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Two Mobility as a Service (MaaS) paradigms: Private Assets as a Service (PAaaS) with reference to the Private Car as a Service (PCaaS) and Corporate MaaS (C-MaaS)

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ABSTRACT: Mobility as Service (MaaS) continues to garner significant interest and yet we still appear to be a long way from any signs of a product profile that has the merit of a business case let alone a commercial case. We continue, however, to explore ways in which MaaS may eventually deliver societal outcomes that make it an appealing contribution to delivering improved mobility aligned with sustainability objectives. This note proposes a focus on ways to make better use of the private car and a corporate commitment model as offering real potential if behaviourally achievable to deliver an appealing MaaS offering.

KEY WORDS: *Mobility as a service (MaaS); Private cars as a service; Corporate MaaS*

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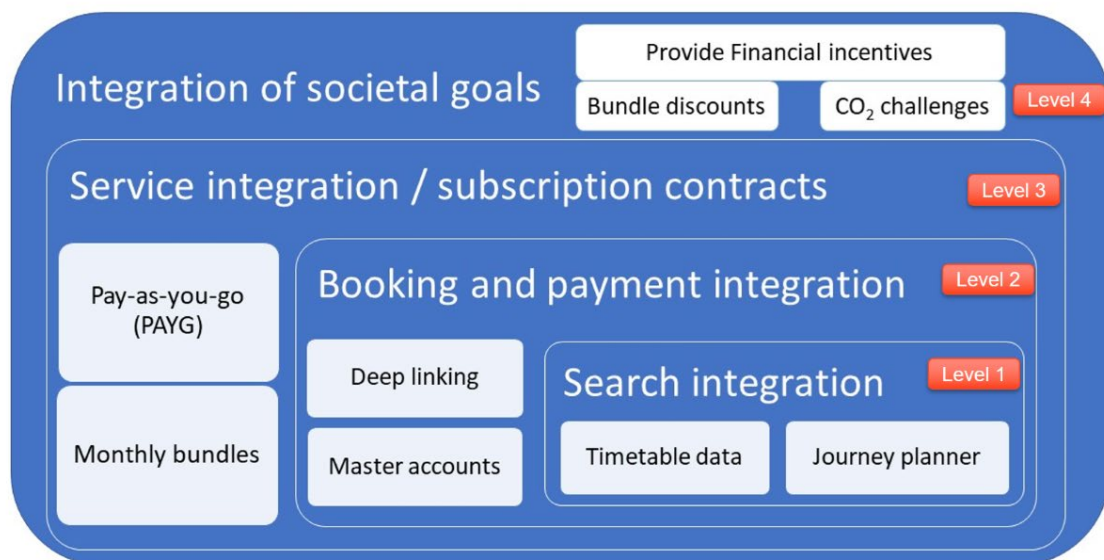
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Introduction

It is popular to label many new initiatives with a title and acronym that includes ‘...as a service (...aaS)’. Mobility as a service, or MaaS, is the most cited idea (Hensher et al. 2020). We recently offered a clarifying definition of what constitutes MaaS (and what does not) to use as a reference benchmark to decide if a MaaS solution is being offered across the four levels in Figure 1¹:

“MaaS is a framework for delivering a portfolio of multi-modal mobility services that places the user at the centre of the offer. MaaS frameworks are ideally designed to achieve sustainable policy goals and objectives. MaaS is an integrated transport service brokered by an integrator through a digital platform. A digital platform provides information, booking, ticketing, payment (as PAYG and/or subscription plans), and feedback that improves the travel experience. The MaaS framework can operate at any spatial scale (i.e., urban or regional or global) and cover any combination of multi-modal and non-transport-related multi-service offerings, including the private car and parking, whether subsidised or not by the public sector. MaaS is not simply a digital version of a travel planner, nor a flexible transport service (such as Mobility on Demand), nor a single shared transport offering (such as car sharing). ‘Emerging MaaS’ best describes MaaS offered on a niche foundation. This relates to situations where MaaS is offered on a limited spatial scale, to a limited segment of society or focused on limited modes of transport. The MaaS framework becomes mainstream when the usage by travellers dominates a spatial scale and the framework encompasses a majority of the modes of transport.”

The Sydney MaaS Trial: System Architecture



¹ This definition below was initiated by David Hensher (Institute of Transport and Logistics Studies (ITLS), University of Sydney) with extensive input from Natasha J Hinrichsen (TMR Qld), Sampo Hietanen (MaaS Global), Corinne Mulley (ITLS, University of Sydney), John Nelson (ITLS, University of Sydney) and Andy Taylor (Cubic). See <https://www.sydney.edu.au/business/news-and-events/news/2022/03/07/stop-calling-it-mobility-as-a-service--maas---it-actually-is-an-.html>

Figure 1. Classification of MaaS Levels of Integration (combining Sochor (2018) with recent evidence from the Sydney MaaS trial

MaaS however, despite its intuitive appeal, is struggling to develop a future, with the business case and indeed the commercial case yet to be proven. While a growing number of App developers are parading their digital capability as delivering a MaaS capability, in the main we see little more than another trip planning app, which while it may have merit in some markets (especially global tourism where knowledge of local services is limited), it struggles to attract significant market interest in many markets where there is a dominant amount of habitual mobility behaviour or behaviour change that is typically from one mode to another and which does not need a trip planning App, or need a pay as you go or subscription plan under a multi-modal MaaS offering, even with generous financial incentives.

Sadly, MaaS appears to be in trouble, with an announcement in September 2022 that the pioneering MaaS Global (linked to Whim) is running out of money and has let its staff go, with a request to interested organisations to step in to help keep the agenda alive², which speaks volumes for what is happening in this fragile market. Despite this, the enthusiasm for MaaS without a business model continues unabated. The business model if related to a commitment from the public sector is essentially a benefit-cost calculus with some very specific outcomes associated with improving specific sustainability goals through initiatives such as reduced CO2 emissions primarily through reduce private car use³ or improving social inclusion. Time will tell whether MaaS, as typically promoted, has long term legs (Hensher 2022)⁴.

What we do know after at least ten years of seeing how MaaS might progress as a relevant societal-focussed contributor, is that unless it can change travel behaviour in a behaviourally meaningful way aligned with broad-based societal objectives, which includes reducing private car use in metropolitan contexts, and improving well-being and reducing social exclusion in rural and regional settings, then one questions why MaaS should be pursued (Hensher and Mulley 2021, Hensher et al. 2021).

In this note we set out two initiatives that have the real potential to increase interest in a viable MaaS product.

² <https://www.mobility-payments.com/2022/09/02/pioneering-maas-start-up-seeks-buyer-new-investors-as-cash-crunch-worsens/>. Since drafting this note, Maas Global has secured interest from Unipol (Italy), a significant insurance company. <https://www.icmif.org/icmif-undrr/unipol-italy/>. See also <https://www.mobility-payments.com/2022/11/04/maas-global-discloses-licensing-deal-for-its-technology-will-it-be-enough-to-save-company/>

³ This policy outcome relates to the current dominance of fossil fuel energy to propel cars; however, as we transition to electric cars we will obtain zero CO₂ at the tailpipe; however with expected significant lower costs of using electric cars compared to ICE cars, congestion is anticipated to increase substantially unless we re-price car use. This is not a good outcome for a business case where congestion mitigation matters.

⁴ Corinne Mulley in a personal communication (14 October 2022) has made the following comment: “Bundles are difficult to sell unless they are targeted at segments and then only if it is cheaper than what customers would normally spend (unless there is a subsidy). People don’t seem to be prepared to pay for the app (which is to me unsurprising). I have always maintained that unless one can make the package cheaper – even if it is through cross subsidy, why should people pay for it. Business models are tortuous with the mix of subsidised and market priced modes. Maybe it will be rural MaaS that takes off where tailoring trips with an app might find favour and where additional modes not readily understood/available become more apparent on the app.”

Private Assets as a Service (PAaaS) with reference to the Private Car as a Service (PCaaS)

It is increasingly recognised that a role for the car will have to be factored in more carefully if MaaS is to grow in value and indeed deliver on societal sustainability objectives. Hensher, Nelson and Mulley (2022) discussed this in an urban setting with the idea of electric car sharing as a service (ECSaaS), with a focus on a corporate commitment to investing in the vehicles that is accessible through a MaaS subscription offer. Hensher and Heitenan (2022) also promote the integration of the private car into MaaS, redefined more broadly as Mobility as a Feature (MaaS). MaaS recognises that transport and travel are derived demand constructs, and mobility offers should be seen as an input into a larger activity-based paradigm of service delivery, moving away from a dominating multi-modal perspective to a multi-service perspective. This service-delivery-paradigm offers a wide range of non-transport mobility services that are essential to customers, and we argue that it is in this service delivery setting that transport integration might flourish. Kyte has recently announced a car sharing scheme through subscription⁵ with three-, six- and 12-month subscription plans available to all 14 markets in the USA which Kyte operates, such as San Francisco, Chicago, New York City, Boston and Fort Lauderdale. A range of SUVs, sedans and economy cars, in addition to Teslas, will be available for longer-term (12 month) subscriptions.

An idea⁶ which may, initially at least, have great appeal, and is different to what is offered by Kyte and proposed under MaaS, especially in a rural context, is what I am calling ‘Private Car as a Service (PCaaS)’ or more generally “Private Assets as a Service (PAaaS)”. The idea is based on a critical need to provide mobility services to residents of regional towns and rural hinterlands who have a need to visit medical specialists who are located many kilometres away, often over 200 or more kilometres, and where they are likely to have to stay overnight. An increasing number of aging individuals (often frail), require a carer or friend to accompany them and typically do not have access to a car or a driver’s licence to rent a car (if they could afford to), and local community transport (CT) services typically do not service such long-distance mobility requirements. Where CT does service them, it often involves transporting several individuals (typically in a small combi van) who then have to either wait to see a specialist if they arrive too early to accommodate other people or have to wait around to return home until the last person has seen a specialist. In addition, they may have to stay overnight if the timing of the meeting creates a problem in returning home on the same day. Alternatively, the CT service may transport the client part of the way (e.g., to a rail interchange) which may not be very suitable for someone with special requirements.

One potentially attractive way of resolving this is to match a private car trip with a person in need (recognising that they may need to be accompanied) who has to get to the same or close by destination. To ensure that there is safety and security including quality of vehicles in this process, we propose a community membership club (CMC)⁷. There is no fee to join the CMC, but when a person requests a lift to a specific destination, there will be a small fee in the way of a donation which will be dispersed to the owner of the CMC and the driver of the private

⁵ <https://techcrunch.com/2022/12/01/on-demand-car-rental-company-kyte-is-now-offering-car-subscriptions/>

⁶ The idea evolved out a discussion with Lee-Ann Breger, Programs Director, iMOVE CRC.
<https://imoveaustralia.com/>

⁷ This club could be linked to CT but could be a stand-alone citizen supported not-for-profit business. The CMC could also be organised by local government or set up as a social enterprise entity.

car. The apportion and sum can be decided on a case-by-case basis with some guidance on what might be deemed a fair and acceptable allocation by all parties (for example, a 50:50 split of \$20). In addition, the CMC may coordinate with accommodation services to offer discounted overnight stay where that is necessary.

What this does is speak to the need for much needed services for regional and rural residents who are at the high end of the spectrum of social exclusion and low levels of well-being. Community led initiatives like this will need some kick-start financial support which seems to be a sensible way for governments to invest in a commitment to improve social exclusion and well-being through mobility enhancements that are much more flexible and with greater spatial coverage than can ever be achieved with regular public transport, on-demand bus services, community transport and commercial ride share.

This may be an attractive feature aligned with the aspirations of MaaS but developed initially as a uni-modal offering through a CMC. It not only opens up new mobility offerings but also grows new friendships and a feeling of belonging that has to be a positive contribution to the sharing economy. In this way, the preserve of maintaining the private car (even when electric and autonomous) can be reinforced by an alignment with societal sustainability objectives, something that appears to have eluded MaaS in metropolitan settings.

Corporate MaaS (C-MaaS): will it help MaaS?⁸

Like many interests looking to find a way forward for Mobility as a Service (MaaS), we have come to a view that there may be other markets in which MaaS needs to be given greater focus as a move away from the dominance to date on an individual subscribing to MaaS. The idea of bundling or packaging of MaaS offers can be appealing to businesses as a corporate initiative that fits well with the social licence and commitment to corporate social responsibility. With a greater focus on greening a business in support of reducing the negative impacts on climate change, there is a case to be made for engagement of enterprises in supporting changes to the mobility activities of employees in a way that supports a move towards more sustainable and emission containment in ways of moving around both during business on behalf of an employer (including the commute) and private mobility. This is a business to group (BtoG) model.

We are increasingly seeing a commitment by individuals to making greener choices, which may benefit by some leverage from their employer organisation. For example, Capgemini's Point of View on Sustainable Mobility⁹ survey in 2022 found that 69% of participants stated that product sustainability (in the context of automobiles) is important for their purchase decision (average across Germany, the UK, and the USA), with the highest proportion, 73%, in the USA. 34% of participants said that they would switch from their preferred brand to a different one due to product sustainability or sustainable-related company activities, with the highest proportion in Germany (37%) and the lowest in the USA (31%).

While some businesses can rightly claim a commitment to greening the environment in which they work, the mobility aspect seems to be struggling to gain momentum to such a degree that it can influence choices and decisions made by employees in their own travel activity. There are a few good practice examples, but in general they are scarce and in part a consequence of the lack of regulations and incentives designed to support initiatives that deliver changes to

⁸ I thank John Nelson for his insightful comments

⁹ <https://www.capgemini.com/insights/research-library/sustainable-mobility/>

corporate mobility plans that align with societal goals such as greening mobility¹⁰. A good example of a positive initiative is the Belgian Mobility Budget legislation, introduced in February 2019, with the aim of not moving away from a company car, but rather opting for a ‘greener’ and ‘cheaper’ car – or no car – and using the savings for alternative modes of transport or cash. In the Belgian context, it is in the best interest of companies to implement this Mobility Budget, as electric and hybrid vehicles will be 100% fiscally deductible in 2026. Moreover, employees expect their companies to move towards the sustainability path and this can be achieved through a corporate MaaS plan (C-MaaS). The idea is not new, and indeed the Sydney MaaS trial had elements of C-MaaS in that it was initiated in partnership with a large insurance company (Hensher et al. 2021, Ho et al. 2021).

Figure 2 is an example of the types of corporate mobility plans that are worthy of support at an enterprise level with varying degrees of transition maturity. As mobility becomes more complex and a major lever to reduce CO₂ emissions, businesses need to reconsider their corporate mobility model to better meet their employees’ needs (both business-related and personal) and their overall environmental responsibility. This is also a way to get a better understanding of how they are integrated into the public infrastructure network (be it public transport or road networks).

With on-going challenges in determining how best to design a governance framework for MaaS, where the business case is far from established, there seems to be an appeal to look to employers to lead by example with hopefully encouragement from government through transparent and committed policy settings that facilitate greater commitments of enterprises which also include government agencies. Implementing a more environmentally friendly and efficient model requires the right governance and mobility solutions designed at a local level, accounting for each business’s distinctive characteristics. The idea of C-MaaS is sufficiently appealing, but it will take many more businesses to step up and do something about it before we can claim that C-MaaS is a serious contributor to the future of MaaS.

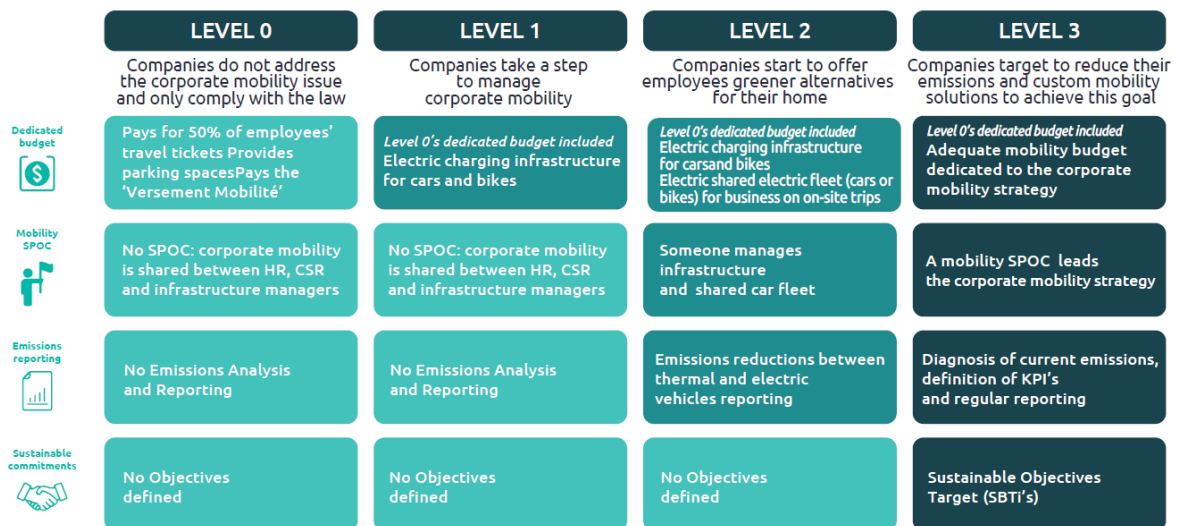


Figure 2. Corporate maturity framework (Source: <https://www.autonomy.paris/en/sustainable-corporate-mobility-of-tomorrow/>). SPOC = single point of contact; CSR = corporate social responsibility

¹⁰ The idea of Corporate (or Company) Mobility Management (CMM) is not new and has been defined by International Transport Forum (2010) as strategies which “seek to promote sustainable commuter, business and customer travel”.

Concluding Comments

The two enhancements to MaaS proposed in this note are an outcome of investigating ways to ‘save MaaS’ from a record to date that is best described as financially (in a commercial sense) and behaviourally (in a sustainability compliance circumstance) disappointing. Hensher and Hietanen (2022) suggest that a re-focus is required that recognises the need to integrate the private car into the offered mix of multi-modal services as well as to consider who the target market is, that is likely to be a move away from a dominant focus on the individual to a group. PCaaS and C-MaaS align well with this refocus.

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