

Mobility as a Service – an ITS perspective

The Mobility-as-a-Service (MaaS) concept can be summarised as a move away from a world dominated by a need to personally own a primary mode of transportation (typically, a car) and towards a world where the travelling public utilise mobility solutions via a service model. Although there are varying interpretations of what MaaS means and how it can be achieved, the objective in every case is the same: to bring together private and public transportation solutions to better match the demand from the user to the capacity of the whole system. This is achieved through combining transportation services from public and private mobility providers through a single, unified gateway that creates and manages the trip, all of which is paid for via a single account.

Although it is common to find MaaS described in subscription terms (that is to say, emphasising the payment plan as the core of the concept), this is in fact somewhat limiting, since the policy of how exactly a user pays for their service is likely to vary when considering the effectiveness of the MaaS approach and the local situation from city to city. It is quite possible in some cases, such as travel to a shopping centre or a cinema, or travel by disabled people, that the MaaS model may mean that some travellers do not have to pay for their travel at all. Their travel may be subsidised or sponsored.

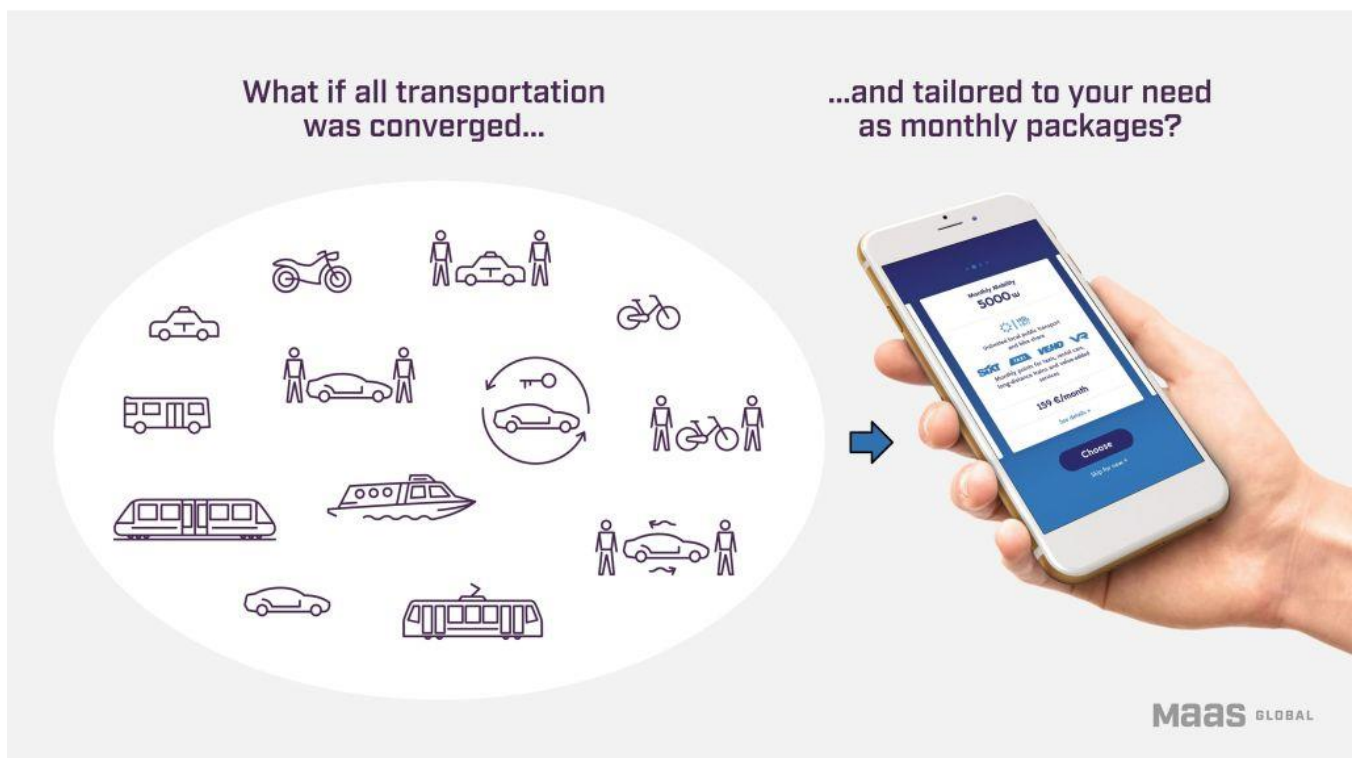


Figure 1 - illustration courtesy of MaaS Global

A single account approach already operates in the field of public transport. London's Oyster, Chicago's Ventra, the Bay Area's Clipper and many more world-wide already enable payment for and access to multiple modes of transport (including bus, metro, rail, light rail and ferry in most cases). Extending such access to include all modes of mobility is not only desirable, but logical as a major stepping-stone to MaaS as well. But the MaaS provider or enabler does not have to be a public transport authority. The provider could also be a private operator or a dedicated MaaS provider who does not operate any transport service. A geographic area may have competing MaaS providers, which could lead to better outcomes for end users. Provided they have the commercial flexibility and inclusiveness to ensure a viable number of modes and stakeholders are included in the model, they should have an equally valid case for leadership.

In the MaaS world, it is envisaged that travellers can choose to pay as they go (ie, paying per trip) or pay a monthly subscription fee to allow travel over a specified distance. This is no different from the single journey or pass approach already deployed in these public transport systems. However, the means of payment is simply a manifestation of fares policy. There are multiple possibilities for how travel can be paid for, and in fact, these are only a factor in the success of the MaaS model. MaaS has the potential to put the minutiae of actual fares detail at a deeper level of abstraction from the end user and develop its own commercial offerings which are simpler for the consumer. Furthermore, although most commonly associated with personal travel, it is possible to apply the same principles to the movement of goods. Long recognised as a contributing cause of congestion and pollution in many urban regions.

This shift is fuelled by a myriad of innovative mobility service providers such as ride-sharing and e-hailing services, bike-sharing programs, and car-sharing services as well as on-demand "pop-up" bus services. The future vision of autonomous vehicles as well puts in to question the economic benefit and efficiency of owning a personal car over using on-demand car services, which is widely expected to become significantly more affordable when cars can drive autonomously. Further, MaaS can help travellers overcome the traditional limitations that so often frustrate them - fixed routes that do not match their requirements and lack of flexible timetabling to name but two. Often, it can be difficult to complete the journey you really want to make using just public transport and that drives people back towards private car usage, despite its expense and frequent lack of practicality. MaaS can help people to navigate that space and find the trade-offs that work best for them.

The potential benefits are huge: reduced congestion, reduced pollution, insightful data emanating from multi-modal journeys, where enlightened legislation allows for its optimal usage, enabling better infrastructure planning and optimisation and personalised travel advice for millions of people.

Interested?

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