

Report from workshop on

Future Roles of Public Authorities in Mobility as a Service (MaaS)

By Yanying Li (ERTICO – ITS Europe)

About the workshop

The SPICE project, a Horizon2020 project aiming at facilitating knowledge exchange and best practices in public procurement for sustainable transport projects, works in the subject of innovation procurement. Since MaaS is one of key innovations being implemented in recent years the project consortium believes that there is a need for public authorities to look into potential business models for MaaS in terms of financial supports from public authorities. Therefore, the consortium organised a workshop by inviting local suppliers of MaaS to present their technical solutions and business model, in order to understand the current trends of MaaS and the potentials to radically improve transport services, thus helping public authorities to make adequate transport policy and associated budget if necessary.

The workshop invited public authorities from the SPICE consortium which includes national, regional and city authorities and private companies such as Upstream and Fluidtime who are MaaS providers based in Vienna. The workshop consists of a number of presentations from the public authorities and the companies and a roundtable discussion.

The workshop was held in Vienna on 10th April 2017. Agenda and participant list of the workshop is in the annex of the report.

Introduction of MaaS

The concept of Mobility as a Service (MaaS) first caught the attention of transport professionals in 2014 during the ITS European Congress in Helsinki, where the MaaS Alliance was formed and launched. Since then, many projects and organisations have embraced the concept, finally making it a reality. MaaS is seen by the ITS community as a major game changer for mobility services, driven by widely used smart phone Apps for travel information, booking and payment, and the increasing importance of sharing economy in the transport sector, i.e. car-sharing and ride-sharing. MaaS is contributing to a notable social change in

the transport sector, i.e. the decrease of car ownership. Car makers have been aware of the change and they have responded to the change by launching their own car sharing schemes. By doing so, car makers are changing their roles from manufacturers to service providers. MaaS is seen as an ideal integrator of public transport and shared mobility, in order to give the maximum convenient travel experience without using private cars.

Since 2014, there have been many various debates into what is MaaS, involving with the MaaS Alliance providers, European Commission, city authorities and their networks and researchers. Yet there is not a unified definition since business models, use cases and technology options involved vary. Various options may result in various impacts on individual travel behaviour and spending, the society and environment as well as local and global economy. Therefore, it is essential for public authorities to prepare their responses to this trend.

The current government policy to MaaS

While many public authorities see MaaS as a clear trend going forward, implementing MaaS has rarely been included in local or national transport policy. International Transport Forum (ITF), the main policy think tank at the international level, has not included MaaS in their current or planned policy reports, raising a concern that there is a lack of policy guidance from national government on MaaS. Even at the city level, where MaaS may have direct impacts on transport and mobility services in a city, there is no link between implementation of MaaS and policy objectives of a city, even though many cities do participate in discussions of implementation of MaaS. However, such discussions often are carried out at technical levels, for example, related to standard interfaces to access data and payment, rather than at the policy level.

Demonstration, research and operation of various types and formats of MaaS are carried out in some cities of the SPICE consortium members, i.e. Tampere and Helsinki. Roles of city authorities in implementation of MaaS can vary, depending on local public transport provision, social and demographic situations and business models of MaaS. Whilst some cities see MaaS as a complementary service to their public transport services, some consider MaaS as sole commercial service. There are two very different attitudes towards to MaaS from public authorities. Some see MaaS as a potential improvement of local public transport services and they have responsibilities to help realisation of MaaS whilst others consider MaaS as business for MaaS providers only. This is associated with business models of MaaS. There are two different types of MaaS providers. One is commercial companies backed by venture capitals, e.g. MaaS Global in Helsinki, and the other is just an extension of local public transport company, e.g. Upstream in Vienna. Such different business models are also associated with public transport provision in a city - in some cities, public transport services are a part of public service provided by local public authorities and heavily subsidised by public authorities and a third party is not allowed to sell ticket of public transport, whilst in other cities public transport is operated as a private and commercial service.

Below two examples from Helsinki and Vienna respectively:

MaaS Global in **Helsinki**, the commercial company and the provider of Whim¹ which is regarded as the first MaaS, does not make profits from re-sale of public transport tickets. Its profits may largely rely on business cooperation with car rental companies and taxi companies. In other word, it makes money from people using car rental services and taxis. Therefore, although the goal of MaaS is to enable convenient and efficient mobility without using private cars, it is not necessary to have the goal to encourage usage of public transport and to reduce traffic in a city.

On the contrary, in **Vienna**, for example, Upstream, the local MaaS provider, offers a mobile app named “JÖ Bin schon da!” which combines public transport service, car-sharing, taxi, bicycle sharing in the city. Upstream is an innovation company of the public transport operator of the city and owned by the local authority. The goal of Upstream app is to encourage usage of public transport and shared mobility. It may be seen as an alternative transport mode when public transport is not available or not as a suitable option.

In Helsinki, the current MaaS is operated as a commercial service, has no support or interaction with the city authority. In many cities, such business models are simply not possible since a third party is not allowed to sell tickets of public transport, e.g. in Copenhagen. However, Finland continues to improve its legislative framework to enable implementation of MaaS such as open data/API and payment interfaces from all transport modes. The aim is to provide adequate legislative and legal conditions, and the digital infrastructure, to enable any companies to provide MaaS services in order to ensure fair competition.

Current public authorities’ roles and policies

Although, in general, public authorities believe that MaaS can play a role in improving mobility service in their cities or regions, and contributing to reduction of use of private cars, attitudes and policies from different public authorities towards to MaaS vary. West Midlands in the UK is working on implementing Whim from MaaS Global in the region. According to Mr. Chris Lane of Transport for West Midlands, the transport authority of the region is supporting the implementation by facilitating cooperation between the MaaS provider and various local transport providers. Transport for West Midlands does not financially support the implementation directly but offer human resources in helping negotiation of contracts and opening data and APIs with various transport operators e.g. public transport companies. In the West Midlands region, public transport service is a private own service, therefore, this is no issue of re-sale of tickets, leading to a possibility of making profit by selling public transport tickets. The goal of supporting MaaS for the local authority is to give more options to local residents, ideally to make travel in the region cheaper and more convenient. Transport for West Midlands commissions a university to carry out a small research project

¹ Information in detail about Whim can be found: <http://maas.global/whim/>.

in order to study users' behaviours and impacts of MaaS in the region. Such results, once available, will provide an important reference for future policy of the public sector.

Public authorities of Helsinki do not play any official roles in deployment of the current MaaS service in the city although Finland national ministry of transport has made huge efforts into preparing for the legal framework and digital infrastructure. City authorities in Finland, e.g. Helsinki and Tampere, see themselves as a facilitator of any new mobility services which can improve mobility services in their cities. In addition to open data and payment of transport modes, they focus also on making infrastructure ready, e.g. making street parking space available for car-sharing.

The public authorities in Helsinki and Tampere also play an important role in encouraging innovation in the transport through various funding schemes. Forum Virium Helsinki, the innovation agency of the city, often publishes a number of 'mini-tenders' to finance small projects in the field to encourage innovation. The aim is to enable more innovative mobility services into the market to maximise the benefits of the digital infrastructure which supports any 'MaaS-like' services. The aim of such actions is to encourage more startups, thus attracting investors into Finland – it may be worth mentioning that current MaaS companies in Finland are backed by Venture Capital. Tampere forms the ITS Factory which involves stakeholders from both public and private sectors as the strategy of the Tampere city authority for implementation of MaaS is to create a win-win situation for both business and the general public in the city .

The issues of current roles of public authorities in MaaS

It has been very surprising that when the participants of the workshop realised that the currently no cities, including those who have MaaS in operation or are planning to implement MaaS, have yet integrated MaaS with overall transport, environment and energy policies, resulting in a potential of that MaaS does not contribute to sustainable urban mobility. Such potential has been overlooked as everyone assumes that MaaS is a contributor to sustainable urban mobility by default. Analysing the business model of Whim in detail, however, could conclude that such assumption lacks supporting evidences. In order to make a commercial success, Whim may indirectly encourage people to use cars more than public transport (even though the car used are taxis or shared cars). Although MaaS contributes to lower car ownership which has long term benefits to cities and environment, MaaS may not result in lower share of using cars in personal mobility service. A scenario of using MaaS may be:

A person who does not own a car but takes taxi or shared car as main transport mode the costs are similar, or event cheaper with similar levels of convenience.

Such scenario certainly may not be ideal for public authorities. Therefore, public authorities should set up KPIs to evaluate the contributions of MaaS in the environment, energy, mode share, social inclusion when they support implementation of MaaS. Public authorities will have to influence local MaaS providers to ensure MaaS's contributions to its overall transport policies, in order to avoid MaaS for commercial interests only. However, such scenario may result in creating jobs in the taxi sector, or attracting more tourists visiting the city. If public authorities would like to see such a result, they may have policies to support it.

It may be difficult to forecast potential impacts of MaaS on the society and environment. More issues may rise after large scale implementations, as it has been seen with other sharing economy such as AirBNB and Uber. Such potential issues have been ignored currently, which may be due to successful public relationships of MaaS providers. The current publicities on MaaS have been successfully made public authorities to believe that MaaS is the way forward to realise sustainable urban mobility. The inflated interest in MaaS requires seeing beyond the hype. Public authorities should realise and prepare for potential negative impacts of MaaS as well and look into solutions to mitigate such negative impacts through policies, legislations and campaigns in order to work for their citizens' interests and the environment.

It has also been noted by the workshop participants, that despite of the notable publicities, there are lacks of studies on different scenarios of implementation of MaaS, thus adequate policy frameworks for implementation of MaaS are not ready. The principle, however, according to the workshop participants, is that MaaS should be a part of the local transport policies rather than as a commercial operation only, as providing good mobility services to all citizens is a responsibility of a city authority.

The way forward for public authorities

Since MaaS is a new technology, public authorities may not be ready for its implementation. Technologies, business models and impacts are still in flux. There is not much research into neither scenarios of implementation nor impacts associated. Yet best practices to share from cities where MaaS has been in operation do not exist. Much of the publicities on MaaS are from MaaS providers, which may not be evidence-based but commercial interest driven. Therefore, public authorities are not well informed with various scenarios and impacts, leading to difficulties in adequate policy framework. Public authorities somehow are obligated to support implementation of MaaS without evaluating potential impacts. Yet, there are no KPIs in mobility service as well in the environment, social inclusion, energy, associated with implementation of MaaS. Therefore, public authorities should be conscious on their policies, particularly regarding the financial and legislative supports. Despite of the potential negative impacts, MaaS may provide an excellent solution to make mobility services more convenient at a cheaper price at the same time. It may fundamentally change the definition of public transport. This may lead to public authorities to consider their funding schemes and public procurement for public transport services since in many cities,

public transport has been heavily subsidised by public spending. There are cases in US, public authorities subsidise shared mobility instead of commissioning public transport in routes where there is not much demand. Public authorities also subsidise shared mobility instead of building new infrastructure to meet increasing demand. The economic factor associated with MaaS should not be ignored by public authorities.

The participants of the workshop suggest that it may require a check list for public authorities to evaluate if a MaaS service should be supported or not. When implementing MaaS, some policy items may be taken into consideration such as:

- KPIs in mobility service;
- KPIs in the environment and energy consumption;
- Impacts on government spending;
- Impacts on local economic development at a short term, i.e. creating jobs;
- Impacts on local economic development at a longer term, i.e. innovation and competitiveness.

Annex A:

Workshop Agenda

Name: Future Roles of Public Authorities in Mobility as a Service

Time: 12:00 – 17:30, 10 April 2017

Location: AustriaTech, Raimundgasse 1/6, A-1020 Vienna

Time	Item	Presenter
12:00 – 13:00	Network lunch	
13:00 – 13:10	Welcome & objectives of the workshop	Dr Bahar Namaki Araghi, City of Copenhagen
13:10 – 13:25	Introduction to MaaS	Martin Russ, CEO, AustriaTech
13:25 – 13:45	Upstream's application – JÖ Bin schon da!"	Gerald Stöckl, head of business, Upstream
13:45 – 14:05	FluidHub - Enabling Mobility as a Service	Michael Kieslinger, CEO, Fluidtime
14:05 – 14:45	Cities current practices <ul style="list-style-type: none">- Helsinki- Tampere	Moderator: Bianca Kapl, AustriaTech <ul style="list-style-type: none">- Sami Sahala, Forum Virium Helsinki- Mika Kulmala, City of Tampere
14:45 – 15:10	Q&A	
15:10 – 15:30	Break & network	
15:30 – 17:00	Roundtable discussions on public authorities' roles in future mobility service provision: <ul style="list-style-type: none">- using public fund in implementation of MaaS;- how to finance MaaS.	Moderator: Sami Sahala
17:00 -17:30	Wrap up and summary	Dr Bahar Namaki Araghi, City of Copenhagen

Background information:

Traditionally the mobility sector heavily depends on public spending. However public fund may not be used to purchase transport services but to be used as an enabler to create new services and concepts like "mobility as a service", which will have their own business models. Cities today have different strategies to fulfil their sustainable mobility goals. Some create their own state owned transport operators to manage the transport, others purchase innovative transport services and some try to find new ways like just providing the data or a platform to enable the market to come up with solutions. The main questions are:

- What is the best way for public authorities to provide new innovative mobility services that are sustainable?
- How can a public authority ensure social inclusion by providing access to innovative mobility services for various types of users who may have different needs?
- What are different funding strategies from the current practices for public authorities?
- What is the role of public authorities in mobility service provision in the Future?

This event invites public authorities from different countries to share their experiences and exchange ideas on how to maximize benefits of public spending to facilitate innovative transport solutions.

Annex B: Participant list of the workshop

Name	Organisation
Sami Sahala	Forum Virium Helsinki
Bianca Kapl	AustriaTech
Martin Russ	AustriaTech
Katharina Zwick	AustriaTech
Lina Mosshammer	AustriaTech
Doris Wiederwald	AustriaTech
David Konig	AustriaTech
Yanying Li	ERTICO
Lasse Stender	North Denmark Region
Bahar N. Araghi	City of Copehagen, Department of Transport
Sabine Hilfert	City of Hamburg
Anni Kurvinen	City Tampere
Mika Kulmala	City of Tampere
Fred Zijderhand	Rijkswaterstaat
Gerald Stöckl	Upstream
Ronald Chodász	VERBAND DER BAHNINDUSTRIE, Austria
Michael Kieslinger	Fluidtime Data Service
Wolfgang Brueckler	Kapsch Traffic Co.