

OPAL FARES
2020-2024
TECHNOLOGY AND TICKETING



Ticketing technology is evolving

The Opal card was introduced on Sydney public transport five years ago. The Opal card has brought significant benefits for customers by removing the need to queue for tickets or to purchase different ticketing products for different modes. In preparation for the Opal card, the range of available public transport tickets was simplified. Periodical tickets were phased out and fares were moved to a pay-as-you-go system. A range of discounts and caps were applied to mimic the fares payable under the paper ticketing system. These changes were necessary because of policy and technology changes.

As of the beginning of August 2019, all modes of transport on the Opal network were updated to enable the use of contactless payments in addition to Opal cards. You can now tap on and off any Opal service with a credit card, debit card, mobile phone or wearable device. The technology needed to provide for these contactless payments is different from the Opal smartcard technology. When you travel with an Opal card fares are calculated and debited in real time at the point of travel using the trip information stored on the card. When you use one of the other contactless payment methods none of your trip data is stored on the card or device itself; instead your tap on and tap off information is sent to and held by a centralised database. At the end of each day, the recorded trips are aggregated, fare rules are applied to calculate the fare and the payment is settled. This technology is known as 'account based ticketing'.

Account based ticketing systems can accommodate more sophisticated fare options because the technology allows fares to be calculated and processed by the back office rather than having to be processed in real-time at the moment of tapping. Storing information on the Opal card itself is very limiting in terms of the pricing that can be offered because the technology in the smartcard's chip is limited. Moving to account based payments is consistent with the NSW's Government's future transport strategy, because it can help offer more choice and flexibility in service delivery, unlocking new customer value.¹

We are recommending a number of changes to fares that could be implemented more easily under account based ticketing than they could under the current Opal system.

Opal Connect is now available

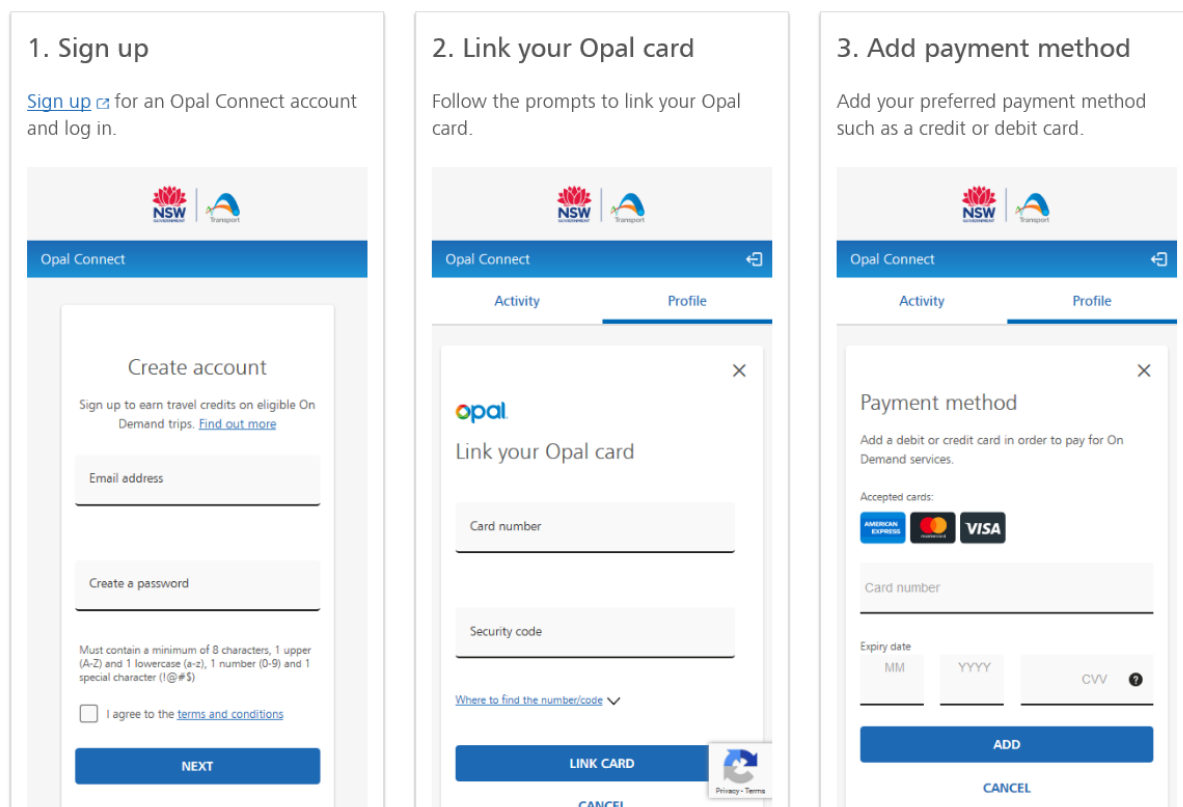
The NSW Government recently introduced a new account based ticketing product for public transport called Opal Connect. Opal Connect is currently being offered on a trial basis for passengers who use certain on-demand transport services. The Opal Connect on-demand trial provides passengers with a \$2 credit when they switch between an on-demand service and another mode that can be used to reduce the cost of future on-demand travel.

Under the Opal Connect on-demand trial passengers are required to sign up to an account with Transport for NSW, register an Opal card to that account and link a credit/debit card to their account. Travel credits earned sit in the account balance. The cost of future on-demand trips is deducted from the account balance. If the account balance is not sufficient to cover the

¹ https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future-Transport-Technology-Roadmap_2016_.pdf accessed 5 December 2019, p 21.

cost of the trip, the remainder is deducted from the linked credit or debit account (see Figure 1).

Figure 1 Current trial Opal Connect account based system



Note: For on-demand services there are subsequent steps that are required including having the relevant app for the on-demand service installed and open.

Data source: Transport for NSW information, https://transportnsw.info/opal-connect-help?_ga=2.57307754.1913447023.1572481171-475752568.1572481171#accordion-eligibility-content accessed 31 October 2019.

Opal Connect could be rolled out more broadly to offer a range of different transport fare options. We are recommending that this be done alongside the existing Opal card offering (which is based on the smart card technology, pay as you go fares with a range of discounts and caps).

Subscription pricing for public transport

The Opal Connect technology would allow the NSW Government to offer subscription pricing for public transport. The Government has indicated that it is keen to do this as a means of delivering better value for customers. Subscription to public transport could be as simple as a monthly travel pass for public transport (similar to the former periodical tickets). Alternatively it could include a range of different products that are complementary to public transport services like paying for a dedicated space in a commuter car park or tickets for tourists that include access to different attractions.

I envisage a subscription service for transport – like Netflix. You sign up to it for a nominal fee each week or month and all the different pricing for public or private providers is built into it.²

– Andrew Constance, Transport Minister

Subscription pricing recognises that for a lot of public transport passengers, their travel is fairly predictable. Regular passengers would be able to identify and subscribe to the option that suits them. For irregular users we recommend that the option of continuing with pay as you go fares remains available. Additional passes could be tailored to tourists or weekend-only passengers.

Subscription pricing is likely to include options that look like the former paper periodical tickets. The main benefit of offering these types of options as subscriptions is that passengers whose use varies from what they expect will still be able to access and pay for other public transport services via their account. Under paper ticketing a regular bus user who decided to make a train journey would have to queue for a train ticket.

Benefits for residents who regularly use public transport

For residents who regularly use public transport it offers the following benefits:

- ▼ A choice of discounted fares that reflect how you use the network – currently only certain groups of customers receive discounts under Opal. Typically three to four days a week travellers miss out.
- ▼ Eliminates the need to ‘top up’ your Opal card in advance of travelling – transport fares could be deducted directly from a linked account after you have travelled.
- ▼ Could allow you to link a range of different cards to a single account – allowing you to purchase discounted family or group travel packages.

Savings on complimentary services

There are likely to be options to include both public transport and complimentary services. Those services could include:

- ▼ A guaranteed parking spot at a commuter car park
- ▼ Complimentary coffees or News subscriptions
- ▼ Entry to local attractions.

² AFR, NSW wants Netflix-style subscriptions for transport, 13 June 2019, <https://www.afr.com/business/infrastructure/nsw-wants-netflix-style-subscriptions-for-transport-20190612-p51wy1> accessed 7 August 2019

Figure 2 Example of subscription pricing in the Netherlands for regular passengers

NS Flex benefits

- ✓ No more credit balance top-ups
- ✓ Always access to your charges
- ✓ You can modify or cancel a season ticket every month

Please select a season ticket costing € 5 or more and save € 10 in administration charges. You can modify your choice free of charge after one month.

Zonder Abonnement € 0 /mnd No discount on travel costs	Weekend Voordeel € 2 /mnd 40% discount at weekends
Dal Voordeel € 5 /mnd 40% discount at weekends 40% discount outside peak hours	Altijd Voordeel € 24 /mnd 40% discount at weekends 40% discount outside peak hours 20% discount during peak hours
Weekend Vrij € 32 /mnd Unlimited travel at weekends	Dal Vrij € 106 /mnd Unlimited travel at weekends Unlimited travel outside peak hours
Altijd Vrij € 347 /mnd Unlimited travel at weekends Unlimited travel outside peak hours Unlimited travel during peak hours	

Data source: <https://www.ns.nl/en/nsflex/webshop#/bestelling/producten>

Figure 3 The London Pass – combined transport pricing and tourist attractions

Pass duration and prices

Select your pass duration and enjoy access to over 80 attractions including the Tower of London, The Shard, and a hop-on, hop-off bus tour.

Select number of days

Children under 11 can travel for free if they are accompanied by an adult holding a valid Oyster card (up to four children can travel per adult).

1 Day Pass Adult: £74 £75 Child: £53 £55	2 Day Pass Adult: £98 £99 Child: £73 £75	3 Day Pass Adult: £108 £125 Child: £78 £89	6 Day Pass Adult: £138 £149 Child: £103 £125
10 Day Pass Adult: £158 £199 Child: £104 £149			

Black Friday - up to 30% off!
Ends on Friday 29th November



Moneyback Guarantee
Free 30 day cancellation. Buy with confidence.
[More information](#)

Data source: <https://www.londonpass.com/london-pass-prices.php> (accessed 29 November 2019)

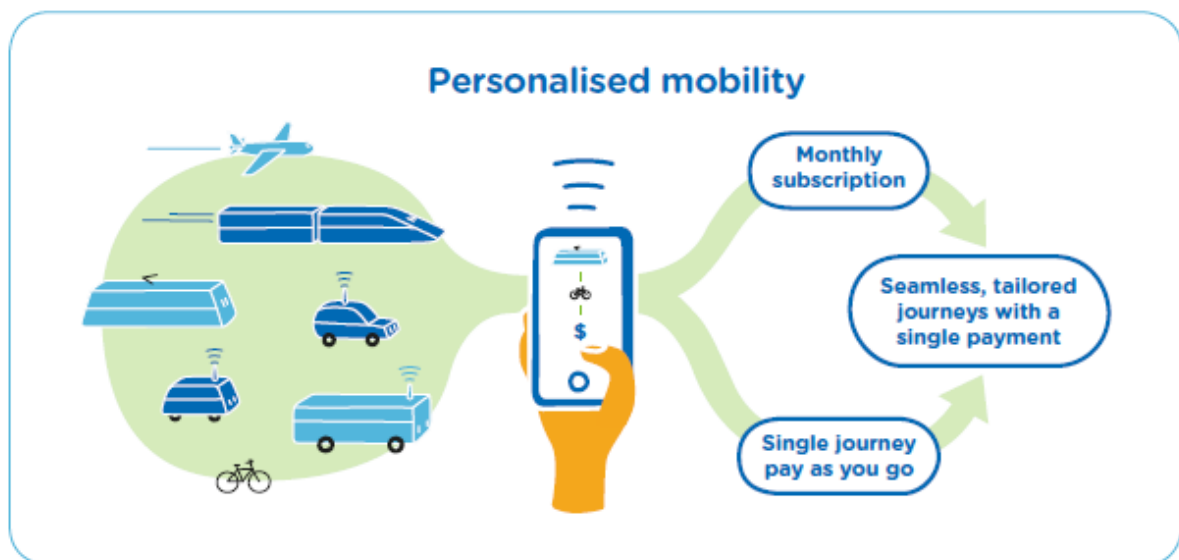
The future of transport pricing

In recent years the term ‘mobility as a service’ (or MaaS) has become popular and is considered by many to be the future of transport pricing. Essentially MaaS is about enabling customers to plan and pay for journeys made on a range of services via a single customer interface (Box 1). Examples of services that could be included are public transport, taxis, rideshare, e-bike, car share and parking. These services could have a wide range of providers including both the NSW Government and private operators. The main benefits of MaaS is that it brings information and pricing for these different providers together under a single customer interface.

Where MaaS has been introduced in other parts of the world it has been provided through a technology solution where passengers have subscribed to an app that gives them access to a range of different transport options including information on travel times and service disruptions. There may be a range of different subscriptions to choose from depending on what passengers want. While MaaS has the potential to change the way people purchase public transport, the technology is yet to be fully realised.

In the absence of significant disruptive technological change we consider that it is likely that public transport will continue to play a significant role in these packages, particularly for the commuter market in and out of the CBD, as public transport will remain the most efficient means of moving large numbers of people.

Figure 4 MaaS has the potential to bring a more personalised experience



Data source: Transport for NSW, *Future Transport 2056*, p 72.

Box 1 Mobility as a service (MaaS)

MaaS is a service model that enables customers to plan and pay for their journeys using a range of services via a single customer interface, such as a mobile phone app. MaaS will enable customers to access integrated, easy-to-understand journeys in a broad market of transport services that gives them more choice in how they travel.

In a fully operational service model, the MaaS provider would sell seamless multimodal journeys, offer convenient payment methods such as subscription services, and communicate directly with customers.

MaaS relies on sharing real time information across different transport service providers to help customers optimise their journeys through a single MaaS provider. It enables customers to plan and purchase their end-to-end journey from a retailer (most likely via an app) choosing from a range of travel options, such as travelling by public transport, rideshare or bike hire. In real time, the app then guides the customer through their journey.

Data drawn from customers via a MaaS platform helps providers offer more personalised services and can also link customers to non-travel related products such as restaurant delivery, event ticketing and retail.

MaaS platforms are already being used in other countries. An example of a recent roll out of MaaS was in Turku, Finland. Under this MaaS system, passenger journeys increased by 20 per cent and 98 per cent of surveyed customers said the attractiveness of public transport had improved. The system also engaged new customers, with 9 per cent of customers on regional lines reporting they had previously not considered themselves to be public transport users.¹²

A trial of MaaS in Sweden also indicated positive results for public transport use, with patronage increasing from 35 per cent before the trial to 45 per cent during the trial.¹³

Source: Transport for NSW, *Future Transport 2056*, p 16, 72.