ITS United Kingdom
Better transport through technology

WHAT IS MOBILITY AS A SERVICE?

Put simply, Mobility as a Service is a way of making it easier to travel using any form of public and private transport, without having to own assets like a car, bike or scooter. It combines transport services from public and private providers, typically through a unified portal or app to create, manage and pay for the trip. The concept is that users can pay per trip or a monthly fee for a limited distance and to offer mobility based on an individual's travel needs. There are four elements to an efficient mobility as a service solution:

An efficient routing solution

There is no point delivering a Mobility as a Service solution that suggests a ludicrous route for the journey. Therefore, it is essential that travellers are given the best modes and timing for their journey. Intelligent routing algorithms and up to date real time information are essential to provide a bespoke journey plan for every user – it is highly likely every single route will be unique.

These routing algorithms can be highly intelligent. They can react to a user's own preferences – the user may want the fastest journey, the cheapest journey or they may choose the most environmentally-friendly option. Ideally the journey may be the same in all cases, but in the "real world" this is often not the case. In certain situations passengers may also choose what is deemed to be the "safest" journey in cities where this may be necessary.

A single payment solution

In order to make it user-friendly and attractive, a Mobility as a Service solution must make it easy and safe for people to pay. The solution should not have to entail having multiple accounts with multiple providers. The solution has one single payment mechanism with each operator is paid according to their contribution to the journey, but this is done by the Mobility as a Service solution "behind the scenes" and is not something the user needs to consider.

Some solutions charge users on a per-trip basis while others provide a full service for a single monthly fee. A good way of thinking about this is a mobile phone account – in that case you choose a package that includes a certain amount of calls, data and texts – for a Mobility as a Service solution you sign up for a set number of journeys, or a distance travelled and then have a set fee for any extra journeys. The package may even include a certain number of miles or time in a taxi or using a car club. The key is that the user thinks of their transport costs as a single account.

Integrated, co-operating transport services

Mobility as a Service works most effectively by offering a transport solution for a traveller which will often use more than one mode of travel. For example an individual may be advised that to get from A to B they should walk to a nearby bus stop, take a bus to a railway station then make a train journey before taking a tram or underground/metro journey and then another bus.

For this to be most effective, the solution requires a degree of collaboration and joined-up thinking between operators, so a bus does not arrive at a railway station two minutes after a train has left, 28 minutes before the next one.

The solution may require some car transport, such as a taxi, but this can be included in the price.

A brand

A key part of a Mobility as a Service solution is the ability to easily understand what you are getting and for how much. Therefore having some sort of branding is vital to allow customers to embrace the solution and interact with it. This also allows different transport providers to clearly signal that they are part of the Mobility as a Service solution in order to avoid the problem of someone unwittingly using "the wrong bus" on a journey and therefore facing extra payment. Think how Just Eat delivers a single food delivery brand with different takeaway outlets being part of it.

A city or region could have more than one Mobility as a Service provider. Some may try and deliver all solutions for all people while others concentrate just on cost effectiveness, others on speed, while some may decide to chase the luxury market.

The benefits

By providing easy, cost-effective and efficient access to the wide range of multi-modal solutions available, Mobility as a Service reduces the need for people to use their private car. This should improve efficiency of the transport network in a city as a whole, making it more efficient and environmentally friendly.

Mobility as a Service also makes it easier for all people to travel, improving accessibility and inclusiveness for all socio economic groups in transport. Specific solutions can be delivered to help elderly and disabled passengers travel. Because the solution knows the person's individual journey (and can even track the person as necessary), any assistance required can automatically be summoned to the right place at the right time, making a journey less daunting.

Challenges

It could be argued that Mobility as a Service is already a reality in places like London where efficient multi-modal planning (the TfL website/app), a single payment solution (Oyster/contactless) and integrated public transport (most modes from buses and tubes to riverboat and bicycle hire is managed by TfL) has the Oyster/TfL brand. However this is a city with a long heritage of efficiently-delivered public transport with an extensive heavy and light rail solution and a single governing body.

It will be harder for other cities to deliver such a service if they have fewer public transport options and have a range of competing private transport suppliers. However, this is not impossible to overcome and the benefits of using technology to help improve efficiency on the transport network should not be underestimated. It is also worth noting that Mobility as a Service is likely to work better in cities compared to rural locations, but given that it is cities which tend to have greater transport capacity challenges, this is not a major problem.

The future

The future vision is to provide a seamless Mobility as a Service solution everywhere, not just in individual cities but across countries and even around the world. Imagine the transport of the future where your account allows you to arrive at an airport anywhere in the world and get to your hotel using public transport, all planned and paid for in your own language on your app. The future is not as far away as you might think.

ITS (UK)'s Mobility as a Service Forum is leading the way in discussion about implementation of these seamless solutions, sharing knowledge from around the world. UK members liaise with pioneers in Finland and the US to discuss best practice and lessons learned from pilot projects. Sign up for details of regular meetings and webinars and to receive important news in this exciting innovation in mobility.