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MOBILITY AS A SERVICE

First Annual Survey of MaaS in the UK

July 2017

- Practitioners' views on the future
- The prospective customer experience
- Innovation case studies
- Provider participation and regulatory issues
- Data management and the user proposition
- Potential implementation models

Prepared for **Landor LINKS** as an industry evidence report
prior to discussion at **Smarter Travel LIVE! 2017**

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The Landor LINKS Annual Survey of Mobility as a Service is based on a survey of transport professionals conducted by Landor LINKS in June 2017 with additional interviews, submissions and case studies from transport professionals in the UK and beyond.

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This Mobility as a Service First Annual UK Survey will be the topic of further in-depth discussion at the forthcoming UK's showcase of practical applications of Intelligent Mobility for sustainable towns and cities

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Foreword

It's a year since Transport Systems Catapult published its influential report *Mobility as a Service: Exploring the Opportunity for Mobility as a Service in the UK*. This was the first attempt to define Mobility as a Service and explore its potential impact in Britain.

The MaaS concept has been developed and refined internationally over the last few years as a logical and desirable next step in the delivery of integrated user-centric multi-modal transport services to individual travellers.

In the past twelve months, interest in and enthusiasm for Mobility as a Service has escalated. Transport practitioners surveyed for this report overwhelmingly view MaaS as an opportunity and anticipate positive impacts.

Over the past year, there have been numerous conferences and further publications on Mobility as a Service. These have debated the definition, conceptualisation, functions, elements and operators of Mobility as a Service.

MaaS in the UK, is however, no longer just theoretical.

London's approach to the total transport system management, presentation and purchase by consumers has continued to evolve, whilst Transport for West Midlands is working with Whim on a platform based app – with integrated journey planning and payment. Transport for Greater Manchester begins work on a transport authority commissioned MaaS provider this summer.

Simultaneously, data-driven app-based mobility services are being developed by companies to solve particular travel problems or offer services to niche markets. These range from reducing employee parking requirements with ride sharing by Faxi for Santander in Milton Keynes, to flexible shared commuter transport by Slide in Bristol or the projects to provide shared electric bikes and car club vehicles as part of Exeter's approach to congestion.

These projects, and others, demonstrate the potential for digital platforms to provide solutions to tricky transport problems – from providing efficient community transport to reducing congestion or improving air quality, and most importantly develop the options and choices of transport from a user's point of view.

The path, however, is not smooth. Of the professionals surveyed for this report, only a minority think that their organisation has a moderate or better readiness for MaaS and even fewer are actively engaged in developing MaaS projects. They rate the biggest barriers to MaaS as political will, lack of resources and inertia because of investment in existing systems. Other challenges are the attitudes of individual modal providers and the need for agreed common platforms.

Diverse approaches risk embedding fragmented offerings. Whilst newer transport operators are launching with a full suite of digital functionality, existing public transport must respond whilst also continuing to work traditionally to meet their public service remits. Whilst most operators have made efforts to add elements of digital services, past experience of integration suggest that full integration with digital platforms will not be straightforward.

Meanwhile, new service providers and transport options are emerging all the time.

There is the potential for slick apps and multiple services to be concentrated at the urban core, where the commercial returns are clearer, whilst poorer and less dense areas struggle with declining options. There are no plans for nationwide services at present – a possible auger of a patchwork of provision in the future.

This is a period of experimentation. It is an exciting time, which will shape how MaaS evolves and whether it becomes a force for social and environmental good.

This report is designed to act as a 'pulse take' and synoptic view of emerging issues. We hope it helps all those who recognise the significance of this journey.

Beate Kubitz
MaaS Report Author

Synopsis: An idea that's time has come?

Transport planners are incredibly optimistic about Mobility as a Service, they see it as an almost universal panacea with the potential to solve the knotty problems of air quality, congestion and access. They are almost naively embracing the concept as the most logical way to approach providing an effective and sustainable transport system. But who implements MaaS, and how it is implemented, are key to whether this optimism is well-placed. The definition and implementation of MaaS is contested. Visions of MaaS vary between versions of agnostic payment platforms to commercial travel service packages, with sharp divergences in expectations beyond a core integrated payment system and integrated journey planner.

The context for this discussion requires a recognition that the transport system is a massive commercial enterprise encompassing vast amounts of business activity. There are huge established interests at stake for public transport suppliers and the automotive sector. The two sectors can be characterised by a 'protect and survive' mentality in public transport, whilst automotive and other OEMs are innovating aggressively to create new mobility services which expand their traditional territory. In parallel, small scale innovators are piloting interesting new models applied local and regionally, but so far lacking in the universal coverage the idealistic vision of MaaS suggests.

The public sector has, meanwhile, played catch-up. Initially side-swiped by the appearance of Uber, engaging with developments in technology and business models has proved challenging and mixed. The Transport Catapult is the first publicly funded body to look at the challenges and now government roles in future mobility are being advertised. However MaaS is not yet part of the political lexicon. As often, talk of technology and infrastructure trumps that of behaviour as more interest is shown in still-distant autonomous vehicles than the more immediately possible MaaS.

Across the UK approaches are varied. MaaS doesn't appear as a concept in the Mayor's Transport Strategy for London and indeed some tension is apparent between a commitment to traditional public transport, walking and cycling, and the innovative use of cars or other shared vehicles. However, the Scottish Cities Alliance has supported MaaS project development and the emergence of MaaS Scotland.

That there is a role for the public sector is clear. The need for regulation around aspects of MaaS is raised frequently in contributions to the report. In this regard, the International Transport Forum has this year raised an intriguing role for the public sector as 'single despatcher' in MaaS systems – with defined relationships between operators and the system whilst still maintaining a competitive environment. We have a potential UK testbed for such a system in Manchester, where Transport for Greater Manchester is testing the provision of MaaS by the transport authority.

The potential prize for such an integrated system is enormous. The ITF study modelled a full-scale implementation of shared mobility across the Lisbon metropolitan area and found it could reduce total vehicle kilometres in peak hours by 55% (compared to 2011) for the metropolitan area, with reduction for the city alone 44%. Carbon dioxide emissions are modelled to be reduced by 62% for the wider agglomeration and 53% for the city. Total parking space needed could eventually be cut by a remarkable 95% as private vehicle use is replaced by operation of a smart fleet that does not need to be stationary for long periods.

The acid test, however, will be in the perceived and demonstrable benefits to the consumer. Indicators are that shared transport can make access to jobs and other public services easier and more equitable, and journeys quicker and cheaper. However, first adopters of existing shared transport have generally come from higher income groups in affluent areas. MaaS will only provide overall social benefits if it can offer access to transport beyond these groups.

Whilst people are not actively demanding MaaS, they do demand simple and seamless access to transport with fair fares. These are the magic ingredients of London's more fluent transport system, especially with its reliable, simple and trusted payment system. Various studies – and the practical experience of the popularity of shared bike use - show that if people see new ways of taking charge of their travel – and its costs – they will.

We are at important point where if more cooperation and innovation takes place across the traditional boundaries between public transport operators, shared transport and the automotive industry there can be huge benefits. But to reap its benefits, MaaS must be seen - by politicians and the public - as a genuinely important aspirational public benefit that gets the policy framework it needs and deserves.

Peter Stonham, Editorial Director, Landor LINKS

Elements of Mobility as a Service ranked by transport professionals

Mobile Phone App
Ticketing
Ride Sharing (Car Share)
Buses
Data Provision to Transport Authorities
Cycling
Integrated Payment System
Smartcard
Electric Vehicle Charging
Trains
Parking
Travel Alerts
Car Hire
Car Clubs
Monthly Fare Plan Bundles
Community Transport
Trams
Special Offers
Integrated Journey Planner
Bike Share
PAYGO Travel
Walking
School Bus / Taxi
Taxis

Elements of apps
Modes of transport
Customer interface
Other

96%

of transport practitioners surveyed see MaaS as an opportunity

Using Mobility as a Service – the traveller's experience

Society is changing. We are increasingly connected. In the UK, 81% of the population has a smartphone[1], and we are keen adopters of digital platforms which enable us to access information, services, social media and shop online.

Transport platforms already include:

- Journey planners: From Citymapper to GoogleMaps;
- Payment platform apps: These are largely restricted to single operators eg Northern, nextbike;
- Self-monitoring apps: from step counters like Fitbit to cyclist's tracker Strava.

Whilst flourishing use of transport apps is a major factor in the readiness of some groups to embrace Mobility as a Service, other social shifts will also have an impact.

A growing and steadily urbanising population in the UK[2] creates increased urban complexity with changing social norms.

Ownership culture is changing. Increasingly we prefer to access services rather than buy items. The BVRLA reports that growth in personal contract car hire is increasingly popular, driving growth in new vehicle registrations[3]. The use of car clubs has grown over the last ten years and stands at around 250,000 members in the UK[4].

Innovations in transport are developing rapidly to use technology and meet these shifting needs and aspirations. Whilst single operators – typified by Uber - have emerged aiming to disrupt and dominate the transport market, others have created niche solutions more likely to compliment existing services, and yet others are aiming for broad coalitions that encompass both new and existing transport providers.

This latter version of MaaS has been conceptualised as the 'Internet of Mobility', by think tank TravelSpirit[5], with all forms of transport available through a single interface. Whilst this appears to be the ultimate convenience for those who use it, we are still quite a way from this as a traveller experience.

CASE STUDY: A

Tailored travel for young adults

Pick&Mix is an Innovate UK funded project established to develop a Mobility as a Service implementation tailored to 16-25 year olds. The new Mobility as a Service service has been co-designed by young people and will be called 'NaviGoGo'.

Guided by the co-design findings, NaviGoGo will include a journey planner able to calculate mode options and prices applicable to a user's profile, entitlements and concessions. The user will be able to pay for their journey using their NaviGoGo account.

Other unique features arising from the collaboration with future users include: a 'taxi splitter' tool to help calculate the fairest way to split taxi costs between friends; a 'destination insight' database which contains high-level, location-specific transport information, reviews, ratings and tips; and a 'deal matcher' which directs users to the best transport offers and discounts based on their eligibility and preferences. The NaviGoGo platform is being trialled in Dundee and Fife from October 2017.

While the NaviGoGo platform is being designed from a user-centric start point, the consortium is also clear that it should deliver benefits to transport providers and support wider policy objectives. Transport operators as well as Fife and Dundee Councils are included in the project planning, offering an opportunity for them to steer the objectives and details of the trials. Furthermore, Transport Scotland is actively following the project and trials to ensure that they are supportive of national smart ticketing initiatives.[6]

Viewpoint

George Hazel, MaaS Scotland

For me MaaS starts with the user, understanding the user's lifestyle needs and then mobility needs and only then builds products and services to meet those needs, aggregates them up into a commercial model and offers one account, door to door seamless services, mode neutral with a loyalty/incentivised model for the user. MaaS must start with user needs and give value to the user. Value is key.

There are huge benefits once you understand the users' personalised needs. You can then offer a range of value added services to generate new income streams, you can also incentivise the user to change behaviour but based on a value proposition.

Hence MaaS offers a door to door service that competes with the car - it's personalised and meets their needs, offers value. It also offers other services under one account therefore less hassle, real time updates for trips, etc. For the transport operators it offers an opportunity to increase their market and grow into being a mobility service provider rathe than just and operator.

MaaS will threaten not mass transport but local services re suburbs and rural. Things like peer to peer, car sharing, etc will offer a better and cheaper alternative to local buses running on fixed routes infrequently. That is why some operators are moving into positioning themselves as Mobility Service Providers. However, automotive OEMs, IT companies, logistics companies and energy companies are doing the same thing and seeing the same opportunity. MaaS is a very large business that is a gateway to providing a range of services on the back of mobility.

MaaS in practice

The reality is that the current generation of MaaS is being developed to meet transport needs in particular geographic areas, for particular groups of travellers or to solve localised issues such as congestion or parking. Even the most advanced examples of MaaS globally are offered within defined boundaries.

Smile in Vienna, Austria, for instance, was a mobility platform which brought together fourteen Austrian mobility partners, from public transport companies to sharing providers, taxis and parking garages. In addition to intermodal route planning, it was the first to provide booking and cashless payment for the whole journey in one app.[7] However, the app provided solutions for the area of Vienna rather than the whole of Austria. The two follow up platforms established now are Wegfinder and Wien Mobil with similar scopes.

There are many companies providing niche services using innovative platform-based mobility technology in very defined situations.

A different approach can be seen for business travel. Mobilleo uses both public APIs and private agreements with a number of providers to include their services. The app allows businesses to compare all forms of available transport and the cost of making the journey in a private vehicle, allowing them to find, book and pay for, the most suitable mode(s) of transport for the journey, all in one place. It has been used to reduce costs and increase efficiency, for instance to reduce to the amount of time taken by travel bookers to plan journeys around Europe, and in another case to reduce a company fleet size.[8]

MaaS providers and innovative operators offer opportunities to change behavior, solve particular problems, make efficiencies and cost savings, or increase speed and convenience to attract customers. An optimistic assessment of the potential is to see these smart solutions eventually being integrated in broader transport platforms and offering an enormous variety of options to travellers.

The development of MaaS in the UK

It is clear that MaaS in the UK is still in its infancy. Only 21% of those surveyed for this report are developing a MaaS project or programme. Whilst a further 45% anticipate developing a MaaS project in the future, almost a third do not have the capability to work in a MaaS framework. Only 3% do not see the benefit of working in a MaaS framework.

A number of those surveyed reported developing projects. These included personal interactive travel planning tools, integrated bike and car share apps and collaboration with the automotive industries. These and the case studies collected for this report reflect that there are multiple views of and routes to MaaS.