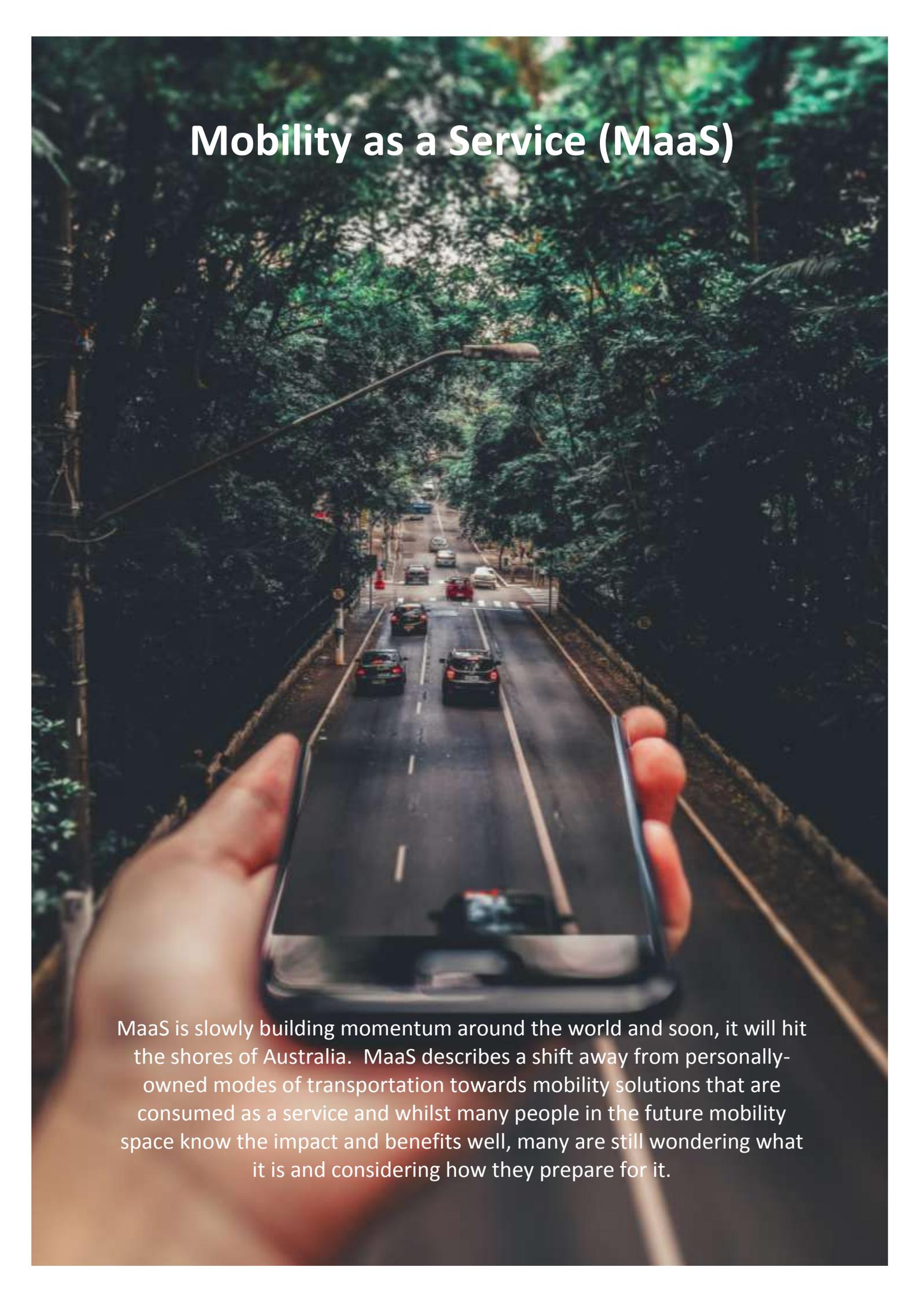


# Mobility as a Service (MaaS)



MaaS is slowly building momentum around the world and soon, it will hit the shores of Australia. MaaS describes a shift away from personally-owned modes of transportation towards mobility solutions that are consumed as a service and whilst many people in the future mobility space know the impact and benefits well, many are still wondering what it is and considering how they prepare for it.

## Transportation as a key issue

I have been lucky enough to speak about the future of transportation and how it is likely to impact industries and economies for many years now.

The importance of the topic has not been lost on key stakeholders, as they seek to understand the changing landscape of transportation and how to optimise it.

Automotive retailers, fleet management companies and car hire firms are trying to understand how Automated vehicles, Connected vehicles, Electric charging, Shared and On-Demand Mobility impacts their current and future business models.

Auto manufacturers are trying to understand how they use their data to enhance the relationships and build brand stickiness with their customers.

Automotive service providers are trying to understand how they can create and integrate new lifestyle products with connected and autonomous journeys.

Governments and councils are trying to improve the liveability and sustainability of their cities by improving supply chain movements, optimisation transportation networks and by creating environmentally sustainable and interactive spaces.

However, over the last two years the most popular topic, by far, has been MaaS. Specifically;

1. What is MaaS?
2. What is the role of industry?
3. Why does it matter?
4. How should industry consider tackling MaaS?

I'd like to offer a perspective on how we can tackle MaaS at the end, however, for now, I want to discuss what MaaS is and why we, as an industry, should care.

## MaaS as a transportation solution

To understand what MaaS is all about, I would like you to cast your mind into the future and imagine how people and goods might move, seamlessly, around the cities of the future.

You call upon a shared car stationed close to your home and travel to a train station. After leaving the car at a designated parking lot at the platform's doorstep and you travel, by train, to a transportation hub. Leaving the train, you move onto an express bus, operating on a designated corridor and then to a taxi which takes you to your destination.

Imagine you can use any combination of these transport modes without the need to own a car, purchase public transport tickets, check timetables or pre-book taxis. Instead, you can

access each transportation mode via an app on your smart phone, which is linked to a mobility service subscription plan.

The mobility subscription plan gives you access to all modes of transport with real time information for each journey, and options for instant journey planning and booking. The best part is – the app, along with various modes of transport options is available, anytime, whenever you need it.

This kind of door-to-door service, has previously been a vision, but is now starting to emerge in cities around the world under the moniker 'MaaS'.

MaaS is no longer a theoretical concept. MaaS has been commercialised in Helsinki, Finland through the smart-phone app called Whim; the service is now available in many countries and will be available as a soft launch in Sydney, Australia in Q4, 2019 (Sampo Kietanen, 2019). This is a great example of a third party taking the lead.

I should also note however, that there are other examples of leadership around the world. Regional Transport District (RTD) and Uber have partnered with the city of Denver on MaaS, demonstrating that the private sector is also showing leadership whilst a good example of a Public Transport Operator taking the lead is in Berlin where their Transport company (BVG) is about to release a MaaS app called Jelbi. With each of these examples there are positives and negatives industry must consider.

Over the last two years, MaaS discussions have matured reasonably well in Australia, but it still has a long way to go. I also think that, through collaboration, we can start to expedite the benefits of MaaS sooner however, over thinking MaaS isn't going to help. What I think will help, is to understand what people need, why they need it, and to establish a good understanding of what would motivate a person to leave their car at home in favour of a MaaS journey.

Fortunately, there are some great industry leaders and advocacy groups pushing the agenda such as ITS Australia; who have recently set up a MaaS reference group committee, which aims to leverage the combined skills of industry to drive change and the MaaS Alliance continue to use their public-private partnerships drive a common approach to MaaS.

In terms of innovation, we are starting to see embryonic collaboration in Australia. Leadership in ticketing solutions, payments, booking and planning solutions and, clearly, leadership in shared mobility and on-demand trials which continue to gain traction in most states in Australia. There are parts of the MaaS movement forging ahead but we need to be better in key aspects; like a great cocktail, you need all the ingredients to make it amazing!

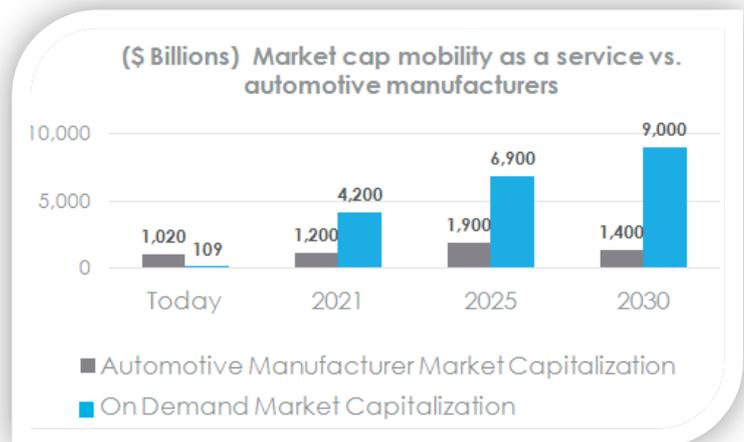
## Why focus on transportation?

Macro economic trends are changing the transport landscape forever. Population growth is expected to hit 9.8 billion people by 2050 (United Nations, 2018). At that time, our planet will likely be dealing with the limits of growth and this will cause severe practical problems, including to our transportation system.

Current transportation systems cannot deal with expected population growth. The Bureau of Infrastructure, Transport and Regional Economics estimated that congestion cost Australia \$16.5 billion in 2015. Without major policy changes, congestion costs are predicted to reach between \$27.7 and \$37.3 billion by 2030.<sup>1</sup> On top of this, we will continue to see a shift in market capitalisation away from the automotive manufacturers toward on-demand and smart-mobility providers.

At present, the car is still king, but we can expect to see a significant shift in market capitalisation by 2021 and, by 2030, on demand will be worth \$9 trillion. In line with this, it is fair to expect private car ownership to decline at a similar pace as the growth of mobility innovators.

McKinsey estimates that by 2030, 30% of owner-driven vehicles will be replaced by some kind of shared mobility. In Australia, we spend around \$150 billion, annually, paying for vehicles we own and drive; by 2030, around \$45 billion of current economic activity will move elsewhere or evaporate.



It is also likely that the rise of mobility innovators may compound the strain on the transportation system before making things better. An estimated 30% of all congestion in a CBD is, as a result of people looking for parking bays.<sup>2</sup>

McKinsey also reported that, in the last 2 years, \$120 billion was invested into smart mobility start-ups; it is fair to expect an explosion of new and innovative ideas.

A good example of an interesting start-up is [Syndeon](#) - a company that is focussing on building monetisable business models from connected vehicles. Essentially car-commerce.



## MaaS as a viable alternative to the car?

I recently gave a joint talk at the [ITS Australia MaaS conference](#) in Melbourne on rewards and data privacy with David Robinson from Telstra. The reason we decided to speak about this, and referencing my earlier comments, is because we are big believers in the perfect cocktail and, for us, there are a couple of critical ingredients missing: **the data broker** role and the **digital engagement, incentive and rewards** role which we will discuss later.

Using your imagination again, if MaaS were here tomorrow and it was convenient, highly accessible and cost effective, would those factors alone be enough?

Is convenience enough for you to give up your SUV – perfect for school runs and so much space for shopping? Is expense even a consideration when the outcome is letting go of your V8 Holden GTS – the heart-racing love of your life? Is accessibility a sufficient reason to ditch the motorbike – your chariot built for one, in favour of a ride sharing journey where the only wind whizzing past your ears will be from that of a fellow passenger? Are you willing to handover your keys?



Realistically, it may be hard for people to give up these things; it is even harder to understand what it would take to give them up. This is because there is no incentive for potential users to do so. To be a viable alternative to a personal vehicle, MaaS needs to be significantly better than a vehicle.

There are other considerations. Thought should be given to the wider economic effects of MaaS. What happens to the car servicing, car parking and fuel revenue, duties and taxes? If MaaS is embraced, there will be less dwell time at bus, train and ferry stations; retail purchases will likely decline as a result. There may also be less exposure to advertising. As experience tell us, making one aspect of a system more efficient, will often negatively impact other aspects of the system; how do we ensure that MaaS makes everyone's life better?

The car remains a status symbol for many. Like your favourite pet, it's loyal and will always be there for you and the best part is that it carries all the things you may need on a whim - golf clubs, gym bag, stroller, shopping bags etc. Why would a person give up their car in favour of a shared space on a bus, train or ride share option? My personal view is that many operators still don't quite understand the differences between what makes a great transport experience and the pain points which come with taking a bus, for example.

The point I want to make is this: how can MaaS motivate a person to give up their car, equipped with all the creature comforts and replace it with a shared space on a bus, train or ride-share option? I'm not sure we have the answers yet however, we could get a little closer if transport providers and service providers shared pockets of information with each other to create new value, through open eco-systems, rather than protecting diminishing value through closed systems.

In either case, significant thought must go into understanding your existing data assets and, which parts of those asset you wish to share to create new value.

## Public transport in the MaaS ecosystem

I do not suggest, for a moment, that public transport agencies and service providers lack a wonderful services, in their own right; they have smashing brands which we relate to and, in most cases, are considered to be reliable and cost-effective services. Public transport has been available for decades, however, it has not diminished the need for a private vehicle – quite the opposite in fact. Public transport, as we currently know it, does not offer a viable reason to give up the car or a reason to change the way we use the car.

Furthermore, and perhaps more importantly, public transport does not offer up a way for new private sector operators to participate in the MaaS ecosystem. Assuming public transport agencies and mass transit is the back bone to MaaS, you would expect those agencies to have to find a way to work independently and in their own right, but at the same time, in a way that allows MaaS Transport Service Providers (MTSP's) to integrate into the agencies. It's encouraging to see many are starting their journeys albeit in silos.

Okay, coming back to what I think are the missing ingredients or key enablers. The first key enabler for a MaaS ecosystem is the data aggregator or data broker.



This is a business who is trusted to move data securely and ubiquitously in a contextual way, whilst keeping passenger and merchant information safe. It sounds obvious but it's quite hard to create a capability which allows businesses to operate in their own right whilst, at the same time, giving them access to create additional revenues through a

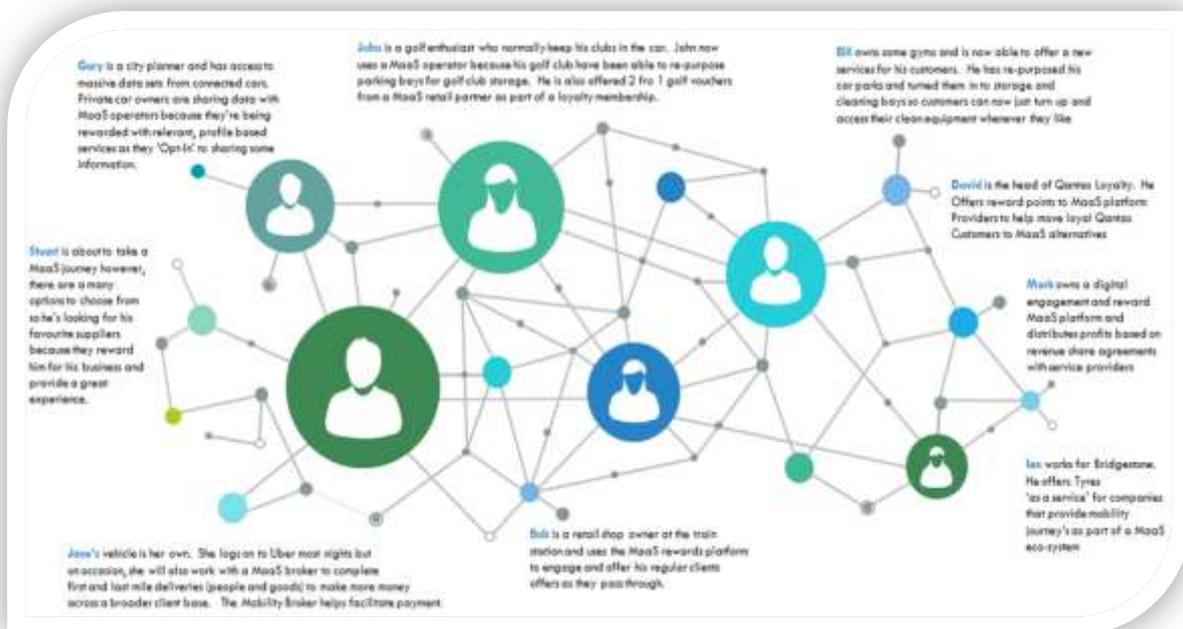
MaaS service offering. Just think about

the complexities associated with payment reconciliation across multiple providers of a MaaS journey. Can you do it yourself? Of course, but why would you when there are capabilities

you can consume - speeding up time to market, spreading risk and reducing the amount of duplication.

The second key enabler is a digital engagement, incentive and rewards provider(s). MaaS operators who use this capability, will benefit in at least two ways. Firstly, they will be able to engage with passengers in a meaningful way and understand their desires, needs and wants as it relates to the design of MaaS and secondly, they will start to create new value for all parties in the MaaS eco-system - a circular economy if you like. Rewards are super powerful. By way of example, consider Bandung, Indonesia where they are already trading a two hour bus trip in return for 10 plastic cups. Brilliant!

Furthermore, new value is created for all parties in the MaaS ecosystem and new business models will start to appear, enabling local businesses to combat the revenue degradation



caused by making the system more efficient.

I also think, because the value is circular, more people will want to be a part of the MaaS movement creating cultural change - the carrot so to speak, not the stick!

If there is any doubt that loyalty schemes work, particularly in Australia, then look no further than schemes associated with travel, credit cards or shopping.

As a society, we love being rewarded. In fact, nine in ten people in Australia belong to a loyalty program and, according to [MasterCard](#), 60% think it influences how they shop. On average, Australians participate in 6.1 loyalty programs, with about 50% of those already travel related (i.e. frequent flyer). The highest proportion, at 79%, have retailer reward programs; a perfect synergy with MaaS, I would suggest.

The question is: who do you trust as the custodian of your personal information and the provider of your rewards program? Facebook, Uber, Qantas, Optus, Telstra, governments or perhaps member organisations like RACQ or MTAQ? The truth is, it could be one, or it could be all; it really doesn't matter, providing those involved agree to share information and create more value tomorrow than exists today – for everyone!

## How do we tackle MaaS?

For industry, we essentially need to think about how we give customers an ideal door-to-door mobility service experience with seamless combinations, whilst keeping traveller information secure and rewarding people for choosing sustainable alternatives. This means the sum must be better than its parts; partnerships are critical.

We have got quite a way to go before we see a widespread deployment of MaaS in Australia. In fact, we need to think about a pragmatic way to drive change through collaboration. Learning from each other, we need to improve as we go; for this reason, I think the right answer is a centre of excellence (CoE) approach. This is discussed more below. The approach requires the maturity to accept that in the past, we may have approached new things the wrong way. We must empty our heads of all the preconceived ideas, to make way for a re-imagined future.

## Replacing the car – a MaaS game plan

According to [The Economist](#), data is the new oil; however, it seems to me that people are reluctant to share data, either because they want to protect trade secrets, or because they want to preserve competitive advantage, or they just do not trust each other. The fact of the matter is, we must try to trust each other or work with an aggregator we trust; that is just the start.

A CoE could bring together brilliant minds with a common industry goal. It should leave ego at the door and focus on creating a new tomorrow and a better future for the people that will inherit the decisions. We need to start acting as a team, leveraging the strengths of the people that play the game. As many of you will know, it is hard to win a sporting event if you're focused on the scoreboard. Your attention is elsewhere and, because of that, you are unlikely to see the strengths of the people on your team; the people who can help you win the game. Focus on the game, not on the scoreboard.

For me, the MaaS game plan should look something like this:

1. **Consider setting up a CoE.** These are the folks who form a critical part of bringing MaaS to life commercially. Think governments, ticketing providers, planners and schedulers, data brokers, incentive and rewards folks and policy makers. Clearly, you should also consider customers too. A journey-mapping sub-committee can offer guidance on the difference

between that which is needed for future travellers and that which is traditional thinking. Agree a governance model and think about a way to pragmatically roadmap a path to success whilst learning along the way.

2. **Think big but start small.** Create a Memorandum of Understanding (MOU) or mandate, which all parties commit to (not just verbally, I mean real skin in the game). Learn from the mistakes but keep moving forward; if only a small amount at a time. Get some investment. Start.

3. **Chose a data aggregator that you can trust.** This is going to be one of the most important decisions you make. A good data aggregator should be the technology enabler and trusted broker. They bring the other parties together, keep data private and secure but, when all parties agree that data is to be shared, they create massive (new) value for businesses and customers in the ecosystem.

4. **Create a brilliant ecosystem.** Don't boil the ocean, just choose people you think have common interests, you can work with and who are complementary. In terms of capability, consider those shown below.

- Ticketing provider
- Data aggregator or Broker
- Rewards & engagements
- Pricing and scheduling
- Payment
- Service providers i.e. advertisers

You'll also want to consider regulators, third party application developers and of course, public and private transport operators. As I mentioned earlier, to enjoy the perfect cocktail you must first fill your glass with complimentary ingredients to make the experience amazing.



5. **Be Pragmatic.** I think about all the things that could go right; but equally, all those things can go wrong. Nobody likes a gold-plated Rolls-Royce when all they asked for a Ford Territory. Get serious about the value you can offer and manage the investment and risk appropriately in a phased approach. Deliver incremental benefit, measure, learn and move on or shut it down.

The infographic to follow is what we provide to our clients and is a suggestion on how they may be able to tackle MaaS when the rubber hits the road.

# ROAD TO MAAS

the startup way

by My Trip Advisory



## MaaS - in Summary

I don't think there is a single recipe to getting this right. It's going to take open-minded collaboration, shared vision and a willingness to change. Industry is well poised to start leveraging the capabilities already in circulation today but must do so in a pragmatic way.

What I do want to stress is the importance of the two key enablers I feel are being overlooked from a design perspective;

1. **The data aggregator or broker** will stretch the imagination of traditional thinking and will require industry to break down borders and co-create. Put simply, the broker role is the glue which brings MaaS together, managing mobility contracts, capacity, planning and scheduling and a range of other services. This role could be a private company, a public company or indeed, it may even be a public-private partnership. It's a key ingredient and must be prioritised.

2. **The digital engagement, incentive and rewards provider** will help create a movement towards MaaS. My personal view is that we can start to engage today given our love affair with reward programs. In return for loyalty, we can start to better understand what will motivate the different demographics to move away from a personally owned vehicle to a MaaS offering. We can start to learn how to improve current services and the difference between an great experience and the problems associated with taking public transport. We will develop insights that help design and prioritise the capability needed and help regulators and government develop appropriate frameworks and infrastructure to support the movement.

Going back to my cocktail analogy, all that really needs to happen; we decide on the drink and pull together the ingredients to create something brand new and amazing. We taste, we learn, we improve. If it tastes really awful, we tip it down the sink.



Sure, if you sit tight and wait, you could probably go and buy a ready-made cocktail mix from somewhere in the world and that may be perfectly acceptable however; if you are on this journey right now, and you are considering what steps to consider next, I hope this article has helped, even if just a little.

## Next Steps - Get in touch



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