

THE SYDNEY MOBILITY AS A SERVICE (MaaS) TRIAL



DESIGN, IMPLEMENTATION,
LESSONS AND THE FUTURE

PROJECT
OVERVIEW



THE UNIVERSITY OF
SYDNEY



SKEDGO



Australian Government
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Energy and Resources

Business
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Introduction

Mobility as a Service, or MaaS, has emerged as a concept that aims to bring together every kind of transport service into a single intuitive mobile app, enabling its users to plan, book, use, and pay seamlessly for multiple mobility services. Put simply, MaaS handles your travel needs in the smartest way possible, and you can use MaaS as a pay-as-you-go user. However, what makes MaaS truly special is the monthly subscriptions, and hence the term “Netflix of Transport”.

MaaS is perceived as the next transport ‘revolution’ because it represents a value-adding proposition for every stakeholder involved:



FOR USERS:
MaaS represents the best value proposition by helping them meet their mobility needs



FOR SERVICE PROVIDERS:
MaaS promises increased profits through additional volume



FOR SOCIETY (CITIES AND GOVERNMENTS):
MaaS could reduce emissions and traffic congestion



FOR APP DEVELOPERS:
MaaS represents new challenges and business opportunities



FOR INVESTORS:
MaaS opens new markets, estimated to be worth hundreds of billions of dollars

With these promising potentials, MaaS is seen as an ecosystem that can offer a way forward for government and other interested parties to achieve a wide range of sustainability objectives such as reducing transport emissions and traffic congestion, especially by reducing private car ownership and car use. The question is, can MaaS realise its potential in the current passenger transport market? This prompted us to do an in-field trial in Sydney to investigate whether MaaS has real potential by offering mobility subscription bundles to every-day travellers in the Sydney Greater Metropolitan Area.

The Sydney MaaS Trial

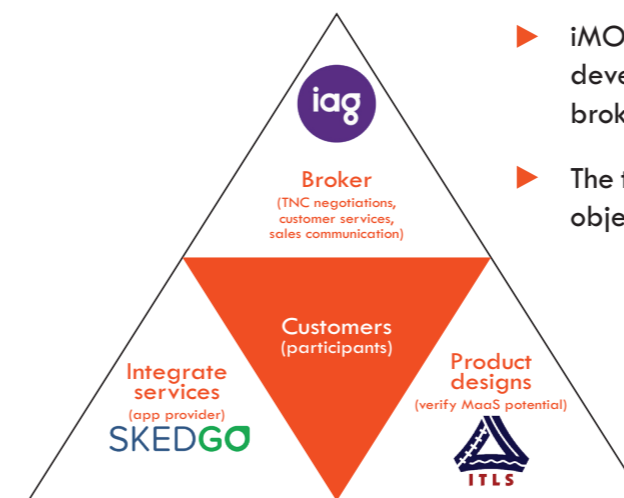
The trial is an iMOVE Cooperative Research Centre project set up with a tripartite structure where SkedGo acted as the MaaS app developer, the Institute of Transport and Logistics Studies (ITLS, The University of Sydney) performed study design, data collection and analysis, as well as project management, and supported IAG, the mobility broker, procuring and offering MaaS products to the end users. This trial is a world-first study that is able to obtain the top level of MaaS by integrating not only information (Level 1), booking and payment (Level 2) and services (Level 3), but also societal goals (Level 4).

System Architecture



The trial placed the customer at the centre of MaaS. Among other things, the Sydney MaaS trial aimed to verify MaaS potential in achieving societal goals through promoting greener travel choices and to assess prospects for commercialisation.

Operational Structure



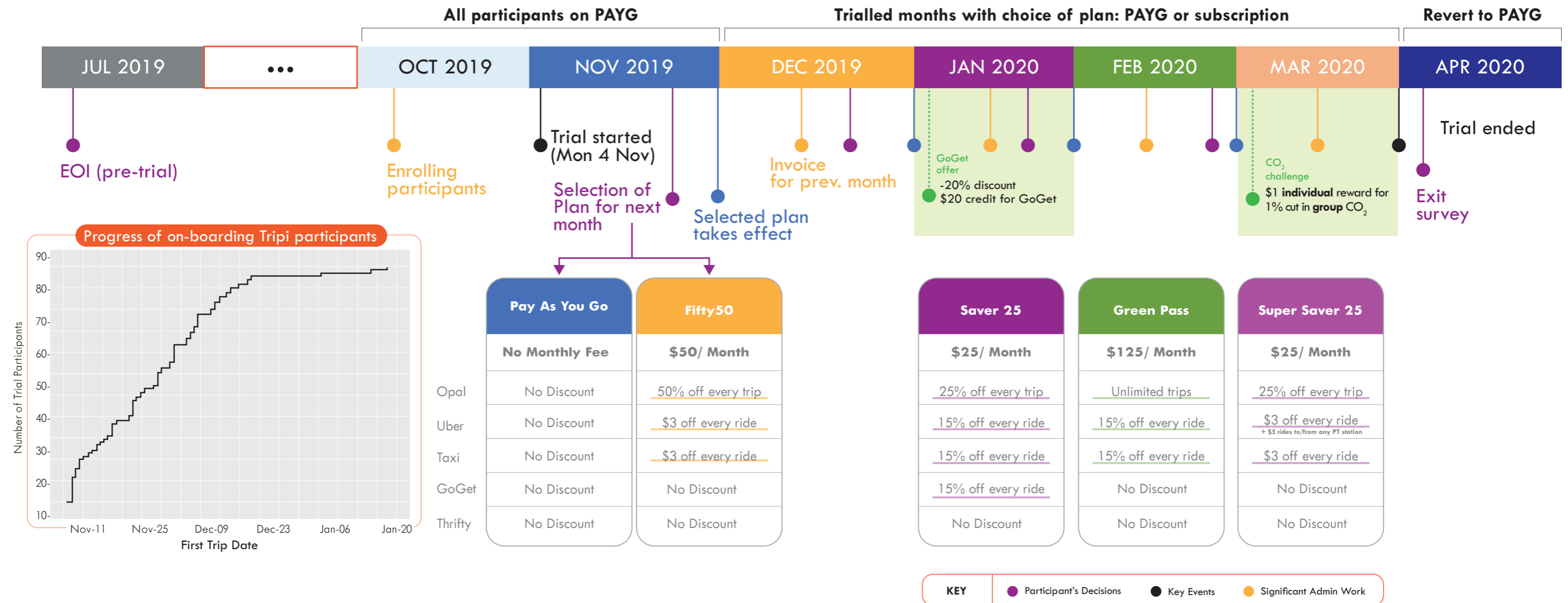
- ▶ iMOVE project with a tripartite structure where SkedGo (app developer) and ITLS (study design) support IAG as the mobility broker.
- ▶ The trial put the customers at the centre of MaaS with the following objectives:
 - Explore mixes of transport services desired by the users
 - Design and assess mobility subscription bundles
 - Verify potential uptake and willingness to pay for MaaS
 - Assess MaaS potential in achieving societal goals through promoting greener travel choices
 - Assess prospect for commercialisation
 - Report the findings and lessons in a transparent way

The Customer Journey

The trial was scheduled as a six-month in-field experiment of mobility services where participants used the customised app – Tripi – to plan, book and pay for all transport services included, either as a PAYG user or monthly subscriber. The trial officially started in November 2019 where only a PAYG option was available to allow customers to familiarise themselves with the MaaS app. This was followed by a four month subscription period in which a new mobility bundle was offered each month, allowing participants to make a choice between using MaaS as a PAYG user or a monthly subscriber. Over the course of the trial, four subscription bundles were designed with built-in incentives for using more sustainable transport services and to encourage a reduction of private car use. In addition, the trial also introduced two green initiatives, namely GoGet offered in January 2020 and the CO₂ buster challenge in March 2020, both providing financial incentive for reducing private car use and the carbon footprint.



The Sydney MaaS Trial journey from the participant perspective

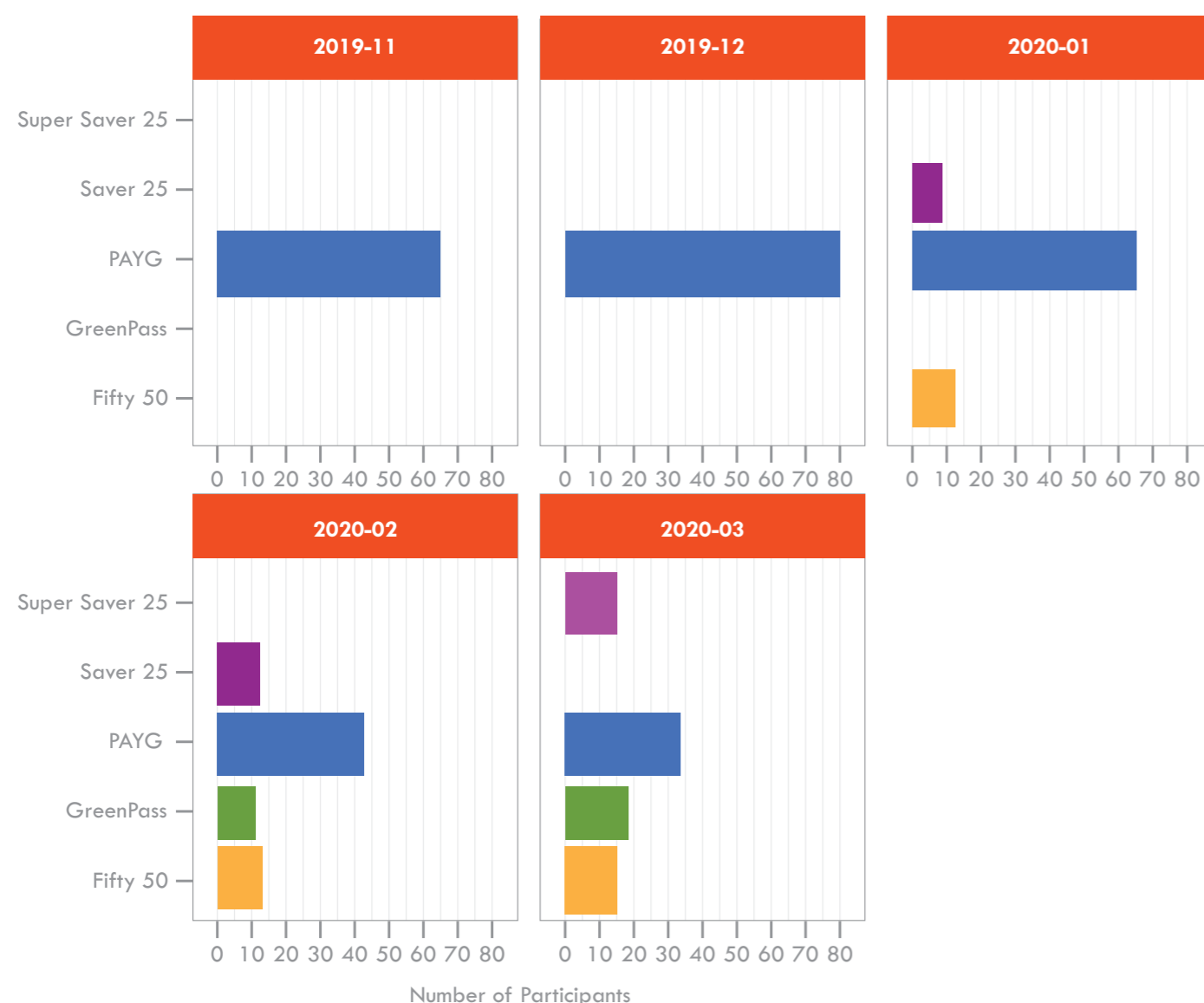




The mobility subscription bundles

Adopting a co-design and data-driven approach, the trial successfully segmented the market with each bundle targeting one market segment. The Super Saver 25 bundle, which replaced its pedigree – the Saver 25 – targeted infrequent public transport users with first or last mile discounts in using Uber/Taxi to connect to public transport. The Fifty50 bundle was aimed at frequent public transport users with the occasional Uber/Taxi trip, whilst the GreenPass bundle targeted heavy public transport users, offering unlimited use of public transport. Each monthly subscription bundle successfully segmented the market by attracting PAYG users instead of existing bundle subscribers. The percentage of subscribers increased as more bundles were added, and by March 2020, the final month of the subscription period, 57% of participants used MaaS as monthly subscribers instead of as PAYG users. The GreenPass bundle saw the most growth and is also the one promoting the most sustainable travel (\$125 for “all you can eat” public transport).

Monthly bundle subscription: Nov 2019 - Mar 2020



What does a high uptake of mobility subscription bundles mean?

First, this means less private car kilometres. The quantitative evidence suggests that MaaS can attract car owners with subscribers reducing private car kilometres. However, many subscribers still rely on their private car. The qualitative evidence reveals that MaaS users prefer improved public transport services to discounts, but discounts do have a role to play. Thus, before we see public transport services improved significantly, MaaS should be best considered and marketed as a supplementary service to the private car, instead of an alternative to the private car as MaaS was initially promoted.

Second, a higher uptake of mobility bundles means more public transport trips and kms. That said, MaaS bundles can be used to promote sustainable travel choices; however, this comes at a cost because a financial incentive is required to design appealing and green(er?) mobility bundles. On average, for every dollar spent on incentivising subscribers, a benefit of 3Kg reduction in CO₂ is accrued, in addition to the extra volume for public transport, Uber and Taxi.

The key lessons

▶ The market demand for MaaS subscription bundles is evidenced and potentially sizeable. Over the four month subscription period of the in-field trial, 57% of the participants subscribed to one of the mobility bundles. This is in line with previous state preference studies in Sydney and the UK which found 32%-37% respondents preferred subscription bundles to PAYG. In the end, who doesn't like discounts and a (digital) wallet for all transport expenses?

▶ Carefully designed, subscription bundles (cf. MaaS app) can be used as a tool to obtain societal goals. Monthly subscribers evidently reduce their private car kilometres and increase public transport use, helping to reduce both CO₂ emissions and traffic congestion. In contrast, PAYG users appear to maintain their travel behaviour (i.e., make no difference to sustainability). The success however will depend on scaling up the evidence to a larger number of MaaS users.

▶ The trial results have practical implications for commercialising MaaS, particularly going from a business model to a digital MaaS app is a necessary but far from sufficient condition for a successful MaaS eco-system. While users appreciate its convenience, in general they are not willing to pay for MaaS app alone! There must be appropriate financial incentives.

- A financially sustainable business model for MaaS is likely to need a level of cross-subsidy, given that public transport (heavily subsidised) is the backbone of MaaS.
- Profitability in a commercial sense, looks like being aligned with scalability and without this, MaaS is unlikely to have commercial legs.
- A MaaS product with efficient subsidy has merit when it is aligned with broad societal goals that support reduced emissions, congestion and other negative aspects of transport activity. One suitable commercial model is the good old PPP where the public sector funds societal objectives and the private sector commercialises MaaS.

The full report is available at: <https://imoveaustralia.com/project/project-outcomes/sydney-maas-trial-final-report/>





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