

NATIONAL MAAS FRAMEWORK

Country: Finland

OVERVIEW

Finland has long been characterised by high levels of digital connectivity throughout the country.

Digitalization is helping the transport sector to find new solutions and bring greater efficiency and transparency to the transport system.

The Finnish national government aims to promote the use of digitalization in the transport sector, including via the development of an ambitious National MaaS (Mobility as a Service) Framework which is built around the 'Transport Code' introduced under The Act on Transport Services (2018)¹ which is designed to encourage new digitally-led business models as a precursor to MaaS-type services, and a new public procurement law requiring the use of electronic channels.

¹ - www.lvm.fi/-/act-on-transport-services-to-cover-the-entire-transport-system-971134



Figure 1. The Rural MaaS communication project
Source: www.vtt.fi/sites/maasdigiboksi/en

Main aspect/issue addressed by the good practice

The development of the Transport Code has helped to place Finland at the forefront of MaaS with a unique country level approach to the development of the concept involving supporting legislation and a focus on new business models.

MaaS Global is one high profile example of a Finnish company promoting the MaaS concept. Finland is also home to the world's first Rural MaaS project. The Ministry of Agriculture and Forestry of Finland-led project aimed at creating a national vision for MaaS in rural and sparsely populated areas.

Main objectives of the good practice

Finland is adopting a unique country level approach to the development of MaaS.

The key aims of the National MaaS Framework are:

1. To create a national vision for MaaS and embed it within national transport policy.
2. In pursuit of 1) to develop and enact legislation covering the Transport Code (a key tenet of the Act on Transport Services 2018 designed to encourage new digitally-led business models as a precursor to MaaS-type services) and public procurement via electronic channels.
3. To develop exportable mobility innovations.

DESCRIPTION OF THE AREA

Finland is a Nordic country of mostly flat land, with more than 70% of it covered by thick forest. Southern areas are characterised by numerous clear water lakes. The land area is 303,815 km², and the water area 34,330 km².

Region	Target area	Population	Population density
Nation-wide	Nation-wide	5.5 million	18.10 [inhab. /Km ²]

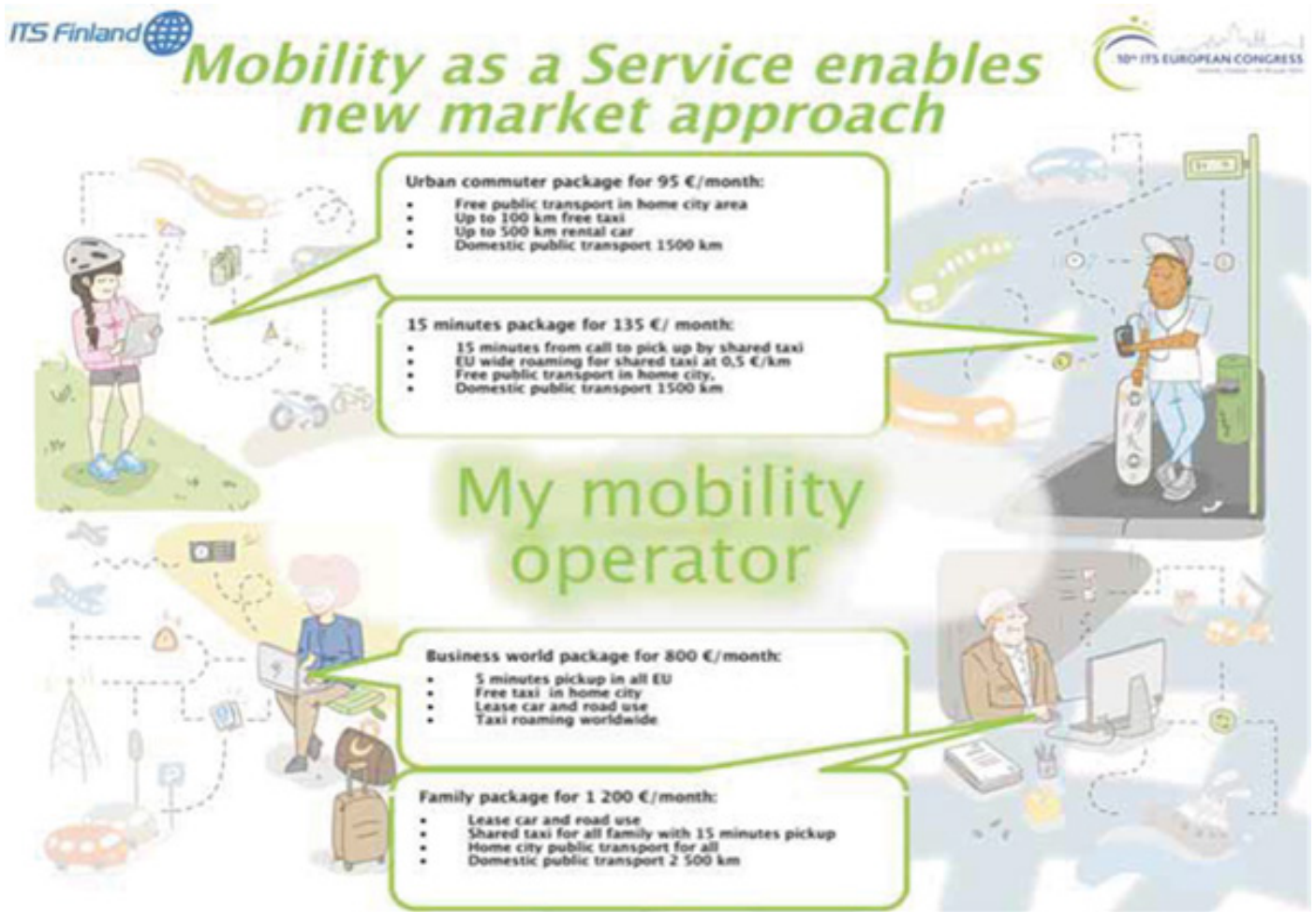


Figure 2. ITS Finland MaaS concept

Source: Hietanen (2014)

Target user groups and needs

Mobility as a Service (MaaS) is a new approach to achieving collaboration and integration between transport providers and where a user (traveller) engages a single service provider to co-ordinate and facilitate their mobility needs (Hietanen 2014)¹. Finland has been at the forefront of developing the MaaS concept since 2012.

The concept of MaaS is described in the detailed description of the practice section below but the intention is that all citizens should have access to personalised mobility bundles or packages such that MaaS which could offer an alternative to owning a car (although it should be noted that MaaS may also be targeted at particular market segments).

¹ - Hietanen, S (2014) 'Mobility as a Service' – the new transport model? Eurotransport, 12 (2), 2-4.

DETAILED DESCRIPTION OF THE PRACTICE

Timeframe(s)

Finland has been at the forefront of developing the MaaS concept since 2012 (more background detail is given in the section on Legal Framework below) and the development of the National MaaS framework is ongoing.

Bodies involved

The Ministry of Transport and Communications (MTC) of Finland is responsible for legislation covering the Transport Code (a key tenet of the Act of Transport Services 2018 designed to encourage new digitally-led business models as a precursor to MaaS-type services) and public procurement.

The Ministry of Agriculture and Forestry of Finland led the Rural MaaS project (2016–2017) aimed at creating a national vision for MaaS in rural and sparsely populated areas.

Mobility services provided/addressed

Mobility as a Service (MaaS) is an emerging concept of new integrated transport services. All definitions try to capture the essential idea which is to see transport or mobility as a single service available on demand and incorporating all transport services from cars to buses to rail rather than as a physical asset to purchase (e.g. a car).

MaaS Global (<https://maas.global/>) is one high profile example of a Finnish company promoting the MaaS concept. They define MaaS, as “a way of combining options from different transport providers into a single mobile service, removing the hassle of planning and one-off payments”. MaaS Global envisages a future environment where MaaS could offer an alternative to owning a car with personalised bundles or packages which offer the best option for every journey (e.g. a taxi, public transport, a rental car or a bike share). MaaS solutions can also offer value added services like deliveries for groceries or restaurant meals.

1 - Whimimpact: Insights from the world's first Mobility-as-a-Service (MaaS) system: https://ramboll.com/-/media/files/rfi/publications/Ramboll_whimimpact-2019.pdf

2 - Rural-MaaS (2017) Rural-MaaS project. www.vtt.fi/sites/maaseutumaa (in Finnish only).

3 - The interested reader is directed to: Smith, G, Sochor, J and Sarasini, S (2017) Mobility as a Service: Comparing Developments in Sweden and Finland. ICoMaaS 2017 Proceedings. Available at: www.viktorias.se/sites/default/files/pub/viktorias.se/upload/publications/smith_et_al._2017_1.pdf

In June 2016 MaaS Global test launched Whim in Helsinki, an app giving people instant access to multiple kinds of transport, from car sharing to taxis, buses, trains and bike share. The app (<https://whimapp.com>) became openly available in the Helsinki Region in May 2017. The experience of the Helsinki application for the period January-December 2018 has recently been published (WHIMPACT¹).

The Rural MaaS project² aimed at creating a national vision for MaaS in rural and sparsely populated areas. It focused mainly on recognizing emerging and potential business models for both commercial and publicly supported transport services. The project improved awareness of the MaaS concept in rural areas by sharing knowledge, and by providing measures and recommendations for developing mobility regulations and raising awareness related to the technical aspects of MaaS. The outcome is reported in Rural-MaaS (2017).

Legal Framework³

Summary

The Act on Transport Services (2018) underpins Finland's development of a unique country level approach to the development of MaaS. Labelled the 'Transport Code' by the Ministry of Transport and Communications (MTC) the Act includes an obligation for transport operators to provide essential information and access to sales interfaces of ticket and payment systems. The Act facilitates entry of the taxi sector and increases the freedom of taxi operators to develop their services. All transport modes (road, shipping, rail transport and aviation) are included to enable multi-modal travel chain.

Background

In 2009, the Ministry of Transport and Communications (MTC) (Liikenne- ja viestintäministeriö – LVM) decided that a major reform of transport market legislation was needed if the public goals for the Finnish transport sector were to be met. In the same year they published Finland's first national strategy for ITS which proposed that an increased use of ITS could encourage greater

DETAILED DESCRIPTION OF THE PRACTICE

use of environmentally sustainable, economical and safe modes of transport, while pointing out that this development required a modern, customer-oriented transport policy. Subsequently, major legislative modifications have resulted in a unified Act, known as the 'Transport Code'.

The key objectives of the Code are to 'promote the creation of new service models, ease market entrance, dismantle national regulation that limits competition and reduce the level of public guidance' (LVM, 2016a, p. 1⁴). The first phase of the Code was adopted by the Finnish Parliament in April 2017 and entered into force from 1st July 2018 via the The Act on Transport Services (2018). This phase has two parts. First, it aims to deregulate transport markets (e.g. with a new passenger transport license under which any type of vehicle will be allowed to be used as a taxi, and limits on the number of taxi licenses as well as price regulations for taxis are removed, LVM 2016a, b⁵). Second, it focuses on the use of open and interoperable data interfaces. The Code will oblige incumbents as well as new entrants to the transport market to provide their operational data as well as their single tickets for third-party resale and use. The underpinning idea of the Code is to take advantage of digitalization and enable both the development of better and more agile transport services, and their integration into MaaS offerings.

Under the Act on Transport Services, mobility service providers are required to share information on their routes and timetables via open interfaces which can be accessed directly by other actors and service developers. The Finnish Transport Agency is no longer legally obliged to maintain an actual collection database of routes stops and timetables (although it will maintain a catalogue of interfaces) and therefore no longer fulfils the preconditions for maintaining a national journey planner. The transport administration's current goal is to give market-based actors room to develop services aimed at passengers, such as journey planners and MaaS services⁶.

Cost and Financing sources

As a national initiative the National MaaS Framework has been crucially dependent on the leadership provided by the Ministry of Transport and Communications (MTC) which has paved the way for MaaS development. Initial funding was provided in early 2015 by the MTC and the Finnish Funding Agency for Innovation (Tekes) launched a joint programme for the development of MaaS. Tekes is the most important funding agency for research funding in Finland. Another public actor, Export Finland, also launched a growth programme for MaaS aimed at supporting Finnish MaaS-related ventures to attract international investors and develop global business opportunities. MaaS Global is the best-known example of a Finnish start-up company promoting the MaaS concept.

Organizational set-up

As noted above in the Legal Framework section the development of the national MaaS framework is closely coupled with the Ministry of Transport and Communication's (MTC) work on reforming transport market legislation. The development of the National MaaS Framework is built around the 'Transport Code' introduced under The Act on Transport Services (2018) which is designed to encourage new digitally-led business models as a precursor to MaaS-type services, and a new public procurement law requiring the use of electronic channels.

Supporting technologies

MaaS is a technology-led concept. Key to the development of MaaS is the recent step change in technology as illustrated by the applications of intelligent mobility (IM) which are closely associated with the rise of digital technologies and their application within the transport sector. IM is enabling change to provide a customer interface with an integrated back office.

4 - LVM (2016a). "Taxi Services in the Transport Code," Fact sheet No. 20/2016, Fact sheet, Helsinki: Ministry of Transport and Communications, September 30. (www.lvm.fi/en/publications_series).

5 - LVM (2016b). "Public Transport in the Transport Code," Fact sheet No. 18/2016, Fact sheet, Helsinki: Ministry of Transport and Communications, September 20. (www.lvm.fi/en/publications_series).

6 - See: <https://vaaja.fi/web/en/transport-system/public-transport/information-services#.XM1rp0xFxPY>

INNOVATION ASPECTS

ORGANISATIONAL RESPONSIBILITIES AND PARTNERSHIP WORKING ARRANGEMENTS

In Finland, communications and transport are governed by the same ministry (MTC). This has enabled the Finnish government to make structural links between transport and ICT. MaaS champions are positioned in many of the most influential roles within key public and private organizations such as the MTC (both politicians and civil servants), within leading start-ups and at the City of Helsinki.

LEVEL OF PUBLIC SECTOR FINANCIAL SUPPORT

The Ministry of Transport and Communications (MTC) of Finland is responsible for legislation covering the Transport Code and public procurement.

INTERCONNECTIONS BETWEEN SHARED AND PUBLIC TRANSPORT SERVICES

Under the Act on Transport Services (2018) all transport modes (road, shipping, rail transport and aviation) will be included to enable multi-modal travel chains.

ICT CONNECTIONS AND IMPACTS OF THE TECHNOLOGICAL SOLUTIONS IMPLEMENTED

The development of the Finnish Transport Code has been ICT-led and closely coupled to MaaS developments.

OTHER (E.G. SOCIAL INNOVATION, ETC.)

Finland is adopting a unique country level approach to the development of MaaS. Finland is home to the world's first Rural MaaS project

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The development of the National MaaS Framework is closely coupled with the Ministry of Transport and Communication's (MTC) work on reforming transport market legislation. The idea of creating multi-modal mobility packages was first promoted at an MTC think tank in 2012 (by Sampo Hietanen, then CEO of ITS Finland, who later became CEO of Maas Finland Oy, subsequently MaaS Global Oy).

In early 2015, MTC and the Finnish Funding Agency for Innovation (Tekes) launched a joint programme for the development of MaaS. Eight pre-studies were funded and several MaaS-related pilots were performed during 2015 and 2016, including:

- The telecom company Telia Finland Oy (previously Sonera) developed a MaaS application called Reissu, and conducted two pilots, one for commuters in the city of Hämeenlinna and one for tourists travelling to the ski resort of Ylläs, before selling the brand to the Finnish company Semel Oy in December 2016.
- Tuup Oy, a start-up company, launched the first version of a MaaS application in 2016. It enables purchase of public transport tickets in Turku and taxi hailing in some areas, as well as exclusive access to Kyyti, a taxi-pooling service currently available in Oulu, Turku and Tampere.
- Sito Oy, a Finnish consultancy firm, piloted a MaaS application, Kätevä, in Seinäjoki between November 2016 and April 2017. The service provided three types of mobility packages that combined local buses, demand responsive transport and taxis.

The highest profile activities by far are those of MaaS Global. In June 2016, MaaS Global publicly launched its first service, Whim, and began a beta test in Helsinki from October the same year. In 2017, MaaS Global raised additional venture capital, and has subsequently expanded to Antwerp and the West Midlands. The Whim app (<https://whimapp.com>) became openly available in the Helsinki Region in May 2017.

In addition to the MTC / Tekes joint MaaS programme, another public actor, Export Finland, has launched a growth programme for MaaS, aimed at helping Finnish MaaS-related ventures to attract international investors and to take advantage of global business opportunities.

Another relevant initiative is the rural transport and mobility national communication project ('Digiboksi') which:

- collects, processes and spreads concrete information about the changes in the transport and mobility sector affecting rural areas
- illustrates how digitalization and changes in legislation (Transport Code) can enable more flexible organization of transport and mobility services; and
- covers the whole of Finland with the main target group being rural SMEs.

Ridership and other key metrics/results (through key-indicators, where applicable)

Not applicable to this GP case.

Good Governance

In Finland, communications and transport are governed by the same ministry (MTC). This has enabled the Finnish government to make structural links between transport and ICT.

Success factors/strengths

- MaaS is seen as a new transport paradigm that can enable growth within ICT and streamline public spending to offset the economic downturn.
- In Finland, communications and transport are governed by the same ministry (MTC). This has enabled the Finnish government to make structural links between transport and ICT.
- The development of the Finnish Code has been closely coupled to MaaS developments. The MTC has paved the way for MaaS development, by:
 - communicating a 'national' agenda that seeks to enable MaaS development, drawing attention to the concept, and making it easier for start-ups to find investors and to convince transport service providers to get involved; and
 - proposing the deregulation and associated regulations required to drive the development, such as requiring transport service providers to make single tickets available for resale.

1 - The interested reader is directed to: Smith, G, Sochor, J and Sarasini, S (2017) Mobility as a Service: Comparing Developments in Sweden and Finland. ICoMaaS 2017 Proceedings. Available at: www.viktorias.se/sites/default/files/pub/viktorias.se/upload/publications/smith_et_al_2017_1.pdf

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- “MaaS champions”. These actors are positioned in many of the most influential roles within key public and private organizations such as the MTC (both politicians and civil servants), within leading start-ups and at the City of Helsinki.

Difficulties encountered/weakness

Public transport operators have been less involved in the development of MaaS in Finland. The organization of public transport in Finland is arguably an institutional barrier to MaaS since the responsibility for public transport (including subsidies) rests at either the state or municipal level. Single tickets are not subsidized and each municipality has the responsibility for subsidizing its ‘own’ residents’ public transport passes. Also, the fact that the Public Transport Authorities (PTAs) do not allow third-party ticket resales is seen as a major obstacle to MaaS. Although HSL (the Helsinki PTA) has developed a contract to release single tickets this is only signed with MaaS Global so far. It has been suggested that the PTAs’ reluctance on the ticket resale issue is primarily related to a protectionist mindset, risk aversion and organizational inertia. Notably, no representative of the public transport sector is active amongst the group of Finnish MaaS champions, and the sector has had little involvement in either the preparation of the Transport Code or the creation of the national MaaS vision. Hence, one may anticipate that the further development of MaaS may experience disagreements regarding the roles of private and public actors (as has been the case in Sweden).

FEATURES THAT ARE CONSIDERED TO BE GOOD PRACTICE (LESSON(S) LEARNT)

1. The MaaS concept has strong origins in Finland and already plays a key role in the national transport policy.
2. Finland is adopting a unique country level approach to the development of MaaS.
3. The development of the Transport Code has helped to place Finland at the forefront of MaaS.
4. Finland is home to the world's first Rural MaaS project.

REFERENCES FOR FURTHER DETAILS

Contact of the operator and of relevant stakeholders

Organization: University of Aberdeen

Person contact: Prof. J D Nelson

Websites

- Finnish led MaaS Roadmap project (2015–17).
www.vtt.fi/sites/maasifie
- Finnish national communication project about rural transport and mobility (2018 - pres):
www.vtt.fi/sites/maasdigiboksi
- Rural-MaaS project. www.vtt.fi/sites/maaseutumaas (in Finnish only). Ministry of Agriculture and Forestry of Finland (2016–2017). Aimed at creating a national vision for MaaS in rural and sparsely populated areas.
- Mobility services technology brokerage platform project (2018–2019).
www.sitra.fi/en/projects/public-private-mobility-services-offered-side-side/#what-is-it-about
- Press release on the Act on Transport Services.
www.lvm.fi/-/act-on-transport-services-to-cover-the-entire-transport-system-971134