

# Regulatory frameworks and policies related to MaaS

## **An overview**

*English edition*

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How legal aspects influence the development of combined mobility as a service - mapping barriers and possibilities

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REGULATORY FRAMEWORKS AND POLICIES  
RELATED TO MAAS

# BACKGROUND

This report has been formulated by RISE, in order to show how regulations and policies relate to the development of Mobility-as-a-Service (MaaS) in Sweden. The report was produced in the project KOMPIS ([www.kompis.me](http://www.kompis.me)) as a part of the roadmap for combined mobility.

KOMPIS is a project within the strategic innovation programme Drive Sweden, a joint venture of Vinnova, Formas, and the Swedish Energy Agency.



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# INTRODUCTION & OVERVIEW

Combined mobility as a service or Mobility-as-a-Service (MaaS) constitutes services that combine several different transport-related services or combine transport services with other types of services. Another way to describe MaaS is that it combines all the forms of mobility one requires into a single service. MaaS should also be seen as a means of modifying the transport system so that it becomes more socially efficient and sustainable in the long term.

Extensive work is underway in Sweden to promote Combined Mobility/MaaS. Among other things, a common roadmap was developed within the Next Generation Travel and Transport collaborative programme. (1) The roadmap summarises activities in Sweden necessary to achieve the established goals of the roadmap by 2027. The proponents of the roadmap are the Swedish Energy Agency, Samtrafiken, the Swedish Public Transport Association, the Swedish Transport Administration and Vinnova. The

roadmap aims to coordinate each organisation's work on MaaS so that everyone works in the same direction.

The roadmap is revised annually to be a living document and reflect the latest learnings available. During the development of the first roadmap, regulatory and legislative issues were identified as the main challenges by far to the emergence of MaaS. For this reason, the roadmap contains an activity area titled Legislation and Policy. It deals with how regulations and policies can be changed to facilitate MaaS. This document is based on the roadmap and describes the present situation concerning regulatory frameworks and policies from a MaaS perspective. No proposals for solutions are provided as this falls outside the scope of the project. Instead, the aim is for this document to form a basis for further work. Included in the focus of the document are issues related to taxation, sharing economy and infrastructure.

(1) *Färdplanen för Kombinerad mobilitet som tjänst i Sverige, En aktivitet i samverkansprogrammet - nästa generations resor och transporter, revision 2 - november 2018*. Developed by Swedish Energy Agency, Samtrafiken, Svensk kollektivtrafik, Swedish Transport Administration och Vinnova.

## INTRODUCTION & OVERVIEW

**Table 1.** Overview of the policy and regulatory relevance for MaaS

	Relevance for MaaS	Barriers / Opportunities	Definitions	On-going work
Public transport Authority	Who bears responsibility?	Current regulations are a barrier	Needed	Under investigation
Sharing economy	Easier to share	Ridepooling	Needed	-
		Shared car fleets	Needed	-
Parking	Easier to share	Car pool	Needed	Under investigation
		Knowledge gap about zero parking ratio	-	-
Income taxes	Commuting	MaaS is disfavoured	Needed	-
	Employee benefits (car)	MaaS is disfavoured	-	-

### Summary

This report is based on an inventory of the identified obstacles to and opportunities for MaaS from a regulatory and policy perspective. Four different areas have been identified. These are:

- who is able to drive development forward,
- the importance of the sharing economy for MaaS,
- MaaS and parking,
- and MaaS as an employee benefit / prerequisite.

Policy and regulatory development are highly significant in promoting the emergence of MaaS. In this section, it can be stated that, so far, there have been no or few changes to regulations with a direct bearing on MaaS in any area investigated. Ongoing and past state investigations to amend regulations have not yet yielded any results. In particular, the regulations lack clear definitions. Other reasons for this include partly outdated regulations as well as regulations that favour private motoring over MaaS and shared mobility.

In Finland and Norway, the exact opposite conclusion was reached with respect to who is responsible for MaaS. Sweden lacks a clear division of roles; it is not yet clear whether MaaS is something the public sector should promote, or if it should be a market endeavour. Without a clearly identified principal to take responsibility for development, MaaS in Sweden may risk falling between the cracks.

Lastly, it also involves increased awareness of the possibilities offered by MaaS and why it is needed from a sustainability perspective. This does not have to do with modernising regulations, but rather working to create acceptance, interest and understanding amongst the public in order to bring about fundamental change.

# WHOSE CONCERN IS MAAS?

MaaS is a new phenomenon. As of yet, no specific laws or regulations based on MaaS exist. Therefore MaaS must operate within existing regulatory frameworks. A fundamental question to answer with regard to the regulations for MaaS services is to clarify what the state, regions and municipalities should be responsible for and what the market should be responsible for, i.e. where is the dividing line for public sector involvement? Is MaaS inherently a state/municipal concern or is it an endeavour for the market? Principally, the choice is between a public operator as the starting point (with proprietary production of transportation, directly or indirectly) and utilising private third parties (without production of transportation) for the realisation of MaaS.

Public sector involvement varies from country to country and take different forms. In Finland, public transportation is regulated at the state and municipal level; in the choice between public sector-driven innovation and a free market, Finland has opted for the market to drive MaaS forward. In 2018, Finland introduced the Act on Transport

Services (2017/320), which focuses on, among other things, the liberalisation and promotion of MaaS (2). Articles 154 -156 stipulate that a public transport service provider is obligated to share its ticketing system with a third party, an option used by, for example, Whim (a third-party provider of MaaS services). A similar proposal has been made in Sweden, in the form of DS 2015:11 Resa lätt med biljett (Eng: travel easily with a ticket), but has not resulted in any legislation.

Norway, on the other hand, considers MaaS to be a public sector concern. Last year, Norway obtained a national travel planner (En-tur) based on rail traffic. En-tur is a collaboration involving all public transport companies and is owned by the Norwegian state. The idea is that all public transport and mobility will be purchased from the En-tur app in the future. Denmark has a similar system, which uses a travel card.

These examples show that MaaS can be both a public sector concern and a market endeavour.

(2) The Finnish Government's bill RP 161/2016 presents a proposal for a code for transport with related laws. The proposal is presented in ch. 3.1.

## The municipal responsibility

The state and municipalities often collaborate to achieve societal goals, but it is the state that has ultimate responsibility for social functions. Municipalities, in turn, operate within their own spheres and essentially free from state interference (municipal self-government) (Chapter 1, Section 1 of the Swedish Constitution), but municipal functions must be based on the needs of citizens, i.e. they must be in the public interest (Chapter 2 Section 1 of the Swedish Local Government Act (2017:725)) (LGA). An example of a public interest is transportation to and from schools. Furthermore, a municipality is prohibited from having involvement in concerns which are under the purview of the state, another municipality, or county council (LGA Chapter 2, Section 2). Ultimately, it is the Riksdag that decides through laws what constitutes a municipal or state concern.

Moreover, a municipality is limited to operating within its own borders (LGA Chapter 2, Section 1), so its services must be correlated to its geographical area or its residents. The mobility services in question do not have to be physically within the municipality, but the services must be useful or vital to the municipality's residents, such as an airport. Another limitation placed on local governments is that their functions must be strictly non-profit and to fulfill a general societal interest or need (LGA Chapter 2, Section 7). Municipalities are also prevented from providing funds to individual commercial operators; however, it is permissible to promote companies as a general group (LGA Section 2, Section 8).

Public transport in Sweden is governed by the regional public transport authorities (RPTA). The Swedish Public Transport Act stipulates that the duty of the RPTAs is to work on public transport. RPTAs are legally considered municipal/county councils (Chapter 2 of the Swedish Public Transportation Act 2010:1065), which means they must comply with the rules described above.

The Riksdag can also decide on what constitutes a concern for RPTAs by, for example, imposing stipulations in the Swedish Public Transport Act. However, with MaaS, no such decisions have been made.

## WHOSE CONCERN IS MAAS?

The question then is: what is public transport in relation to MaaS? Can all MaaS services be considered public transport, or do forms exist outside the definition of transit? We do not have a clear answer at present.

Based on the regulations that regional public transport authorities must comply with, the phenomenon of MaaS does not quite fit the pattern. RPTAs have a local/regional area of interest, not national. The area of interest for a traveller is something that can be debated, i.e. whether a traveller is primarily interested in local MaaS services or whether a national interest also exists. However, from the perspective of a third-party looking to develop MaaS services, the national area of interest is important in order to scale and profitability. Unlike third-party operators, RPTAs are prevented from having a profit incentive. This means that RPTAs may not resell commercial services at profit in a MaaS app- and so current legislation makes it difficult for RPTAs to drive MaaS forward.

At the same time, it is the regional public transport authorities that regulate and control third-party access to public transport ticketing systems. Access to ticketing systems, and the developing systems themselves, are a prerequisite for MaaS. The ongoing LIMA and KOMILAND projects, both of which aim to develop MaaS services, show that this is possible to do. In the LIMA project, the intended provider is a commercial operator. Therefore sales commissions, requirements for information sharing and transparency

have become important issues that must be addressed between the RPTA and provider.

In KOMILAND, the starting point is that commercial mobility providers are unable to turn a profit as a transport broker since it involves rural areas. Instead, the public sector procures platforms and services to fulfill a societal need. The RPTA itself acts as dispatcher, and the question of third-party sales (procured platform/service provider) is not as sensitive.

Another aspect being investigated by RPTAs is the possibility of procuring and offering MaaS services *within* the existing framework of public transport. Work is in progress (as of autumn 2019) at both Storstockholms Lokaltrafik and Västtrafik to determine

- how third-party sales can be organised
- the form this will take
- the terms and conditions thereof

In 2019, a government investigation into a new national ticketing system (see below) was launched, where the issue of third-party sales is likely to be addressed. In the same year, the Swedish Transport Administration also received a government mandate to explore how national access to public transport and other services could be designed, and how it could support the development of combined or packaged mobility tickets.

These investigations are ongoing.

(3) The project Lindholmen Mobility Arena (LIMA) will offer MaaS services to 1000 participants during 2020. The project is part of the collaborative program Next generation's travel and transport and is funded by Vinnova as part of the strategic innovation program Drive Sweden and by participating parties.

(4) KomILand stands for "Kombinerad mobilitet på landsbygd och i mindre tätorter" (Combined mobility in the countryside and smaller communities). The project is funded by Västra Götalandsregionen and Vinnova and is running during 2019-2020. Project participants are Skaraborgs kommunalförbund, RISE, IVL, VTI/K2, Samtrafiken, and Västtrafik.

## WHOSE CONCERN IS MAAS?

RPTA operations are governed by the Swedish Competition Act (2008:579) (CA). The act aims to eliminate and prevent obstacles to fair competition. In this respect, RPTAs can be equated with companies since their going concern is financial in nature and are not linked to the exercise of authority (CA Chapter 1, Section 5). Furthermore, CA Chapter 2, Section 1 prohibits, in most cases, anti-competitive collaboration between companies. This would make it impossible for multiple RPTAs to collaborate and control access to MaaS services through agreements, since this risks skewing the market. There could also be a risk of abuse of dominant position pursuant to CA Chapter 2, Section 7. Another point of interest is the provision in CA Chapter 3, Section 27 which stipulates that a municipality may not engage in anti-competitive public sales activities if these risk hampering or skewing conditions for fair competition in the market. The purpose of the provision is to ensure that public and private companies enjoy equal conditions if they operate in the same competitive market. Thus, the operations of RPTAs cannot be of a nature that makes it difficult for private companies to start up or expand.

### What is a state concern?

The extent of public sector involvement is determined by the Riksdag. The motivations for public sector involvement are primarily efficiency and dispensation. The former means that, in certain circumstances, a publicly regulated or organised market produces a better socio-economic outcome than one left to market forces. Dispensation matters can involve both the dispensation of financial resources and the provision of, for example, education and welfare. The trend in recent decades has been for the state to manage the transport system and implement conditions for its functionality and development, while the production and execution of transport follows market principles.

The liberalisation of the railways is an example of this. In contrast to Norway, Sweden no longer has a state ticketing system for the purchase of train tickets, but rather privately-owned systems.

## WHOSE CONCERN IS MAAS?

Over the years, the Riksdag has adopted several transport policy objectives, the latest in 2009 (Prop. 2008/09:93). The current transport policy comprises an overall goal, a functional objective, and a call for considerations. The functional objective involves developing accessibility for citizens and businesses. The consideration objective describes how the transport system will be developed with consideration for road safety, the environment and health. Additional specifications are included which articulate and define how the transport policy objectives should be interpreted and understood. In addition, there are overall governmental priorities pertaining to transport policy.

Since MaaS is a more recent phenomenon, it was not considered when the transport policy objectives were adopted. This means that the transport policy objectives must be reinterpreted to determine how MaaS relates to them.

In recent years, work has been underway to develop a new National Plan for Infrastructure. In May 2018, the government adopted a plan for the 2018-2029 period. It outlines the investments the state will make over this period. The investments will not only focus on upgrading infrastructure, but also on initiatives geared towards competitive trade and industry, increased road safety, the development of sustainable cities and accessible rural areas. Focus will also be on new technologies and the digitisation of the transport system. It involves efficient door-to-door travel chains incorporating different modes of transport where connected, automated and electrified road vehicles combined with mobility services are anticipated to have the potential to radically change road transport. In the case of MaaS, it is stated that the focus should be on knowledge acquisition, i.e. to solely follow the development of MaaS.

Since the elections, four Riksdag parties reached agreement on the formation of the government in January 2019. The agreement resulted in a list of 73 points concerning matters to be carried out during the term of office. One of the points related to the possibility of introducing a national public transport ticketing system. A government investigation was initiated and is expected to be completed by April 2020 (Dir. 2019:48).





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# MAAS AND THE SHARING ECONOMY

The sharing economy refers to areas of the economy where private individuals are able to rent, lease, exchange or borrow/lend under-utilised assets reciprocally. This is typically accomplished through online platforms or mobile apps which facilitate sharing digitally. Sharing often involves payment, but sometimes it is an exchange of resources.

By its nature, the sharing economy can make it challenging for the Swedish Tax Agency to ensure that both seller and buyer pay tax.

With MaaS, the sharing economy primarily revolves around two concepts:

- a person drives another person somewhere (a service in the form of on-demand ridehailing)
- a person borrows/lends a car or motorized vehicle (shared property)

## Sharing Rides

There has been debate around ridesharing and MaaS- where is the line between giving an individual a lift, and entering the taxi business? If co-riding individuals do not make money from each other, it can still be counted as sharing among private individuals (non-profit). An example of this is the non-profit organisation Skjutsgruppen. However, when a driver takes a rider to a destination for financial gain and not from convenience, it becomes a taxi service.

The question of what constitutes a taxi business as opposed to sharing rides has been brought before the courts. Uber launched a service in Europe/Sweden called UberPop, where individuals could connect themselves and their car to Uber's ridesourcing platform, in order to engage in these activities.

## MAAS AND THE SHARING ECONOMY

The legal cases came to be about how often the person in question drove other persons (scope) and whether it could be considered a professional business. After several people were convicted of illegal taxi operations, Uber closed down the service in 2016, but operates versions of this model successfully in the United States, Australia, and numerous other countries, where different regulations exist.

A government inquiry proposed amendments and clarification of the regulatory framework for ridesharing and ride-sourcing services (SOU 2016:86). Specific proposals on ridesharing and its definitions have not yet led to changes to the regulatory framework.

In Estonia, taxi operations have been divided into four categories with different rights (Public Transport Act) since 2017. In this way, categories have been introduced between the two extremes of shared rides – for profit and non-profit. Ridehailing services have become a new category of mobility services separate from taxi operations, and without some of their benefits. For example, vehicles used for ridehailing may not use public transport lanes, and all dispatch and payment must be made digitally to process taxes and fees.

An issue in Sweden that remains open is whether ridesharing can complement public transport from a legal perspective, especially in rural areas and then in the form of on-call public transport. An example of this would be that person A notifies the ordering centre that they wish to travel between x and y tomorrow at 8 am. At the same time, person B notifies that they will be driving between x and y tomorrow at 8 am. The ordering centre could then connect person A with person B. Person A pays for the trip with their monthly ticket and person B receives compensation from the

public transport provider for the ride. The legal foundation for transactions between person B and the RPTAs is currently unclear.

However there are a few ridesharing examples in Sweden, such as an updated version of Närtrafik or the Västtrafik Flexlinje, where users book rides and share the vehicle (usually a van or shuttle bus) with other residents traveling in the same time period. Users could pay through multiple means, either per trip to the provider, or through a subsidized monthly transit pass from the municipality. Närtrafik and Flexlinje have existed for years, but through manual telephone scheduling, and do not currently operate fast enough to be considered on-demand. The shared ride service DELTA in Kista Science City, to begin in Fall 2020, will be the first trial of on-demand ridepooling in Sweden.

### Sharing vehicles with each other

When it comes to car sharing, the issue has two dimensions: when a person wishes to loan their vehicle and when a person wishes to borrow it. Current regulations and insurance policies do not restrict an individual from borrowing someone's vehicle. However, when it comes to loaning a vehicle, the regulations are more complicated.

There are established companies that offer platforms enabling private individuals to share vehicles- Peer-to-Peer (P2P) car sharing. Snapp Car and CiaoCiao are examples. However there is some uncertainty as to what constitutes professional car rental. Snapp Car, for example, has limited the number of vehicles that a person may lend out to 3. In recent years, the Swedish Tax Agency has been working to produce information on how to tax car sharing between private individuals, available on its website.

(6) <https://www.skatteverket.se/privat/skatter/arbeteochinkomst/inkomster/delningsekonomi/hyrautillgangarsombilbatmedmera.4.2cf1b5cd163796a5c8bc0b.7.html?q=bildelning>

That the Swedish Tax Agency updated its website with information about car sharing was a result of the KRABAT project (7).

When it comes to P2P car sharing, there is also another dimension that has nothing directly to do with regulatory obstacles, but instead involves a changed approach to car sharing between private individuals. To make car sharing more attractive, greater awareness of the possibility of car sharing is required.

In order for car sharing to function smoothly between private individuals, the handover needs to be as simple as possible. For this, a digital car key plays an important role. It is possible to retrofit a digital key in a car, which Snapp Car and CiaoCiao offer in some locations at a certain cost. But what if all cars were already equipped from the factory with a digital key? Car sharing could then be included in calculations as early as customers deciding to lease or purchase a vehicle. If a person were to own the car, they could make their own decision; however, if they lease the vehicle, it is the contract that determines whether or not the vehicle can ever be loaned. Some lease contracts prohibit car sharing, so to allow for car sharing, changes to business models with amended contractual content and changes to risk analyses are needed. The company GoMore has developed a leasing model that allows for private car sharing with its vehicles.

Another issue is that Swedish laws for car rental prevent P2B car sharing (person to business). The legislation is based on the notion that the identity of the vehicle is somewhat static. In contrast, a vehicle having a dynamic identity could facilitate car sharing. Car rental requires that the car in question is registered in the road traffic registry as a rental car. This results in requirements for more frequent inspections compared to a regular private car. And this in turn individual to lend their car to a car rental company. An example of this would be Anders embarking on a long journey abroad, during which his car is parked at the airport and not used. What if Anders could instead place his Volvo in Hertz's rental fleet, which could then rent it out visiting tourists? It is possible to re-register a private car as a rental car and back again, but it is administratively complex and time consuming. The Drive Sweden Reality Lab Support project (8) investigated existing interest in this option.

(7) KRABAT - Kraftsamling för nästa generations resor och transporter. The project is part of the collaborative program Next generation's travel and transport.

(8) Linda Olsson & Maria Schnurr (2018) Regelverksinnovation för P2P bildelning i Sverige.

[https://www.viktoria.se/sites/default/files/pub/www.viktoria.se/positionpaper\\_juni2018.pdf](https://www.viktoria.se/sites/default/files/pub/www.viktoria.se/positionpaper_juni2018.pdf)



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# MAAS AND PARKING

MaaS is intended to be an alternative to private car ownership. Access to parking spaces is one of the most important factors in decisions related to modes of transport and travel patterns. A car being shared by several people will increase its use while reducing the need for a parking space.

## Definition of car clubs

One challenge for MaaS is to provide access to mobility as close to the user's door as possible. In large cities, there may be a shortage of parking spaces for cars at certain times of the day and in some areas. If, for example, a car club is located too far from the customer, it will not be an attractive option. However, it is not just about where the car club car can be collected, but also where it can be dropped off, i.e. parked. If there are no available parking spaces in which to park the car, the car club will have no appeal. To

promote car clubs, there has been discussion about whether these cars can get their 'own' reserved parking spaces on public streets, thereby being closer to users.

In a city, there are two kinds of parking spaces. One type of parking space is on private property. For this, the property owner determines what rules apply to parking. However, parking spaces on private property can be in short supply in cities. Another type of parking is in public spaces. According to the Planning and Building Act (2010:900) (PBA), a public space constitutes a street, road, square or other area that, according to a zoning plan, is intended for public use. The term includes street parking. By means of a local road traffic regulations, a municipality can decide how public spaces may be used (Chapter 10 of the Swedish Road Traffic Ordinance).

For example, it is possible to reserve parking spaces for people with disabilities or reserve spaces for residential parking.

The municipality of Gothenburg wanted to promote car clubs by first banning vehicles from parking on a particular street through a local road traffic regulation and then by issuing permits for car club cars to park there. In this way, the municipality would be able to offer attractive parking in public spaces. The decision was appealed by the Swedish police. The case eventually ended up with the Swedish Transport Agency, which is the last resort in the process. The Swedish Transport Agency ruled that the municipality had erred on the grounds that there exists no legal definition of a car club (9). The issue defining what a car club is or is not has been relevant ever since. In order for a municipality to employ road traffic regulations, the phenomenon in question needs to be defined in the laws or regulations pertaining to road traffic definitions. The problem here is that since there is no definition of a car club, it is not possible to reserve space for a car club car through a local road traffic regulation. A report from March 2017 proposed a definition of a car club in order to enable parking in public spaces (SOU 2017:22). The proposal did not result in any legislation. Critics of the proposal asked, among other things, why the promotion of car clubs was in the public interest. The matter is being re-examined in an ongoing investigation (Dir. 2018:93).

From a MaaS perspective, it can be argued that there is a clear public interest since a

mobility subscription for many user groups can serve as a viable alternative to owning a car (10). Reduced private car ownership leads to fewer passenger-kilometres driven and can have a positive effect on the city. In order for MaaS services to work, proximity to car clubs and 'a car when needed' is vital.

Consequently, the option for cities to use public spaces for car clubs is in the public interest. This position, however, has not been underscored in previous work.

### Zero parking ratio

For a developer, it is expensive to build parking spaces in the form of, for example, underground garages. Provisions for parking are therefore required for new construction projects to ensure that the matter of parking is handled lawfully and that developers do not shirk their responsibilities. The Planning and Building Act merely states that a plot of land, to be developed, shall be arranged in such a way that there is appropriate space for parking, loading and unloading of vehicles on the plot or within a reasonable distance from the plot (PBA Chapter 8, Section 9). The onus is then on the municipality to interpret what 'reasonable distance' entails in each individual case (PBA Chapter 4, Section 13). Instead of interpreting what constitutes a reasonable distance in each individual case, many municipalities work according to a parking policy, which contains municipal guidelines for the construction of parking spaces. For instance, the guidelines may specify that there must be 0.8-1.1 parking spaces per apartment, referred to as the parking ratio.

(9) Swedish Transport Agency 2014-02-11, TSV 2013-2214

(10) Jana Sochor, I.C., MariAnne Karlsson & Helena Strömberg (2016) Trying out Mobility as a Service – Experiences from a Field Trial and Implications for Understanding Demand

One advantage of parking ratios is that they provide predictability for the parties involved in new construction projects.

In recent years, some municipalities have started to apply very low parking ratios, dubbed 'zero parking ratio'. The range may be somewhere between 0.0-0.3 parking spaces per apartment. The idea behind this is that all parking should still be on private property, thus not encumbering anyone else's parking space. Instead, different types of mobility solutions should then be used to increase the proportion of sustainable transport and reduce the need for car ownership and therefore parking. If the developer adopts mobility measures that facilitate sustainable travel, e.g. in the form of MaaS, the developer can obtain a reduced parking ratio. For example, the developer can plan the plot to include a designated area for car clubs and bicycle sharing, or purchase space in a nearby parking lot for car clubs (11).

The zero parking ratio is a relatively new phenomenon. For this reason, there is a lack of long-term research into what living in a zero parking ratio apartment may entail for residents. In terms of zoning plans, the operational period is of interest. A zoning plan is valid during the operational period. This means that during the operational

period (typically 15 years), the zoning plan may not be amended, replaced or revoked against the will of property owners (PBA Chapter 4, Section 21). A zero parking ratio will require property owners to take greater responsibility for mobility, but the question is then: how long into the future will this responsibility extend (1 year, 5 years, or 10 years)? Will the zero parking ratio concept work when the buildings become older? If the zoning plan stipulates that the property owner must provide mobility for the first 5 years, but the operational period is 15 years, what happens then in year 6? Another problem is how mobility will be valued. There is extensive experience of building parking spaces and what it costs. But there is little experience of financially valuating different types of mobility solutions. There is a risk that the demands placed by the municipality on the developer's reciprocity in the form of mobility may be too low to obtain a zero parking ratio. There is also no provision stipulating that the full amount of money the developer saves on building according to a zero parking ratio should be utilised for mobility solutions. More research is therefore needed on how a zero parking ratio affects mobility and construction.

(11) Anders Roth, Cecilias Hult, Åsa Hult, Torunn Vikengren & Michael Koucky (2018) Sänkt p-tal som drivkraft för attraktiv stadsbyggnad och hållbar mobilitet. Rapport nr C 276, IVL Svenska Miljöinstitutet  
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# MAAS AS AN EMPLOYEE BENEFIT

Income tax regulations affect MaaS in different ways. If the tax system favours private car ownership, it makes it difficult for MaaS to compete on equal terms. At the same time, the opposite could also apply. If the tax system favoured MaaS, MaaS would become more attractive compared to private car ownership.

## Travel to and from work

Travel to and from work has traditionally been regarded as a personal cost of living. Under tax law, private living expenses are not normally eligible for income tax deductions. However, deductions for travel to and from work have nevertheless been possible because there is a connection to the earning of income. Another reason for allowing tax

deductions is that they are viewed as facilitating labour mobility.

Tax deductions are governed by a detailed regulatory framework, and are claimed based on, among other things, mode of transport, duration of travel and distance. It is only possible to claim tax deductions for travel expenses in excess of SEK 11,000/year. Criticisms of the current system have included the fact that tax deductions are deemed to favour private motoring. If regulations had only been based on the distance between the home and workplace instead of focusing on the cost of travel, the regulations would have favoured public transport.

In June 2019, a report (SOU 2019:36) was submitted proposing amendments to regulations to include this. The report also highlights environmental reasons as one of the justifications for why the regulatory framework needs to be amended. The proposals have not yet resulted in any changes to regulations.

Because of the requirement in the current system that the costs of travel to and from the workplace must amount to at least SEK 11,000 per year before tax deductions can be claimed, commuters with a monthly ticket for public transport can seldom claim tax deductions because the annual cost of the monthly ticket does not exceed this amount. The focus of the ongoing LIMA project (12) is on shared mobility. As part of LIMA, 1,000 participants will be offered a smart mobility service. One issue being investigated in the project is whether there is interest in introducing 'mobility benefits' in the future. The idea behind mobility benefits is to broaden the concept of employee health benefits.

Certain types of employee health benefits are favourable from a taxation perspective. This applies to minor, low-value benefits (max. SEK 5,000) geared towards creating wellbeing at work. These may include fitness allowances, exercise activities, and basic refreshments such as coffee or fruit at the workplace. One requirement for employee health benefits is that all employees must be offered them. Employee health benefits are

non-taxable for employees. This means that the employer cannot claim tax deductions or pay employer contributions on the benefit.

The idea of providing mobility as a perk or benefit is that the employer can offer all employees MaaS services (tax-free up to certain amount) to use, for example, for travel to and from work, with similar rules to employee health benefits, in order to make it easier to offer mobility services. Today, it is possible to offer mobility as a perk or benefit based on the normal rules applying to other benefits. Benefits and perks constitute all forms of 'compensation for work' employees may receive other than cash. In principle, a benefit is afforded as soon as the employer compensates an employee for a private cost of living. The benefit is taxed according to the market value inclusive of VAT. In terms of MaaS as a benefit, it is difficult to calculate the market value since no MaaS services are available on the market yet and are still undergoing feasibility studies. When an employee receives a benefit from their employer, it also needs to be decided whether it will be claimed as a gross or net wage deduction. If 'mobility benefits' are introduced with similar rules to employee health benefits, the mobility benefit would be non-taxable for the employee and result in simpler regulations and less administration. In this way, MaaS could also compete with private motoring to and from work (13).

(12) The project Lindholmen Mobility Arena (LIMA). It is part of the collaborative program Next generation's travel and transport and is funded by Vinnova as part of the strategic innovation program Drive Sweden and by participating parties.

(13) Maria Schnurr, Linda Olsson & Kristina Andersson (RISE Viktoria) (2019) Regelverksinnovation i Sverige: Från förmånsbilar till förmånsmobilitet.

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***The LIMA project will also investigate the possibility of making the value of a take-home vehicle and the value of mobility benefits financially neutral.***

## Company cars and car sharing

An employee can travel for business using a company's vehicle. In such cases, there is no taxation on the employee. However, an employer can also offer an employee a company car for private use (take-home vehicle) regardless of whether the employee requires the car in their job. In such a case, the employee is taxed because the car is considered a benefit affecting income tax. The value of the benefit depends on a range of factors, such as who pays for the fuel. However, if an employee infrequently uses a company vehicle privately (only on a few occasions and a maximum of 1,000 km/year), it constitutes a tax-free benefit. The LIMA project will also investigate the possibility of making the value of a take-home vehicle and the value of mobility benefits financially neutral.

When it comes to car sharing, the following scenario applies to the calculation of the value of the benefit. Option 1 involves an employer offering a car club for employees to make use of privately. The offer is based on 10 employees sharing a single car. Here, the benefit value will probably be 10% for each employee. In Option 2, Anders agrees to share his own take-home vehicle with nine other colleagues when he does not need it. Here, the benefit value will probably be 100%, i.e. because Anders gains no advantage from sharing his vehicle. The precise nature of this is uncertain since there are no legal precedents, but the example aims to show that current regulations do not make sharing your car with colleagues appealing.





# INCENTIVES AND INSTRUMENTS FOR MAAS

Instruments and incentives can be used to achieve a desirable societal goal. Instruments are mandatory and incentives are voluntary. For example, an instrument may provide incentives to restrict or increase the use of MaaS. A measure here is the action carried out by an operator as a result of an instrument. This creates an effect and makes headway towards achieving goals. Instruments can be divided into four categories. These are:

- Financial instruments
- Legal/administrative instruments
- Social instruments
- Informative instruments

## Financial instruments

Financial instruments constitute policy instruments aimed at steering the behaviour of individuals and companies in a desired direction through financial incentives. They can include taxes, fees, grants and subsidies. When it comes to MaaS, discussion has primarily focused on the role MaaS can play in a circular economy in terms of renting and sharing. For example, an investigation currently underway is tasked with exploring whether it is possible to promote car clubs through reduced VAT (Dir. 2018:93).

### Legal/administrative instruments

Legal instruments constitute regulations that establish formal prerequisites and steer the behaviour of individuals in a desired direction. In recent years, investigations have been focusing on formulating proposals for amending regulations in order to promote MaaS, primarily by establishing clear definitions of various phenomena associated with MaaS. So far, this has not resulted in any changes to regulations. The regulations are also designed in such a way that private motoring is favoured, not least of all from a taxation perspective. No changes to regulations aimed at facilitating ticket sharing with third parties similar to the Finnish regulations have been adopted or introduced, despite proposals.

### Social instruments

Social instruments chiefly involve infrastructure as applies to physical urban planning and infrastructural investments. In this, it is mainly by means of zoning plans and parking ratios that society can promote MaaS. The state no longer owns a ticketing platform, so it is not as easy to adopt Norway's approach for the introduction of MaaS. At the same time, it is unclear what role regional public transport authorities can play in MaaS. For example, is MaaS something that can be

procured? The government has a collaborative programme for MaaS called Next Generation Travel and Transport (Kompis). Through this programme, the government is able to steer societal development. The programme is funded through Vinnova.

### Informative (knowledge-based) instruments

A lack of information can affect the development of MaaS. Countering this requires creating acceptance for and public interest in MaaS by demonstrating good examples. The fact that MaaS has not yet been generally accepted can be illustrated, for example, by the criticism directed at the proposals made by a government investigation concerning the definition of a car club to enable parking in public spaces (SOU 2017:22). Multiple responses to the proposals revolved around questions about why car clubs were in the public interest. Authorities can play an important role here in creating acceptance for MaaS. An example of this is that the Swedish Tax Agency provides information on its website on how P2P car sharing should be taxed.

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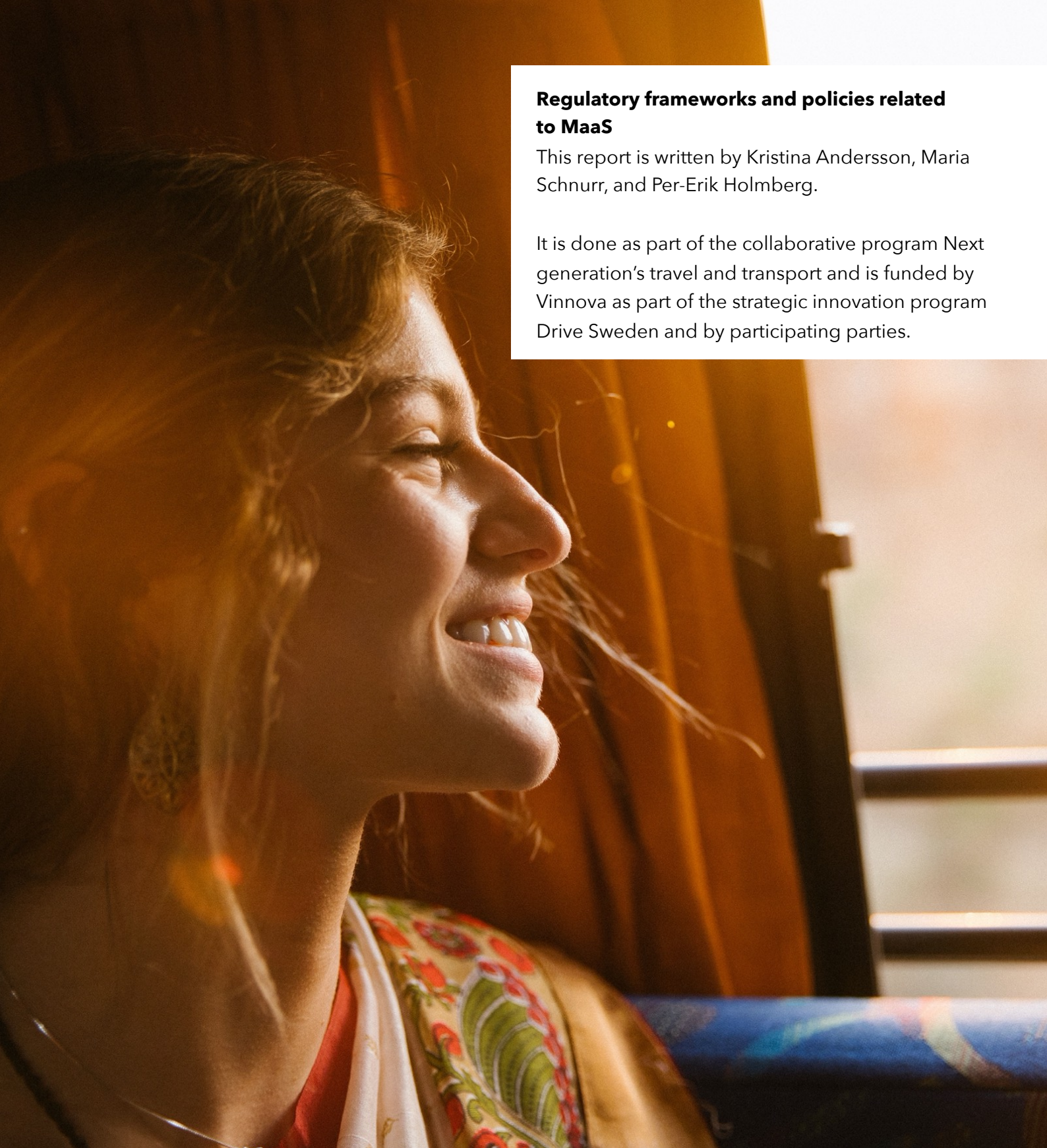
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## **Regulatory frameworks and policies related to MaaS**

This report is written by Kristina Andersson, Maria Schnurr, and Per-Erik Holmberg.

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