



European Innovation Partnership on Smart Cities and Communities
Building a Market for Smart Cities and Communities
Sustainable Urban Mobility Action Cluster

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Market Place

of the European Innovation Partnership on
Smart Cities and Communities



NEW MOBILITY SERVICES

Sustainable Urban Mobility

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BACKGROUND (WHY)

Today's cities face challenges in terms of congestion, lack of space, growing population, air quality, noise, liveability, social inclusion, health, economic development and creation of jobs. Citizens want to be mobile and move from a to b - within and between cities - easily, cheap, smart and clean. Freight needs to be transported equally easy, cheap, smart and clean. Expanding infrastructure in the urban environment is almost never an option and not a sustainable long-term solution: It is not cost-effective, there is no space, it gives environmental issues and citizens want custom-made and flexible solutions instead of strictly regulated public transport. Meanwhile innovation and competitiveness is crucial for the future of Europe.

Large-scale deployment of New Mobility Services (NMS) is part of the solution in dealing with these challenges. C-ITS, automated driving, MaaS, shared mobility concepts and smart bicycle solutions can contribute to wealthy, healthy, clean, spacious, liveable and accessible cities. Industry has innovative solutions available that have the potential to truly revolutionise the mobility sector. Apart from the speed and extend of these innovations, the integration potential of innovations will further increase the impact they can make on the mobility sector. Integration of these developments in NMS is a game changer that really changes our current mobility system and therefore has large impact on society and on the way we use our public space.

Specially small- and medium sized cities (50.000 - 400.000 inhabitants) will profit more from embracing and rolling out these NMS because of larger dependency from car mobility compared to large cities (500.000 +) having rail-based public transport services such as metro and trams and a more extensive network of public bus services.

Challenges are among others:

- Bringing theory to practice. There is a lot of knowledge that needs to be implemented and valorised in 'learning by doing' concepts and real life test environments. We need to move from tests and pilots to practice. Demonstration and deployment in the real life urban contexts is key. The slow uptake of new solutions hinders large-scale deployment of NMS.
- All stakeholders have to be brought together in a learning-by-doing multi stakeholder ecosystem because of the complexity of the transition. Which is easier said than done. Local and regional governments, knowledge institutes, industry, SME's, end users and civil society need to develop a collective agenda to create collective impact. Too often stakeholders are only driven by their own agenda like to sell a product, to produce a paper or to have exposure in the media.
- Interoperability and creating a sustainable business model. Involving the right industrial partners, for whom international standards are crucial. Sustainable business models only arise when a service can be rolled out on a global scale, without modifications in technology standards for individual countries.
- Meanwhile, diversity between urban areas in Europe is large. So implementation always needs to be adapted to local circumstances and needs to be tailor made, within the agreed architecture. Think global, act local!
- User involvement is crucial. Adoption of *user centric design* models is required in the 'learning by doing' concepts. Among others to find out if assumptions about behaviour of people are correct in reality.
- The role of private and public responsibilities will change in the domain of mobility during this transition.



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OBJECTIVES AND EXPECTATIONS OF THE INITIATIVE (WHAT)

What we want to achieve is to boost the deployment and market uptake of NMS within the urban context to contribute to wealthy, healthy, clean, spacious, liveable and accessible cities. The NMS initiative will focus on the deployment opportunities for NMS, including identification of deployment barriers and exploring solutions for these barriers.

Large-scale implementation of a wide range of NMS will:

Mobility / spatial

- Improve accessibility of cities for citizens and transport of goods and decrease congestion in the urban context.
- Improve liveability and the quality of the spatial domain.
- More efficient and human centric use of space in the urban context.
- Offer cost effective solutions both for individual as well as collective mobility needs.

Climate / environment

- Be sustainable in the view of environmental issues: Decrease emission of CO₂ to achieve the Paris climate goals and improve air quality in cities with reduced concentrations of PM_{2,5}, NO_x and O₃.

Social / health

- Improve health of citizens because of cleaner air and increased physical exercise because of shift to walking and biking.
- Boost social inclusion and quality of life because of improved mobility for vulnerable citizens such as disabled persons and older adults.

Economical

- Increase economical opportunities in cities because of better accessibility and higher quality of the spatial domain.
- Create new business opportunities for the development of New Mobility Services, tools and products.
- Be sustainable in the view of a sound business model and business case and use if needed most advanced technology.



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The following domains are addressed:

1. Technology enablers for NMS

- Facilitate research, testing and piloting of CCAM (Cooperative Connected Automated Mobility), MaaS and integration of both as enablers for NMS. For example: car sharing or ride hailing as part of MaaS will be much more efficient with driverless vehicles. Drones could completely change current urban delivery systems.

2. Data

In order to come to NMS data are key. The NMS initiative will explore best practices to collect, use and share data needed for NMS. Privacy protection, security, safety and public and private collaboration are some of the key aspects.

3. Legislation and private-public collaboration

NMS and innovation will only happen if both public and private partners are open to new cooperation models. For public authorities challenges are among others:

- To give space to experiments with technology and living labs in terms of legislation and exceptions.
- To give space to pilots regarding changing roles of public authorities: Focus on policy key performance indicators and service level agreements with industry instead of well-defined procurement of services. For example: traffic management as a service.

4. Economies of scale

The NMS initiative will bring together supply and demand of NMS and will enlarge the demand side.

5. Digital library

The NMS initiative will act as European database for NMS.

Concrete examples and ideas

Existing platforms, alliances and pilot- and deployment projects are one of starting points for development of learning by doing in real life urban contexts, like MaaS alliance, C-ITS deployment platform, MobilitymoveZ.NL (large-scale pre-deployment of new mobility concepts), roll-out of the European C-ITS deployment project C-Mobile project to other locations, roll out of 'Talking Traffic' infrastructure (e.g. hundreds of intelligent traffic lights, including public availability of the data and algorithms), roll out of MaaS Scripts pilot to introduce mobility bundles. Furthermore a marketplace for pilot projects for mobility services can be initiated.



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WORKING APPROACH (HOW)

The essence of this initiative is to organise a 'learning by doing' approach to demonstrate and deploy NMS. A multi-helix learning ecosystem will be built in which relevant stakeholders are involved from governments, research, industry and civil society. Real partnership is crucial and all partners will bring and take. Several real life test environments all over Europe will be initiated or selected in which the 'learning by doing' approach takes place. The focus will be on involving small and medium sized cities. User involvement and user centric design are key. Assumptions about behaviour of citizens travelling have to be tested in real life situations. It needs to be an open market and no vendor lock-in. The initiative is driven by policy goals but is also business-wise with a lean-and-mean operation. Optimal use will be made of existing platforms like the MaaS alliance, C-ITS Deployment platform, existing European projects and databases such as the ITS observatory.

The added value of this NMS initiative is in:

- Facilitate testing and piloting: supply of data - learning from pilots: decide which data are needed, who is the owner of the data, what are privacy issues and development of business cases and models.
- Offer living labs to make the step from research to deployment.
- Facilitate the involvement of users through user centric design.
- Facilitate development of legislation.
- Knowledge sharing and make an inventory of best practices and lessons learned.
- Bring economies of scale and to offer a market place for suppliers of NMS

Phase I 2017-2018

- Mapping of existing alliances, platforms, networks and projects of NMS in urban context.
- Create an environment that allows mutual understanding of the NMS market actors: authorities, MaaS providers/integrators and the mobility service providers, like car sharing and bicycle services. As well as the end user needs. The output will be a quick scan market analysis.
- Explore the behavioural side to the new mobility services to a degree that this helps to inform the market actors.
- Dissemination of the story and mission of the NMS initiative to recruit potential partners via our networks, existing projects, conferences, etc.

Phase II 2018 - 2019

- Create partnership, build the community and trust between participants in the process of developing an agenda for collective impact. Decide about the focus for the pilot and deployment projects.
- Develop the testing and piloting concepts in co-creation with all partners
- Find and agree about sites and smart cities for deployment and real life test beds.
- Organise financing and find investors for the deployment and piloting.
- Kick off and implementation of a range of pilots and deployment all over Europe.



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KEY STAKEHOLDERS INVOLVED (WHO)

Coordination: BrabantStad (NL): the administrative network from the cities Breda, Eindhoven, Helmond, 's-Hertogenbosch and Tilburg and the Province of Noord-Brabant in the Netherlands.

Local and regional governments

- small and medium sized cities (50.000 - 400.000 inhabitants)
- small regions with lower urbanisation level
- larger cities with skills, experience and
- ShareNorth cities and regions

National governments

- Ministries of infrastructure, environment and Mobility/traffic
- National Highway Authorities.
- Regulation bodies (e.g. vehicle type approval authorities)
- Other national entities in Europe.

Industry

- Technology and service providers
- Car manufacturers (OEM's)
- SME
- 1tier-suppliers
- Public transport companies
- IT, mapping and semiconductor companies
- Data connectivity parties
- MaaS providers
- IRU

Insurance companies

Research and knowledge institutes

Universities

Universities of Applied Sciences

Research institutes e.g. Fraunhofer, TNO

Civil Society - end users.

- Associations of car drivers like ANWB and FIA
- Road operators
- Y4PT, EDF, ECF, EPF, GE Platform



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- Associations from bicycle riders and/or pedestrians
- Associations of citizens in cities
- Associations of older adults
- Trade unions
- Organisations for sustainable mobility

Financers

- Investors like banks, pension funds or trusts and regional development agencies.
- European Investment Bank
- Impact investors
- European subsidies such as Horizon2020, CEF and Interreg.

Network organisations:

- ERTICO
- MaaS Alliance
- Polis - European cities and regions networking for innovative transport solutions
- Eurocities
- AER - Assembly of European Regions



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WORK PLAN (ROADMAP)

Task	Subtask	Time
Mapping of existing alliances, platforms, networks and projects, including products (like roadmaps, white papers, guidelines, etc.) of these groups of NMS in urban context.	<ul style="list-style-type: none"> - Quick scan with partners of the groups and products. - Meetings with relevant alliances, platforms, networks and projects to include or to align with. 	Continuously
Dissemination of the story and mission of the NMS initiative to recruit potential partners via our networks, existing projects, conferences, etc.	<ul style="list-style-type: none"> - Make inventory of opportunities - Organise the storytelling and make presentations and articles. - Use social media such as twitter. - Divide tasks in dissemination. 	Continuously
Create an environment that allows mutual understanding of the NMS market actors: both public (like authorities) and private (like technology and service providers) stakeholders, as well as the end users. And that makes the connection between the existing more specialised or focussed initiatives.	<ul style="list-style-type: none"> - Organise co-creation sessions and workshops. - Study visits 	April 2018
Create partnership, build the community and trust between participants in the process of developing an agenda for collective impact. Decide about the focus for the pilots and deployment.	<ul style="list-style-type: none"> - Organise 1st partner meeting February 21st at House of the Dutch Provinces, Rue de Treves 59-61 in Brussels - General Assembly of EIP SCC in Sofia, Bulgaria June 2018 present 	Continuously
Organise marketplace. With support from the investment consultants look for financing and find investors for the deployment and pilot projects.		september – may 2019
Kick off and implementation of a range of projects for pilots and deployment all over Europe.		End of 2019 / early 2020?