framework, *T1.4* contributed to the definition of a participatory approach to involve and engage citizens and relevant stakeholders in the design and creation of an inclusive C-ITS system. *T1.4* cooperated with the other partners involved in the other WPs and tasks in the co-definition of a multi-stakeholders' strategy aimed at defining the Groups of Interest and the Research Areas, including:

1. The provision of a methodology to identify and map the four Groups of Interest and their characteristics.
2. The identification of the groups of people and organizations that will constitute the Groups of Interest in Trikala, Hamburg, Noord Brabant and West Midlands, including the groups of people with mobility challenges, the citizens representatives and the stakeholders.
3. The creation of a methodology to support the SINFONICA participatory approach, with the aim of involving the different categories of people and organizations identified in *T1.4* in the co-creation framework with the scope of identifying users' needs, desires and concerns toward CCAM.

As part of the SINFONICA Framework, *T1.4* has operated in a complementary way to the other Tasks of "*WP1-Setting the SINFONICA framework*", "*WP2-Shaping the SINFONICA strategy to capture the mobility needs of users (demand side) and CCAM challenges (supply side)*" and "*WP3-Understanding expectations, concerns and desires toward CCAM*" to support the achievement of the sub-goals associated with the latter, including the refinement of the participatory approaches methods, the engagement strategies, the data collection and the evaluation of the whole process.

Within WP1 framework, *T1.4* was aimed to define the categories of citizens, the future users and the stakeholders – with particular attention to people with mobility challenges – that need to be involved in the co-definition and co-creation activities of the project. Furthermore, *T1.4* task force will formulate the Research Questions (RQs) to be indagated through the participatory approach.

Together with "*T1.1-Mobility needs and requirements of European citizens*" and "*T1.2-CCAM vocabulary and stakeholders' needs and requirement for CCAM solutions*", *T1.4* was aimed to provide a unique source of knowledge for the creation of the Groups of Interest and the Research Areas.

The final aim of *T1.4* is to identify the different research groups that will compose the Groups of Interest, including people with mobility challenges, citizens and stakeholders, that are analysed within this Task to better assess the needs and the potential impact of CCAM technologies.



2.2. Objectives and expected results

SINFONICA will foster the development of methods and measures aimed at capturing the mobility needs of the European citizens in the context of economic, social, and environmental objectives at national, regional and local levels, and provide guidance on how to engage with citizens on CCAM solutions.

To achieve this objective, SINFONICA will develop innovative solutions to understand, assess, and evaluate the accessibility and inclusiveness of digital transport solutions in European areas and especially of CCAM. More specifically, within the SINFONICA framework, the gaps and unmet needs around CCAM and C-ITS will be identified, and there will be proposed a wide range of innovative and transferable solutions, including ICT-enabled elements, ensuring accessible, inclusive, and equitable conditions for all and especially people with mobility challenges.

Therefore, *T1.4* has focused on identifying the different groups of users, their characteristics and their needs, to implement the engagement strategies necessary for their involvement in the search for CCAM solutions as much in line with their real needs. This identification process aims to define the groups of people with mobility challenges, which are the most disadvantaged categories and most affected by the existing gaps in terms of inequalities and inclusiveness in CCAM, the citizens and the stakeholders and their expectations toward CCAM. The knowledge base will be used from the different stakeholders via the SINFONICA Knowledge Map Explorer innovative tool to further assess and elaborate on the users' needs.

To this end, *T1.4* aims to achieve the following goals:

1. Definition of users' categories⁴ and creation of Groups of Interest⁵.
2. Identification of the groups of people with mobility challenges and identification of the methods to include them in the SINFONICA participatory approach through interviews.
3. Definition of citizens representatives and creation of Focus groups.
4. Definition of the stakeholders' groups and structuring of workshops.
5. Study of Research areas in the CCAM field.

⁴ With the term "users' categories" we refer to all categories of potential future users of CCAM solutions. This terminology is intended to include people with mobility challenges, citizens and stakeholders, who in this sense are considered potential users.

⁵ By "Groups of Interest" we mean all categories of people and organizations that will contribute to the Sinfonica co-creation process. They include people with mobility challenges, citizens and stakeholders who will be involved in the four realities of Trikala, Hamburg, Noord Brabant and the West Midlands.



3. The co-creation framework according to the literature review

3.1. Literature review

The concept of co-creation as a technical discipline and conceptual framework has been originated in the transformative process of the entrepreneurial world, whose final scope was to support the generation of new products and services implemented by the companies by means of co-design and innovation strategies which involved different categories of actors and stakeholders (Senabre, 2015).

With the evolution of digital communication techniques and the development of new and more efficient engagement strategies, the different players have developed the need to renew their offers, through the involvement of consumers and, in general, of the different players outside of the corporate organization, in order to develop innovative solutions and facilitate the meeting between supply and demand more effectively (De Konig et al., 2016).

The main root of the co-creation concept lies in the participatory approaches used to engage the stakeholders in the decision-making processes. It does not constitute a methodology by itself but, more precisely, it represents a process through which the stakeholders participate in the definition of certain objectives and procedures. Thus, the participatory approach focuses on the involvement of different categories of actors in the decision-making processes, to better define the objectives and the methodologies adopted to reach them (Senabre, 2015).

There's no common definition of the concept of co-creation, which has been often described with other words such as "co-definition" or "co-design", as it has been described in many different applications with a wide range of frameworks (De Konig et al., 2016). However, the vision of the processes falling within the co-creation approach share the common idea that the centre of the concept lies on cooperation between the actors involved, where the participants share their knowledge and experience to achieve a better understanding of all the aspects related to the process.

In the context of "T1.4- Definition of the Research groups and creation of Groups of interest", co-creation is understood as a structured process in which the structure is constituted primarily by the topics, which are treated distinctly in the discussions. The second element of the structure is constituted by the discussions and the temporal frequency with which they are made in the period of completion of the project. Within this structure, the participants provide their contributions based on the different topics developed in the discussions.

The main benefit of co-creation is related to the added value represented by the participants' knowledge, skills, and motivation. Since co-creation is founded on the participation of a wide range of individuals and organizations in the project's implementation, the contributions provided by the different actors with their own experiences and skills become a fundamental resource that can speed up the achievements of the project, by providing different points of view and, thus, giving a more comprehensive vision of the many dimensions faced during the project development.



Therefore, the skills and experience brought by the participants in the co-creation process constitute a resource as a function of the fact that these factors are integrated with each other and create value (Wetter-Edman et al., 2014).

Co-creation techniques presuppose a continuous flow of information exchange between the participants and very accurate planning of the activities in charge of every single actor. The centre of the co-creation process is determined by the working groups and by the interactions that take place between their different components. The need to establish a scheme within which the participants can collaborate to achieve the pre-established objectives sets as a fundamental element for ensuring that the whole group interacts according to common operating rules, to be able to carry out discussions and support processes of collaborative decision-making (Senabre, 2015).

Within the co-creation approach, the key elements through which the work is carried out are set, such as the specific objectives, the steps and the roadmap. Since co-creation works using cooperation between participants as a key concept, there needs to be continuous discussions on the evolution of the work. Each phase of the project evolves following the timetable and is punctuated by the periodic discussions of the working groups. In this sense, not all discussion phases presuppose the presence of all members, but at the same time it is necessary that everyone is updated on the progress of the project and the sub-tasks set at each meeting. The different stages of carrying out the co-creation process are not fixed but can vary and adapt to different contexts and to the project, but they have in common the existence of an organization around which the tasks due to each actor are divided⁶.

3.2. From theory to practice

In the framework of the SINFONICA project, *T1.4* followed a co-creation approach for the creation of the Groups of Interest, including the definition of people with mobility challenges, citizens representatives and stakeholders, and the study of the Research areas to be implemented in the subsequent phases of the engagement.

T1.4 was organized in periodic meetings that were held on a monthly basis, during which the aspects related to the creation of the Groups of Interest and the Research Areas were addressed.

The monthly meetings carried out within *T1.4* constitute the concretization of the step-by-step approach through which the co-creation framework has been structured. Through the different discussions carried out in the monthly meetings, the steps that led to the definition of the Groups of Interest have been made, in a process that can be resumed as follows:

⁶ Cue Insights. 5 keys to successful co-creation. Available at: <https://www.cueinsights.com/wp-content/uploads/2019/06/Cue-Insights-Co-creation-White-Paper.pdf>

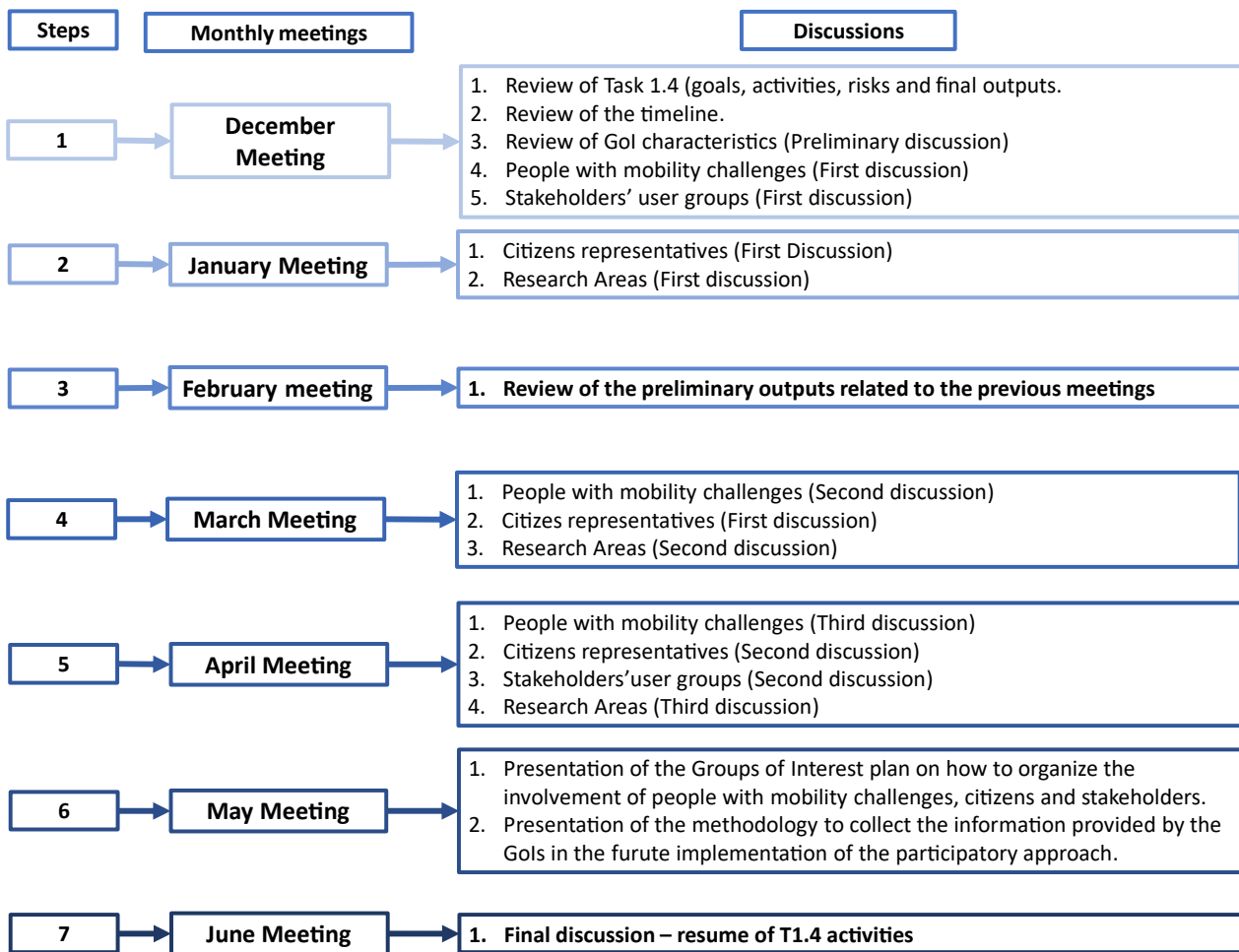


Figure 2. Schematization of the step-by-step process followed in the T1.4 co-creation framework.

The different phases of the process were marked by seven steps, one for each discussion carried out in the monthly meetings. In each of these phases, the co-definition process was implemented through the contributions provided by the partners directly involved in the definition of the Gols, such as Trikala, Hamburg, Noord Brabant and West Midland, and the other partners involved in the SINFONICA project. The following table provides an overview of the contributions given by the different partners involved:

Table 1. Partners' contributions to the co-creation framework developed within T1.4.

Short Name	Contributions to T1.4
<p>TUD</p>	<p>Short description of the partner: As one of the academic partners in SINFONICA, TUD with its Chair of Traffic and Transportation Psychology has relevant skills in survey design, traffic psychology, and empirical social research. TUD has strong skills in conducting EU and national projects attempting to address user needs and experiences with new mobility solutions like automated vehicles, micro-mobility, and connected vehicles. From a scientific perspective, high-quality articles in international journals are provided by the Chair of Traffic and Transport Psychology of TUD.</p> <p>Contribution to T1.4: With regard to “<i>WP2-Shaping the SINFONICA strategy to capture the mobility needs of users (demand side) and CCAM challenges (supply side)</i>”, TUD made sure to structure the Research areas and research questions being developed in T1.4 as a basis for the design and implementation of the EU-wide survey related to “<i>T2.3-Surveys on the user factors that affect the future deployment of CCAM</i>”. In addition, TUD as work package leader of WP1 monitored the activities of T1.4.</p>
<p>ICCS</p>	<p>Short description of the partner: The Institute of Communication and Computer Systems (ICCS) of the National Technical University of Athens (NTUA) is one of the academic partners of the SINFONICA project. ICCS's aim is to promote the Research and Development in several different research disciplines, including Intelligent Transport Systems (ITS) and Cooperative, Connected, and Automated Mobility (CCAM). ICCS is committed to the highest standards of academic excellence and research innovation, being involved in a great number of EU funded and National research projects and producing outstanding research results.</p> <p>Contribution to T1.4: ICCS monitored T1.4 activities and participated in the co-definition of a multi-stakeholder strategy. Based on the outputs of “<i>T1.2- CCAM vocabulary and stakeholders' needs and requirement for CCAM solutions</i>”, ICCS contributed to the identification of the different categories of stakeholders that will compose the research groups to be involved in the SINFONICA's participatory processes and provided insights concerning the data collection strategy.</p>

Short Name	Contributions to T1.4
<p>UNIMORE</p>	<p>Short description of the partner: As an academic partner, UNIMORE has taken part in several initiatives concerning CCAM and automated mobility, providing its knowledge in the research of methodologies for assessing the needs, concerns and desires toward CCAM. UNIMORE has a consolidated experience in the management and the conduction of European projects in relation to the development of innovative solutions for CCAM, automated and connected vehicles, IoT, micro-mobility and data-sharing.</p> <p>Contribution to T1.4: In <i>T1.4</i>, UNIMORE carried on the activities coordination between the actors involved in the following activities:</p> <ul style="list-style-type: none"> • Definition of the research groups and the creation of the Groups of Interest. • Definition of the stakeholders’ user groups and people with mobility challenges. • Formulation of the Research areas under investigation. <p>Together with the other partners involved, UNIMORE had an active role in setting the SINFONICA framework by providing the necessary knowledge in the co-definition and co-creation activities aimed at identifying the different categories of stakeholders that will compose the research groups. Furthermore, UNIMORE provided its contribution in the process of co-definition of the stakeholders’ categories which will form the groups of people with mobility challenges, collaborating with the Groups of Interest involved in the SINFONICA project in the definition of specific categories of people with mobility challenges to be added.</p>
<p>ARRIVA</p>	<p>Short description of the partner: ARRIVA is an expert fleet operator and major service provider. Arriva is one of the largest regional public transport operators of the Netherlands. ARRIVA provides city and regional bus transport in 8 Dutch concessions and operates 4 regional train connections through all parts of the Netherlands. With a fleet of 1.500 buses with almost 200 electric buses, Arriva operates local, regional and long-distance services.</p> <p>Contribution to T1.4: In <i>T1.4</i> Arriva has worked closely with the North Brabant Gol including N-Brabant as a partner. Accordingly, ARRIVA contributed to a couple of areas:</p> <ul style="list-style-type: none"> • Co-creation of the definition of the research groups and Groups of Interest. • Co-creation of the Research areas. • Definition of vulnerable research groups. • Define the associations and stakeholders that will be engaged in the interviews, Focus groups and workshops.

Short Name	Contributions to T1.4
<p>RELAB</p>	<p>Short description of the partner: RE:LAB is a leading SME in the field of Human-Machine Interfaces (HMIs) design and development. Particularly active in the automotive and transport sectors, its expertise includes a heterogenous set of skills, ranging from User experience and User interaction, ergonomics and Human Factors to cognitive psychology. RE:LAB has been participating for years in EU-funded research projects and in SINFONICA will manage the communication and dissemination activities, the development of the user engagement strategies and methodologies and the development of the tool named Knowledge Map Explorer.</p> <p>Contribution to T1.4: as responsible for “T2.1- Stakeholders’ engagement strategies”, RE:LAB participated and supported in the selection and definition of the categories of the research groups to be involved in the data collection activities in the territories of the Groups of Interest.</p>
<p>N-Brabant</p>	<p>Short description of the partner: The Province of Noord-Brabant has a wide variety of instruments and network-organisations to consult, include and involve citizens, passengers and commuters in development, monitoring and implementation of policy, new services, smart mobility innovations, traffic management, performance of public transport etc. Some of them are owned and operated by the regional authority and others are independent citizens organisations 100% funded by the province. The Noord-Brabant group of interest will be the liaison with the Methods and tools for Comprehensive impact assessment of the CCAM solutions for passengers and goods (Move2CCAM) project (Horizon-CL5-2021-D6-01-05 – Area A). This connection will allow SINFONICA and Move2CCAM to enrich expertise and knowledge and to have a more decisive resonance in taking a step forward towards understanding the needs and impacts related to the world of CCAMs.</p> <p>Contribution to T1.4:</p> <ul style="list-style-type: none"> • Co-creation of the definition of the research groups and Groups of Interest. • Co-creation of the Research Areas. • Definition of the associations and stakeholders that will be engaged in the interviews, Focus groups and workshops.

Short Name	Contributions to T1.4
<p>TfWM</p>	<p>Short description of the partner: Transport for West Midlands (TfWM) is part of the West Midlands Combined Authority. West Midlands works with bus and train operators to make sure that public transport is:</p> <ul style="list-style-type: none"> • Safe. • Reliable. • Affordable. • Accessible for everyone. <p>West Midlands owns and runs West Midlands Metro, which is the region’s tram service. West Midlands also runs the Swift smartcard. This flexible, cashless ticket is the most used outside London.</p> <p>Contribution to T1.4: As one of the pilot regions Transport for West Midlands will conduct interviews, Focus groups and workshops. The contributions regarding the creation and organization of the Groups of Interests are:</p> <ul style="list-style-type: none"> • Co-creation and definition of the research groups and the Groups of Interest. • Identification of the main contact points and possibilities for participation in West Midlands. • Co-design of the Research areas on which the questions in the interviews, Focus groups, and workshops are based.

Short Name	Contributions to T1.4
<p>E-TRIKALA</p>	<p>Short description of the partner: E-TRIKALA is a Municipal Developmental company operating in collaboration with Trikala Municipality since 2004. By creating infrastructure and by providing services, e-Trikala continuously aims to the development of Information and Communication Technology (ICT) based applications, oriented to the improvement of all citizens' everyday life, in a medium sized city, simplifying public transactions, reducing telecommunication costs and delivering new services related to the local way of life. Moreover, these ICT applications offer new ways and methods that enable citizens participate on policy-making, while in parallel establish local Government and Public Authorities as guarantors of local society's every day proper, digital and distanced operation. The city of Trikala is one of the 100 EU cities and one of the 6 Greek municipalities chosen by the EU to be part of the Climate Neutral and Smart Cities' mission. CCAM is an essential part of the future transport development of the city of Trikala. In this context, the city of Trikala will be in liaison with the SHOW and In2CCAM projects that demonstrates autonomous vehicles' integration into the transport system. Trikala will showcase the operation of automated shuttles fleet DRT service to serve a specific line with the focus on active users working in the city centre, and on vulnerable user groups (elderly, low-income, immigrants), connecting them with the intercity train station, the festival area of Matsopoulos Park and the city centre.</p> <p>Contribution to T1.4: E-TRIKALA is one of the cities that will conduct all major activities e.g., interviews, Focus groups and workshops. E-TRIKALA contribution in T1.4 has focused on:</p> <ul style="list-style-type: none"> • Co-creation and definition of the Groups of Interest, Research groups, their characteristics, contact information and engagement methodology. • After identifying the Groups of Interest, E-TRIKALA will design the tools and methods to engage each group and will also identify the connection/dynamic among the different groups that will be involved in all activities.

Short Name	Contributions to T1.4
<p>FHH</p>	<p>Short description of the partner: The city of Hamburg is one of the pilot cities in the SINFONICA project. As Germany's second-largest city, Hamburg deals with many mobility issues – particularly regarding public transport, conducts tests of traffic technology and functions together with stakeholders on its own test track for automated and connected driving in the city area and is involved in many national and international ITS projects.</p> <p>The city of Hamburg has good contacts with technical CCAM stakeholders and various citizen groups that will be contacted for WP3. Furthermore, the city of Hamburg contributes insights from the public administration perspective in the project.</p> <p>Contribution to T1.4:</p> <p>As one of the pilot cities, Hamburg will conduct interviews, Focus groups and workshops. The contributions regarding the creation and organization of the Groups of Interests are:</p> <ul style="list-style-type: none"> • Co-creation and definition of the research groups and the Groups of Interest. • Identification of the main contact points and possibilities for participation in Hamburg. • Co-design of the Research areas on which the questions in the interviews, Focus groups, and workshops are based.
<p>ISINNOVA</p>	<p>Short description of the partner:</p> <p>ISINNOVA is an Italian private research and consulting company supporting public bodies for the analysis, the design, the implementation and the evaluation of sustainable policies in the fields of transport and mobility, urban planning, energy, and knowledge society. Through the participation in over 100 EU funded projects, ISINNOVA became a partner of choice for administrations and bodies who want to maximize the results of activities and projects, reaching out to different target groups involving key stakeholders at local, national and international level. ISINNOVA can facilitate exchanges with relevant players by organising conferences, workshops, surveys, or ad-hoc working groups and discussions.</p> <p>Contribution to T1.4:</p> <p>ISINNOVA contributed to the definition of the research groups with a view to their involvement in the participatory activities organised by WP2.</p> <p>ISINNOVA is, in fact, the leader of WP2 and responsible for “T2.2-Participatory methods to capture mobility needs and future expectations from CCAM”, where the guidelines for the involvement of users and stakeholders specified in T1.4 are formulated. ISINNOVA thus contributed to defining the type (interviews, Focus groups and workshops) and quantity of participatory activities to be organised across the SINFONICA three data collection rounds involving the pre-defined research groups.</p>

During the discussions carried out within the co-creation framework developed in *T1.4*, the different topics were divided considering the objectives of the task, with reference to the following ones:

1. Definition of the people with mobility challenges.
2. Identification of the citizens' representatives.
3. Definition of the stakeholders' users' groups.
4. Definition of the Research areas.

Through the deepening of these topics, it was possible to structure the various aspects concerning the creation of the Groups of Interest in a homogeneous way.

4. Organization of T1.4

4.1. Definition of the Groups of people with mobility challenges

The starting point for the definition the categories of people with mobility challenges concerned a careful analysis of the literature and existing gaps in the CCAM field carried out in "*T1.1-Mobility needs and requirements of European citizens*" and in "*T1.2- CCAM vocabulary and stakeholders' needs and requirement for CCAM solutions*". This base of knowledge allowed to define several categories of people with mobility challenges to be involved in the participatory process. Thus, within the co-creation framework developed in *T1.4*, each GoI identified both the groups of people with mobility challenges to be involved in accordance with their priorities, associating the potential categories with a level of priority among the following ones:

1. High priority.
2. Potential priority.
3. No priority.

Based on the knowledge provided in these activities, the groups of people with mobility challenges have been identified among the different categories of potential future users. According to the definition of people with mobility challenges identified in "*T1.1-Mobility needs and requirements of European citizens*" the latter are described as "*Physically, mentally, or socially disadvantaged persons who may be unable to meet their basic needs and may therefore require specific assistance. Persons exposed to and/or displaced by conflict or natural hazards may also be considered as having mobility challenges. People with mobility challenges may experience a higher risk of poverty and/or social exclusion*"⁷.

Within this conceptual framework, five categories of people with mobility challenges have been identified and they have been included in all the GoIs, in accordance with the following definitions:

⁷ Deliverable 1.1 - Mobility needs and requirements of European citizens. Available at: <https://sinfonica.eu/download/#Publications>

1. **Elderly.** The elderly population is defined as people aged 65 and over. Moreover, elderly population is particularly vulnerable to loneliness and social isolation which in turn can have a serious effect on health (high blood pressure, heart disease, obesity, a weakened immune system, anxiety, depression, cognitive decline, Alzheimer's disease, and even death). Barriers in transport can improve social isolation and loneliness⁸. *Gender balance should always be considered.*
2. **People with cognitive disabilities.** People with cognitive disabilities are regarded as individuals with impairments in intellectual functioning (reasoning, problem-solving, planning, abstract thinking, judgment, academic learning, and learning from experience) and adaptive behaviour (conforming to developmental and sociocultural standards for the individual's independence and ability to meet their social responsibility). We adopt a broad definition of cognitive disabilities by considering intellectual disabilities that are developed during childhood and cognitive impairments due to traumatic brain injuries, Alzheimer's disease, and other dementias in addition to conditions such as stroke. People with cognitive disabilities are part of the groups of people with mobility challenges, experiencing barriers in transport⁹. *Gender balance should always be considered.*
3. **Digital Vulnerable People.** Digital vulnerable people do not have access/do not want to have access/have difficulties to deal with information and communication technology. These forms are primarily computers, smartphones and the Internet. *Gender balance should always be considered.*
4. **Gender-related vulnerabilities.** Gender-based violence, harassment, and a general feeling of being unsafe largely affect peoples' mobility patterns. To guarantee high-quality, accessible, and affordable public transport for all, a gender-sensitive approach to transport policy is necessary. Within this category, we ideally aim to involve women, men, transgender, cisgender, non-binary, agender, gender non-conforming, gender fluid, genderqueer and, in general, LGBTAI+Q representatives. *Gender balance should always be considered.*
5. **Youth.** The United Nations, for statistical purposes, defines youth as those persons between the ages of 15 and 24 years old, without prejudice to others. Youth is best understood as a period of transition from the dependence of childhood to adulthood's independence. That's why, as a category, youth is more fluid than other fixed age groups. Yet, age is the easiest way to define this group, particularly in relation to education and employment, because 'youth' is often referred to a person between the ages of leaving compulsory education and finding their first job¹⁰. We include in this group all those people between 18 and 24. *Gender balance should always be considered.*

⁸ National Institute of Aging -NIA (2019), "Social isolation, loneliness in older people pose health risks". Available at: <https://www.nia.nih.gov/news/social-isolation-loneliness-older-people-pose-health-risks>

⁹ American Psychiatric Association (2022), "Diagnostic and statistical manual of mental disorders" (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>

¹⁰ United Nations. Definition of Youth. Available at: <https://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-definition.pdf>

Besides the five aforementioned categories, at least two additional categories of people with mobility challenges have been identified for each GoI, according to its specific characteristics and needs. The following table shows the categories associated with each Group of Interest:

Table 2. Definition of the groups of people with mobility challenges identified for each GoI in accordance with their specific needs and characteristics.

Group of Interest	Additional groups of people with mobility challenges identified in each GoI	Definition
Trikala	People living in rural areas	People of any gender or age that reside at the periphery of the city or in villages near the city and need to use their car, motorbike and public transportation to commute on a daily base to the city and back. Trikala aims to involve this group of the population, which is currently underserved by the public transportation system and is considered vulnerable in terms of accessibility. Gender balance should always be considered. Age shouldn't be a discriminating factor.
	University students/Young people	A student is someone who is enrolled in a degree-granting program (either undergraduate or graduate) at an institution of higher learning and registered full-time according to the definition of his/her respective academic institution, and who is not employed full-time ¹¹ . Trikala aims to involve students enrolled in bachelor's or master's degree. In addition, based on Eurostat young people are defined as being between 15 and 29 years old. Young people may experience age discrimination by being passed over for working opportunities or being remunerated lower wages. Multiple mobility patterns and transportation challenges have been identified in young people (including children as well) - so that they have proper access to education, health, social activities, participation, digital world and social inclusion. Gender balance should always be considered. Age shouldn't be a discriminating factor.

¹¹ International Associations for Energy Economics (IAEE), "Student definition". Available at: <https://www.iaee.org/en/students/definition.aspx>

Group of Interest	Additional groups of people with mobility challenges identified in each Gol	Definition
Hamburg	Cyclist associations	Cyclists are considered vulnerable road users ¹² . Within this category, Hamburg aims to involve people through cyclists’ associations, considering both people that are using bikes daily and people that are using bikes just on special occasions. Gender balance should always be considered. Age shouldn’t be a discriminating factor.
	People with physical disabilities	Physical disability indicates any “ <i>limitation on a person’s physical functioning, mobility, dexterity or stamina</i> ” that has a 'substantial' and 'long-term' negative effect on an individual’s ability to do normal daily activities. The causes of this kind of disease are various. Any person can acquire it through accident, injury, illness post-surgery effects and heredity. There are different forms of physical impairments: physical disabilities (for example: damage to the skeletal system, amputation or muscle system disease), hearing impairment (deafness and hearing loss), visual impairment (blindness and visual impairment), and speech impediment (voice, speaking). Gender balance should always be considered. ¹³

¹² According to the vocabulary presented in D1.2, vulnerable road users can be defined as “any roadway user not in a motorized vehicle capable of operating at the posted speed for the roadway in question, and also any roadway user in a vehicle not designed to encase (and thus protect) its occupants. This includes pedestrians, cyclists, wheelchair users, two-wheeled scooter micro-mobility users, as well as powered scooters and motorcycles” (Giannakos, L., Antonakopoulou, A., 2023).

¹³ Legislation.gov.uk, “Equality Act 2010”. Available at: <https://www.legislation.gov.uk/ukpga/2010/15/section/6>

Group of Interest	Additional groups of people with mobility challenges identified in each GoI	Definition
Noord Brabant	Migrants	<p>An umbrella term, not defined under international law, reflecting the common lay understanding of a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students¹⁴. Gender balanced should always be considered. Age shouldn't be a discriminating factor.</p>
	Single parents' families	<p>A single parent is someone who is unmarried, widowed, or divorced and not remarried and has one or more children. The single-parent household can be headed by a mother, a father, a grandparent, an uncle, or aunt¹⁵. Gender balanced should always be considered. The age shouldn't be a discriminating factor, but a parent who is still looking after his/her children must be considered.</p>
	People living in rural areas	<p>People of any gender or age that reside in a rural area. A rural area is everything but an urban area. An urban area in the Netherlands is defined as an area with at least 1500 addresses per square kilometre. Concepts that are included in a rural area are countryside, villages and hamlets. People living in a rural area often face large distances between home, work, schools, shops and services, and are generally heavily dependent on their car, motorbike and public transportation in order to commute or travel. Gender balance should always be considered.</p>

¹⁴ International Associations of Migrations (IOM), "Definition of Migrant". Available at: <https://www.iom.int/who-migrant-0>

¹⁵ Psychology Today, "Single Parent Family". Available at: <https://www.psychologytoday.com/intl/basics/family-dynamics/single-parent-family>

Group of Interest	Additional groups of people with mobility challenges identified in each Gol	Definition
West Midlands	People with physical disabilities	Physical disability indicates any “ <i>limitation on a person's physical functioning, mobility, dexterity or stamina</i> ” that has a 'substantial' and 'long-term' negative effect on an individual’s ability to do normal daily activities. The causes of this kind of disease are various. Any person can acquire it through accident, injury, illness post-surgery effects and heredity. Some examples of physical disability are cerebral palsy, spinal cord injuries, amputation, spina bifida, Duchenne muscular dystrophy, birth trauma and prematurity ¹⁶ . Gender balance should always be considered.
	Low-income people	Someone who is experiencing financial hardship due to a lack of sufficient income from employment. This could include individuals who are working but not earning enough to cover their basic needs, as well as those who are currently unemployed or underemployed (meaning they are working fewer hours than they would like or are qualified for). The UK Government reports regularly on income levels. Households are classed as being low income if they live on less than 60% of the average (median) net disposable equivalized UK household income. Ethnicity is a consideration as between April 2008 and March 2020, people in Pakistani and Bangladeshi households were consistently the most likely out of all ethnic groups to live in low-income households, before and after housing costs, whilst people in White British households were consistently the least likely to live in low-income households.

¹⁶ Legislation.gov.uk, “Equality Act 2010”. Available at: <https://www.legislation.gov.uk/ukpga/2010/15/section/6>

After defining the categories of people with mobility challenges, the second step concerned the organization of the subsequent phases of the participatory approach and the ways through which the information will be collected. To this end, three rounds of involvement have been defined, which have been distributed as follows:

1. The First Round will be held between September and November 2023, for a period of three months.
2. The Second Round will be held between January and February 2024, for a period of two months.
3. The third Round will be held between April and May 2024 for a total period of two months.

During these three rounds, the categories of people with mobility challenges defined above will be involved by means of interviews aimed at assessing people needs, desires and concerns toward CCAM. More specifically, a total of 290 interviews among the four Gols will be conducted, which will be distributed according to what is shown in the table below:

Table 3. Distribution of the interviews in the assessment of the groups of people with mobility challenges during the rounds of engagement.

Round	Number of interviews	Gol	Total interviews
1st Round (September- November 2023)	5 interviews for each group of people with mobility challenges.	Trikala	35
		Hamburg	35
		Noord Brabant	40
		West Midlands	35
2nd Round (January-February 2024)	3 interviews for each group of people with mobility challenges.	Trikala	21
		Hamburg	21
		Noord Brabant	24
		West Midlands	21
3rd Round (April- May 2024)	2 interviews for each group of people with mobility challenges.	Trikala	14
		Hamburg	14
		Noord Brabant	16
		West Midlands	14
		Total interviews	290



4.2. Categorization of citizens

Given the co-creation framework adopted to study the possible CCAM solutions and IoT technologies in the transport sector in a more effective and capillary way, the steps that led to the definition of the various categories of users were aimed at studying the best possible participatory approach of the potential future CCAM users. Thus, the following steps focused on identifying the citizens' representatives (people, private or public organizations, etc.) which will constitute part of the core through which the Groups of Interest have been defined.

From the literature review on citizens' participation, it emerged that there's not a common citizens categorization, whereas each study is usually deciding a specific division according to the scope of the research.

Therefore, it was decided to proceed considering socio-economic characteristic and, more specifically, to divide the stakeholders into five age classes, in accordance with the objectives defined during the first discussion, respectively:

1. 18-25 years old.
2. 26-35 years old.
3. 35-45 years old.
4. 46-65 years old.
5. +66 years old.

Within these groups thus defined, Trikala, Hamburg, Noord Brabant and West Midlands contributed to the process of definition of the citizens representatives, such as school representatives for the 18-25 age class, retirement associations for +66 class etc, which will be involved in the creation of the Groups of Interest.

Secondly, the citizens have been analysed in relation to the levels of income, thus classifying them into three sets as follows:

1. Low-income.
2. Medium-income.
3. High-income.

These two criteria of analysis have been incorporated, to have a clearer vision of the stakeholders' habits in relation to the levels of wealth. The process of data collection will be conducted allowing the Groups of Interest to assess the levels of income or mobility habits in relation to the characteristics of each Gols. More specifically, each Gol decides what criterion can be preferable to its characteristics and needs and adapts the methodology of assessment by using the selected one including the second¹⁷.

¹⁷ This choice was made considering the heterogeneity in wealth levels and mobility habits between the various European Union countries. In this sense, each of the realities considered has different levels of wealth. For more information, please check <https://ec.europa.eu/eurostat/web/income-and-living-conditions> and <https://ec.europa.eu/eurostat/web/products-interactive-publications/-/ks-02-20-634>

Finally, the last criterion of analysis has regarded the travel frequency and access to public transport, to have a comprehensive view of the stakeholders’ opinions and experiences. More specifically, the stakeholders have been divided in two sub-groups, which distinguished between:

1. People with easy access to public transport.
2. People living far from public transport stops.

In particular, the first sub-group of citizens associated with those living in the city centre or highly serviced areas of the city, whose frequency in public transport usage is higher with respect to those living far from the centre or from the transport services and who therefore are associated with lower levels in public transport usage.

This multi-vision framework resulting from the co-creation process will constitute the basis for the data-collection phase, allowing to classify the information about stakeholders’ needs and habits in a more capillary way.

Alongside the strategies aimed at involving the groups of people with mobility challenges, the participatory process established in SINFONICA will provide for the involvement of citizens' representatives to implement the knowledge of users’ needs, concerns and expectations. This involvement will include the creation of Focus groups, which will be carried out during the three rounds of engagement, in accordance with the guidelines provided by WP2. More specifically, the Focus groups will be performed as follows:

Table 4. Composition of the Focus groups in the three rounds of engagement.

Round	Focus groups
1st Round (September -November 2023)	4 Focus groups:
	<ol style="list-style-type: none"> 1. 6-10 people between 26 and 35 years old. 2. 6-10 people between 36 and 45 years old. 3. 6-10 people between 46 and 65 years old. 4. 6-10 people + 66 years old.
2nd Round (January- February 2024)	3 Focus groups:
	<ol style="list-style-type: none"> 1. 6-10 people with low income. 2. 6-10 people with medium income. 3. 6-10 people with high income.

Round	Focus groups
3 rd Round (April-May 2024)	2 Focus groups:
	<ol 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.

To have a clearer vision of the process that will bring to the implementation of the Focus groups, the phases described so far can be summarized in the following scheme:

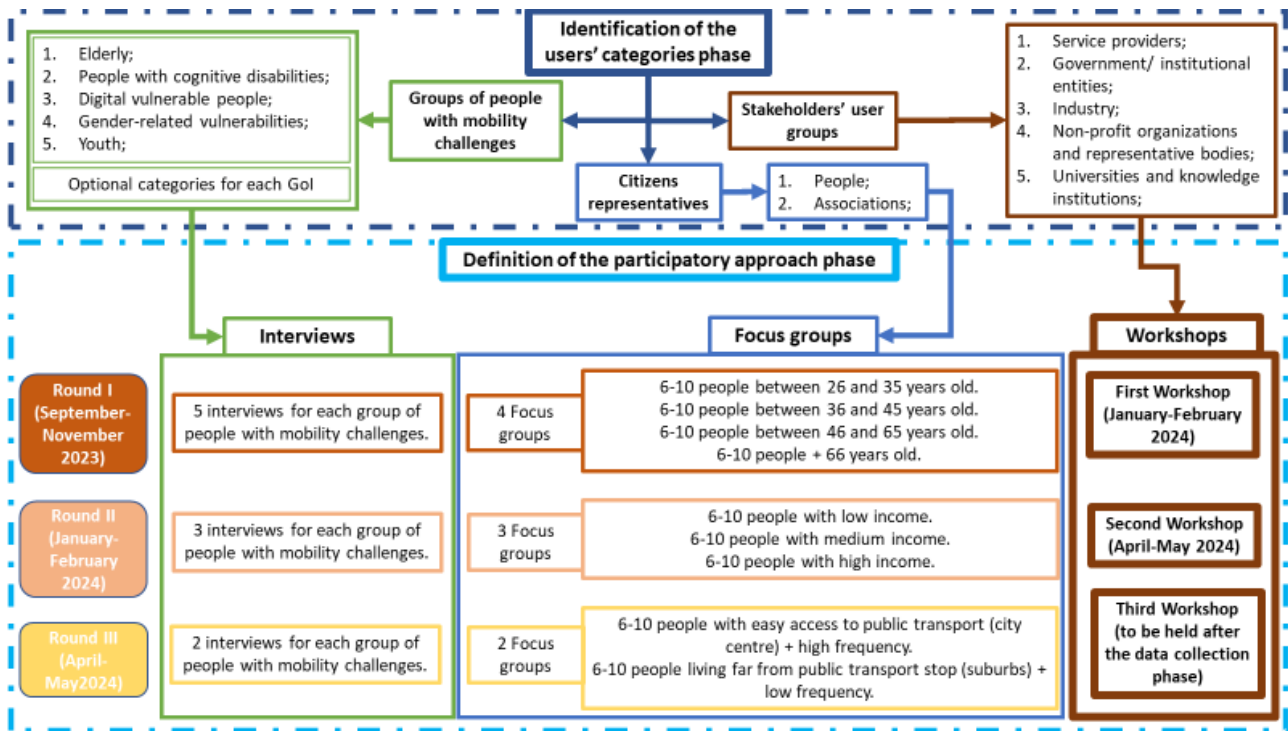


Figure 3. Conceptual scheme of the co-creation process leading to the definition of the T1.4 participatory approach to be implemented in the engagement phase.



4.3. Identification of the stakeholders' users' groups

Within the co-creation framework developed in *T1.4*, the stakeholders' user groups have been divided into five categories, each consisting of specific groups of people, companies, public entities and bodies, and associations, whose needs, desires and concerns toward CCAM will be assessed during the phase of engagement. More specifically, the stakeholders' user groups have been classified as follows:

1. **Service providers.** This category includes all the public and private organizations which operate in the provision of services in logistics and transport sector, such as mobility and road services providers, ride hauling companies, decision makers and assets owners, and insurance companies.
2. **Government/ institutional entities.** This group identifies the public institutions, i.e., the policymakers, mobility and transport operators and emergency responders. It includes the road and transport authorities, the territorial institutions such as Member States, Regions and Municipalities, and public entities operating in road infrastructure management and road safety.
3. **Industry.** This category includes those actors operating in the provision of products, digital and communication services, such as automotive manufacturers and suppliers, telecom and mobile networks operators, data management and cloud providers, ITS solutions and AI providers.
4. **Non-profit organizations and representative bodies.** Within this group, several types of organizations are considered. It broadly includes people and associations which are related to mobility or might have interests in dealing with CCAM aspects, such as cyclists and automobile associations, consumers and trade associations etc.
5. **Universities and knowledge institutions.** This category is constituted by the academic actors, such as universities, research entities and people experts in the logistics, transport and mobility fields, which can enrich the participation process by providing several ideas and feedbacks concerning CCAM aspects.

Furthermore, the stakeholders' involvement in the SINFONICA framework will focus on the implementation of workshops to enrich the engagement strategies and further improve the data collection process. During the discussions held within the co-creation framework, there have been defined three workshops that will be carried out, respectively, in the second and third Round of data collection, and after the completion of the surveys. In particular, the three workshop will focus on different topics, divided as follows:

- The first workshop will develop a critical analysis of the mobility of the present times, discussing the findings of the Focus groups and the semi-structured interviews. This step will allow to identify barriers and potential solutions for the CCAM implementation.
- The second workshop is aimed at investigating on the CCAM potential to meet mobility needs, discussing expectations, desires and concerns.
- The third workshop will focus on co-definition of the requirements for an inclusive, equitable and accessible CCAM deployment. This step will consider the needs of the users, while

considering the abilities and constraints that industry stakeholders (developers, operators and service providers) and policy makers face.

During the three workshops, several stakeholders' categories will be involved in the co-definition process, whereas each category will be involved in a specific step of the workshops in accordance with the topics discussed. More specifically, there have been identified several mandatory stakeholders' categories to be involved in each workshop, plus one optional category for each Gol. The identification of the stakeholders' categories can be resumed as follows:

Table 5. Composition of the workshops that will be implemented during the engagement phase.

1 st workshop (January-February 2024)	Number of participants	Mandatory categories	Optional categories
	20-30	Service providers	
		<ol style="list-style-type: none"> 1. Public Transport operators. 2. Mobility providers. 3. Private ride hauling companies. 	At least one among: <ol style="list-style-type: none"> 1. Toll road operators. 2. Insurance companies. 3. Road maintenance providers. 4. Roadside assistance. 5. Infrastructure managers (decision makers and assets owners).
		Government	
		<ol style="list-style-type: none"> 1. Transport Authorities. 2. Road Authorities (Public bodies). 3. Infrastructure managers. 4. Municipalities/Cities/Regions. 	<ol style="list-style-type: none"> 1. Emergency responders. 2. Member States.
		Industry	
		<ol style="list-style-type: none"> 1. (Autonomous) vehicles' manufacturers. 2. (Autonomous) vehicles' suppliers. 3. ITS solutions' providers. 4. AI providers. 	<ol style="list-style-type: none"> 1. Telecom industry / mobile network operators. 2. Data Handling and storage industry/ cloud providers.

1 st workshop (January-February 2024)	Number of participants	Mandatory categories	Optional categories
	20-30	Non-profit organization and representative bodies	
		At least two among: <ol style="list-style-type: none"> 1. Drivers' associations. 2. Trade associations. 3. Cyclists' associations. 4. Environmental associations. 5. Consumers' associations. 	
		Universities and knowledge institutions	
		At least two representatives from: <ol style="list-style-type: none"> 1. Universities. 2. Research centres. 3. Experts in the field. 	
		Others	
		<ul style="list-style-type: none"> - According to local stakeholders' mapping. - Innovation cluster (start-ups, young people interested in CCAM and smart cities). 	

2 nd workshop (April-May 2024)	Number of participants	Mandatory categories	Optional categories
	20-30	Service providers	
		<ol style="list-style-type: none"> 1. Public Transport operators. 2. Mobility providers. 	<ol style="list-style-type: none"> 1. Toll road operators. 2. Insurance companies. 3. Road Maintenance providers. 4. Roadside assistance.
		Government	
		<ol style="list-style-type: none"> 1. Transport Authorities. 2. Road Authorities. 3. Infrastructure managers. 4. Member States. 5. Municipalities /Cities/ Regions. 	<ol style="list-style-type: none"> 1. Emergency respondents. 2. Road operators.

2 nd workshop (April-May 2024)	Number of participants	Mandatory categories	Optional categories
	20-30	Industry	
		<ol style="list-style-type: none"> 1. Automobile manufacturers. 2. Automotive suppliers. 3. ITS solution providers. 	<ol style="list-style-type: none"> 1. Telecom industry / Mobile network operators. 2. Data handling and storage industry / cloud providers.
		Non-profit organization and representative bodies	
		At least two among: <ol style="list-style-type: none"> 1. Automobile associations. 2. Trade associations. 3. Cyclists' associations. 	

3 rd workshop (to be held after the data collection phase)	Number of participants	Mandatory categories	Optional categories
	20-30	Service providers	
		<ol style="list-style-type: none"> 1. Public Transport operators. 2. Mobility providers. 	At least one among: <ol style="list-style-type: none"> 6. Insurance companies. 7. Toll road operators. 8. Road maintenance providers. 9. Roadside assistance.
		Government	
		<ol style="list-style-type: none"> 1. Transport Authorities. 2. Road Authorities. 3. Infrastructure managers. 4. Member States. 5. Municipalities/Cities/Regions. 	<ol style="list-style-type: none"> 1. Emergency respondents. 2. Road operators.
		Industry	
		<ol style="list-style-type: none"> 1. Automobile manufacturers. 2. Automotive suppliers. 3. ITS solution providers. 	<ol style="list-style-type: none"> 1. Telecom industry / Mobile network operators. 2. Data handling and storage industry / cloud providers.

3 rd workshop (to be held after the data collection phase)	Number of participants	Mandatory categories	Optional categories
	20-30	Non-profit organization and representative bodies	
		1. Technology cluster.	At least two among: <ul style="list-style-type: none"> - Automobile associations. - Trade associations. - Cyclists' associations.

5. Research Areas

Finally, the Research Areas through which to assess the users' expectations, desires and concerns toward CCAM have been defined. Starting from the knowledge baseline provided by "T1.1- Mobility needs and requirements of European citizens" and "T1.2- CCAM vocabulary and stakeholders' needs and requirement for CCAM solutions", the discussion carried out within the co-creation framework allowed to identify six Research Areas, aimed at investigating specific aspects of the stakeholders' vision of CCAM, through which constitute a fundamental knowledge for the development of IoT and IoV technologies capable of meeting the citizens' needs, desires and concerns. The Research Areas under investigation can be summarized as follows:

1. **Socio-demographic area.** This area is aimed to collect personal information about the respondents, such as family status and nationality, and information about the economic conditions of the respondents.
2. **Experiences and feelings toward public transport.** This area aims to collect information about the users' perceptions and experiences with respect to public transport. In particular, the questions falling under this area will improve the knowledge of transport habits, the level of satisfaction toward public transport, and barriers that can affect it in the respondents' vision.
3. **Familiarities with the CCAM concepts.** This area focuses on the collection of information regarding the citizens' knowledge of CCAM, including familiarities with CCAM and AV concepts, and the general attitude towards innovations.
4. **Explanation of autonomous vehicles and CCAM concepts.** This area will provide information about CCAM concepts, to let the users to have a comprehensive view of several CCAM aspects, using video, pictures, and outputs from previous EU projects.
5. **Feelings, emotions, attitudes toward autonomous vehicles and related aspects.** This area will focus on citizens perception of CCAM aspects, providing information about the doubts of the users around autonomous vehicles and related aspects, the perception of the risk and safety of IoV technologies, and trust in institutions.
6. **Ideas, points of view, new inputs.** This area is aimed to collect the inputs from the respondents with respect to the possible innovation aims to collect the inputs from the respondents concerning aims to foster the co-creation framework by providing inputs

from all the participants ns on CCAM. This section is aimed to foster the co-creation framework by providing inputs from all the participants, to better understand the desires, expectations and challenges toward CCAM. aims to foster the co-creation framework by providing inputs from all the participants

Based on the six Research Areas defined in T1.4 thus defined a set of Research Questions will be developed in accordance with the participatory approach adopted in the SINFONICA co-creation framework¹⁸, which will focus on the following aspects in accordance with the Research Area specifically analysed:

Table 6. Aspects of the Research areas that will be implemented during the formulation of the Research Questions carried out in WP2.

Research Area	Aspects that will be deepened in the Research Questions
Socio-demographic area	<ul style="list-style-type: none"> - Socio-demographic questions (Gender, Age, Country, Level of education, Income, Employment status). - Family status. - Disabilities / disabilities in family. - Car ownership / rent (long/short). - Digital friendly (smartphone, credit card – usage of app for payment).
Experiences and feelings toward public transport	<ul style="list-style-type: none"> - Habits of transport; Satisfaction; trust of the transport means (price); modes of payment (habits, possibility to pay with credit card). - Satisfaction with the changes that happened in the last few years (regarding public transport). - Comfort with information. - How the respondent would increase his comfort in public transport usage. - Challenges / barriers/ challenges in public transport in accordance with the opinion of the respondent. - Preferences in paying for the usage of the different means of transport. - Ranking of preferences in the means of transport. - Knowledge about automation of public transport. - What ate the challenges experienced in everyday lives.

¹⁸ The objective of T1.4-Definition of the research groups and creation of Groups of Interest is to define the Research Areas, while the definition of the Research Questions is part of the engagement strategies that will be developed within WP2-Shaping the SINFONICA strategy to capture the mobility needs of users (demand side) and CCAM challenges (supply side).

Research Area	Aspects that will be deepened in the Research Questions
Familiarities with the CCAM concepts	<ul style="list-style-type: none"> - Familiarity with CCAM and automated vehicles concepts. - General attitudes toward innovations and CCAM.
Explanation of autonomous vehicles and CCAM concepts	<ul style="list-style-type: none"> - Dissemination among the respondents of the CCAM concepts. - Dissemination of the outputs coming from previous projects. - Provision of communication material (video, pictures etc.).
Feelings, emotions, attitudes toward autonomous vehicles and related aspects	<ul style="list-style-type: none"> - Personal opinions on CCAM and related aspects. - Positive and negative opinions of the respondents around CCAM. - Positive and negative emotions of the respondents around CCAM. - Perception of safety and risks in relation to CCAM solutions. - Trust in technology and institutions. - Attitude toward time (waiting time and travel time).
Ideas, points of view, new inputs	<ul style="list-style-type: none"> - Feedbacks from the respondents, such as ideas, points of view and other inputs that can improve the CCAM solutions developed within the SINFONICA co-creation framework.

6. Achievements and Conclusions

The co-creation process carried out in *T1.4* made it possible to establish a strong foundation that will allow the implementation of the SINFONICA participatory process from different points of view. Firstly, through the discussions carried out with the Gols and the other partners involved, different groups of people with mobility challenges, citizens and stakeholders were identified which will subsequently be involved in the SINFONICA participatory framework. Within these groups, it was possible to identify people with mobility challenges, their needs and their characteristics, to effectively implement a more inclusive participatory approach focused on the mobility needs of different groups of citizens.

Secondly, the ways in which groups of people will be concretely included in the creation of the Groups of Interest. This identification has been twofold, where on the one hand there have been identified the different categories of people with mobility challenges, citizens representatives and groups of stakeholders. On the other hand, the methods for including the different actors in the creation of the Groups of Interest have been structured, with specific regard to the ways in which the interviews, Focus groups and workshops will be conducted in the three rounds of engagement and data collection.



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Annex 1: Composition of the Groups of Interest

Based on the results of the process defined and deployed in T1.4, it was possible to define the composition of the Groups of Interest.

Trikala

The Trikala Group of interest will be composed by a diverse cluster of people that will be involved in the SINFONICA activities as followed:

- **Interviews:** in the Trikala Group of Interest the interviews will be performed targeting people with mobility challenges as: Elderly, People with cognitive disabilities, Digital Vulnerable People, Gender-related vulnerable people, Youth, people living in rural areas, university students/young people. Our aim is to perform 5 interviews for each group of people with mobility challenges during the first round of data collection (between September and November 2023); 3 interviews for each group of people with mobility challenges during the second round of data collection (between January and February 2024); 2 interviews for each group of people with mobility challenges during the third round of data collection (between April and May 2024) for a total of 70 interviews.

- **Focus Groups:** in the Trikala Group of Interest the citizens' representatives will be involved by means of the creation of 9 Focus groups. During the 1st Round (between September and November 2023) there will be performed 4 Focus groups which will regard the participation of citizens representatives thus divided:

1. 6-10 people between 26 and 35 years old.
2. 6-10 people between 36 and 45 years old.
3. 6-10 people between 46 and 65 years old.
4. 6-10 people + 66 years old.

During the 2nd Round (between January and February 2024) there will be performed 3 Focus groups in which the citizens representatives will be involved in accordance with the following division:

1. 6-10 people with low income.
2. 6-10 people with medium income.
3. 6-10 people with high income.

In the 3rd Round (between April and May 2024) there will be performed 2 Focus groups that will involve the citizens representatives in accordance with the following classification:

1. 6-10 people with easy access to public transport (city centre) + high frequency.
2. 6-10 people living far from public transport stop (suburbs) + low frequency.



-**Workshops:** in the Trikala Group of Interest the workshops will be performed targeting different categories of stakeholders in three rounds. The first workshop will be performed between January and February 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

1. **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators, Mobility providers and Private ride hauling companies, plus at least one category among the following ones: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers, Infrastructure managers (decision makers and assets owners).
2. **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories which are, respectively, Emergency responders and Member States.
3. **Industry:** the stakeholders that will be included among this group are divided into the following categories: Autonomous vehicles manufacturers, Autonomous vehicles suppliers, ITS solutions providers and AI providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.
4. **Non-profit organizations and representative bodies:** at least two categories of stakeholders will be included among this group, including: Drivers' associations, Trade associations, Cyclists' associations, Environmental associations, Consumers' associations.
5. **Universities and knowledge institutions:** within this group, at least two categories of representatives will be included among the following categories: Universities, Research Centres, Experts in the field.

Furthermore, the first workshop will include other groups of stakeholders that do not belong to the aforementioned categories, that will be involved in accordance with the Group of Interest's local stakeholders' mapping and the Innovation cluster (start-ups, young people interested in CCAM and smart cities).

The second workshop will be performed between April and May 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers.

-**Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following



optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-Non-profit organizations and representative bodies: at least two categories of stakeholders will be involved among this group, including Automobile associations, Trade associations, and Cyclists' associations.

The third workshop will be held after the data collection phase and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, and Roadside assistance providers.

- **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, Member States and Municipalities/Cities/Regions, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-Non-profit organizations and representative bodies: the stakeholders' categories to be involved among this group belong mainly to Technology cluster, plus at least two stakeholders' categories among: Automobile associations, Trade associations, and Cyclists' associations.

Hamburg

The Hamburg Group of interest will be composed by a diverse cluster of people that will be involved in the SINFONICA activities as followed:

- **Interviews:** in the Hamburg Group of Interest the interviews will be performed targeting people with mobility challenges as: Elderly, People with cognitive disabilities, Digital Vulnerable People, Gender-related vulnerable people, Youth, Cyclist associations, and People with physical disabilities. Our aim is to perform 5 interviews for each group of people with mobility challenges during the first round of data collection (between September and November 2023); 3 interviews for each group of people with mobility challenges during the second round of data collection (between January and February 2024); 2 interviews for each group of people with mobility challenges during the third round of data collection (between April and May 2024) for a total of 70 interviews.

- **Focus Groups:** in the Hamburg Group of Interest the citizens' representatives will be involved by means of the creation of 9 Focus groups. During the 1st Round (between September and November 2023) there will be performed 4 Focus groups which will regard the participation of citizens representatives thus divided:



1. 6-10 people between 26 and 35 years old.
2. 6-10 people between 36 and 45 years old.
3. 6-10 people between 46 and 65 years old.
4. 6-10 people + 66 years old.

During the 2nd Round (between January and February 2024) there will be performed 3 Focus groups in which the citizens' representatives will be involved in accordance with the following division:

1. 6-10 people with low income.
2. 6-10 people with medium income.
3. 6-10 people with high income.

In the 3rd Round (between April and May 2024) there will be performed 2 Focus groups that will involve the citizens representatives in accordance with the following classification:

1. 6-10 people with easy access to public transport (city centre) + high frequency.
2. 6-10 people living far from public transport stop (suburbs) + low frequency.

-**Workshops:** in the Hamburg Group of Interest the workshops will be performed targeting different categories of stakeholders in three rounds. The first workshop will be performed between January and February 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

1. **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators, Mobility providers and Private ride hauling companies, plus at least one category among the following ones: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers, Infrastructure managers (decision makers and assets owners).
2. **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories which are, respectively, Emergency responders and Member States.
3. **Industry:** the stakeholders that will be included among this group are divided into the following categories: Autonomous vehicles manufacturers, Autonomous vehicles suppliers, ITS solutions providers and AI providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.
4. **Non-profit organizations and representative bodies:** at least two categories of stakeholders will be included among this group, including: Drivers' associations, Trade associations, Cyclists' associations, Environmental associations, and Consumers' associations.



5. **Universities and knowledge institutions:** within this group, at least two categories of representatives will be included among the following categories: Universities, Research Centres, Experts in the field.

Furthermore, the first workshop will include other groups of stakeholders that do not belong to the aforementioned categories, that will be involved in accordance with the Group of Interest's local stakeholders' mapping and the Innovation cluster (start-ups, young people interested in CCAM and smart cities).

The second workshop will be performed between April and May 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, Road maintenance providers, and Roadside assistance providers.

- **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

- **Non-profit organizations and representative bodies:** at least two categories of stakeholders will be involved among this group, including Automobile associations, Trade associations, and Cyclists' associations.

The third workshop will be held after the data collection phase and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, and Roadside assistance providers.

- **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, Member States and Municipalities/Cities/Regions, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.



-Non-profit organizations and representative bodies: the stakeholders' categories to be involved among this group belong mainly to Technology cluster, plus at least two stakeholders' categories among: Automobile associations, Trade associations, Cyclists' associations.

Noord Brabant

The Noord Brabant Group of interest will be composed by a diverse cluster of people that will be involved in the SINFONICA activities as followed:

- **Interviews:** in the Noord Brabant Group of Interest the interviews will be performed targeting people with mobility challenges as Elderly, People with cognitive disabilities, Digital Vulnerable People, Gender-related vulnerable people, Youth, Migrants, Single parents' families, People living in rural areas. Our aim is to perform 5 interviews for each group of people with mobility challenges during the first round of data collection (between September and November 2023); 3 interviews for each group of people with mobility challenges during the second round of data collection (between January and February 2024); 2 interviews for each group of people with mobility challenges during the third round of data collection (between April and May 2024) for a total of 80 interviews.

- **Focus Groups:** in the Noord Brabant Group of Interest the citizens' representatives will be involved by means of the creation of 9 Focus groups. During the 1st Round (between September and November 2023) there will be performed 4 Focus groups which will regard the participation of citizens representatives thus divided:

1. 6-10 people between 26 and 35 years old.
2. 6-10 people between 36 and 45 years old.
3. 6-10 people between 46 and 65 years old.
4. 6-10 people + 66 years old.

During the 2nd Round (between January and February 2024) there will be performed 3 Focus groups in which the citizens representatives will be involved in accordance with the following division:

1. 6-10 people with low income.
2. 6-10 people with medium income.
3. 6-10 people with high income.

In the 3rd Round (between April and May 2024) there will be performed 2 Focus groups that will involve the citizens' representatives in accordance with the following classification:

1. 6-10 people with easy access to public transport (city centre) + high frequency.
2. 6-10 people living far from public transport stop (suburbs) + low frequency.



-**Workshops:** in the Noord Brabant Group of Interest the workshops will be performed targeting different categories of stakeholders in three rounds. The first workshop will be performed between January and February 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

1. **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators, Mobility providers and Private ride hauling companies, plus at least one category among the following ones: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers, Infrastructure managers (decision makers and assets owners).
2. **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories which are, respectively, Emergency responders and Member States.
3. **Industry:** the stakeholders that will be included among this group are divided among the following categories: Autonomous vehicles manufacturers, Autonomous vehicles suppliers, ITS solutions providers and AI providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.
4. **Non-profit organizations and representative bodies:** at least two categories of stakeholders will be included among this group, including: Drivers' associations, Trade associations, Cyclists' associations, Environmental associations, Consumers' associations.
5. **Universities and knowledge institutions:** within this group, at least two categories of representatives will be included among the following categories: Universities, Research Centres, Experts in the field.

Furthermore, the first workshop will include other groups of stakeholders that do not belong to the aforementioned categories, that will be involved in accordance with the Group of Interest's local stakeholders' mapping and the Innovation cluster (start-ups, young people interested in CCAM and smart cities).

The second workshop will be performed between April and May 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers.

-**Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following



optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-Non-profit organizations and representative bodies: at least two categories of stakeholders will be involved among this group, including: Automobile associations, Trade associations, Cyclists' associations.

The third workshop will be held after the data collection phase and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, and Roadside assistance providers.

- **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, Member States and Municipalities/Cities/Regions, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-Non-profit organizations and representative bodies: the stakeholders' categories to be involved among this group belong mainly to Technology cluster, plus at least two stakeholders' categories among: Automobile associations, Trade associations, Cyclists' associations.

West Midlands

The West Midlands Group of interest will be composed by a diverse cluster of people that will be involved in the SINFONICA activities as followed:

- **Interviews:** in the West Midlands Group of Interest the interviews will be performed targeting people with mobility challenges as: Elderly, People with cognitive disabilities, Digital Vulnerable People, Gender-related vulnerable people, Youth, Cyclist associations, People with physical disabilities. Our aim is to perform 5 interviews for each group of people with mobility challenges during the first round of data collection (between September and November 2023); 3 interviews for each group of people with mobility challenges during the second round of data collection (between January and February 2024); 2 interviews for each group of people with mobility challenges during the third round of data collection (between April and May 2024) for a total of 70 interviews.

- **Focus Groups:** in the West Midlands Group of Interest the citizens representatives will be involved by means of the creation of 9 Focus groups. During the 1st Round (between September and November 2023) there will be performed 4 Focus groups which will regard the participation of citizens representatives thus divided:

1. 6-10 people between 26 and 35 years old.



2. 6-10 people between 36 and 45 years old.
3. 6-10 people between 46 and 65 years old.
4. 6-10 people + 66 years old.

During the 2nd Round (between January and February 2024) there will be performed 3 Focus groups in which the citizens representatives will be involved in accordance with the following division:

1. 6-10 people with low income.
2. 6-10 people with medium income.
3. 6-10 people with high income.

In the 3rd Round (between April and May 2024) there will be performed 2 Focus groups that will involve the citizens representatives in accordance with the following classification:

1. 6-10 people with easy access to public transport (city centre) + high frequency.
2. 6-10 people living far from public transport stop (suburbs) + low frequency.

-**Workshops:** in the West Midlands Group of Interest the workshops will be performed targeting different categories of stakeholders in three rounds. The first workshop will be performed between January and February 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

1. **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators, Mobility providers and Private ride hauling companies, plus at least one category among the following ones: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers, Infrastructure managers (decision makers and assets owners).
2. **Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories which are, respectively, Emergency responders and Member States.
3. **Industry:** the stakeholders that will be included among this group are divided among the following categories: Autonomous vehicles' manufacturers, Autonomous vehicles' suppliers, ITS solutions' providers and AI providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.
4. **Non-profit organizations and representative bodies:** at least two categories of stakeholders will be included among this group, including: Drivers' associations, Trade associations, Cyclists' associations, Environmental associations, Consumers' associations.
5. **Universities and knowledge institutions:** within this group, at least two categories of representatives will be included among the following categories: Universities, Research Centres, Experts in the field.



Furthermore, the first workshop will include other groups of stakeholders that do not belong to the aforementioned categories, that will be involved in accordance with the Group of Interest's local stakeholders' mapping and the Innovation cluster (start-ups, young people interested in CCAM and smart cities).

The second workshop will be performed between April and May 2024 and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, Road maintenance providers, Roadside assistance providers.

-**Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-**Non-profit organizations and representative bodies:** at least two categories of stakeholders will be involved among this group, including: Automobile associations, Trade associations, Cyclists' associations.

The third workshop will be held after the data collection phase and will regard the participation of between 20 and 30 stakeholders divided as follows:

- **Service providers:** the stakeholders' categories that will be included among this group are Public Transport operators and Mobility providers, plus the following optional categories which are, respectively: Toll Road operators, Insurance companies, and Roadside assistance providers.

-**Government:** the stakeholders' categories that will be included among this group belong, respectively, to Transport Authorities, Road Authorities (Public bodies), Infrastructure managers, Member States and Municipalities/Cities/Regions, plus two optional categories among Emergency responders and Road operators.

- **Industry:** the stakeholders that will be included are divided among the following categories: Automobile manufacturers, Automobile suppliers, ITS solutions providers, plus the following optional categories: Telecom industry/mobile network operators, Data Handling and storage industry/cloud providers.

-**Non-profit organizations and representative bodies:** the stakeholders' categories to be involved among this group belong mainly to Technology cluster, plus at least two stakeholders' categories among: Automobile associations, Trade associations, Cyclists' associations.