URBANITE

Supporting the decision-making in urban transformation with the use of disruptive technologies

Deliverable D2.5

SOPO Lab third session "Policy: translating insights into practical policy and requirements"

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Abstract:	This deliverable will provide the results and findings of the sessions carried out in each of the cities/nodes in the third round of the Social Policy Lab sessions.
Keyword List:	Social Policy Lab, Co-Creation, Disruptive Technology, Urban Mobility, Amsterdam, Bilbao, Helsinki, Messina
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Terms and abbreviations

BI	Business Intelligence
CET	Central European Time
FVH	Forum Virium Helsinki
HRT	Helsinki Regional Traffic
ICT	Information and Communication Technology
SME's	Small and Medium Entreprises
SoPoLab	Social Policy Lab

DRAFT VERSION

Executive Summary

This document presents the results and findings of the third Social Policy Lab (SoPoLab) in each of the four URBANITE pilot cities.

In this third session of the SoPoLab co-creation process, the main objective was going deep into the co-creation of public policies at local and European level that favour the penetration of disruptive technologies in urban mobility services in a fair, ethical and sustainable manner and that guarantee a positive social impact.

The plan has been to work on the specific challenges, needs and roadmaps that were identified in the first and second sessions of the SoPoLab (reported in D2.3 and D2.4[1]) and based on those outcomes, try to identify specific policy actions and proposals from, mainly a Local point of view.

Despite trying to look for a European scope in each of the pilot cities, the main actions and policies proposed in each pilot cities were, mainly, at a local or regional level, as the stakeholders and participants in the session contributed with their views and knowledge, which was primarily local and regional. Some European level actions have been identified but the plan now is to carry out a European level session among all the pilot cities where they could share their view and outcomes and learn and explore the European scope of the proposed actions. This session will be reported and documented in the D2.6, the impact analysis and recommendations, the document that will gather the experiences attained in all the tasks carried out in WP2 to convert them into recommendations and lessons learned for any public administration.

This deliverable D2.5 reflects the different realities of urban mobility in each of the pilot cities and, therefore, the scope and level of detail of the concrete actions identified diverge one from the others. We can see how in Messina and Bilbao some very concrete actions and suggestions have been identified in terms of trust in technology and urban mobility services, while in Helsinki, for example, the discussion was framed around the traffic simulation models they work with and the problems they face regarding the different administrations' (local, regional and national) policy strategies and the need to bring them together to a common discussion. In Amsterdam, on the other hand, the outcomes of the third session were very much oriented on the data commons, data collection and ownership. In all of the cases, the outcomes of the sessions perfectly represent the scope of the use case and the interests of the community built around each of the use cases, which was, definitely, one of the main goals the projects set at the beginning of this process.

Even though the Social Policy Lab co-creation process was supposed to be finished with this third session, all the pilot cities agreed to carry out, at least, on the last session at a European level where they could share the outcomes of the process with the rest of the cities as well as to explore to what extent the conclusions and lessons learned in each of the pilot cities could be replicated at a European level. All pilot cities found out that the community built around the SoPoLabs has a great potential to identify, discuss and solve urban mobility issues in their respective cities; it is, therefore, the reason why the next SoPoLab sessions are planned in order to keep on with the momentum generated and to keep on working on the challenges that the use of technology in urban mobility management suppose, which will not end with Urbanite.

It is also planned to carry out in each of the pilot cities and within the framework of the SoPoLabs a workshop with the public servants and end-users where they can test the final version of Urbanite platform and feedback WP6 Task 6.3 (Urbanite Evaluation). The reflections and testing

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[1] D2.3 SOPO Lab first session "Ask: defining challenges and formulating shared values and principles" and D2.4 SOPO Lab second session "Create: going into the details of challenges and designing roadmaps"

results of each of the pilot cities will also feed the European level discussion among all pilot cities so each of the cities' end-users and public servants can learn not only from the conclusions and outcomes of the SoPoLab process but also from the use of the Urbanite Platform.

DRAFT VERSION

1   Introduction

This deliverable is framed within the T2.2 SoPoLabs task and the co-creation process with stakeholders to analyse the attitude and trust of all agents and especially public servants in relation to the use of disruptive technologies in decision-making processes and to identify to what extent the Urbanite ecosystem and platform can be an initiative from which to analyse this attitude and trust.

More precisely, this deliverable is part of the result of the Subtask 2.2.4 SOPO Lab third session "Policy: translating insights into practical policy and requirements". Local and European Level. It reflects the results and findings of those local sessions in each of the pilot cities, as well as the plans for the next and last European level activity.

1.1   About this deliverable

This document is the responsibility of Tecnalia Research & Innovation, and it was ultimately this partner that signed and drafted the document.

The document is a product of the contributions made by all the partners involved in the WP, thus, the pilot cities themselves have done the work of collecting the results of the co-creation sessions held in their respective cities and the leader of WP2, WAAG, has worked together with Tecnalia Research & Innovation in the definition and approach of the co-creation sessions, the methodology to be implemented, the dynamics, tools and methods used for the collection of feedback and the structure and approach of this very document.

This document is the last one of a series of 3 deliverables that have reflected and collected the vision of all stakeholders related to the impact of disruptive technologies in public administrations from an urban mobility management point of view, aiming to provide an empirical analysis of the trust, attitude, impact, challenges and benefits arising from the use of URBANITE disruptive technologies for decision making.

1.2   Document structure

The document presented here is structured as follows:

1) A first section in which we analyse the validity of the scope of the SoPoLabs defined at the beginning of the process after the third SoPoLabs session.

2) A second section in which we directly present the results obtained in each of the four sessions held in the four pilot cities. The specific objectives of the session, the participating organisations, the activities held, the outcomes and the findings.

3) A final section in which we show the next steps that will be carried out from a content, process, and outcomes ambition point of view.

2 URBANITE Co-Creation approach

2.1 Validity of the Scope of Social Policy Labs

In this third session of the SoPoLab process ("Policy: translating insights into practical policy and requirements"), the initial objective was to define concrete actions from the second SoPoLab ("Create: going into the details of challenges and designing roadmaps") that could become policies in the short or medium term. Furthermore, within this initial plan, we also envisaged having a session at the European level in which we could share the results of these concrete actions and reflect on the extent to which they could have an implication at the European level.

The truth is that the pace and status of the use case in each of the pilot cities have not allowed for a common approach in each of the pilot cities, but we have been able to identify actions that could become policies in the medium and short term, mainly at local and regional level, although we have not yet been able to analyse the extent to which these actions have a common link at European level. Putting in common the results of each pilot city in a session with a European focus, is something that we have agreed among the partners to carry out in a future fourth session, which was not initially foreseen, in the coming months (October/November 2022), in which in addition to sharing the conclusions and concrete actions at local level with the other European partners in a joint dynamic, we will also share the results and lessons learned after the testing of the platform with end users that will also be carried out in the coming months.

This last session at European level will be duly documented and reported in the deliverable D2.6, which reflects the whole co-creation process and, on the other hand, the result of the testing of the Urbanite platform by the end-users that will be carried out in the same session, will feed back to WP6, fulfilling in that way the objective of collecting feedback and evaluation from the end-users.

Therefore, the initial approach is still perfectly valid, although we recognise that, being a living and dynamic project with different social and technical realities in each of the pilot cities, we have had to slightly adapt the methodological approach to obtain the best results that satisfy all partners. In this sense, in the last year, since the second SoPoLab session, Tecnalia and WAAG (co-leaders of the task) have set up monthly one-on-one sessions with each of the pilot cities and a shared logbook in which to reflect the specific needs and progress in terms of needs (of the pilot and stakeholders) and the SoPoLab vision. This is why communication and interaction have been more fluid and intense over the last year and this has resulted in a more detailed and concrete design process for the third SoPoLab (and fourth in the coming months).

3 SoPoLab third session "Policy: translating insights into practical policy and requirements"

The approach for the third session was based on the local insights and testimonies collected in the two previous sessions. This session has designed and developed practical and concrete proposals, road maps and next steps for each of the pilot cities, translating the insights gained in the two previous sessions into practical policy and requirements from the stakeholders' point of view, specifically public servants and end-users (citizens), even though in every pilot cities the input from private organisations was also collected (as suggested from project reviewers in the interim report) and their need and vision is reflected in this document.

There have been carried out four local sessions (one in each pilot city) that are duly documented down below. The final European level session where all the cities will share their lessons learned and conclusions (to be carried out in November 2022) will be documented in the D2.6 Impact analysis and recommendations.

3.1 Amsterdam third SoPoLab Session

3.1.1 Where we come from

The outcome of the first SoPoLab was the *understanding* that the Amsterdam pilot would not focus on establishing new modes of gathering bicycle data. Rather, **the pilot will focus on identifying and unifying existing (open) data sources and** on **citizen inclusion** and communication regarding new mobility policies and approaches.

The outcome of the second SoPoLab was a first concrete step toward designing a data commons, focusing on **multiple value creation** for a citizen, bicycle service provider and bicycle (mobility) policy maker, putting the privacy and safety of citizens first.

- Following the second SoPoLab, we continued conversations with stakeholders on the potential architecture of a data commons;
- Modules needed for a data commons pilot such as consent tools;
- The **mobility data ecosystem** of the Municipality of Amsterdam;
- Designing a potential pilot to learn about the data commons approach by gathering data and mapping the cycling environment and experiences with school children aged 10-14.

3.1.2 SoPoLab third Session

The third Amsterdam SoPoLab took place on the 5th of July 2020, 14.00 - 16.30 in the Waag, Nieuwmarkt, Amsterdam. 9 participants were present.

3.1.2.1 Purpose, goals and themes

The main aim of this (third) Social Policy Lab was twofold.

First, present what has been **learned about a data commons approach for mobility data to relevant stakeholders** from the municipality.

Second, have an **open dialogue** with municipal stakeholders about the **relevance and feasibility of a data commons** approach for the municipality. We wanted to figure out **how to embed data commons practices** in the right municipal contexts.

Due to the audience present, the goals achieved departed slightly from the intended purpose. Besides four civil servants from the Municipality of Amsterdam, other participants not working

for the municipality were present. Although this added perspectives from citizens, academics and professionals with expertise in data and cycling, it also resulted in the discussion broadening where we envisaged a more in-depth dialogue.

Inspiration about data commons approach, presentation of mobility data ecosystem mapping, and definition of the relevance of data commons for policy makers and analysts of the municipality were, as said before, the main topics discussed during the discussion.

3.1.2.2 Participants

During the workshop itself, 9 people participated:

- • 4 servants from the Municipality of Amsterdam, working on cycling policy and cycling data projects;
- • 5 citizens and professionals not affiliated with the municipality, but with professional and lay experience and knowledge on data, cycling data and cycling in Amsterdam with interest in data practices and data commons.

For the preparation of the workshop, contextual conversations were carried out:

- • 7 civil servants were interviewed, all involved in data projects related to mobility;
- • 3 commercial mobility experts working with the municipality on mobility projects;
- • 2 experts from an NGO and SME, that share mobility data with governmental bodies.

3.1.2.3 Activities

In the planning of the third SoPoLab, the following activities have been carried out:

- • Preparatory contextual conversations with civil servants from the Data Department and an analyst of the Municipality of Amsterdam. Conversations with stakeholders from Bike-Data enterprise (Ring Ring) and the Dutch Bike Union continued between SoPoLab 2 and SoPoLab 3;
- • Attracted expertise for next step in the (technical) design of data commons;
- • Mapping of mobility data ecosystem of Municipality of Amsterdam;
- • Inventory of Urbanite modules that could function as a bridge between the Urbanite platform and a potential data commons;
- • Further define goals with data commons participants of collectively collecting data by cycling with school students in Amsterdam North;
- • Feedback conversations with civil servants from Municipality of Amsterdam on lessons from data commons developments so far;
- • Broad communication within the municipality about the workshop through internal and public communication channels.
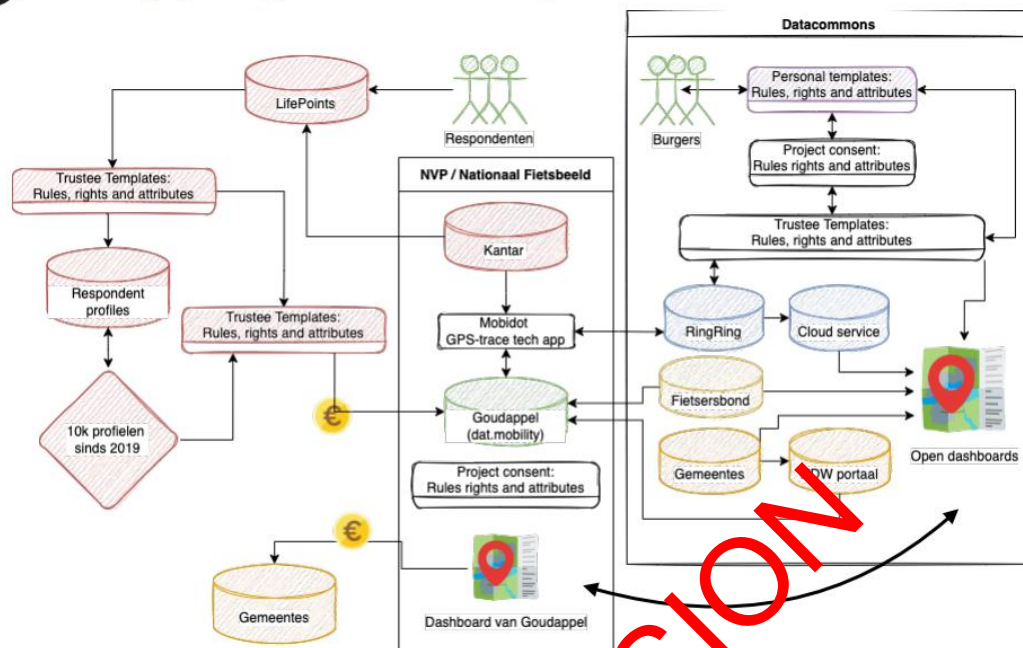
Figure 1. The Data Ecosystem that was presented during the SoPoLab session

During the third SoPoLab session, the following activities have been carried out:

- Introduction. Introduction round & welcome
- Presentation of Urbanite project in 10 mins by Nathalie van Loon (Municipality of Amsterdam)
- Presentation of cycling data ecosystem mapping
- Dialogue. plenary discussion on the insights of the data commons process so far
- Presentation of potential data commons pilot: school project 'Fiets data baas'
- Dialogue. how to realise a data commons pilot? What is needed to make it a success?
- Closing dialogue. An ecosystem for data commons: what actors, expertise, software tools and engagement are needed to embed data commons activities in current practices?

3.1.2.4 Outcomes

The dialogues and responses to the presentations during the workshop resulted in a couple of outcomes that can be addressed in the further development of the data commons pilot within the context of the Amsterdam Urbanite pilot.

0. <u>Broad vs in depth</u>: Having a mixed audience resulted in a broader discussion, at times lacking depth in discussing governmental structures and processes.
1. Sending invitations to a wide audience of civil servants resulted in previously unknown relevant contacts at the municipality that got introduced and engaged in the subject.

2. <u>Unclarity of data-use cases: Participants were not sure about the vision and aim of Urbanite and of the data commons</u> pilot within Urbanite. The goals of data collection and analysis should be better specified and further defined —- explicating why, for whom, and how does data contribute? Although it was presented that the Amsterdam pilot should increase the happiness of cyclists in Amsterdam North, it was not clear for participants how the collection of GPS traces could contribute to this goal. The host of CTO (Municipality of Amsterdam) explained that increased happiness should follow from improved insight – for cyclists themselves – in routes suited for fast cyclists and routes safer for slow cyclists. However, the path from data collection to insights was questioned by various participants.

3. <u>Legitimizing data collection:</u> Participants expressed the <u>need for very clear and specific goals for the collection of GPS traces</u> about cycling trips. Participants were critical about the need to continuously track individuals' location data to produce cycling GPS traces, for example, via the Ring Ring app. Participants expressed the concern that by allowing an app to use location services, other parties such as Apple and weather apps would indirectly also gain access to their location data. When location services on your phone are switched on, all apps can track you. In response, the presenters of the data commons initiative set out how GPS traces can be used to see what routes are chosen and gain insights into possible safer alternatives. The hosts stated that location data can be used for insights in an aggregated manner answering to privacy concerns. However, the general <u>perception of collecting personal location data was critical</u>. One participant stressed the benefits of collecting data. He told how data can be used in discussions with the municipality and other residents to get a clear image of actual mobility situations. This can prevent discussions from being only based on emotions. However, he also argued that using and collecting data requires very specific use case description.

4. <u>Ownership:</u> Participants questioned the <u>relationship between the data commons initiative and the municipality, regarding ownership, rules and rights</u>. They stressed that although the municipality collaborates with the data commons initiative (data commons Fietsgeluk), the initiative is not *owned* by the municipality. A certain distance should be maintained according to the participants of the workshop.

5. <u>Representation issues:</u> Participants put forth the question of the <u>possibilities for citizens' engagement</u> in a data commons like the pilot in Amsterdam North. The question was raised on how democratic the data commons pilot currently is and how this can be improved – for example by ensuring that the sample of students cycling is representative of different resident groups in North. The issue how to include people without smartphones was stressed. One participant offered to think along about ways in which residents can have more ownership and control in the data commons pilot.

6. <u>Time and engagement:</u> Potential links with current municipal data practices were explored. A data commons approach for the municipality was <u>problematised in terms of time and attention</u> that it needs. One civil servant had doubts due to these issues whether the data commons could be embedded wider. However, another civil servant related data commons approach to current practices of working with open data, which is already quite common within the municipality.

Outcomes of contextual conversations with civil servants of Municipality of Amsterdam:
Leading up to and following up on the workshop, conversations were held to discuss how lessons from the data commons pilot could contribute to data commons approaches in the city of Amsterdam. A data commons approach does not only entail developing a common pool of data that participants of the data commons can access or use. It also entails opening up tools for the city and its citizens to gain insight from the data that is produced by us altogether. This includes developing software tools for visualising and understanding data, making those software tools and data (re)usable, but also the development of methods to improve data and empowering citizens in the use of data for their benefit. We, therefore, discussed current practices around data collection and analysis with citizens and civil society, how they relate to a data commons approach and how elements of a data commons approach could be embedded in municipal data practices.

Some of the insights were:

1.   Municipal methods for working with citizens on data collection & analysis: The Cycling Department of the Municipality of Amsterdam is involved in projects working with data collected by citizens. For example, in the past, they collected information on cycling experiences in the city through a program called 'Ping if you care'. An innovative tool was developed to create a detailed cycling map with the most important bottlenecks for cyclists. Currently, the municipality is working with TUDelft to collect data from fitbits about stress experienced by cyclists in traffic. It is not completely clear whether standardised processes are used to collect these types of data. Gaining more insight would be beneficial for the Urbanite Amsterdam pilot, as working together with citizens on data collection and insights from data is a central goal.

2.   Private – public collaborations are better developed than public – civil. Whereas it was hard to gain insight in the processes for data collaboration between the municipality and civil society and citizens, it was easier to understand the relation between the municipality and private parties working on collecting data and insights from citizens. These relationships seem a lot better developed, which is questionable from the perspective of public value creation. Analysts from the municipality buy insights – for example, in shape of dashboards – from private parties like [Kantar](#) and [Mobidot](#). The data and methods of analyses are often not owned. These companies are specialised in data collection about citizens' behaviour and experiences, using panels, surveys and qualitative research. The question rises whether citizens and municipality would not benefit more from direct involvement and data exchange between citizens and the city. Can public money be saved by developing dashboards and software tools as part of an open source ecosystem? The open-source software can be made available to other municipalities and citizens at no additional cost. Commercial companies stressed the need for updates, changing compatibilities and helpdesks, things that might be an issue using open-source software.

3.   National data portal NDW provides a portal where municipalities can access data.
Municipalities sometimes buy data and make that publicly accessible through NDW. Currently, we are exploring with NDW how tools like urbanite can directly connect to this NDW platform, so that NDW provides standardised API connections to datasets provided by municipalities and tools like urbanite can create open insights based on this data. This concerns mostly open-data.

4.   Developments toward open software and reuse of code. In preparatory and follow-up conversations with civil servants from the municipality of Amsterdam, we explored the potential of embedding modules of the Urbanite ecosystem in municipal ecosystems. SCORE might be a project of interest for Urbanite to learn how software modules developed for harvesting, analysis, and visualisation of data can be prepared for reuse in Amsterdam and other cities. SCORE focuses on clear documentation and publication of code. A fourth SoPoLab could play a role in the exploration how to reuse code amongst the different participating cities in Urbanite.

3.1.2.5   Next Steps

For the coming months, the Amsterdam Urbanite partners will assess how to work on these next steps:

- Further define and communicate data use case, building on the pilot with school students and the insights from the Urbanite platform. Perhaps using Public Stack mapping.
- Plan conversations with school teachers to further define and develop the guest lectures about data commons in practice. Together with the teacher further defining potential data use cases and other learning goals related to data literacy;
- Develop a tool for data ecosystem mapping, making it easy for all pilot cities in Urbanite to visualise the data ecosystem of their municipalities, specifically related to mobility. This could give insight into how / where a data commons approach could improve the knowledge & information balance between government, market and communities.

3.2 Bilbao third SoPoLab Session

3.2.1 Where we come from

As a result of the SoPoLab2 and as indicated in D2.4 SOPO Lab second session "Create: going into the details of challenges and designing roadmaps", these three main challenges and opportunities for future work were identified, laying the foundations as a starting point for the third SoPoLab:

- **Data in Urban Mobility:** Opportunity around a challenge that focuses on defining a data plan, a data strategy for urban mobility and focuses on the use of data for decision making. Importance of data quality: Harmonisation and standardisation of data. This challenge should also work around data-driven decision making, i.e. managing diverse capacities to harmonise the data, prioritise it, generate indicators and package it all so that the decision can be transferred to both an administration and citizen participation. And finally, to ensure that data is a business, i.e. to reflect the need for financial resources and to draw on experiences in other countries that have worked. Professionalize services with portfolios of products, innovations, etc., of companies.

- **Policies:** Another challenge has been defined to work on policy-making aspects ranging from the improvement of vision and cooperation between institutions to aspects of cultural change and awareness-raising among citizens, as well as concrete regulations and policies to push forward a Data Plan for urban mobility.

  In relation to citizens, policies are needed to raise awareness, change consumption habits, sustainability, new mobility and the environment. It is also necessary to work on policies that improve cooperation between institutions, i.e. to create policies and laws along the same lines from all institutions, avoiding incoherence and conflicts of interest. All these measures must be accompanied by economic measures, more investment and resources. The technology is mature and does not need more R&D, but rather commitment and implementation. And lastly, they must be policies with a higher level of concreteness and commitment, as there is a lack of regulations and concrete policies, and we must commit to a consensus-based, long-term Data Plan.

- **Cultural Shift:** The last challenge and opportunity for future work are closely related to aspects of trust and attitude towards the use of technology. This challenge would focus on opportunities around fostering citizen participation in urban mobility management processes, improving trust and communication between all actors involved and analysing people's competencies and skills.

  Citizen participation and social awareness policies need to be defined and promoted, and closer proximity to the end-user/citizen, and more open participation formulas that help to obtain representative feedback from citizens need to be ensured. It is also necessary to analyse how to improve education and skills among workers and decision-makers and to promote a better academic offer. And finally, with regard to decision-makers, there is a need to build trust in data for decision-making and to improve communication between managers and technologists.

All the results of the second SoPoLab are available at the following link:

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https://jorgetecnalia.kumu.io/urbanite-reflection-discover-sopolab-bilbao

3.2.2 SoPoLab third Session

The session was held on the 17th of June 2022 at 11.00 a.m (CET) on the 6th floor of the Town hall main building of the Municipality of Bilbao. It lasted for two and a half hours (11:00 – 13:30). It was carried out in presence, hosted by the Mobility Cluster of Bilbao, facilitated by Tecnalia Research & Innovation and with the participation of the Municipality of Bilbao. 13 people attended the meeting.

Figure 2. Participants to the third Bilbao URBANITE SoPoLab session

3.2.2.1 Purpose, goals and themes

The main objective of this session was to collect concrete proposals and actions that could lead to policies at local, regional and European or national level.

Given that we had already worked on the identification of problems and needs in previous sessions, the objective of this session was to translate these needs and problems into concrete actions that could be carried out in the short and medium term. These actions will be presented to the local policy makers of Bilbao in a future session and will also be shared with the stakeholders of the rest of the project partners in a future joint session.

It was designed a specific template for each of the three topics that were discussed during the session so we could identify specific actions in terms of cultural shift, data in urban mobility and policies.

3.2.2.2 Participants

A total of 13 people from 9 organisations participated in the Third session of the SoPoLab, taking into account attendants and facilitators. All people attending the SoPoLab session signed the Informed Consent Form regulating their personal data and their contributions during the workshop.

All the organisations, except Tecnalia Research & Innovation, belong to the Sustainable Mobility Forum of Bilbao that integrates different neighbourhood and business associations and other relevant mobility agents. These organisations were:

- Bilbao Municipality: City's administrators, Local Authorities target group. Participation as "Limited delegation": Partner organisations give limited control over decision making to community.
- BATURA: Mobility service provider. BilbaoBus app developer. As contractors in charge of municipal services and/or systems management they may benefit from implementing functionalities that better supports them on integrating data with other systems. Business Companies, Urban Mobility Platforms target group.
- INGARTEK: At Ingartek we offer our services to the public administration, to transport operators, concessions and engineering companies, carrying out studies on traffic, mobility, transport and urban planning.
- KAPSCH: Mobility service provider. Traffic Control Centre System Provider. As contractors in charge of municipal services and/or systems management they may benefit from implementing functionalities that better supports them on integrating data with other systems. Business Companies, Urban Mobility Platforms target group.
- GRUPO LOGI: specialised in various areas of logistics and promoter of the national transport, parcel and express courier network TIPSA.
- KAIKU KM0: sustainable milk production company. Focused on animal welfare, proximity, care for the environment and equal treatment.
- BILBAOTIK: Municipal ICT provider. They manage all Communication Infrastructures in the city, exploiting the Informatic Systems and providing hardware and software aspects. As municipal ICT provider, they are subject to adapting/integrating the project developments to the IT infrastructure of the city. Any module/system to be implemented will require their support.
- TECNALIA. Facilitator Role.

3.2.2.3 Activities

The session was structured in three different blocks. The schedule was:

- An initial presentation with a twofold objective: Firstly, to present and recall the results of the second SoPoLab Bilbao session. In this way, attendees identify the three main areas or themes that will be worked on. This is followed by an explanation of how the third session will work.

  The objective is to identify CONCRETE ACTIONS among the participants in order to achieve the challenges identified in the second session.

- A second part of group work, in three parallel tables, for each of the following themes:

Table 1: Policy area. Ideas that focus on policy-making aspects range from improving vision and cooperation between institutions to aspects of cultural change and awareness-raising among citizens to concrete regulations and policies to push forward a Data Plan for urban mobility.

Table 2: Cultural Shift area. Ideas around fostering citizen participation in urban mobility management processes, improving trust and communication between all actors involved and analysing people's competences and skills.

Table 3: Data in Urban Mobility area. Ideas that focus on defining a data plan, a data strategy for urban mobility and focus on the use of data for decision making.

At each table, there is a CANVA to work on the ideas. They are asked to identify concrete actions to achieve the challenges described above. To do this, identify proposals, which are concrete actions. These proposals can be of different types:

- Project/Initiative
- Policy/Regulation
- Funding
- Network
- Other

At each table, made up of 4-5 participants, ideas are discussed and expressed on a post-it note: both the idea and the typology.

Attendees work on each topic for a period of 30 minutes and rotate to the next table in such a way that all participants make their contributions to the 3 themes.

All the material resulting from the second SoPoLab session is available to attendees at all times, both for consultation and for inspiration, in two formats:

- On A3 sheets printed in each of the work areas.
- With a laptop with the KUMU scheme: https://jorgetecnalia.kumu.io/urbanite-reflection-discover-sopolab-bilbao

- A third and final part, a a plenary session. Facilitators highlight the main ideas identified by the working groups regarding the three table areas.

- Farewell to the session, with a lunch.

3.2.2.4   Outcomes

Three main challenges and opportunities for future work that were identified in the previous Sopolab were:

Data in Urban Mobility, Policies and Cultural Shift, so in order to collect concrete and specific projects/activities, policies or funding initiatives the above mentioned canvas was prepared.
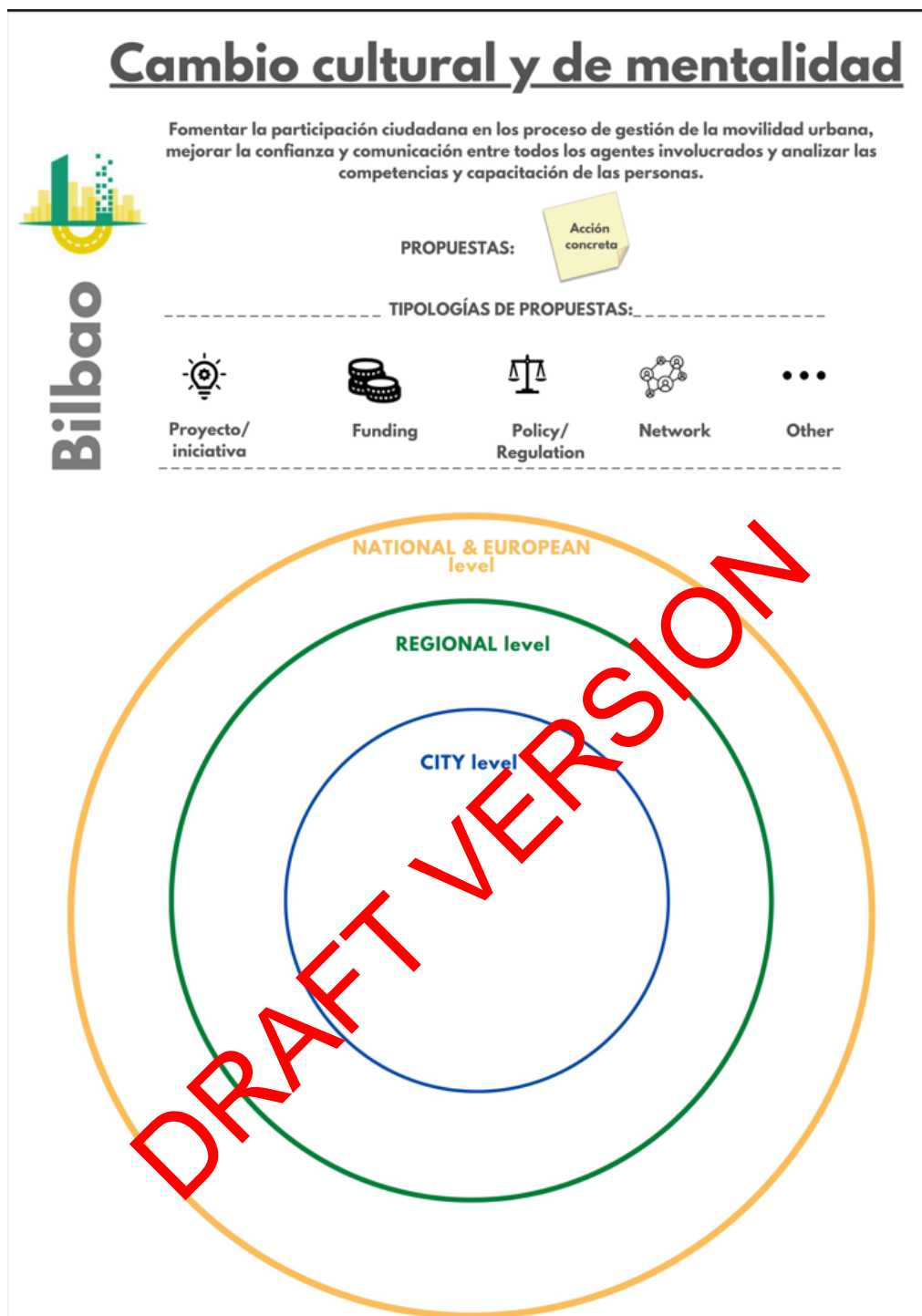
Figure 3. Cultural Shift Canvas

The outcomes we obtained, splited in local, regional or European level and for each of the 3 topics are:

The Data in Urban Mobility
At a local level, funding initiatives such as incentives for citizens to share their mobility data (bike, car...) or incentivise private companies to provide their mobility data to look for delivery

logistics patterns were mentioned. Also, funding to improve public space, loading/unloading spaces, thanks to that shared data, was identified as needed.

In terms of policies at a local level, the integration of data management, standardisation of data in the technical specifications of public tenders of the city council was mentioned.

At a European and National level, the creation of a National Data Office was mentioned (which already exists) in terms of policies.

As an interesting initiative at a European level, a repository of European success stories of projects on the use of data in mobility that could be replicable was identified as very interesting. It was also mentioned that free standards in data formats should be used in Europe as a good practice and also that in order for a city to be eligible for European public funding in mobility matters, it should standardise and share its mobility data and this could be done through policy regulation.

Policies

In terms of policy-making, at a local level, the creation of a Department within the local institutions that could lead the management of the Data office as the only interlocutor with stakeholders was identified as a very needed action. A new and unique space in the mayor's office organisation chart to lead these matters was mentioned as a very concrete action in terms of Policy-making and Regulation.

The need to encourage (and incentivize) private companies to use electric or non-emission fleets and public company fleets to do so de facto was mentioned in some working groups as a good idea to boost the use of sustainable mobility.

At a regional level, the creation of a binding space that could coordinate the municipalities in order to facilitate the technological development of cities was identified as a good practice that could be funded in terms of a network.

At that very same level also, the common mobility policies between the different institutions at a regional level (municipality, province, region) should be regulated by law, so that all the institutions could have a common and shared framework.

Something that was also mentioned as a good practice that could be implemented is the identification of success stories or best practices in urban mobility policies boosting the electric mobility within the region that could be replicated in other municipalities and could be coordinated at a regional level by the regional government. This is something that is missing nowadays, and that could help the small municipalities in the region very much. Moreover, those good practices could be identified not only in terms of public policies but also from the private sector.

Cultural Shift:

When it comes to the cultural shift and changing the mindsets among the society, there were some very interesting concrete actions mentioned in the Bilbao SoPoLab such as, for example, at a local level to increase the early and quality participation levels of the civil society in the urban mobility projects, so the society increases the feeling of belonging and ownership of the project and also assumes co-responsibility with the decisions made.

Another change that should be made at a local level in the administration is to improve the communication (early communication) of the initiatives of urban mobility that the municipality launches, which could be done by including a more heterogenous communication working group with profiles such as sociologists, anthropologists, urban planners and communication experts and marketing advisors.

There is a need to make a bigger effort in pedagogy among the society. Awareness of the benefits of more sustainable mobility should be raised, focused on a very wide audience (not only kids or students) and with specific training or capacity building actions.

In terms of capacity building actions also, another very remarkable issue is that there is an urgent need for training public servants in the use of disruptive technology-based solutions, such as Urbanite platform, in order to improve the trust of those public servants in those decision-making tools and build capacity among them so they can use them fluently and with knowledge.

At a European level, one of the concrete actions that were suggested was to analyse the Higher Education Institutions (HEIs) academic offer in those topics and adapt it to the companies and administrations demands in Urban mobility, as they feel there is a big gap there. The cluster or EIT of Mobility could perfectly lead that task.

3.2.2.5   Next Steps

It is planned in Bilbao a very concrete roadmap and next actions. The plan is to present the outcomes of this third session and all the suggestions made by the stakeholders to the local policy-makers so that they can take note of them and, potentially, consider including them in their next policy planning.

End-user testing of the Urbanite platform with public servants will also be carried out and all the learning from these actions will be shared with the rest of the pilot cities in a European level Workshop (or SoPoLab).

Apart from that, it is also well recognised in the municipality that they will take advantage of the momentum generated within Urbanite project and they will leverage on the community built in the project to keep on working on Urban mobility management and technology related issues.

3.3 Helsinki third SoPoLab Session

3.3.1 Where we come from

FVH, as Helsinki SoPoLab facilitator, has continued tight cooperation with the relevant stakeholders, in particular, concentrating on stakeholders working with traffic simulations. FHV has had meetings with several specialists, engineers, planners and researchers from the city of Helsinki, Helsinki Regional Traffic (HRT), Aalto University, Port of Helsinki and private companies, such as Telia and Hypercell. These companies are providing mobile phone/Bluetooth-based data that can be used for traffic simulation work (e.g. calibrations).

The target of the second SoPoLab was to shed light on data platforms the participants currently use and how they experience their usage. Also, it was discussed their usage of traffic simulation models, if they used any. After the workshop, they targeted cooperation with stakeholders towards stakeholders working with traffic simulations as the target of the URBANITE project is to develop simulation models too. The aim was to increase understanding of what kind of work the stakeholders do with traffic simulations. This included the used tools, common difficulties and the used data sets.

3.3.2 SoPoLab Third Session

The third SoPoLab was organized, as a face-to-face meeting on the 7th of June 2022 in Kalasatama Urban Lab, lasting 1,5 hours (Helsinki).

3.3.2.1 Purpose, goals and themes

Based on work with stakeholders, discussions revolving around traffic simulations generally concentrate on the used tools and models, technical difficulties, developing of methods and so on. While they are central too, this approach tends to overlook the role of simulation models for urban development and their political dimensions.

The target of the third SoPoLab was to discuss what kind of city we are planning with present traffic simulation models now and in the future. Traffic simulation models can have a notable role in defining how the city is developing in the future. We wanted to gather understanding of what kind of assumptions there are behind traffic simulations, how sustainability goals are reached, how citizens are taken into account and how simulation work should change in the future.

The workshop was targeted to stakeholders and entrepreneurs who are working with or developing traffic simulation models or are interested in them.

Invitation and registration form: https://forumvirium.fi/tapahtuma/urbanite-hankkeen-7-6-tyopaja-liikenteen-simulaatiot-nyt-ja-tulevaisuudessa/

3.3.2.2 Participants

- Seven different stakeholders took part in the SoPoLab, representing different sectors such as universities, local administration, cyclist lobby and mobile operator providers. Traffic engineer, the city of Helsinki, role: traffic simulation work
- Lecturer / Researcher, Aalto University, role: researching traffic simulations
- Operations manager, Helsinki cyclists, role: lobbying for cyclists
- Telia Oy (Mobile phone operator provider), role: sales and data
- Specialist, Flou (traffic consultancy company), role: traffic simulations

- Project manager, Forum Virium Helsinki, role: traffic simulation specialist
- Urban planner, the city of Helsinki, roles: urban models, modelling, urban planning

3.3.2.3   Activities

The workshop had four parts:

1) Introducing the participants, presentation about the URBANITE project, work done with stakeholders and an introduction to the workshop.

Figure 4. Introducing Urbanite project.

2) Workshop in two small groups concentrating on the question 'what kind of city we're planning with the present traffic simulation models'. One group was tech/digital twin oriented and another group urban planning oriented.

3) Workshop in two small groups concentrating on the question 'what kind of city we should be planning in the future with the help of traffic simulations'.

4) Concluding thoughts, forming policy recommendations and next steps. The whole group was working together.

A virtual Miro board was used to gather information the participants shared. We shared a link to the board with the participants, but most of the participants decided to use sticky notes or let the facilitator write notes on the board.
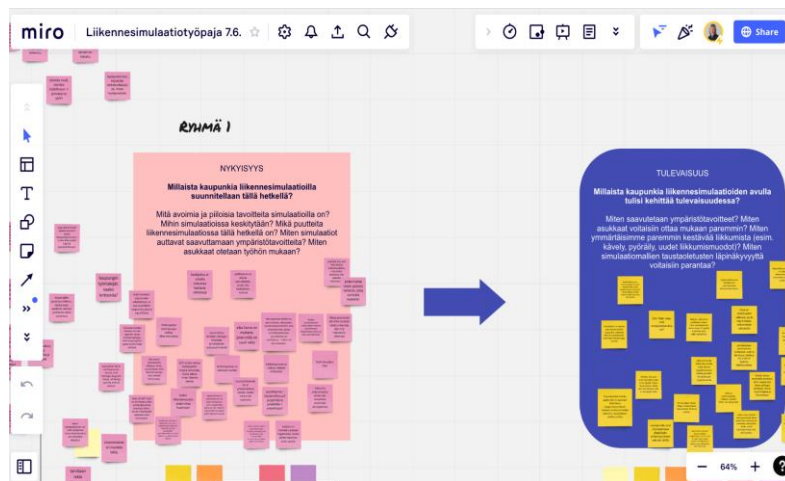
Figure 5. Virtual Miro board used in the workshop.

3.3.2.4   Outcomes

Similarly to the second session of the SoPoLab, we discussed the reliability of the traffic simulation models and scenarios. Data and models have to be valid and reliable in order to provide relevant results. However, when making future scenarios with data based on the present moment, it's possible to build problematic scenarios. For instance, if the city has a plenty on traffic jams, it might sound relevant to make scenarios where car traffic is growing, and therefore build more roads, even if the target was to reduce car traffic and support sustainable means of transportation. We discussed whether the traffic simulations could be more based on strategic targets. Also, it was mentioned that modelling should be a process that's learning itself. It would be important to build models that take into account rapid changes e.g. electronic vehicles, climate change, political targets etc. This may be difficult if the city is purchasing models from consultants who are not working in a long-span.

While in the second SoPoLab the stakeholders expressed that they have too many traffic-related platforms and BI-solutions to use, we found that traffic simulations are not easily available. Instead, traffic simulation works rather exclusive and it should be popularized. Starting with the tools, which are behind expensive licenses and require expertise, the assumptions behind traffic simulations could be more transparent. Traffic simulations are easily seen as 'black boxes' which are 'independently' producing traffic scenario models. They may be used wrongly in political decision-making, even purposely. The participants expressed that sometimes even the experts do understand how simulation models are built and therefore cannot estimate their validity and reliability. The citizens have even less touchpoints to simulation models. While there's no need to understand, e.g. mathematics behind the models, their targets and aims could be popularized and made more accessible to experts not familiar with simulations and citizens. Popularized simulation models could be part of the traffic and mobility data platform that the city of Helsinki is developing, and some simulation models could be included in open documents about master plans in the city.

When thinking of sustainable traffic, the participants mentioned that the traffic simulation models are designed to enhance car-flow. While there is a growing pressure to reduce climate-impact, traffic simulations should take into account sustainable forms of transportation and climate-targets the city of Helsinki has addressed.

The participants expressed that there are problems with different levels of government in reaching climate-goals. City's urban planning is regulated by regional and national governments,

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along with the city. While the regional government has responsibilities related to regional traffic flow and congestion prevention, it can concurrently undermine the city's strategical climate targets. At the local level, the city's traffic planning should be 'more radical' in putting politically agreed climate targets into practice. Along with traffic planning, the city does not have 'radical tools' such as road tolls because of political decision-making. Thus, the participants suggested that sustainably targets should be regulated by legislation that they were taken seriously enough.

3.3.2.5   Next Steps

We agreed that discussion between different stakeholders should continue diverse and in ways that's supporting different voices to raise. The used 'language' should be shared, and simulation work should be more popularized.

The simulation model that the URBANITE project is providing will help to popularize how traffic simulation models function.

FVH will contact the regional and national governments to open discussion on how the region could better reach sustainability goals, get that feedback and share it in the next European Level common SoPoLab with the rest of the pilot cities.

3.4 Messina third SoPoLab Session

3.4.1 Where we come from

The second SoPoLab event took place at the Messina City Hall on December 17, 2021, to discuss with local stakeholders about necessities and priorities for urban mobility management in Messina and how to make the SoPoLab concrete support for our policy-makers.

At the end of the SoPoLab event, two key thematic areas have been identified as strategic, that are: 1) sustainable mobility and 2) multi-modal transport. In respect of them, it is necessary to identify opportunities and possible problems, and allow different stakeholders to discuss how to achieve desired results and the possible approaches to use.

During the second SoPoLab, we also defined the methodology to use for the co-creation of new policy-making strategies on the two key thematic areas above till the third SoPoLab. The activity implementation strategy were organized in two phases:

a) Asynchronous interaction of stakeholders through the DECIDIM platform in order to identify key issues and application fields related to sustainable mobility and multi-modal transport;

b) Planning and organization of technical tables on the two key thematic areas, with the aim to create a collaborative and long-term ecosystem of experts and key actors able to be an active part in the next future decision-making processes for the city of Messina.

Figure 6. Messina SoPoLab roadmap

3.4.2 SoPoLab third Session

The third SoPoLab event took place at the University of Messina on May 16th, 2022.

Figure 7: Flyer of the Digital Day event during which the 3rd SoPoLab was held

3.4.2.1 Purpose, goals and themes

Starting from the outcomes of the second SoPoLab and the interactions of the stakeholders on the DECIDIM platform about **sustainable mobility and multi-modal transportation** in Messina, the objectives of the third SoPoLab were focused on the **identification of possible solutions to solve the problems that affect the urban mobility in Messina**. To this aim, we organized **three panel sessions** with some experts and opened the discussion to the whole audience. The expected outcomes of the SoPoLab event were **identifying specific strategic objectives that should be addressed by the local policy-makers**.

3.4.2.2 Participants

The participants in this third session of the SoPoLab in URBANITE were:

- · Municipality of Messina (Public Administration)
- · University of Messina (Public Administration)
- · Alma Digit (SME)
- · Professional orders of Engineers in Messina
- · Professional orders of Architects in Messina
- · Almawave (Company)
- · Engineering Spa (Company)
- · BIP Spa (Company)
- · Intellera Consulting (Company)
- · CubeCurve People (SME)
- · IDS&UNITELM (SME)
- · Citizens and students

Figure 8: A large group of attendees proactively participated in the panel sessions

3.4.2.3   Activities

The investigate problems and possible solutions to urban mobility in Messina, we have organized the SoPoLab activities in two steps:

- Step 1: asynchronous interaction among the stakeholders to exchange ideas and identify the most strategic issues that need innovation and new decision-making processes related to the above key topics; such phase will be managed using the DECIDIM platform;
- Step 2: organization of thematic panels at the third SoPoLab to identify new policy decision opportunities.

Figure 9: A groups of experts contributed with their knowledge in each of the panel sessions

We held the third SoPoLab event in conjunction with the "Messina Digital Day" event hosted at the University of Messina. This opportunity allowed to attract the attention of new stakeholders operating in the IT sector and of university students and citizens. As a wide audience was involved, it was very important to discuss daily problems of people in moving around the city and possible or favourite solutions. Participants were proactive and provided interesting inputs for identifying priorities in the management of Messina urban mobility.

So, in order to boost the discussion and participation, at this third SoPoLab session, we organized three panels of 45 minutes and 5/6 panellists each. The panels were focused on three key topics (all three identified in the DECIDIM platform or coming from the previous SoPoLab session):

1) Sustainable Mobility;
2) Multi-modal Transportation;

3) Optimization of traffic flows.

In the first panel on "**Sustainable Mobility**", we discussed local initiatives to promote green transportation means (e.g., MuoviME) and the experience users had; also, we debated the impact of sustainable mobility on working days activities or free time and of possible forcing actions (e.g., fines or traffic tickets) to convince people to take green transport systems. Anyway, the audience converged in considering the low education of citizens in using green transportation means as the principal barrier to achieving sustainable mobility, and specific actions should be undertaken by the public administration (and the Municipality in particular).

In the second panel on "**Multi-modal Transportation**", we discussed difficulties related to transport connections in Messina, trying to understand the causes and possible solutions.
We identified marketing problems that limit the knowledge of citizens on available services, the low match of public transportation with user needs in some cases, the need of planning multi-modality not only for passengers but also for freight, and the importance of wide-ranging projects to reduce costs and improve citizens' quality of life. Most of all, the audience agreed on the lack of citizens' trust in public transportation because they do not have guarantees on timetables and the transportation in the city is not always reliable.

In the third and final panel on the "**Optimization of traffic flows**", we discussed the opportunities to reduce traffic peaks by increasing flexibility in working timelines, the need to define new mobility models (for example, according to the Mobility as a Service principle), the advantages brought by new parking areas to reduce traffic congestion in the city centre and stimulate the usage of public transportation, how to improve the users' quality of experience in the urban mobility. The major interest of the audience with respect to this topic concerned the promotion of public transportation and also using technologies to respond to citizens' needs.

3.4.2.4 Outcomes

SoPoLab activities in Messina are finalized to provide concrete solutions to the policy-makers of the Municipality of Messina in addressing urban mobility problems.
Starting from the key thematic areas of interest for the city recognized at the second SoPoLab, during the third SoPoLab we investigate problems and possible solutions related to such thematic areas. To do this, we involved not only stakeholders but also citizens and university students, who proved to be proactive and interested in the proposed topics.
Wanting to draw up a sort of "to-do list" of recommendations for decision-makers that came out from the panels, outcomes can be summarized as follows:

- the **need**, on the part of the administration, **to improve services** but also to help **educate citizens on sustainable urban mobility through awareness campaigns**, events and other initiatives aimed at this end;
- **multi-modality is a focal point for improving the quality of life:** enabling travel through the use of well-connected means of transportation would help citizens, students, tourists, and even commuters solve many of the daily frustrations caused by a lack of coordination on the part of the actors involved in managing them;
- new infrastructure (parking lots, bike lanes, etc.) can help improve the traffic situation in the city centre, a sore point highlighted by **simulations using data from the municipality** and the direct experience of event participants.

For the future, given the already achieved results, we aim to investigate results more in detail and **draft specific proposals for decision-makers of the** city municipality.

3.4.2.5 Next Steps

The next step of our work is the organization of the last SoPoLab (the 4th in Messina), where we would like to **understand how the Urbanite technologies can support the Municipality to address the priorities identified in the panels organized during the 3rd SoPoLab** (i.e., education of citizens, **trust in the multi-modal mobility**, promotion of the public transportation, etc..). Such technologies will be part of the proposals that will be drafted and proposed to the decision makers of the Municipality of Messina and that we would also like to share with the rest of the partners in an **European-level discussion**.

4   Conclusions and next steps

Now that we are in the last year of the project we are getting to the end of the co-creation process, so all the lessons learned so far have to be reflected in the D2.6. In any case, as mentioned before, we still believe that the process can have a follow-up in a form of a 4th SoPoLab sessions where each of the pilot cities could share their conclusions when it comes to the use of big data and algorithms for better decision-making in urban mobility. We have touched topics and aspects of trust in disruptive technologies, the use of data for decision-making in urban mobility, the management process of urban mobility in public administrations, the shard values and/or public-private-civil collaboration in urban mobility and, even if we still have to share in a European Level SoPoLab the lessons that we have learned and the specific actions that could be taken in each of the pilot cities, there are some conclusions for each of the pilot cities that we can already share.

In that respect , the main conclusions and outcomes in **Amsterdam** are that the mixed audience resulted in a broader discussion, that the goals of data collection and analysis should be better specified and further defined and that the objective for collection of GPS traces about cycling trips should be even better defined. We also learned that there are some doubts about how democratic the data commons pilot currently is and how this can be improved, ensuring all the groups are represented, that the private – public collaborations are better developed than public – civil, and that work should be done in that sense.

In **Bilbao** there were very concrete actions suggested such as to incentivize private companies to provide their mobility data to look for delivery logistics patterns, that the creation of a repository of European success stories of projects on the use of data in mobility that could inspire the municipality would be very welcome, that the creation of a Department within the local institutions, a kind of new and unique space in the mayor's office organisation chart, that could lead the management of the Data office as the only interlocutor is seen as a critical and urgent need or that increasing the early and quality participation levels of the civil society in the urban mobility projects, would also increase the feeling of belonging by the civil society and therefore the citizens would assume co-responsibility with the decisions made. Finally, in Bilbao it was very much suggested to train public servants in the use of disruptive technology based solutions in order to improve their trust in those decision-making tools (Local Level).

In the city of **Helsinki**, the conclusions that were obtained in the third session of the SoPoLab were very focused on the traffic simulations aspect of the use case, such as that it is crucial to design traffic simulation models to reduce climate-impact instead of enhancing car-flow, it is needed to define future and problematic scenarios with data based on the present and current moment (simulation and prediction) and that in terms of policies, different levels of administrations have different approaches to reach climate goals and that is a problem at a city level and an homogeneous view and approach is needed.

Finally, the conclusions obtained in **Messina**, were about the need, on the part of the administration, to improve services but also to help educate citizens (pedagogy) on sustainable urban mobility through awareness campaigns, events and other initiatives aimed at this end. We learned that investment is needed in Messina to improve the traffic situation in the city centre with new infrastructure (parking lots, bike lanes, improvement of current infrastructure) enabling travel through the use of well-connected means of transportation considering multi-modality as a focal point for improving the quality of life.

As we mentioned in the last report on the second SoPoLab sessions (D2.4), a remarkable effort has been done on the third session of the SoPoLab to gather the interests and needs of the whole value chain of urban mobility. This is something that was somehow missing in the second SoPoLab and that we have definitely fixed in the third on as, for example, in Messina it was crucial to gather the interests of students and citizens as end users of the urban mobility services or the involvement of NGOs in Amsterdam to gather the needs and vision from cyclists. On the other hand, in Bilbao and Helsinki a very strong representation of the private organisations providing services to the municipality was achieved, so the point of view, interests and needs for policy-making of this collective is going to be delivered to the public servants.

Something worth mentioning that we have learned from the third sessions in the pilot cities is that, for example, in Messina and Bilbao there is the same need in terms of cultural and mental change of end users, through capacity building and trust building initiatives, not only in technology but also in the means of sustainable mobility itself. In addition, to improve trust in technology, both cities also identify the need to train public servants in the use of these disruptive technologies. This is something that will definitely be shared with all partners in the next session at European level in the coming months.

In that respect, the objective of that European level session will be to gather insights and feedback from an European policy maker perspective related not only to the results of the local sessions, but also from the lessons learned on the use and testing of Urbanite platform for decision-making processes in urban mobility. This will be reported and documented in our next deliverable D2.6 Impact analysis and recommendations.