



PARTICIPATION 2.0 IN THE SUSTAINABLE URBAN  
MOBILITY PLANNING PROCESS –  
EXPERIENCES FROM THE CIVITAS DYN@MO PROJECT

# DYN@MO cities test and implement new participation 2.0 methods

The involvement and participation of citizens and stakeholders in the sustainable urban mobility planning process is necessary in order to obtain public legitimacy and create a plan that satisfies the mobility needs of people. With the adoption of new Information and Communication Technologies (ICT), citizen participation methods have started to shift more towards online environments. We are entering an era of participation 2.0 or e-participation referring to the change from “web 1.0” or “read only” to “web 2.0”, meaning websites that allow users to interact and collaborate with each other and to create content rather than just passively view it. New methods that support participation through social media groups, interactive web-platforms, discussion forums, online polls and mobile applications have several advantages:

- They can be used to complement the traditional tools and to overcome problems related to those;
- Participation 2.0 removes the barriers of time and space and allows citizens to participate whenever they have time;
- New tools have the potential to reach new target groups and allow citizens to become informed and participate in the debate themselves;
- They can be used to offer real-time travel information and new services to citizens that help to plan trips in a more sustainable way.

ICT based modern communication tools play an important role in cities' activities within the CIVITAS DYN@MO project funded by the CIVITAS Initiative. The four cities



Aachen (Germany), Gdynia (Poland), Koprivnica (Croatia) and Palma (Spain) test innovative participation 2.0 tools, referred to as mobility 2.0 tools within the framework of the DYN@MO project, to support the preparation and implementation of their Sustainable Urban Mobility Plans (SUMPs). This brochure shares cities' practical experiences on implementing these tools.

*The brochure supports the general aims of the CIVITAS Initiative to support cleaner and better transport in cities.*

## DYN@MO project in a nutshell

- DYN@MO (2012-2016) is part of the CIVITAS Initiative, supporting cities to introduce ambitious transport measures and policies towards sustainable urban mobility
- Four DYN@MO cities Aachen, Gdynia, Koprivnica and Palma have agreed on a common mission to strengthen sustainable mobility
- The project consists of 28 partners in the four cities supported by Union of the Baltic Cities, Rupprecht Consult and Lund University
- The strategic aims of the DYN@MO are to:
  - develop “Mobility 2.0” systems and services by applying new web-based technologies
  - implement innovative electric mobility solutions, using new electric and hybrid vehicles and
  - engage in dynamic citizen dialogue for mobility planning and service improvements



Photo: City of Aachen/Jens Stachowitz

## Experiences of e-participation in the Aachen SUMP process

Text: Dr. Armin Langweg/City of Aachen

The city of Aachen with its 248,000 inhabitants is the westernmost city of Germany, located in North Rhine-Westphalia, close to the borders of Belgium and the Netherlands. The city has four universities, making it a young, dynamic and highly educated metropolis. Aachen has a long tradition in sustainable urban mobility planning and has been appointed as a German model region in both mobility management and electromobility.

The participation of citizens and other stakeholders is a crucial element of the mobility planning process in Aachen. Participation helps citizens to better perceive the process of sustainable urban mobility planning – from vision building to implementation, and offers an opportunity to influence and participate themselves in the planning and developing their own living environment. The involvement of citizens obliges transport and urban planners to explain, often, very complex planning issues in everyday language and use methods that citizens understand. It is also important for the city to get feedback at an early stage and to get to know the topics which may be controversial.

Active participation on the part of citizens can help to gain better acceptance of the traffic planning measures. Aachen has a recent example illustrating that the success of major development projects is highly dependent on the extent to which the public is involved in the process. A referendum in Aachen, in 2013, put a stop to the planned project of reintroducing a light railway system. This is a good example of how projects “coming from above” may fail to be successful. Instead, a broad agreement, with the help of public participation, has to be reached with regard to the need for major changes to get wider acceptance and public support.

### E-participation supports the SUMP vision building process

One of the key elements for creating a successful Sustainable Urban Mobility Plan (SUMP) is the development of a common vision that will establish the foundation for all steps later in the process. A mobility vision for the year 2050 in Aachen was formulated by different participants involved in the process such as politicians, city officials and different stakeholder groups in 2012-2013. The vision was divided into 8 sub-topics that were com-

pared against the current situation in these fields. The 8 sub-topics followed the division to eight thematic commissions that were established to facilitate the discussion between experts and stakeholders on the SUMP.

To make the vision easily understandable, the components of the vision were visualised with 36 attractive posters. The posters, together with a video, explaining the reasons for developing a SUMP, were presented to the public in a citizens' workshop taking place in a large marquee near a popular pedestrian zone. Citizens had the opportunity to read the vision and make concrete proposals on measures and express their opinions, which were collected on the partition walls. The leaders of the 8 commissions were available to discuss with the citizens.

About 500 people took the opportunity to familiarise themselves with the SUMP process. The atmosphere was positive and the event can be considered a success.

In order to motivate more people to participate in the SUMP process, especially people who were not able to attend the citizen workshop or who usually do not take part in such events, Aachen utilised a participation 2.0 method to complement the traditional participation approach. An online questionnaire, where people could express their opinions and evaluate the visions, was opened for three weeks after the public event. The video served as an invitation to citizens to participate. Furthermore, the 36 posters were also available as online versions.



Photo: City of Aachen/Jens Stachowitz

An introduction page explained the background of the SUMP process, the aims of the survey and the intentions to develop concrete mobility measures at a later stage.



Photo: City of Aachen

Respondents were asked either to agree or disagree on the eight visions. Subsequently, the respondent was asked to give a score, following the German school grade scale from 1 to 5, to the actual situation in each field. In addition, the participants could select three out of 15 topics given, where they would see a need for the most immediate action.

### Results and lessons learned

Some 270 persons took the opportunity to participate in the survey. The majority agreed on the visions in all 8 fields. The distribution of answers – to agree or not - was very similar in all fields.

Proposals for how to change the visions were especially helpful and were discussed in the 8 thematic commissions. Some of the changes were implemented. The current situation was evaluated negatively, which is not surprising considering that it was compared with the desirable state in the future. Public transport and the cycling were identified as the fields with the highest need for action. The citizens made altogether 215 proposals and remarks for the eight fields, some of them receiving fewer comments than others.

Five months after the completion of the participation process, politicians decided upon the finalised version of the draft resolution prepared. In January 2014, the “visions 2050” were approved unanimously by the Mobility Commission of the City Council.



Based on the experiences, Aachen sees the participation 2.0 methods as an additional and useful possibility to engage citizens in the process of developing a SUMP. However, traditional participation methods also have their place. Both ways are needed to develop and implement citizen-supported plans.

The short version of the visions 2050 have been translated into English. Documentation of the process and the video is available at [www.aachen.de/vep](http://www.aachen.de/vep).

## 5 key points to remember when planning e-participation:

1. Public participation should take place at an early stage, preferably already in the vision building state
2. Clear and simple language should be used and professional jargon avoided
3. Elements of consent, voting and suggestions should be involved
4. Results of participation are not representative
5. Key results should be used to plan further steps

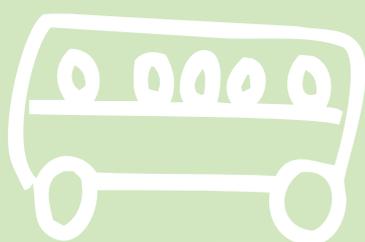




Photo: City of Gdynia

## Mobility 2.0 and Social Media Platforms in SUMP processes – experiences from Gdynia and Palma

Text: Aleksandra Romanowska/City of Gdynia & Emilio Lopez Sancho/Eurolocal Palma de Mallorca

Cities of Gdynia and Palma have experienced that traditional participation tools like workshops, consultation events and one-way written communication, tend to attract the same segment of the city population – the usual suspects. By combining the traditional tools with mobility 2.0 tools the pool of participating citizens can be enriched with the so-called digital natives. This way, more young citizens can be involved, which is essential

when talking about future visions for the city. There is also a potential to obtain more feedback from tourists and other visitors, which is of strategic importance for tourist destinations like the city of Palma.

Mobility 2.0 tools can help to create more interactive online environments where, both, information can be shared and feedback received. Dynamic two-way communication can lead to a better awareness about the importance of sustainable mobility and enrich on-going planning processes. Experiences within the CIVITAS DYN@MO project have shown that due to the specific situation in each city, different approaches are needed.

### “Mobilna Gdynia” platform integrates several tools together

A Mobility 2.0 Internet platform “Mobilna Gdynia” was set up and officially launched in February 2014 by the city of Gdynia within the CIVITAS DYN@MO project following a concept elaborated by the Gdansk University of Technology. The main aim was to create a tool, which



Photo: City of Palma

would allow the city to communicate with the public and stakeholders more easily and on a wider scale, and to conduct consultations with the local community, especially during transport planning and the Sustainable Urban Mobility Plan (SUMP) elaboration process.

The Mobilna Gdynia platform was not the city's first attempt of using web 2.0 and social media for communication with citizens. Since 2013, Gdynia has actively used its Facebook profile "Mobilna Gdynia" to raise awareness and inform citizens about sustainable mobility and get public opinion on currently implemented or planned mobility measures. The profile has become popular and has more than 1,100 users.

With the Mobilna Gdynia platform, the city decided to take one step forward and designed the website, not only to provide information and raise awareness, but also to encourage citizens to join the discussion on the SUMP. With the platform Gdynia hopes to learn more about the public opinion on planning issues, better understand people's attitudes and receive concrete proposals for actions to overcome mobility related problems. This is made possible through the use of web 2.0 tools integrated to the platform. Comment boxes, opinion polls and questionnaires published on the platform as well as microblogs allow users to create content by themselves e.g. articles, opinions, photos, videos or links. The social media groups used to promote sustainable mobility, e.g. Facebook and Twitter are linked to the portal. Since the launch of the website, it has been actively used by Gdynia's administration for communicating with its citizens.

One example of a successful dialogue with citizens was an online survey on closure of one of the Gdynia's main streets for traffic. The experiment showed that this way of communication with the public has huge potential. The questionnaire was completed by more than 2,700 people and was viewed by over 7,000. Some 73% of respondents agreed on to limit car traffic on the street

and more than 60% out of those also agreed on closing the street for traffic. To reach the less "technology-active" target groups, the survey was supplemented with around 200 traditional interviews.

The experiences have shown that people are willing to take part in surveys and express their opinions when registration is not needed. The number of registered users to the platform is relatively small. However, since the official launch, the website has been visited 23,000 times by more than 7,000 users. The Mobilna Gdynia has the potential to become a real one-stop-shop for mobility information in Gdynia.

### Palma Mobility App provides integrated Mobility information

For the city of Palma, the main challenge is to combine available mobility information and on-going ICT development processes from different departments and operators into an integrated mobility platform. The aim of the platform is to offer users the possibility to plan intermodal trips in real time and choose the most appropriate transport mode for them. The information should make the use of public transport services, walking and cycling easier and more comfortable and, thus, discourage the unnecessary use of private vehicles. A beta version of the platform – an integrated Mobility App, was launched in 2013.

The wide interest of users in real time mobility apps was discovered in spring 2013, when the first App for real time bus departure information covering the network of Palma Municipal Public Transport Company (EMT) was launched. By May 2014, more than 50,000 downloads have been registered just on the Android platform.





Photo: EMT Palma



Photo: City of Gdynia

While enjoying the massive acceptance of this App, different parties in the city started to work on other services as well. A private developer included data from the Palma public bike sharing system in a generic app on public bikes. The operator handling the on-street paid parking introduced an App for mobile phone payments in April 2014.

However, to achieve the desired intermodality, a more coordinated approach is required to integrate the different isolated projects and to overcome technical and administrative barriers. Therefore, Palma decided to build the integrated Mobility App - one of the measures implemented within the CIVITAS DYN@MO. The main technical challenge is to reach a proper concentration of all the scattered data to feed the main core of the App.

On the administrative side, the different departments and public companies have to agree on cooperation. In the first phase of the project, the Palma Smart Office supported with the standardisation of data formats and offered open data platforms for private developers.

After this first phase, local partners came to a conclusion that it was necessary to contract an external company that can take care of the overall integration and design of the user-interface of the Mobility App. The contract has been signed between the different departments and the sub-contractor. The finalised Mobility App will be available in the end of 2014. With the Mobility App, Palma hopes to offer its citizens an easy way to plan their trips and receive mobility information.



Photo: City of Palma

## Conclusions

Even if the approaches of Gdynia and Palma are different, in both cities, Mobility 2.0 tools play a significant role in establishing a two-way communication between the City authorities and residents. In Gdynia, the Mobilna Gdynia platform directly supports the mobility planning process, while in Palma the Apps are used to provide mobility services and real-time data to users.

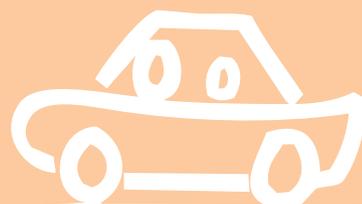
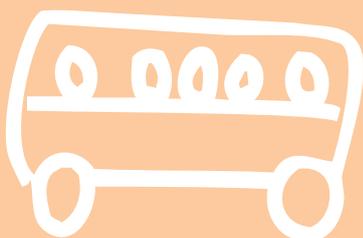
The use of Mobility 2.0 tools benefits both parties. Citizens feel more involved and are provided with reliable information. City authorities, on the other hand, receive feedback and input from citizens that can be used for improving both the planning processes and the information services.

While the mobility 2.0 tools attract mostly digital natives, these tools are becoming increasingly popular among broader audience as the technology becomes available to everyone. In Gdynia, 65% of the respondents of a survey agreed with a statement that Mobilna Gdynia platform facilitates the communication with the city administration. This shows that citizens appreciate highly the possibility of two-way communication with the city. The cities of Gdynia and Palma believe that different mobility apps and platforms have huge potential and, when applied in the right way, can be valuable tools for making cities' mobility planning processes and services more effective.



## 5 benefits of using mobility 2.0 tools:

1. Possibility to reach wider audience and involve better new target groups in the mobility planning process
2. Enhanced communication between the city administration and citizens helps to create wider acceptance towards a mobility plan and planned measures
3. Possibility to receive feedback and public opinions on the development of mobility measures and services
4. Offer a good way to provide citizens easily accessible mobility information for planning multimodal trips
5. Possibility to create synergies by integrating and linking several tools such as different social media groups together



# Simplified scenario-building tool for sustainable urban mobility planning

Text: Conny Louen/RWTH Aachen

The simplified scenario building tool aims to involve different stakeholders in the development of future mobility scenarios through an interactive game. In order to work out and draw up smart and sustainable mobility strategies, it is essential to predict the development of transport demand. The simulation game can be considered an introduction of this prediction phase within the sustainable urban mobility planning process.

## Complexity of prediction and multiplicity of stakeholders

The description of the current state of traffic and mobility, with parameters like traffic volume or modal split, can be intricate because of the extensive, required data basis. Due to the diversity of determining factors, the projection of these parameters into the future is even more complex. Some relevant factors are summarised in figure 1.

The prediction of future mobility requires assumptions referring to these factors (e.g. changes in the law or the invention of new mobility offers). Finally the assumptions for the different factors have to be combined into scenarios, which describe possible future mobility as a whole.

The definition of plausible assumptions and development of scenarios becomes even more complicated due to the multiplicity of stakeholders (like politicians and local authorities) and affected groups (primarily citizens) of the Sustainable Urban Mobility Plan (SUMP). Each group has different levels of knowledge referred to the different factors, which influence future mobility.

## Purpose of the tool

In this context the main goal of the tool is not the development of a final and realistic scenario of future mobility. In particular, it is planned as an introduction for stakeholders without a deeper traffic planning background and will be used during the SUMP processes within the CIVITAS DYN@MO project. The tool reduces the complexity of future mobility scenario building to 14 general issues with different choices for the user of the tool. This does not lead to an accurate description of future mobility. But the results are evaluated and aggregated automatically and can build up the basis for a discussion between the stakeholders involved.

## Usage of the game

At the beginning of the discussion about future mobility within the SUMP process the involved stakeholders can use the tool individually. After answering some questions referring to their role within the process, they reach the main screen of the game, which is shown in figure 2. The main screen is a schematic illustration of a fictitious city, consisting of ten areas. Each area represents a functional part of a city (e. g. industry) or a mobility and transport offer (e.g. public transport) and is equipped with one or two question marks.



Fig. 1 Factors with influence on future mobility

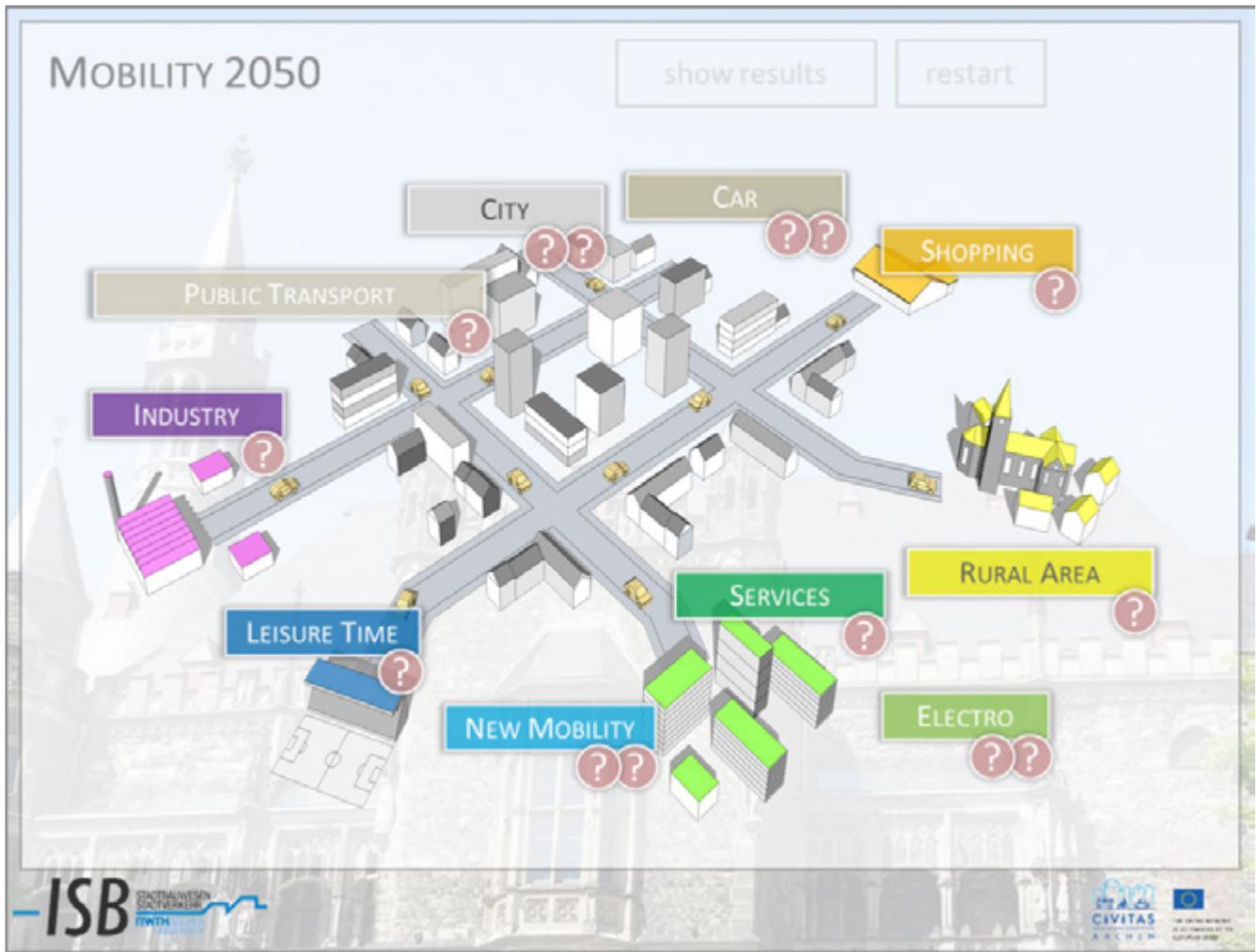


Fig. 2 Main screen of the tool

Every question mark corresponds to one of the 14 general issues. Areas and issues are listed in figure 3. Clicking on a question mark leads to a choice for the corresponding issue, referring to the future development of this issue. For each issue the user has to choose one of two or three theses, which he thinks is most likely and plausible. After completing this step, the user has the opportunity to click on 'show results' and will see an illustration of his simplified future mobility scenario. Some buildings in the fictitious city, shown on the main screen will expand, while others will contract. New mobility options like green electric or blue car-sharing vehicles may arise. The number of conventional vehicles may decrease, while the number of bicyclists and busses increases.

With the illustration of his future mobility scenario the usage of the tool is completed for the user. At the same time the data is saved on a webserver, evaluated automatically and aggregated with the data of the other stakeholders for further discussion about future mobility within the SUMP process.

The game is available on: [www1.isb.rwth-aachen.de/simulationgame](http://www1.isb.rwth-aachen.de/simulationgame).

Areas and issues within the simulation game	
Area	Issue
Functional part of the city	
City	Population development
	Life expectancy
Shopping	Importance of online commerce
Industry	Transnational outsourcing
Leisure Time	Importance of social media
Services	Jobs in service sector
Rural Area	Suburbanisation
Mobility and transport offers	
New Mobility	Importance of new mobility services
	Combination of mobility services
Public Transport	Financing of public transport
Car	Invention of traffic toll
	Development of fuel costs
Electro	Distribution of electric vehicles
	Range of electric vehicles

Fig. 3 Areas and issues within the simulation game

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