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Mobility as a Service - an open ecosystem?

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Abstract

Can we get public transit and private shared mobility providers to deliver multimodal shared mobility services within months rather than year simply by using MaaS. The technology is there but the major obstacles are governance and will power. Is the only solution the Finnish model: Open MaaS by lawmaking - the stick? – or is there a carrot way too?

The incumbent mobility suppliers are used to “own” their customers and does not necessarily see the benefits of having an extra part (The MaaS agent) in the value chain between them and “their” customers. The necessity for the shared mobility actors to come together to present a compelling alternative to the private car is presented and discussed.

To create a level playing field for a shared mobility ecosystem including MaaS, a set of rules of engagement or charter is needed. An example is introduced as the carrot method or MaaS as common business sense.

The advent of MaaS

Public transport has been talking about multimodal smart ticketing for decades and while some have managed truly to get multimodality to work smart in cities, very few are multimodal on a national scale (The Netherlands: Ovchipkaart, and Denmark: rejsekort and rejseplanen).

Now we think we can get public transit and private shared mobility providers to deliver multimodal shared mobility services within months rather than years. The technology is there but the issue is governance and will power. Is the only solution the Finnish model: Open MaaS by using the stick? – or is there a carrot way too?

We talk a lot about multimodality, yet we all try to minimize modal shifts whenever possible for convenience reasons. This is why the car is a powerful door to door mobility device.

Public transport has invented A and B to define points where you can enter/exit public transport. You are then on your own for the last mile to your door.

How can we ensure that people not only can travel from A to B but from door to door.

The MaaS Vision

So, how does the future look for shared mobility. Do we think it will create more value to the users, suppliers and society?

Imagine if all suppliers of public and private shared mobility plugged into a digital open market with open data defining their service offerings so everybody could see and choose.

Now imagine an open API plug for offer, book and pay for mobility service between actors on the market to provide complete travel plans, prices and single payment for customers.

Finally imagine that suppliers send mobility production data to a shared data repository and gets relevant info for tuning their operation in return.

This is basically the framework for an open mobility as a service ecosystem. Easy to imagine but how to accomplish?

Finland is the first country in the world to regulate an open market for mobility services for passengers (and goods). The new law on Transport (The Transport Code) (ref 1) effective January 1, 2018 essentially mandates all providers of mobility to open data and API's to third parties. At the same time the Transport Code ensures that essential business and tax rules are followed by everybody including the MaaS providers.

Business model for incumbent mobility service providers [

All shared mobility suppliers have the same basic elements in their organisations to support their business. (see fig 1.):



Figure 1- The silos of incumbent mobility service suppliers

Service: The operation of the transport mode

Data: The necessary data to support the service and billing

Plan: Information about service, schedule, available seats, vehicles etc. to customers

Book: Booking mechanism

Pay: Available payment mechanisms

Customer Service: Customers means to interact with the mobility supplier before, during and after use of service

All suppliers can move customers from one point in the geography to another but not necessarily covering the whole door to door journey.

It is up to the customers to navigate between one or more mobility suppliers to find a travel plan that fits the user needs for mobility. The private car can be an easy alternative to avoid the planning hassle to gain freedom of mobility using shared mobility services as is.

Incumbent Mobility suppliers feel a high degree of ownership to their customer base and is almost instinctively against a new party (The Maas provider or agent) in the value chain between the service offering and the consumer.

Business model for mobility as a service (MaaS) .

The MaaS agent is going in between the customer and the suppliers of shared mobility services.

Through aggregation and bundling of the offerings the MaaS agent helps customers to select the right package of mobility based on a set of questions: Where from? Where to? How many? When? How? How much?

The ambition for the MaaS agent is to deliver a complete journey door to door – One Price – One ticket and One Payment.

The MaaS business case has some serious challenges to overcome to be successful:

1. The willingness of incumbent public and private mobility suppliers to interface to and work with MaaS agents fronting the customers.
2. Commercial agreements with third parties (MaaS Agents) on conditions to sell on behalf of a mobility supplier for a reasonable fee or commission, mark up on volume purchases or other forms for compensations.
3. Customer conversion to and adoption of MaaS one stop shopping of mobility.
4. Ability to present a trustworthy offering to customers to maintain freedom of mobility by conversion from private car ownership to use of MaaS.

Making it easy for the customer to get from A to B requires a lot of work behind the curtain. Look to the airlines where you can get anywhere to anywhere multimodal with one ticket reference and one price in one currency. A lot of coordination is taking place through IATA and the major reservation systems. To get a MaaS ecosystem operation requires similar level of governance, coordination and investment.

Governance – the potential showstopper for MaaS

How can public and private mobility operators coexist in the same mobility grid and how do you handle the governance between the parties.

In Finland the governance has been resolved on a national level by law so the level playing field has been established for both local and international actors including MaaS.

Is it possible to create an open ecosystem for MaaS elsewhere, not by law, but simply because it makes sense and as a joint effort between shared mobility actors and upcoming MaaS agents?
Consider the mobility market as a Red ocean or a blue ocean market

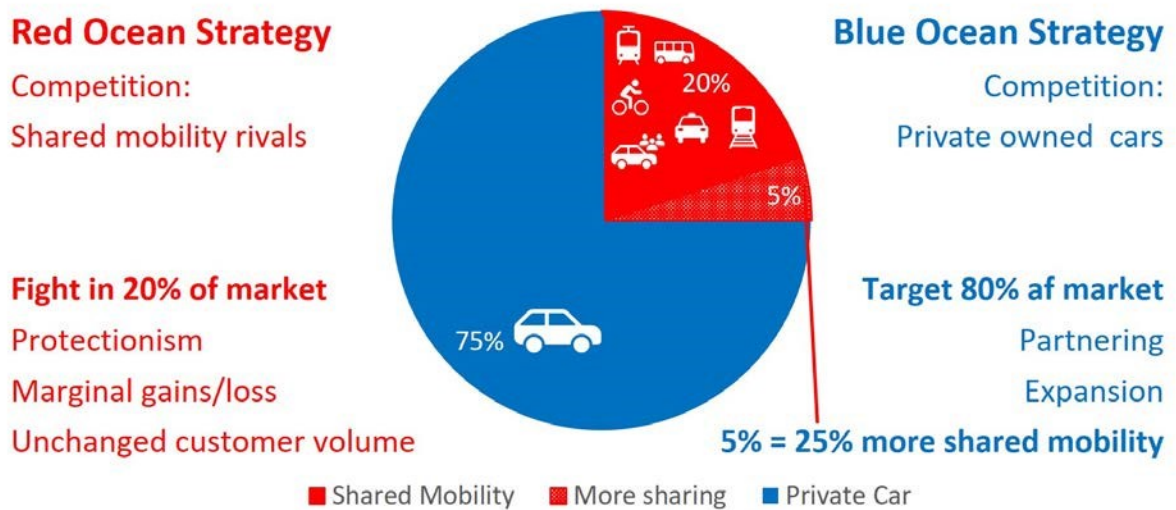


Figure 2 – The mobility market – Red or Blue Ocean?

The split between mobility produced by private car and shared mobility options is typically 80:20.

The private car dominates the mobility market and will of course try to protect its market share. How can suppliers of shared mobility services act in the market:

Red Ocean Strategy: The shared mobility actors see each other as rivals competing about the same customer base (20%).

As a result, you can witness protectionism and marginal gains/loss between the actors and an overall unchanged customer volume.

Blue Ocean Strategy: The shared mobility actors sees the private owned car as the main competitor in the mobility market.

The strategy is now to present a trustworthy alternative to the private car. The shared mobility actors may realize that by partnering and making it easy for the customer to maintain freedom of mobility using shared mobility services they can actually win market share from the use of private car. It is worth noting that if you can convert 5% of the mobility to shared mobility you increase the shared mobility business with 25%!

Quite a challenge though as the marketing capacity of the car industry is huge and most private and public decision makers happens to be car owners.

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Charter for an open MaaS ecosystem:

The charter for an open MaaS system is a way to voluntarily regulate the marketplace for shared

Mobility and MaaS. This is the carrot method of reaching MaaS. The elements presented here have been compiled by looking to the Finnish Transport code act and other initiatives across Europe.

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Charter for MaaS ecosystem



Figure 3- Charter for MaaS ecosystem - an example

1. The user of MaaS is central and right to own travel data essential.
2. Open Market for public and private mobility services. The charter requires the participants to open and fair competition based on open data and API's. To protect against outcomers who may want to pray on the open data a charter qualifier can help limit the openness to parties who live up to the charter.
3. Unbiased A to B travel information. User should be informed if the information provided is biased or limited and on what basis
4. Right to anonymous mobility. Even because shared mobility is selected the journey should remain private (as a car journey in a private car is). Personal data should not be sent or sold to third party.
5. Protection of user sensitive data. The collection and storage of user sensitive data should be limited to the bare minimum required to provide the service and such data shall be deleted as soon as no

more needed to deliver the service. The user shall have access to see what data is stored at any time.
(European Data Directives)

6. Realtime mobility navigation and assistance. The Ecosystem protected by the charter shall ensure that the participants in a shared mobility ecosystem not only have to provide good service when needed and when the customer is being transported but also look after the customer before and after the service especially in exception situations.
7. SOME platforms and rating. Even the individual journey is private, the ecosystem should allow users to comment, discuss and rate the services provided.
8. Travel Data available for suppliers, regulators and research. The participants shall deliver relevant production data to a common repository. The data is refined to useful information for planners, regulators and research and each participant gets useful information back related to his part of delivering the overall service of the ecosystem. In handling data proper care is made to ensure individual business data privacy

By developing and operating in a charter like described the shared mobility ecosystem can co-work to present an even more compelling and trustworthy alternative to the need of owning a car

To conclude:

MaaS is not just smart technology. It is a question about governance and good business sense.

Can we see the value for everybody in creating an open market for shared mobility services?

However, MaaS by itself is not the magic potion to increase the market share for shared mobility.

It must be combined with investment in growing and market the total grid of shared mobility options.

Without access to shared mobility outside your door or within short walking distance the private car will remain the winner of freedom of mobility.

Finally a set of challenges and questions for the audience:

Will MaaS create more business to everyone?

How can public and private actors cooperate effectively in a MaaS ecosystem?

Can you reach critical mass for MaaS without regulation?

How can cities, regions and public entities best enable MaaS?

How to avoid big procurements and vendor lock-ins?