Funding our future networks and operations

Transport is a key enabler of economic growth and community wellbeing. Our infrastructure and services underpin productive economies, supporting movements of people and goods across the State. To maintain the focus on our customers and our communities, we must ensure that transport is financially sustainable.

Source: Sydney Metro

The challenge

Transport for NSW is planning for the long term. Despite a short-term drop in overseas migration due to COVID-19, the NSW population is expected to grow from 7.7 million in 2016 to 11.8 million people by 2056.[1] Our Transport networks will require sustained investment to meet this growth, and to respond to key policy imperatives, including improving NSW productivity and achieving net zero emissions by 2050.

Between now and mid-century, Transport will face significant funding pressures, and we will need to make careful decisions about how public infrastructure and services are funded, and who will pay for them. Some of the challenges include:

- increasing expenditure on a growing and ageing asset base
- low levels of cost recovery from transport pricing
- competition from other public spending needs
- the need to improve the resilience of our assets and operations
- changing travel habits and customer expectations.

Current funding structures

Costs for infrastructure and services are generally met by a combination of taxpayers through government budgets, users through fares and charges, and beneficiaries through infrastructure contributions or levies.

Traditional funding structures for transport infrastructure and services have often not kept up with the pace of change. Recent estimates have shown that road congestion and public transport crowding cost the Australian economy $19 billion in 2016 and without continued infrastructure investment in our cities, this cost could more than double by 2031 to reach $39.8 billion.[2]

One key source of funding has been via Commonwealth taxes on fuel excise. But this consumption-based pricing model has been in decline due to improved fuel efficiency.[3] In addition, revenue from State-based taxes such as motor vehicle and vehicle weight taxes could drop in the future if new trends, such as ridesharing and car sharing, accelerate.

Setting fares in Singapore

Singapore's Public Transport Council is responsible for conducting annual reviews of fares using a predetermined fare formula which automates the fare adjustment process.

First introduced in 2005, the formula uses a number of inputs including macroeconomic indicators that capture inflation, wages and energy costs, and a productivity extraction factor to capture efficiency improvements.

Between 2012 and 2016, Singapore's annual operating costs increased by over $900 million while fare revenues increased by $230 million (~75 per cent shortfall). In response, the latest formula review saw the addition of a Network Capacity Factor which better connects fares to fluctuations in cost.

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[1] NSW Treasury, **'2021-22 NSW Intergenerational Report'**, Sydney, 2021.
[2] Infrastructure Australia, Australian Government, **'Urban Transport Crowding and Congestion, The Australian Infrastructure Audit 2019'**, 2019.
[3] NSW Treasury, **'2021-22 Intergenerational Report'**, Sydney, 2021.

The NSW Government recently announced the deferred introduction of road user charges for electric vehicles, following significant investment in purchase subsidies and charging infrastructure.[4] This will provide some help to ensure financial sustainability by underpinning cost recovery as the private fleet in NSW transitions to electric vehicles.

However, as more people make the shift to electric technology, the road user charging scheme will need to be carefully monitored, particularly in metropolitan Sydney, which will face new challenges as the city becomes significantly denser. Opportunities to adapt road user charging could help manage demand for our network at peak times, make better use of investments, and accelerate the transition towards cleaner and safer vehicle technologies.

Fares

The affordability of the public transport network for everyday users is a paramount consideration in setting fares.

A report prepared for the Independent Pricing and Regulatory Tribunal estimated Transport's overall cost recovery as 26.8 per cent in 2018–19.[5] These cost recovery values are significantly below comparable cities in Asia, the Americas and Europe where OPEX-only recoveries average between 60 and 140 per cent. Even compared with similar cities in terms of population density, such as Auckland, Sydney services tend to recover less as a share of their operating costs.[6]

Significant investments in improved public transport service levels could be sustained where there is growth in fare revenue, new and innovative funding and operating models to capture value, and other efficiencies such as demand increases and technological efficiencies.

Paying for railway projects – London Crossrail

Crossrail is a major railway construction project in Central London, providing high frequency passenger services across the city.

To help pay for Crossrail, in April 2010, the Mayor introduced a two pence business rate supplement on larger non-domestic properties in London. The increased earnings Crossrail will bring – from new jobs and quicker journeys – will benefit businesses across London. This business rate supplement was in addition to borrowings, property sales and levies on new office developments.

The business rate will run for up to 31 years until the debt raised by Crossrail is paid off. Ratepayers in the cities and hamlets where the majority of jobs created by Crossrail will be located, will contribute to over half of the total rate income.

Redesigning funding frameworks to unlock value

Globally, government budgets are under pressure because of the fiscal impact of COVID-19, and the need to sustain the post-pandemic recovery. As a result, transport operators are having to compete for already strained government funds. In response, transport operators across Asia, Europe and the Americas are exploring potential additional sources of revenue. These include the selling or developing of assets, and alternative hypothecated taxes such as fuel taxes, user charges, or levies on property sales.

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[4] NSW Treasury, **'Infrastructure Statement 2021–22, Budget Paper No. 3'**, Sydney, 2021

[5] The Centre for International Economics, **'Measuring cost recovery of NSW public transport services'**, for the Independent Pricing and Regulatory Tribunal, 2020.

[6] Note for comparison with Transport for NSW values: these values were calculated by different parties which can limit the ability to draw direct comparisons. Imperial College London, Transport Strategy Centre, **'COVID-19 Cross-Group Benchmarking Review of Recent Activities: Public Report'**.

Other funding frameworks may also unlock value. These include:

- Fares and services charges – fare structures can be structured to reflect the cost of providing trips to incentivise travel behaviours such as off-peak travel, embed equity measures such as discounts for pensioners and students, and ensure access across metropolitan and regional areas.
- Increasing competition and contestability – one example is Newcastle Transport's use of outcomes-based contracting.

- Value capture – the linking of projects to broader beneficiaries such as businesses, households and government (not solely users) can drive a more efficient and fairer allocation of resources.
- Parking space levies and other charges – disincentives for using cars in business districts or well-serviced areas.
- Road user charging – can help ensure financial sustainability and achieve other safety, congestion, environmental and equity objectives.
- Ancillary revenues – may include retail concessions at stations and advertising on and around public transport.

What non-fare revenue measures can efficiently fund Transport operations?

Optimising efficiency to create more value

Continual population growth will inevitably require major infrastructure investment throughout NSW. However, new infrastructure cannot be the answer to every transport challenge. Smaller projects, such as incremental upgrades and better demand management, can sometimes be more cost effective, and faster to deliver. Optimising the efficiency of service delivery provides more opportunities to do more with less.

These types of solutions could include:

- Zero emissions buses, which improve customer perceptions of the quality of bus services, and could underpin sustained investment in bus priority and bus infrastructure. Services could be offered with some of the features of light rail but with much lower costs.
- Emerging technologies such as artificial intelligence, intelligent congestion management and remote inspection drones, which can be deployed to monitor and manage networks, increase the capacity of existing assets such as motorways, reduce maintenance costs and provide more reliable journeys.

Technology to keep customers safe and informed

The free Opal Travel app gives customers notifications about the COVID safe capacity of their bus, metro, train or ferry services. Using their travel history, the app helps customers identify their regular trips and services, and sign up for real-time notifications.

Transport uses data from Opal readers and other sources to estimate the occupancy of a service. Opal Travel app also offers customers tailored notifications about major disruptions or delays.

- Walking and cycling infrastructure, which has low to moderate capital costs, but next to no operational costs. More customers travelling on foot or by bike, particularly in growth areas, means less expenditure managing congestion, expanding networks, or operating buses in congested environments.
- On demand service models, which allow less patronised fixed-route buses to be replaced by more tailored and responsive bus services.
- Travel demand management, which can help redistribute or reduce demand on the most congested parts of the network, while shifting trips to more sustainable modes.
- Digital service delivery, such as for medical and professional services, which allows people to avoid unnecessary trips for routine appointments.
- Optimising the efficiency of freight operations with priority access to parts of the network, policies that incentivise a shift to rail freight, and measures to improve productivity, safety and sustainability.

What technologies or innovations can deliver better transport outcomes and better value?

Policy and regulation

Given the scale of projected growth in NSW, including coastal and regional growth, new greenfield urban developments as well as infill developments will be required. Funding and pricing frameworks need to be complemented by supply-side regulations and policies.

A strengthened focus on masterplanning can support the viability of cost-effective public transport. Integrating land use and transport can create more liveable urban areas with mixed-use development patterns well connected to public transport. Other supportive government policies to maintain transport productivity include careful land use zoning to support growth around public transport infrastructure, zoning to protect productivity of major logistics centres, and roll out of new standards and policies to support charging of electric vehicles, particularly commercial electric vehicles.

Freight pricing considerations and mechanisms to unlock value

Pricing reform that better reflects the economic, environmental and social benefits of rail over road freight could decrease the relative costs of rail. At present, pricing focuses on cost recovery for network owners, offering few incentives for the uptake of greener and safer technology. Rail planning and pricing reforms that focus on network performance would encourage the adoption of modern rolling stock, such as more powerful locomotives and wagons with electronically controlled braking. They would also recognise and reward the operation of lighter and faster trains that could assist with the overall reliability and capacity of the shared passenger and freight network.

Opportunities also exist for optimising road freight, including offering signal priority for safer and greener trucks, constructing or allocating freight only lanes, and pricing the road network in areas of high freight demand.

What pricing measures could align financial and environmental sustainability across road and rail networks?

Have your say

Please provide your feedback at

haveyoursay.nsw.gov.au/future-transport

What happens to my feedback?

Thank you for sharing your views with Transport for NSW. We will consider your input and will share the draft Future Transport Strategy when it is published via the email address you provided.