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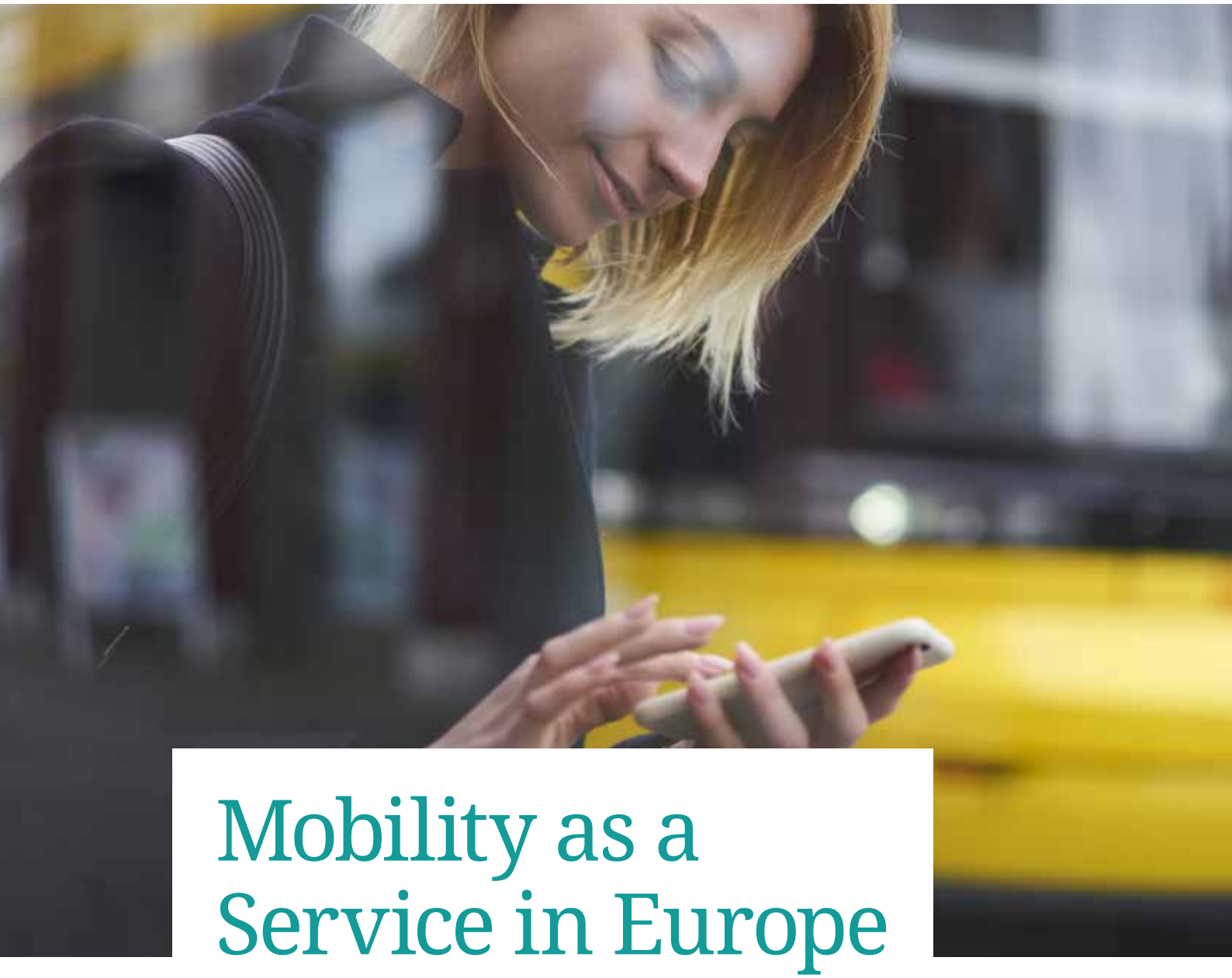

Mobility as a Service in Europe

A POLICY ANALYSIS

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Introduction

Mobility-as-a-Service, or MaaS, is one of the most talked about developments in transport technology. In 2018, Reuters assessed the size of the market globally to be $24 billion, with potential for it to increase in value to $230 billion by 2025. Gartner placed MaaS at the peak of the hype cycle as all kinds of software companies look to become involved in the sector. And established transport companies are increasingly investing too: in the U.S., Uber has started listing public transport options alongside its own ride hailing and bike and scooter sharing services, as part of its goal to become "the operating system for your everyday life." Daimler and BMW's mobility joint venture, YourNow, now includes two multimodal transport apps: moovel, and ReachNow. The list goes on.

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Although there are a number of definitions in use, MaaS broadly refers to technologies which allow individuals to access and pay for a range of transportation options via a single interface. **It is fundamentally about adopting a more user-centric model.** It puts the individual consumer at the heart of the market for transport solutions and provides them with a means of accessing information about, and the use of, both public and private transport services. It aims to remove the need to purchase individual tickets, and instead to create a single gateway for all mobility needs.

Basic examples of MaaS includes apps such as Google Maps and Citymapper, which allow users to plan journeys and which factor in a range of different public and private transport options. A more sophisticated form allows users not only to plan journeys, but also to access the transport services via a link contained within the app, so that they can make a booking. The most complex MaaS platforms would permit users to plan the journey and pay for the services all within the app.

MaaS is a potentially transformative technology, but like all such technologies, it begs a number of intricate questions about how it works, or does not work, within established policy frameworks – where gaps have emerged; tensions with existing rules and regulations arise; or opportunities are held back by outdated laws.

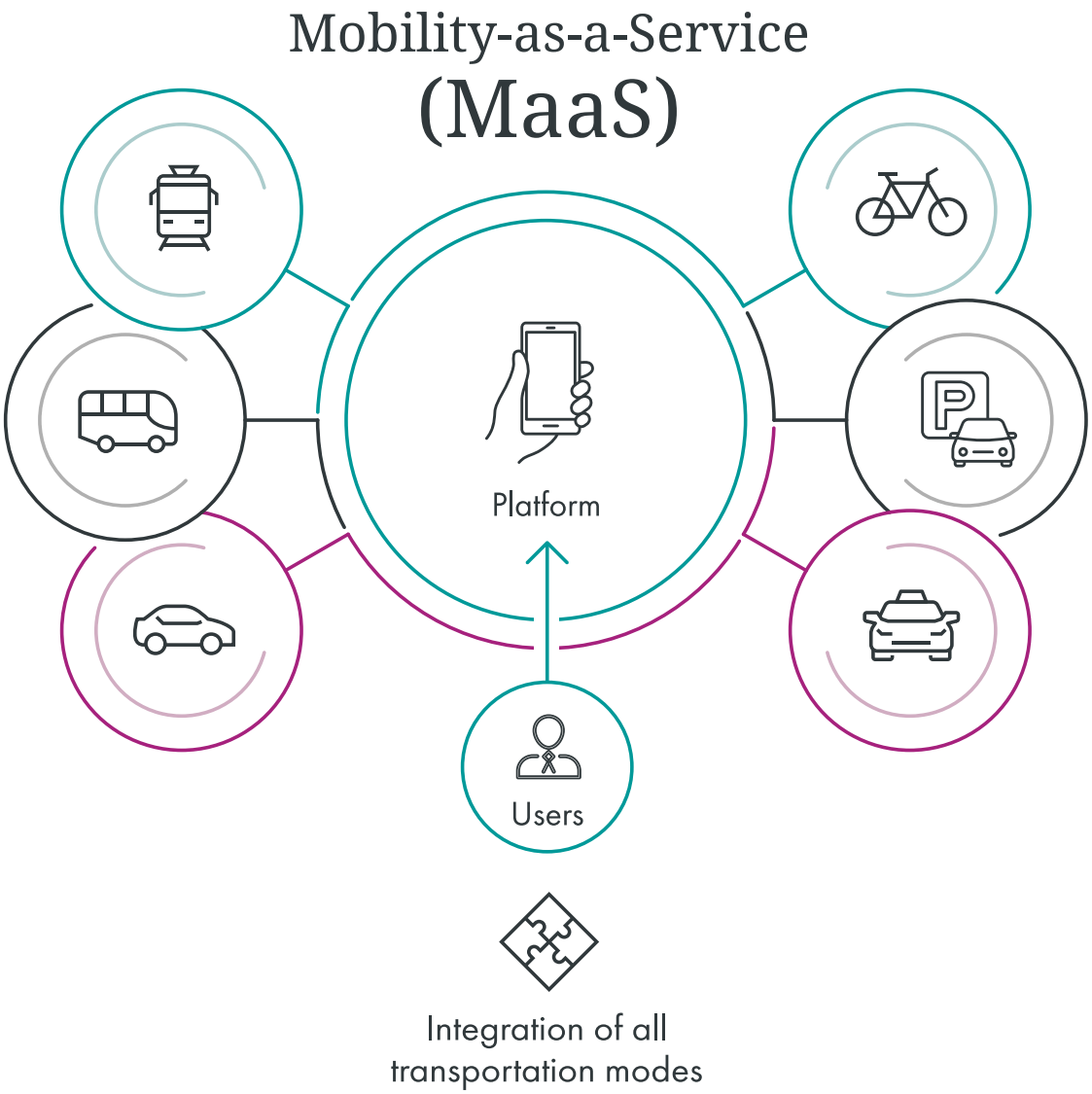
Against this background, work has begun at both within the European Union and at Member State level. Outgoing Transport Commissioner Violeta Bulc highlighted multimodal transport as an important area for the forthcoming Commission, suggesting for instance that the creation of a single method for accessing a range of transport solutions could be a suitable way forward.

In France, new mobility legislation already contains provisions for MaaS, whilst the UK Government has committed to reviewing existing legislation with MaaS in mind. At the municipal level several cities across Europe, including Helsinki and Berlin, have rolled out MaaS apps to integrate their public transport systems with the broader private transport infrastructure.

However, despite these ongoing initiatives, significant policy challenges remain unaddressed. For MaaS to work effectively, companies will need to share information about their services, and relinquish control of the customer journey, which not everyone is keen to embrace. Regulators will also be wary of emerging monopolies and will want to ensure that MaaS is something that all citizens, not just the wealthiest or most tech savvy, can take advantage of.

This brief therefore seeks to take stock of the policy problems facing MaaS and looks at some of the possible solutions that are already being trialled across Europe. Specifically, it considers:

- How to ensure that MaaS businesses have access to the data they need to provide their services
- How to create a regulatory framework for integrated booking services on MaaS apps
- How MaaS works alongside, and does not detract from, public transport
- How to ensure that MaaS is available for more disadvantaged and less well-connected communities



The MaaS policy challenge

Policymakers are increasingly interested in MaaS not only because it can help them meet their own targets but also because of the unintended consequences if developments are left unregulated.

On the one hand, cities and governments all over Europe are seeking to improve air quality, and subsequently to instigate a modal shift away from the private car, and towards walking, cycling, or public transport wherever possible. Where car journeys remain necessary, most cities would much prefer their residents to use shared car solutions like Getaround, or ride hailing apps such as Uber or Bolt, than to use a private car.

MaaS can help achieve these aims by presenting travellers with a simple way of seeing what the alternatives to driving their car are, and to find and book those alternatives. Moreover, MaaS can improve consumer choice by allowing them to see a broad range of transport options, and can improve outcomes for travellers by providing a user-centric approach to journeys, suggesting transport options that best suit the needs of the traveller. **However, in order to allow consumers to benefit from these opportunities, and to give travellers the best possible information about their journeys, policymakers have to ensure that the correct data architecture is in place, and allow for integrated booking and payment systems.**

Conversely, there are a number of things that might give policymakers cause for concern. Firstly, policymakers must decide how to integrate MaaS into the broader public transport ecosystem, and how to ensure that, if private companies control the planning and booking infrastructure, public transport remains relevant. Secondly, policymakers need to decide whether interventions are required to ensure that MaaS is a product which is available to all, and not simply the younger, wealthier, and more urban demographics to whom the technology might initially be the most attractive, and to whom private transport operators market their services most aggressively.

Bringing the data together

MaaS relies on users having access to live data about all of their available transport options, so that the user can see what the quickest, or most convenient, mode or modes of transport are for their particular journey. **Transport data belongs to transport operators, and they must be persuaded (or required) to share this data with MaaS app operators in order for the system to function effectively.**

Some public transport operators publish open data. For example, all of Vienna's traffic and transport data is published in an open format, and the same is true of Barcelona. Transport for London (TfL) publishes vast quantities of open data, and has a unified API, allowing developers to use this data when route planning. Popular journey planning apps including Google Maps and Citymapper rely on this data when calculating routes.

In contrast to these public sector operators, most private sector transport operators do not publish open data, making the development of MaaS services across public and private sector transport operators much more complex. The EU tried to address this issue in 2017 as part of its Mobility Package by introducing a Regulation which encourages EU Member States to look for cost-effective ways of digitising existing static (i.e. timetables) and dynamic (i.e. availability/live running times) transport data, and addresses the exchange of such data and the linking of travel information services. Article 10 of the Regulation states that a single national access point for static data should be created, that transport operators should deposit their static data in this database, and that Member States should consider putting all public and private transport data in the same place. The Article obliges Member States to produce a progress report on these initiatives by 1 December 2019.

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Meanwhile, a study carried out on the Commission's behalf by Grimaldi, a consultancy, argued that certain elements of integrated ticketing, such as dynamic fare access, can only be addressed by legal intervention. One mooted example is an obligation for all public and private sector mobility operators to open up data about their services in open APIs.

The UK Government has pledged to investigate how legislation and regulations might incentivise or even oblige data sharing by mobility service providers as part of an ongoing Regulatory Review, following the publication of its Future of Mobility: Urban Strategy, earlier this year. Meanwhile, the UK House of Commons Transport Select Committee recommended that local authorities make sharing data a condition of licensing for mobility service providers. The Government has said in Parliament that a consultation on the regulatory framework for new forms of mobility will be launched, although no timescale has yet been given. **In Finland, it is already the case that companies are obliged by law to have open APIs so that their service can be integrated into existing payment and route planning systems, and this could be an example which governments elsewhere in the European Union look to for inspiration.**

Allowing bookings and payments on a single platform

Sharing data will only be sufficient for the simplest form of MaaS however. **In order to enable more complex forms of MaaS, it will be necessary to unify a range of services into a single access point (i.e. an app), from where a user can book and pay for those services.**

Moreover, MaaS can work either on a pay-as-you-go model or on a subscription basis, where a single MaaS ticket gives the user access to a specified range of services. Clearly, for this type of MaaS subscription model, mobility service providers need to permit the MaaS apps to receive bookings and process payments on their behalf. For MaaS ticketing solutions, these electronic tickets have to be accepted by a wide range of transport providers including ride hailing drivers, car and bike sharing companies, and public transport bodies. **There are a number of potential barriers to realising this level of integration.**

Commercial dynamics and competition

The commercial dynamics between operators and MaaS apps can be quite complex as there are well established journey planning apps in a number of markets, well established transport brands in the public and private sectors in all markets, new entrant brands seeking to challenge incumbents in most markets, and a plethora of new micro-mobility companies which may or may not be affiliated with one of the larger players in any market over a certain size. **The commercial dynamics will be driven by who has the most to gain – the MaaS provider or the transport operator.** For example, a MaaS provider may want to integrate Uber into their app as this is a popular form of transport in many cities around the world, whereas Uber is only likely to be interested in offering integration with MaaS apps that have established a significant user base in markets that are important to Uber.

At present, a transport service operator can choose if and how it would like to integrate with a MaaS application and vice versa. **However, as the sector and competition rules develop, some MaaS operators may be required to carry the services of any transport service operator that asks to be included.** The French Mobility Orientation Law includes such a measure whereby any MaaS app which includes services which are not operated by the app company itself cannot refuse to include other transport providers. The British Government, in its policy statement, Future of Mobility: Urban Strategy, highlighted that the Government would seek to ensure that MaaS applications did not become local monopolies that could lock-out competitors.

Controlling expenses and the customer experience

Integration into third party apps also requires significant investment to develop APIs that can work for multiple app operators and the infrastructure to support requests for live (or near live) data from multiple operators. The Mobility Orientation Law in France allows transport operators to charge MaaS operators for access to APIs in order to recoup development costs, although this is not something that has been mirrored in other jurisdictions yet.

Transport service operators may also be reticent to allow third parties to handle their bookings and payments because they are likely to want to retain ultimate control over their customers' experience. They would not want a poor user experience within a third-party app to reflect badly on their own service.

Missing out on data

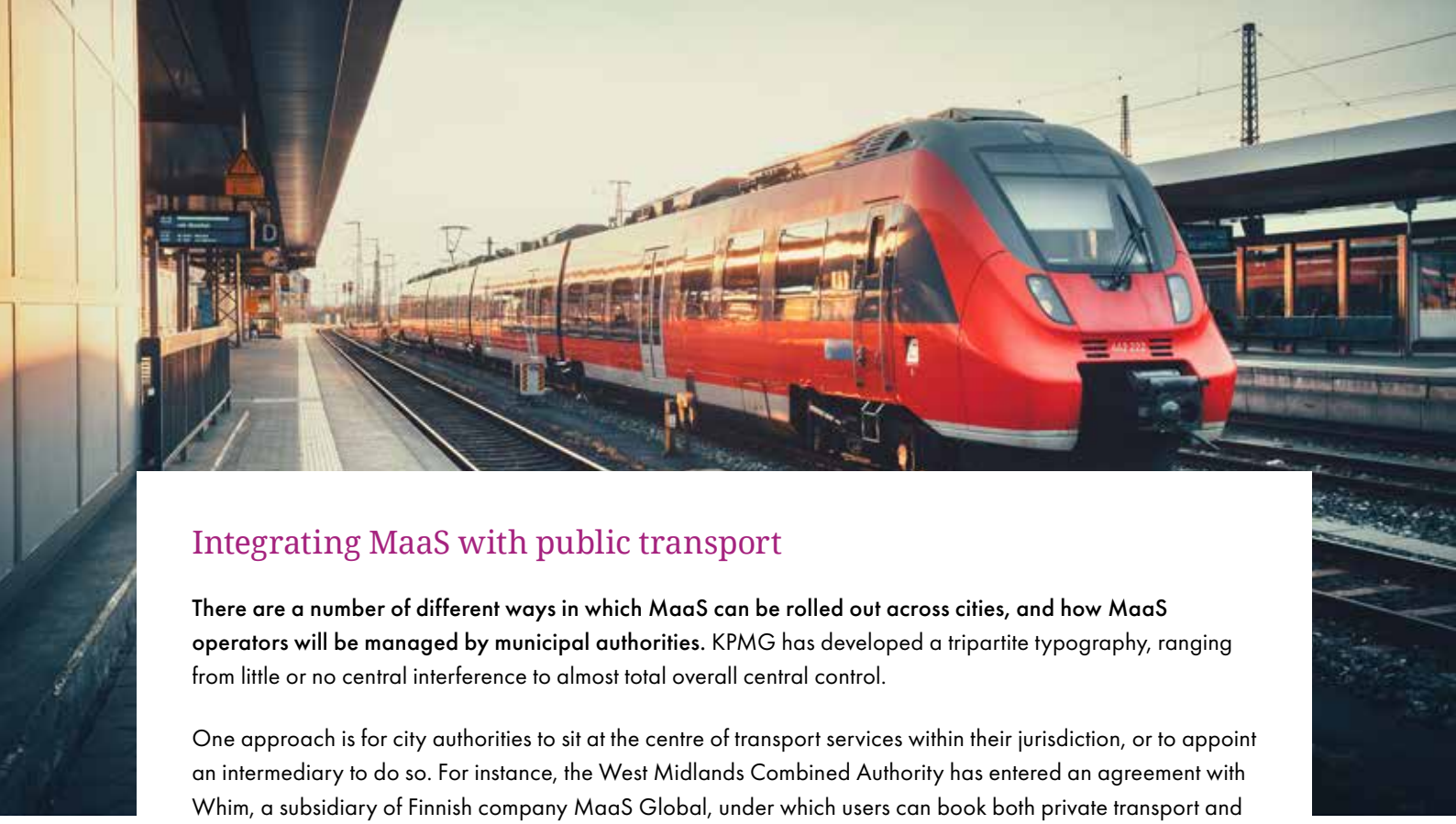
MaaS apps may also limit the data that transport operators are able to gather on levels and location of demand for their service. For shared mobility like bikes, e-scooters and shared cars, which are deployed around a city, this type of demand data is very important for planning and managing the logistics of their service. The presence of MaaS intermediaries may also have an impact on the data which mobility service providers are able to collect on their customer base; they may have less information on who their typical customer is and what their journey habits are if that person is not required to sign-up directly with their service. This could have a longer-term impact on a company's ability to innovate and personalise their services to the user.

Multimodal ticketing

Multimodal ticketing is a fundamental part of the long-term future of MaaS. In essence, multimodal ticketing means that users can purchase a single ticket which is valid on a range of transport services, both public and private or, at the very least, that the user can purchase a range of separate tickets from a single point of sale (i.e. the MaaS app). **This obviously requires MaaS apps to have access to the pricing information and booking processes of transport operators.**

Policy discussions about how to enable multimodal ticketing are at a less advanced stage than those around data sharing. A report produced for the European Commission's "Year of Multimodality" in 2018 suggested a range of options, including amending existing data sharing rules to include fare data; introducing new legislation on integrated ticketing; or introducing a new Code of Conduct for mobility service operators. Outgoing Transport Commissioner Violeta Bulc said in April that multimodality is an area that requires further action, however that further work on MaaS at the EU level will have to wait until the next Transport Commissioner is in place.

A recently-leaked document which professed to outline the future work programmes of each EU Directorate-General referred to a "European Mobility Identity", some kind of ID that would simultaneously act as a driving licence, a means of accessing and paying for transport, and a carbon footprint calculator. However, the European Commission later disowned the document which contained these proposals, and the new Commission President, Ursual von der Leyen, did not refer to the concept of a European Mobility Identity in her letter of mission to the incoming Transport Commissioner, Rovana Plumb. Plumb has been discounted as a candidate for the Commission due to corruption charges back home in Romania, so it remains to be seen whether the new Transport Commissioner, whomever they might be, will look to take this work forward.



Integrating MaaS with public transport

There are a number of different ways in which MaaS can be rolled out across cities, and how MaaS operators will be managed by municipal authorities. KPMG has developed a tripartite typography, ranging from little or no central interference to almost total overall central control.

One approach is for city authorities to sit at the centre of transport services within their jurisdiction, or to appoint an intermediary to do so. For instance, the West Midlands Combined Authority has entered an agreement with Whim, a subsidiary of Finnish company MaaS Global, under which users can book both private transport and West Midlands public transport services using Whim's app and Whim's subscription service. In Berlin a mobility aggregator called Trafi has developed an app, called Jebli, for Berlin's public transport authority. The app includes a range of mobility solutions, including Berlin's public transport network, and has allowed the city to take control of the development of MaaS within its jurisdiction.

Rather than commission or build their own apps, cities could adopt a franchise model for MaaS. The franchise model is already used across a wide array of transport modes, such as local bus routes and railways. Under this model local MaaS monopolies could be licensed by municipal authorities, in exchange for certain guarantees around pricing or service provision.

Without such direct intervention, it is unclear whether a competitive market will develop or whether a small number of players will dominate. The trend in markets such as ride-hailing and micro-mobility in cities has been towards multiple companies competing for the market rather than seeking to compete in the market. This echoes developments in many other sectors of the digital economy: by monopolising the interface between transport consumers and transport providers, companies can achieve potentially huge incomes with comparatively small overheads. Uber's recent moves to integrate both public transport information and its Jump e-scooters and e-bikes into its app is an example of how this trend is developing. **As competition between larger companies becomes established there is a risk of fragmenting MaaS by having competing providers in the areas but not integrating each other's services.**

There is also a risk that companies monopolising a MaaS market will be incentivised to recommend transport options that are not aligned with the goals of urban authorities; if a ride hailing company also operates a MaaS app, it is in the interest of that company to recommend that users take ride hailing trips instead of public transport or active travel, as they will not make money from the latter two options. **Finally, private sector monopolies give companies considerable market power,** and may lead to businesses being able to influence travel behaviour by utilising the large amounts of data they can collect on patterns of mobility.

This is another question that policymakers are looking to answer in the short-term. The UK Government stated in the Future of Mobility: Urban Strategy that it wishes to avoid the emergence of MaaS monopolies. In particular the Government is looking at how to use the competition framework, and other policy levers, to ensure this outcome. Likewise, France's Mobility Orientation Law creates requirements for MaaS platforms to rank competing mobility services in a transparent and non-discriminatory manner.

Making sure MaaS works for the masses

There is currently a lot of commercial and investment attention being paid to the development of MaaS, but this is strongly biased to urban areas and large population centres. **There is a risk that, if policymakers leave businesses to choose where they operate MaaS services, only wealthier and generally younger demographics will benefit from it. Policymakers have to consider how MaaS will impact not just the relatively wealthy city dwellers, but also the wider population.**

On the supply side, MaaS suffers from a general transport issue, which is that there is a strong likelihood that private operators will be focused in large urban centres and wealthy suburbs, leaving poorer and less-densely populated areas to rely on publicly-funded or subsidised services. On the demand side, current MaaS ticketing schemes work much like other transport ticketing, with single-use, pay-as-you-go products alongside weekly, monthly, and annual products which involve savings over time, but which present a substantial initial investment by the passenger.

There has not yet been any clear indication as to how authorities will seek to respond to these challenges. Cities could stipulate that bike and car sharing companies have to deploy their fleets in certain areas in order to ensure that transport services are available in all kinds of areas and available to all appropriate users without discrimination (such as discriminating by age or wealth).

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On the demand side, the policy levers available to authorities are less evident, and no authority has clearly engaged with this problem. In cities like London it is not uncommon for employers to offer interest free travel loans to employees to allow them to spread the cost of an annual ticket through their monthly salary. In some countries around Europe it is common for employers to pay or subsidise their employees' commute. One example, cited in the Urban Transport Group's report on MaaS, comes from Washington, D.C., where a pilot scheme called 'Transportation as a Service' allows residents on low incomes to book and pay for ride hailing vehicles which are underused.

Neverthless, the Travelspirit Foundation points out in a report on MaaS, **there is a risk that MaaS will only be available to those with enough disposable income to afford a subscription. Unless municipal transport authorities set up their own MaaS solutions, MaaS subscriptions will be run by private actors, who will sell those subscriptions at profitable rates.** One possibility, which has been suggested by mobility organisations, would be governments offering subsidies for MaaS subscriptions, but how this would work in practical terms, and whether it would be national governments or municipal authorities paying the subsidies remains to be seen.

Conclusion

As more and more countries commit to ambitious carbon reduction targets, facilitating the transition away from private car use is becoming a more urgent public policy concern. MaaS is likely to play an important role in this, given its potential to facilitate wider public and shared transport use, and so the questions surrounding how to properly and fairly regulate it will only intensify.

Across Europe, policymakers are already working on how to tackle some of these questions, and more interventions are likely in the near future. **One stark conclusion from the Urban Transport Group's report in the UK is that, the more control the public sector can exert on MaaS, the more likely it is that MaaS will be able to deliver its policy goals.** Some initial suggestions made, such as reform of competition frameworks or tying licensing decisions to willingness to share data, show that policymakers are not afraid to impose regulation where necessary in order to achieve their desired outcomes. In many respects, this is also what France's Mobility Orientation tries to do.

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To be sure, EU policymakers will not want to stay back either. While most transport issues are seen as local policy issues, the rapid growth of new models of commercial urban transport means that the Commission is likely to consider how these questions impact on the functioning of the single market, which would open the door for new EU-wide rules. Moreover, and as is highlighted in the recent report of MaaS ticketing prepared for the Commission, a 'wait and see' approach runs the risk of fragmentation of the single market as Member States start to introduce their own, diverging, rules on MaaS.

The next twelve months will be critical for the future of MaaS. If public policy gets it right, boundless opportunities await. But for this to happen, greater attention to the many unresolved questions is urgently required.

Get in touch with Inline

If you would like more information about the issues affecting you, or to discuss the political and regulatory challenges that your business faces, then please get in touch.

Matthew Niblett

Senior Policy Analyst
matthew.niblett@inlinepolicy.com

Olaf Cramme

Managing Partner
olaf.cramme@inlinepolicy.com
@olafcramme

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Inline Policy Ltd, 310 Vox Studios, London SE11 5JH
Inline Policy Sprl, Avenue Marnix 17, 1000 Brussels