



# D8.15 Exploitation Strategy

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# 1 Executive Summary

The SPROUT Exploitation Strategy is the document that sets out all the activities in which project partners will engage with the aim of maximising the impacts of the project over the its lifetime and after its completion.

This strategy has been developed by Polis, Work Package 8 leader for *Project outcome's validation, transfer, and exploitation*, in cooperation with relevant partners.

As stated in the Description of Action, SPROUT Exploitation Strategy has been issued at the end of the first year of the project (M12), and will be adapted, reviewed, and evaluated at the end of the second year (M24) and at the end of the project (M36).

The Exploitation Strategy proposes activities that will allow an appropriate uptake of the results produced within the project. In particular, this report focuses on a series of aspects that are essential in order to assure an appropriate uptake of the project results:

- Identification of exploitable project results;
- Target groups and objectives of exploitation per target group;
- Exploitation roadmaps;
- Role of the SPROUT Open Innovation Community in the exploitation of results;
- Involvement of validation and associated cities.

## 2 Introduction

### 2.1 Aim of the deliverable

The objective of this deliverable is to develop a fully-fledged strategy that will serve as the guide for all the SPROUT partners with regard to the activities of exploitation of the results that the project will produce during its lifetime.

This strategy aims to ensure a maximum level of awareness and consequently of uptake of project results, as well as establishing clear roadmaps for exploitation depending on the project result and on the target group addressed.

The exploitation of the SPROUT results has the following objectives:

- Policy change at the urban level in Europe and beyond;
- Further research activity;
- Use of project results in the context of standardisation activities.

This document will highlight the potential for exploitation of each of the expected project results and its potential roadmap for exploitation.

With relation to the different project results, the plan for exploitation includes a matrix that provides an overview of the roadmap for each project output, the relevant audiences that are identified as suitable target groups, as well as the action that each project partner will put in place in order to maximize the impact of the project through the exploitation of its results.

### 2.2 How this deliverable relates to other deliverables

This deliverable has to be seen as a complementary document to the SPROUT Communication and Dissemination Strategy (D8.6) and to the Validation Strategy (D8.5) of the project.

The indications set out in the Communication and Dissemination Strategy – aimed at defining communication channels, tools and opportunities for dissemination – and in the Validation Strategy – aimed at enhancing the quality of project results and their internal consistency – are very relevant and linked to the plan for the exploitation of project results.

This is due to the 3-layer cities' approach adopted by the project, in which the validation cities are not only the primary audience for dissemination of the results of the six pilots projects, but also the most important validation entities in the project.

They will therefore represent an essential target for structured transfer of SPROUT results and contribute to the assessment of the transferability potential of the results of the project.

This deliverable is also closely related to the project report outlining the set-up of the SPROUT Open Innovation Community (D8.1), which will be another environment through

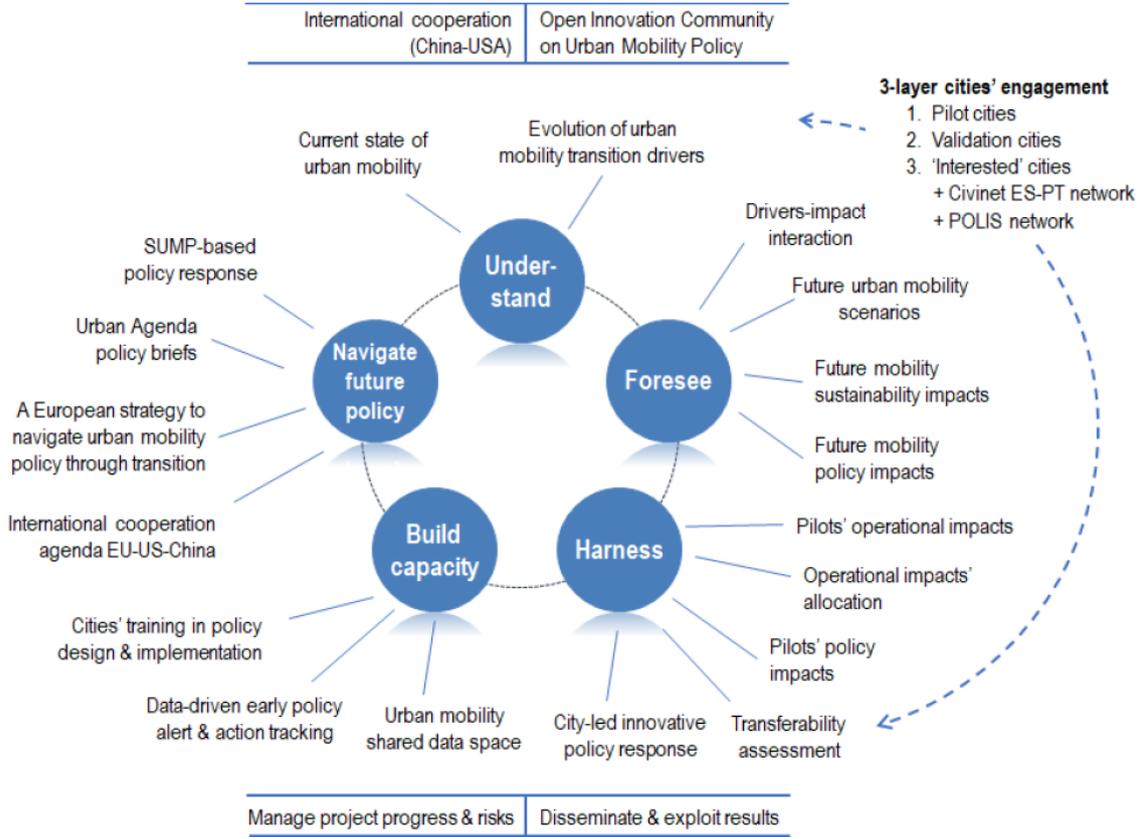
which the outcomes of the project will be transferred and utilised by the stakeholders that make part of the community.

# 3 Overview of exploitable results

This chapter provides a first overview of the main project results that are expected to be utilised by the urban mobility stakeholders that have been identified as target groups and possible beneficiaries of the results produced by the project over its duration.

These results are connected to the different pillars of the SPROUT project and will represent the final outputs of the work packages. The ultimate aim is to develop the SPROUT policy response to address the impacts of the emerging mobility patterns, digitally enabled operating & business models, and transport users' needs.

The relation between the approach of SPROUT– based on 5 conceptual pillars (Understand; Foresee; Harness; Build capacity; and, Navigate future policy) and on 3 concept facilitators (3-layers cities' engagement; international cooperation structure; and, participatory innovation approach) and its expected project results – is illustrated by the following diagram.



In the following sections, the foreseen tangible results that will be produced by the project, divided per Work Package, will be listed and their potential for innovation will be highlighted more in depth.

### 3.1 Work package 2: Understanding transition in urban mobility

#### **Main WP2 result**

**Quantified assessment of the current state of the urban mobility environment and definition of parameters driving its transition to the future involving stakeholders.**

The SPROUT approach to navigate transition in urban mobility is based on a solid understanding of the current changes in the urban mobility landscape and its impacts with regards to sustainability and governance. In order to acquire such an understanding, with the ultimate aim of providing a data-driven policy response to urban mobility challenges, the project has defined a framework for the collection and integration of data by the partner cities. These efforts resulted in the construction of an ‘urban mobility transition inventory’, which consists of a set of relevant KPIs, drivers, and stakeholders. This set of attributes corresponds to the aspects on which the SPROUT pilot and validation cities collected and structured data to build their assessment of current state of urban mobility.

In close connection with these activities, the SPROUT pilot and validation cities also analysed the previously identified urban mobility transition drivers, in order to identify which were considered as essential in the construction of future city-specific urban mobility scenarios.

The main results of this work package entail a significant potential for exploitation, which is connected to the possibility for external and follower cities and regions to take up the set of attributes recognised by SPROUT project as essential for understanding transition to future urban mobility, and employ them in their local context for similar purposes.

Furthermore, the exercise undertaken by the SPROUT cities of identifying the most relevant local drivers for transition among the set can be of further help for cities in the assessment of their city-specific urban mobility state. This can be realised by the means of employing the ones that were recognised as most relevant by SPROUT with the most similarities, with regards to political, environmental, social, technological, economical, and legal aspects.

The work done by the project within WP2 has a high potential of exploitation in the field of further research that will be undertaken by external local and regional authorities, in order to respond to similar challenges to the ones faced by SPROUT cities.

## 3.2 Work package 3: Determining the impacts of emerging urban mobility environments

### Main WP3 results

**Stakeholder co-created future urban mobility scenarios for 6 pilot cities and 2 time horizons (2025, 2030).**

**Analysis of impacts of future urban mobility scenarios in case the current policies remain unchanged**

The main results of Work Package 3 consist in the co-creation of three urban mobility scenarios related to the time horizons of 2025 and 2030 for the six pilot cities, assuming that no policy interventions have been undertaken.

These scenarios have the aim of providing plausible and probable future urban mobility environments considering the current urban mobility environments and the policies currently in effect. These scenarios are analysed in terms of their impacts on the urban mobility system's economic, environmental, and social sustainability, as well as based on their potential policy impacts. In other words, the impact of each scenario is analysed referring to the adequacy and effectiveness of the existing policy frameworks to enhance scenarios' positive sustainability impacts and mitigate the negative ones.

The potential for exploitation of this results concern again the possibility by other local and regional authorities to analyse the work done in SPROUT and utilise the framework and the methodology adopted in the construction of the scenarios and the analysis of their impacts.

As in the SPROUT project the result of this work will be the setup of the pilots and the impact assessment of alternative policy responses. The first type of actors that are targeted for the utilisation of the results of this work package are the SPROUT validation cities. This group of nine cities involved in the SPROUT project follow (at least) one pilot city in the construction of scenarios and the assessment of impact of these scenario will be in the privileged position of being able to exploit first-hand the new knowledge built in this work package and apply it to analyse the status of their urban mobility environment, as well as further refine and validate the approach adopted by the SPROUT pilot cities.

Since these analyses will be employed by SPROUT pilot cities as the basis for the setup of their pilots, this validated approach to the setup and testing of new and innovative mobility solutions has the potential to represent a starting point for the validation cities, the associated cities, and further external cities following the activities of the SPROUT project, in the process of introducing new mobility solutions in their local contexts. A mechanism planned for the revision, validation, and fine-tuning of the analyses produced in WP3 was, according to the initial work program and to the D8.5 SPROUT Validation Strategy, a conference session, at one of the major international mobility events, that shall form an interdisciplinary

perspective of private, public and academic stakeholders who play critical roles in shaping the unique urban mobility and planning reality of European cities. The COVID-19 pandemic has prevented the consortium to organise such conference in line with the timeline foreseen by the SPROUT Validation Strategy and it is currently postponed.

### 3.3 Work package 4: Pilots' setup, running & testing

#### **Main WP4 results**

**Evaluation framework with impact assessment guidelines to evaluate the new mobility solutions sustainability impacts, operation feasibility and identify areas where policy intervention may be required**

**Guidance for identifying, prioritizing and testing alternative policy responses considering each urban stakeholders economic, social and environmental impacts**

**Recommendations of 6 pilot-verified, urban policy responses to specific emerging new mobility solutions**

The first objective of WP4 is to provide first layer cities with the implementation and evaluation framework to guide the pilots in the process of assessing the impacts of the new mobility solutions considering the existing policies.

The second objective is the implementation of the pilots. SPROUT first layer cities will follow this framework to test in practice the emerging mobility solution, introducing it into a limited scale and collecting data to assess the operators' operational feasibility and financial sustainability, and the sustainability impact.

Afterwards, pilots will learn to define and prioritize alternative policy responses considering all the stakeholders' needs. Finally, the pilots will need to implement the list of prioritized responses at a limited scale and assess their implementation feasibility and user acceptance to validate the set of alternative policies.

All the steps above will turn into pivotal learnings for the whole urban community to understand how assessing the mobility solutions to identify areas where policy intervention may be required and define and assess alternative policy responses. It will also result in pilots' policy implementation messages to be validated by the second layer cities in WP5.

The body of knowledge that will be produced in the context of the testing of the pilots will not only contribute to the formulation of a city-led innovative policy response, widely applicable to European and non-European cities, but also to navigate urban mobility in transition.

Not only local and regional policymakers in validation and associated cities will be able to take advantage of the tested policy responses designed to harness the impact of emerging urban mobility solutions. The new knowledge produced in this Work Package will also allow a wider range of urban mobility stakeholders – for example transport operators, logistics service providers, organisations representing different categories of transport users – to make use of the process experimented in SPROUT and replicate it in their local contexts in the framework of assessments of operational feasibility and sustainability of new mobility solutions.

Also, a further target group that will utilise the knowledge developed thanks to the SPROUT pilot cities' experimentations is the academic community: researchers of different disciplines affected by, and driving urban mobility innovations – such as, governance, political sciences, urban design, social cohesion, geography – will be in the position of exploiting the results of the pilots in other EU-funded research and innovation projects and in related initiatives cooperation with national and local research institutes.

### 3.4 Work package 5: Formulating a city-led innovative policy response

#### **Main WP5 result**

**The 'SPROUT city-led innovative policy response', widely applicable to European cities, addressing the issues of better understanding, better regulation and better financing**

The activities within Work package 5 will be dedicated to the development of a fully-fledged urban mobility policy response to urban mobility transition that can be widely applicable to European cities.

The innovation aspect of this policy response is that it stems from the experience of six pilot cities and validated by the 9 SPROUT validation cities, making it a city-led and data-driven policy response. Furthermore, in this work package, an urban policy system dynamic model will be developed to gain a more thorough understanding of the interrelations between urban mobility operations, new mobility solutions and urban policies.

This SPROUT city-led innovative policy response, as one of the most important project results, will be the object of exploitation activities by the technical partners of the consortium, in the framework of future projects and initiatives across the urban mobility international sphere represented by the CIVITAS2020 community and the involvement of CIVINET Spain and Portugal.

The validation of the SPROUT policy response will be carried out by a wide range of cities. In the first stage, it will be validated by the 1<sup>st</sup> and 2<sup>nd</sup> layer of the project cities. After any required adaptation, it will enter the second stage, with its validation to be undertaken by the 3<sup>rd</sup> layer cities and the SPROUT Open Innovation Community.

This process will allow the SPROUT policy response to be disseminated and utilised in non-European contexts and beyond conventional urban mobility researchers and practitioners involved in EU-funded projects.

The cooperation already established with non-European and global practitioners and researchers, such as UN-HABITAT (Urban Mobility Unit, Urban Services Branch), the University of California Davis, and the Massachusetts Institute of Technology: Center for Transportation and Logistics (MIT-CTL) will allow this project result to be transferred and taken up by cities and urban mobility stakeholders all over the world.

### 3.5 Work package 6: Building cities' policy making capacity

#### **Main WP6 results**

**Proposal for a minimum set of data to drive an evidence-based urban mobility policy making;**

**Urban mobility shared data space for both passenger and freight transport;**

**Urban policy toolbox for building cities' capacity on recognising the appropriate uses of additional tools not produced by the project.**

The main objectives of Work Package 6 are related to the need of cities to enhance their capacity in the policy-design and decision-making process of deploying innovative urban mobility solutions.

Consequently, the main results that will be produced by this Work Package link to this objective and see as their main target groups local and regional authorities in Europe and beyond. These cities and regions will be able to utilise the minimum set of data and KPIs defined by the project; this set of data and KPIs will be customized to the data capabilities of rich and scarce data environments, and therefore applicable to a vast range of city contexts.

However, the urban mobility shared data space for passenger and freight transport that will originate from the work of this Work package will be useful not only for city policymakers, who aim at benchmarking their urban mobility performances with other local contexts and tracking their cities' progress towards the achievement of specific policy goals, but it will also be functional to other stakeholders active in the field of urban mobility. The creation of an open data space that will be populated with data by the SPROUT cities and by follower cities will represent an useful pool of information for national institutions, researchers, as well as industry members that aim at investigating determined aspects of urban mobility in cities for different objectives: to name some examples, research purposes, market enquiries that are preliminary to the deployment of a new service or product by mobility providers, or

standardization activities aimed at building national databases related to several aspects that can inform national policies and guidelines on urban transport and mobility.

The Urban policy toolbox (Task 6.3) has particular interest for exploitation. Under the lead of the WP 3 leader Wuppertal Institut, its results and applications are planned to feed into similar toolboxes from related projects, e.g. the toolbox for efficient e-mobility from Horizon 2020 project SOLUTIONSplus. Vice versa, it is possible to populate the SPROUT toolbox from Task 6.3 with external data. The backends of different toolboxes may remain stand alone devices, but front ends could be merged. In this way , WI aims to maximise the toolboxes' impacts.

The activity of building cities' policy making capacity will translate in delivering a series of training activities for SPROUT cities. Webinars and workshops on the setup and use of the "urban mobility shared data space" and on the identification of key policy objectives and actors to inform policy design, will be delivered during the third year of the project and they will be functional not only for the cities involved in SPROUT, but also exploitable for follower cities that aim at navigating urban mobility transition though a data-driven and informed methodology.

### 3.6 Work package 7: Navigating future policy

#### Main WP7 results

**An adapted SUMP-based policy response;**

**Urban Agenda policy briefs;**

**A European strategy to navigate urban mobility policy through transition;**

**An agenda of international cooperation on urban mobility policy issues between the EU, China, and the US.**

The results of this Work Package link to the objectives of having an impact on future EU initiatives on urban mobility and of delivering an agenda of international cooperation on urban mobility policy issues between the EU, China, and the United States. For this reason, the main actors that will be targeted for the exploitation of the results of this Work Package are mostly policymakers. Differently from the results of the previous Work packages, the target groups that will take advantage of these results are not only policymakers in city and regions, but mostly of other level of governance, in particular the EU-level.

The results of each pilots will be channelled into pilot city-specific recommendations for the revision of their SUMP, in light of the findings produced by the experimentation of the alternative policy responses to the specific emerging mobility solutions tested in each pilot

city. However, the objective with the relation of the revision of SUMP's will not be limited to the local level, but it will also aim at a better integration of the topics of merging innovative mobility solutions into the EU SUMP guidelines. The beneficiaries of the results of SPROUT will therefore be extended to authorities in all cities in Europe, who through the implementation of the revised SUMP guidelines by the EU community, will be supported on the topics of: analysing local mobility situations and developing scenarios; considering the impacts of new mobility solutions; and identifying emerging mobility scenarios. Furthermore, the work developed within SPROUT will feed the development of SUMP Practitioner's Briefings and/or SUMP Topic guides to facilitate the transferability of the project results to a wider range of cities.

The European level of governance will also exploit the results of the SPROUT projects, by benefitting from the two Policy Briefs that will address the following actions defined by the Partnership for Urban Mobility:

- SPROUT Policy Brief 1: Extent of support and/or regulation to be provided by city authorities to new mobility services and the future evolution of the cities' role;
- SPROUT Policy Brief 2: Required regulatory and operational facilitators for the effective integration of new mobility solutions in the transport offer of cities.

All these outputs will contribute to form the basis for structuring a proposed European strategy to navigate urban mobility policy through transition, which will feed into future EU-funded research and innovation projects. National and regional policymakers will also benefit from this strategy that will serve as a guideline for national or regional policies aiming at addressing the topics covered by SPROUT.

Furthermore, the involvement in the project of Chinese and US cities has allowed to validate project results under a range of conditions that go beyond the ones present in Europe. For this reason, policymakers at all levels, as well as researchers and other urban mobility stakeholders from outside of Europe will be able to harness the results of the project, through the means of the creation of a fully-fledged agenda of international cooperation on urban mobility policy issues between the EU, China, and the US. The Wuppertal Institute will use its international network to close the implementation gap between applied research of SPROUT and policy action to foster sustainable urban development and mobility in Europe, Asia, Africa and Latin America. The main partnerships in this context are the Urban Electric Mobility Initiative (UN Habitat), the Mobilise Your City Partnership (EC, German Ministries) and the Global Environment Facility.

The project is also committed in exploring possible thematic synergies with relevant projects funded by the US department of Transportation, as outlined in the Annex 2 of the Description of Action, on the basis of topics of mutual interest that have the potential of resulting in benefits in research, dissemination, and also exploitation activities, by the means of joint activities and collaboration in the aforementioned domains.

## 4 Outreach to target groups

This section will focus on the main target groups for the exploitation of the project results produced by the SPROUT projects, which were also mentioned in the previous chapter dedicated to the exploitable results of each Work package.

The SPROUT project will address its efforts related to exploitation activities, as well as for the ones related to dissemination, towards the target audiences outlined in the following subsections.

### 4.1 Local European policymakers

European cities are to be considered as the primary target groups of a project, which has as its main objective the development of data-driven city-led policy response to transition in urban mobility.

The means for the outreach to this community is represented by the relevant contacts that most of the technical partners of the project (ZLC, VUB-MOBI, UPM, Polis, CERTH, Wuppertal Institut) have within the CIVITAS network, as well as through the involvement of CIVINET Spain and Portugal through UPM, and of the members of the Polis Network.

Within this target group, the pool of cities and regions that make part of the consortium as validation cities represent the primary audience of the project results that are originated by the experimentations that will take place in the pilot cities. These actors will not only co-learn and co-create the SPROUT approach together with the pilot cities but will also take an active role in the transfer of project results with their neighbouring communities and networks. This action will enhance the larger take up of the SPROUT policy-response to a larger network of cities, first of which the pool of third-layer cities (the so-called, associated cities), which will be regularly updated throughout the project duration about the development of project results.

### 4.2 Research communities

As highlighted in the previous chapter, several of the project results will be the starting point of further research by the academic community involved in urban transport and mobility, with a particular attention of disruptive innovation in urban mobility.

This channel for the exploitation of SPROUT project results is identified on the one hand in the transfer of knowledge and uptake of results in the framework of current and future EU-funded projects – many of which have been already identified as related projects in the Communication and Dissemination Strategy – and on the other hand, thanks to the participation of the research institutions present in the consortium in national and regional research projects and to their cooperation with industry members at national level.

Furthermore, the involvement of the European Conference of Transport Research Institute (ECTRI) in the SPROUT Open Innovation Community, and as signatory of a Letter of Support in the preparation phase of the projects, guarantees further channels of

communication with its member community, composed by the most prestigious higher research institutes covering urban transport and mobility topics.

### 4.3 Urban mobility industry

A target group, which will also benefit of the results originated by SPROUT is the urban mobility industry, which will take advantage of the project's policy-response by the exploiting the possible new and innovative models of cooperation with local and regional authorities in the provision of innovative mobility services and products.

The collaboration of the project partners with the industry in other related European and national research projects will give the possibility that the project results developed by SPROUT are translated in real solutions to problems of public-private cooperation. In addition to that, SPROUT validated models will lead to the development of innovative products and services designed by the urban mobility industry – both regarding passenger and freight transport – which are really aligned to policy objectives aimed at economic, social and environmental sustainability.

The project has also targeted the outreach to urban mobility industry members through the participation of project partners to the following international mobility events – keeping in mind possible the postponement or cancellation of physical meetings, due to the restriction of travel and gatherings following the COVID-19 pandemic:

- NECTAR Conference 2021, dates & place to be defined
- 16th World Conference on Transport Research (WCTRS 2022), Montreal, Canada
- 100th TRB conference, 24-28 January, 2021, Washington DC, USA
- 15th International Conference on City Logistics and Freight Transport, 7-8 February 2021, Amsterdam, Netherlands
- 2021 CIVITAS Forum Conference, dates & place to be defined
- POLIS Conference 2021, dates & place to be defined
- 2022 TRB conference, Washington DC, USA, dates to be defined
- 2022 Transport Research Arena, dates & place to be defined
- 16th World Conference on Transport Research (WCTRS), 24-28 July 2022, Montréal, Québec, Canada,
- 11th World Urban Forum, Katowice, Poland, 2022, dates to be defined

### 4.4 Asian and North American urban mobility innovation experts

One of the characteristics that distinguishes SPROUT from most of the other EU-funded projects is the international dimension of its outreach. Thanks to the direct involvement in the project of one Chinese city, Ningbo, and one city from the United States, Minneapolis, SPROUT aims at providing a truly global perspective to its policy-response to urban mobility transition.

The international audience of the project is not only represented by the international cities that are part of the consortium, but also by the links established by the project partners with a series of international actors that are following the project activities and have signed a letter

of support to the project during its preparation phase: University of California Davis, the Massachusetts Institute of Technology – Centre for Logistics Transportation, and UN-HABITAT (Urban Mobility Unit, Urban Services Branch), all of which are also part of the SPROUT Open Innovation Community.

## 5 Role of the Open Innovation Community

The SPROUT Open Innovation Community (OIC) will have a central role in the validation and the transfer of the SPROUT policy-response towards the external communities that are interested in the work of SPROUT. It will constitute an online forum platform (<https://www.etmforum.eu/working-groups/wg-04-sprout-oic-policy-response-to-transition/>) for debate among external stakeholders and SPROUT partners about the current changes in urban mobility and the policy requirements to face them.

The main goals to be achieved through this OIC are: (i) to reflect and brainstorm on the policy response needed to face emerging mobility solutions, (ii) to actively involve international members, bringing together relevant experiences and insights from different contexts (iii) to provide additional insights into current changes in urban mobility, (iv) to exchange best innovative policy response to urban mobility problems, and (v) to validate the Sprout project results.

The participation and involvement in the OIC of many of the most important network organisations in the field of urban mobility, world-leading universities and research centres in the field of transport, as well as European, will ensure the take up and transfer of key project results towards a wider and differentiated range of actors within the urban mobility community and beyond.

OIC members will be actively involved through a series of online community hubs, allowing them to interact and exchange ideas. The ultimate purpose of these hubs is to validate and explore the possibility of replicability of the solutions proposed by the SPROUT project and its pilot cities.