MOBILITY BEYOND THE PANDEMIC

PTA ANZ

PUBLIC TRANSPORT ASSOCIATION
AUSTRALIA NEW ZEALAND

LEK

Contents

Foreword

I am delighted to release the latest collaboration between L.E.K. Consulting and the Public Transport Association Australia New Zealand (PTAANZ), *Mobility Beyond the Pandemic.*

The publication of this paper comes at a critical juncture in history where we must fight for reform and innovation in the way people move around our communities. We have settled into a 'new normal' post the COVID pandemic, and must now focus on tackling the climate crisis.

Transport is the fastest growing source of emissions in Australia and New Zealand, so our sector has a big role to play in assuring a sustainable, liveable, and equitable future.

We must take a dynamic approach that includes incentivising increased uptake of public and active transport options, as well as measures to discourage private vehicle use. Essentially, we must do everything possible to make public and active transport more appealing travel choices. This paper outlines a number of strategies to achieve both, informed by case studies from our region and abroad.

This paper is the result of extensive research, data analysis and consultation with public transport authorities. We also had the opportunity at PTAANZ's Mode Shift Symposium, held in Brisbane in May 2024, to workshop ideas for initiatives that have been trialled or that organisations would like to trial, to improve public transport patronage. The findings of that workshop are outlined in this paper.

I would like to acknowledge my team's hard work in pulling this paper together, particularly Natasha Santha – Partner, Andre Tibyrica – Senior Manager, Vincent Chan – Senior Consultant and Brendan Quigley – Consultant. We would also like to thank Australia and New Zealand's public transport authorities for generously sharing insights into what's happening in their jurisdictions and how they're responding to those mobility trends.

I hope this paper provides you with inspiration and ideas to shape world-leading mobility options in Australia, New Zealand and beyond.

Mark Streeting

Senior Partner, L.E.K. Consulting
Vice Chair, PTAANZ

Executive Summary

Public transport has evolved considerably over the last 100 years. Over the last century public transport investment, demand and mode share have gone through a series of transformations. The early 1900s saw significant investments in public transport. For example, Adelaide's Electric Tram System (inaugurated in 1909), the electrification of Flinders Street Station in Melbourne (completed in 1919) and Sydney's City Rail Loop (inaugurated in 1926). These investments drove metropolitan public transport mode share in Australia and New Zealand from 20% to c.60% by the 1920s, as active and public transport were among the only modes available at this time. However, things changed with the widespread adoption of the car, which saw mode share decrease to c.15% by the late 1960s in Australia. Then, rapid population growth post WWII and increased personal mobility drove growth and congestion in ANZ cities. In Australia, average daily travel times went from c.64 minutes in the early 1900s to c.50 minutes by the mid-1960s, but eroded by the 1970s to c.85 minutes today. Public transport re-emerged as a priority in the 2000s to combat congestion and respond to growing sustainability concerns. Governments increased investment in public transport infrastructure and introduced policies which led to a gradual increase in mode share by the late 2010s.

Then, the COVID-19 pandemic hit. COVID-19 saw unprecedented levels of disruption to public transport systems around the world. Across ANZ cities, patronage dropped to historic lows at the height of the pandemic. In the years during and immediately following the pandemic, public transport authorities implemented several initiatives to encourage a mode shift back to public transport. It appears that these initiatives have been successful. Many jurisdictions are largely back to, or exceeding 2019 patronage levels.

It is now the time to move beyond the 'recovery phase' and focus on driving public transport growth in the 'new normal'. Enough time has passed since the effects of COVID to confirm that lasting structural change has occurred in the way Australians and New Zealanders live, work and play. These include:

- rise of flexible working
- suppression of peak commuting
- change in social and recreational patterns
- a shift to active and micro mobility
- increasingly positive sentiment for environmentally-friendly transport modes

Several interventions have been trialled across ANZ to win back mode share and unlock patronage growth. Insights from PTAANZ member organisations suggest that interventions that build confidence in the system, embrace multi-modality, and consider the whole transport network as a system appear to deliver the greatest tangible benefit.

Specifically, **public transport authorities in ANZ believe that initiatives tied to 'service delivery', 'service reform' and 'service innovation' are the most likely to be successful**. For example:

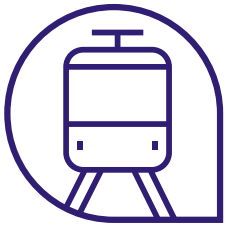
- **Service delivery** - Improving the frequency, reliability, and customer experience of services to make public transport an attractive mode compared to alternatives. E.g. through bus prioritisation
- **Service reform** – Re-designing the network to provide more services at times where people need them most. In particular to respond to the structural change that has happened. E.g. an increased focus to shift to off-peak services
- **Service innovation** – Implementing initiatives such as on-demand public transport, or integration with micro-mobility

Many of these initiatives will require proactive investment in both public transport infrastructure and services to unlock future growth in mode share.

Looking ahead, there are opportunities to think beyond the 'carrots' which make public transport more attractive and consider the 'sticks' which can be used to actively discourage the use of private vehicles – particularly in congested cities. For example, congestion charging and 'emissions based' access charging in London has sought to improve the pricing signals presented to the community and are clearly public transport friendly initiatives.

Governments across ANZ have laid a strong foundation for the future of public transport, but more needs to be done to support growth in public transport usage and mode share in Australian and New Zealand cities.

Public transport evolution



Early investment in public transport – c.1900s-1920s

Over the last century public transport investment, demand and mode share have gone through a series of transformations. The early 1900s saw significant investments in public transport. For example, Adelaide's Electric Tram System (inaugurated in 1909), the electrification of Flinders Street Station in Melbourne (completed in 1919) and Sydney's City Rail Loop (inaugurated in 1926). These investments drove metropolitan public transport mode share in Australia from 20 to 60 percent over the first 20 years of the 20th century.[1] Similarly in New Zealand, investment in electric tram systems across its four main cities spurred increased public transport mode share.

Advent of the car – c.1920s-1960s

Public transport mode share peaked around 1920 in Australia, reaching c.65% across metropolitan areas, before falling to c.15% by the late 1960s. The introduction of personal transport (i.e. cars) in the 1920s heralded a significant change in the Australian transport landscape, with the impacts rapidly accelerating as cars proliferated. Private motor vehicles surpassed rail as the dominant mode choice across metropolitan Australia. In New Zealand, car adoption accelerated from the 1950s, as many of the restrictions that constrained private car usage in NZ (during war years) were lifted and discretionary income increased.

From the 1930's, buses began to play a greater role in public transport. The increased flexibility in routing and timetabling offered by buses was seen as an advantage over the existing tram networks. The 1950s and 1960s saw the decommissioning of most major tram systems across Australia and New Zealand, apart from Melbourne. For consumers, buses often presented a less compelling alternative to private car usage, due to perceived poor service levels and fare volatility, which reflected shifting petrol prices.

The significantly reduced demand for public transport due to booming car sales led to excess public transport capacity. It was only with the rise of congestion when we had to start thinking about investing in public transport infrastructure.

Rise of congestion – c.1970s-1990s

A rapidly growing population post World War 2 (c.90% population growth between 1945 and 75)[1] and the increased personal mobility afforded by private motor vehicles drove the geographic sprawl of Australian cities. This was reflected in a rising portion of the population residing in suburbs, rather than the city itself. (For example, by the 1960s, over 70% of Sydney population lived in the suburbs, compared to c.40% in the 1840s.[2])

This growth of car ownership also supported the transition away from 'living locally', driving increased trip making behaviour. People's travel patterns began to capture geographically disparate places of living, work, education, shopping and recreation. This was reflected in an increased demand for mobility. In Australia, this grew from c.20 billion passenger-kilometres in 1940 to reach c.160 billion passenger-kilometres by the turn of the century.

While average daily travel times in Australia dropped over the first half of the 20th century (from 64 minutes in the early 1900s to 50 minutes by the mid-1960s), this benefit had eroded by the 1970s, with daily travel times continuing to grow to current levels of c.85 minutes today. This reflects significant metropolitan expansion across many ANZ cities, increased trip making behaviours and increasing levels of road congestion. The public transport mode share decline slowed from the beginning of the 1970s, dropping to c.10% across metropolitan Australia by 1980 and remaining stagnant through to the 2000s. NZ saw a similar pattern of public transport mode share evolution through the 70's, 80's and 90's.

Re-emergence of public transport as a priority – c.2000-2019

While cities focused on constraining (sub)urban congestion through programs that improved car journey times, such as road-widening and implementation of new roads (e.g., bypasses), there was also an increasing focus on the role of public transport.

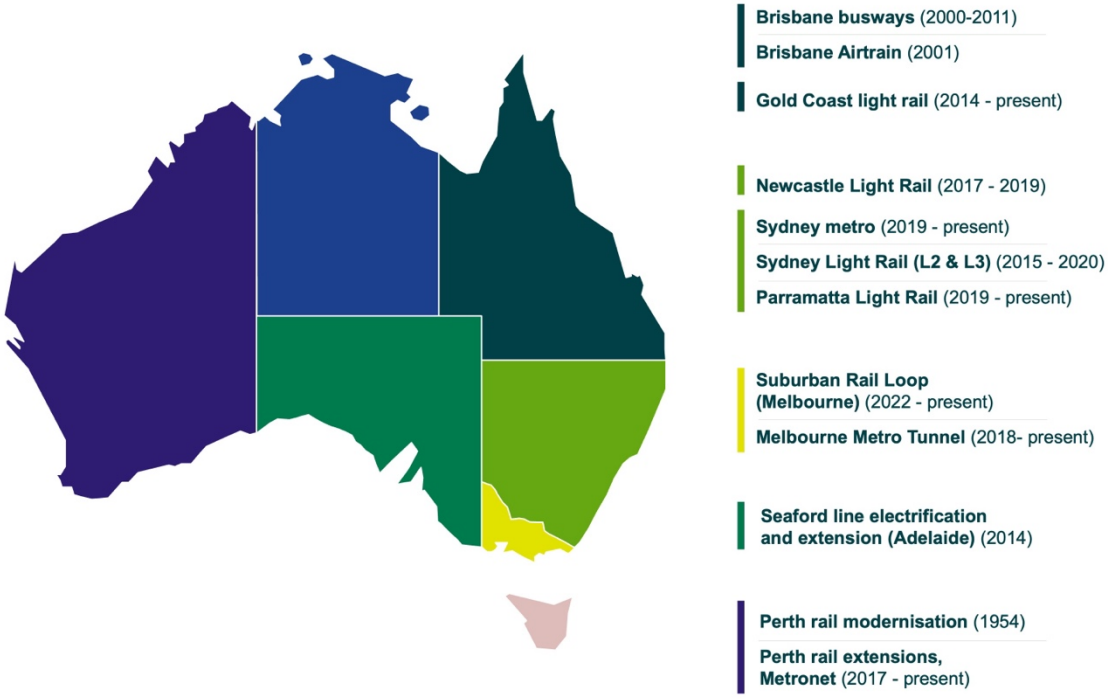
Over the last 40 years, ANZ PT authorities have overseen significant investments in public transport, with new infrastructure projects playing an important role in driving mode share to public transport.

[1] Australian Bureau of Statistics

[2] Steele & Gleeson 2010

Major public transport investments in Australia

Not exhaustive



One of the earliest post-war investments into public transport was the introduction of diesel railcars in Perth in 1954, along with the opening of seven new stations. The faster speeds reduced the time to get to Perth from Fremantle, Bellevue or Armadale, and resulted in a 75% increase in patronage over 5 years.

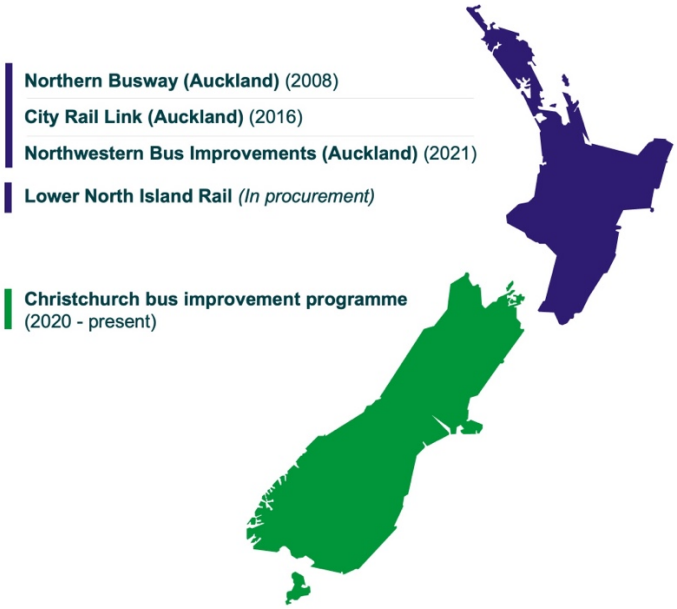
More recently, projects such as the Brisbane Busway (2000-2011), Sydney LRT (1999-ongoing), Gold Coast LRT (2014-ongoing), and Sydney Metro (2019-ongoing) are examples that have achieved very strong patronage outcomes to date, with many having continued expansions in progress. For instance, the Brisbane Busway comprises a a 32 km network, with the inner Northern busway (one of four links) carrying over one million passengers each month.[3] The Gold Coast Light Rail similarly strengthened Queensland public transport patronage, surpassing projections to reach 10.7m journeys in FY2019, supporting further service expansions.[4] Census journey to work data in the decade to 2016 reveals significant pre-COVID public transport mode share gains in Sydney and Melbourne (c.4 ppt), with more modest results in Brisbane, Perth and Adelaide (c.0-2 ppt).

[3] https://www.ugllimited.com/en/case-studies/current/brisbane-busways

[4] https://www.railexpress.com.au/more-services-for-seq-as-patronage-climbs/

Major public transport investments in New Zealand

Not exhaustive



NZ's geographical topology and a strong focus on road infrastructure, has led to buses being the main form of public transport, with only Auckland and Wellington having urban train services. Bus remains the dominant mode in Auckland accounting for c.70% of journeys. The Northern Busway linking Auckland's North Shore with the Northern end of the Auckland Harbor Bridge was completed in 2018, and acts as the spine of the bus-based public transport system. In June 2010, the busway carried its 5 millionths passenger and was estimated to remove the equivalent of about 5,100 cars in the morning peak, with 80 buses per hour during peak times[5]. Auckland saw significant investment in services, with a focus on improving service levels and rail-bus interconnectivity driving a doubling of annual public transport journeys from 2006 to 2019, with rail journeys increasing roughly four-fold.[6] Auckland's City Rail Link currently under construction aims to further improve rail services in the city. Despite these improvements, low adoption of public transport relative to international standards has persisted in NZ, with public transport accounting for c.5-6% of total travel time in the 21st century (excluding Covid-impacted periods).[7]

[5] "Like a railway, but with buses". Region Wide. Auckland Regional Council. July 2010. p. 2

[6] https://at.govt.nz/about-us/reports-publications/at-metro-patronage-report/

[7] New Zealand Household Travel Survey 2011- 2014, 2015-18
https://www.transport.govt.nz/assets/Uploads/Report/Public-Transport-2015.pdf
https://www.ehinz.ac.nz/assets/Factsheets/Released_2020/Commuting-Time-by-Mode-of-Transport.pdf

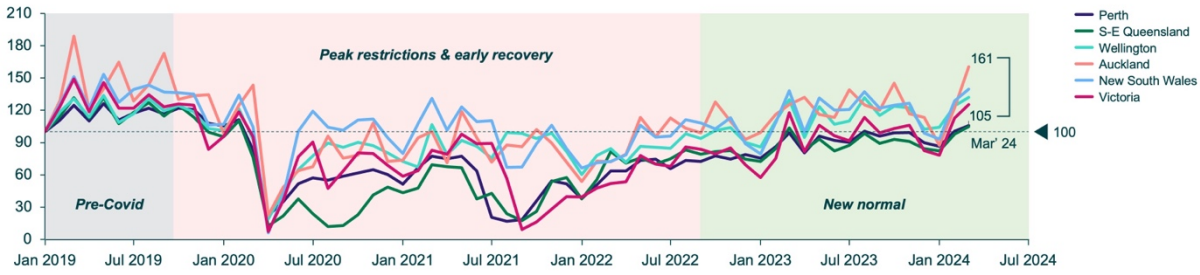
Covid and the emerging new normal

Covid represented the most significant impact to public transport usage since the wide scale adoption of the private car. Initially, sharp declines in public transport patronage were observed, reflecting government-imposed lockdowns and mobility restrictions. Parallel to government-imposed restrictions, the viral transmission risks associated with public transport and aversion to crowding limited the initial rate of reuptake, which occurred alongside a significant increase in working-from-home arrangements as well as an increase in private car usage.[8]

While government-imposed restrictions have now ceased, some societal and behavioural changes have persisted in what is now a 'new normal'. Over the last 18 months to March 2024, overall public transport patronage has largely stabilised across most ANZ cities, with Q1 2024 patronage within c.20% of Q1 2019 levels. Cities which experienced less severe lockdowns relative to other cities, such as Perth, Wellington and Brisbane, have now reached, or exceeded pre-COVID patronage. While the recovery in Victoria and Auckland has been slower.

We have now entered the 'new normal', with public transport patronage recovered in most ANZ cities

PT journeys, by ANZ region
(Jan 2019 – Mar 2024)
Index = 100 (Jan 2019)*



Q1 2020	Q1 2021	Q1 2022	Q1 2023	Q1 2024	PT journeys Q1 202x vs. Q1 2019 (%)
90%	70%	64%	93%	103%	Perth
88%	64%	48%	81%	89%	South-East Queensland
92%	84%	56%	86%	96%	Wellington
83%	55%	37%	67%	85%	Auckland
89%	58%	45%	78%	87%	New South Wales
81%	46%	50%	75%	82%	Victoria

Note: ** The no. journeys has been Indexed to Jan 2019 for each state;*
Source: *NSW - TfNSW Open Data; VIC - Data VIC; Perth (TransPerth) - PTA; Wellington – MetLink; Auckland - Auckland Transport*

Similar trends have been observed across other major cities in the world. Initial declines were not as strong in some cities as those observed in ANZ, where governments imposed less stringent movement restrictions (e.g., London, Hong Kong). However, public transport patronage has remained systemically lower than pre-COVID in some cities. For instance, data from 2023 shows San Francisco and Toronto uptake at 71% and 70% of 2019 patronage, respectively, while London's uptake has recovered to 96% of 2019 patronage.[9]

The top-level patronage declines hide a more nuanced view of changes in passenger behaviour, which reflect structural changes that have materialised in the 'post-COVID' society, particularly in relation to how people travel to work, versus recreational or social activities.

[8] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8575658/

[9] https://www.ttc.ca/about-the-ttc/Key-Information-About-the-TTC;
https://www.sfmta.com/press-releases/press-release-muni-ridership-rises-25-2023#:~:text=The%20agency's%20ridership%20continues%20to,from%2Dhome%20than%20San%20Francisco
https://tfl.gov.uk/info-for/media/press-releases/2023/november/latest-tfl-figures-show-the-tube-reaching-4-million-journeys-per-day

A new normal for working

Working from home became the norm for many white-collar workers across ANZ during COVID lockdowns. In the post-COVID world, many 'white-collar' workers have transitioned to a hybrid model, with eligible workers incorporating some days per week working from home. Some employers have now implemented minimum days-in-office policies, which has led to number of days worked from home reducing since the height of the pandemic but remains higher than pre-COVID. L.E.K.'s 2023 Australian consumer survey found the proportion of people working from home increased by c.18 ppt compared to pre-COVID to 54%, with the largest increase seen in those working 2-4 days per week from home. Workers are also increasingly working 'flexible hours', with those who work flexibly more than 'occasionally' increasing 14ppt in 2023 compared to pre-COVID.

Working from home, and working 'flexibly' continue to be the norm, post-COVID

Note: *Total n = 1,483, totals exclude those not working in a given period (e.g. unemployed, students, retired)*

Source: *L.E.K. consumer survey (May 2023), Q10. How often did you work from home pre-COVID compared to now?; Q11. How often did you work flexible hours (e.g. adjusting the time of your working hours from the standard for your organisation) pre-COVID compared to now?*

The evidence suggests that these working patterns are here to stay. Weekday public transport levels remains broadly stable across most jurisdictions, and employers have settled in to an environment where 'hybrid' and 'flexible' working is the norm. An increasing number of workplaces are offering flexible-working arrangements, with a New Zealand national survey finding 82% of respondents having workplaces which will continue to support remote working following the pandemic.[10]

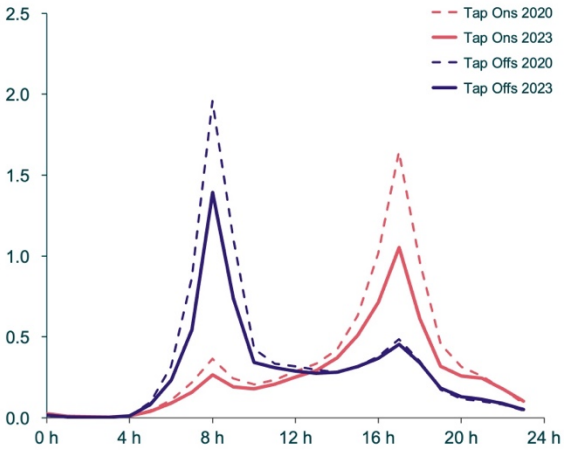
The effect of these structural shifts is that people are also choosing to travel at different times of the day, with peak-time commuting remaining suppressed. For example, Sydney CBD Opal 'tap offs' over the morning peak (c.8am) commuting period are lower for Feb 2023 vs. Feb 2020 (pre-COVID), whereas the off-peak period had largely recovered to pre-COVID levels. [11] A similar impact was seen in Auckland's bus and ferry boarding data. In Wellington and Perth, the impact has been less severe.

[10] https://hrnz.org.nz/news/article?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=541&cHash=a7068014ea9955445ad9f11b9b0fe567

[11] https://www.theguardian.com/news/datablog/2023/mar/13/new-normal-sydney-and-melbourne-public-transport-use-still-at-80-of-pre-covid-levels

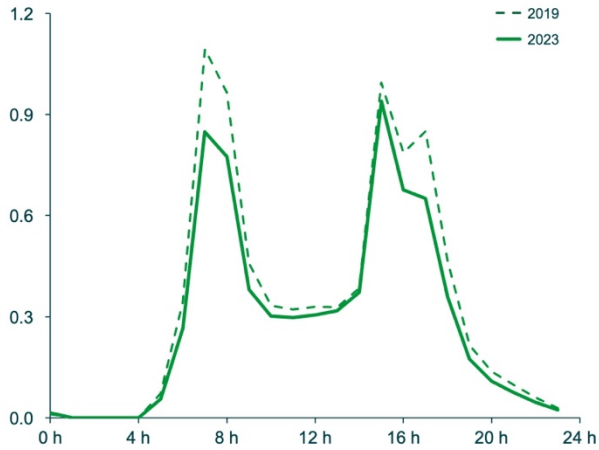
Peak-time commuting remains suppressed in major cities

Opal Sydney CBD weekday tap on / tap offs, by time of day* (Feb 2020, Feb 2023)**
Millions of taps



Sydney CBD

Auckland bus & ferry boardings^, by time of day (Mar 2019, Mar 2023)**
Millions of taps



Auckland

Note: ** Data shown may be indicative for low-patronage periods due to data specificity; ** Dates were selected to try and capture typical non-holiday PT behaviours pre-Covid and post-Covid based on available data: Sydney CBD – weekdays over 3 weeks commencing from 1st Monday in February 2020/2023; Auckland – weekdays in March 2019/2023; Perth – non-holiday weekdays (schooldays) in March 2019/2023; Wellington – FY2019/2023 overall average. ^ Excludes train services due to differences in operations between 2019 / 2023*

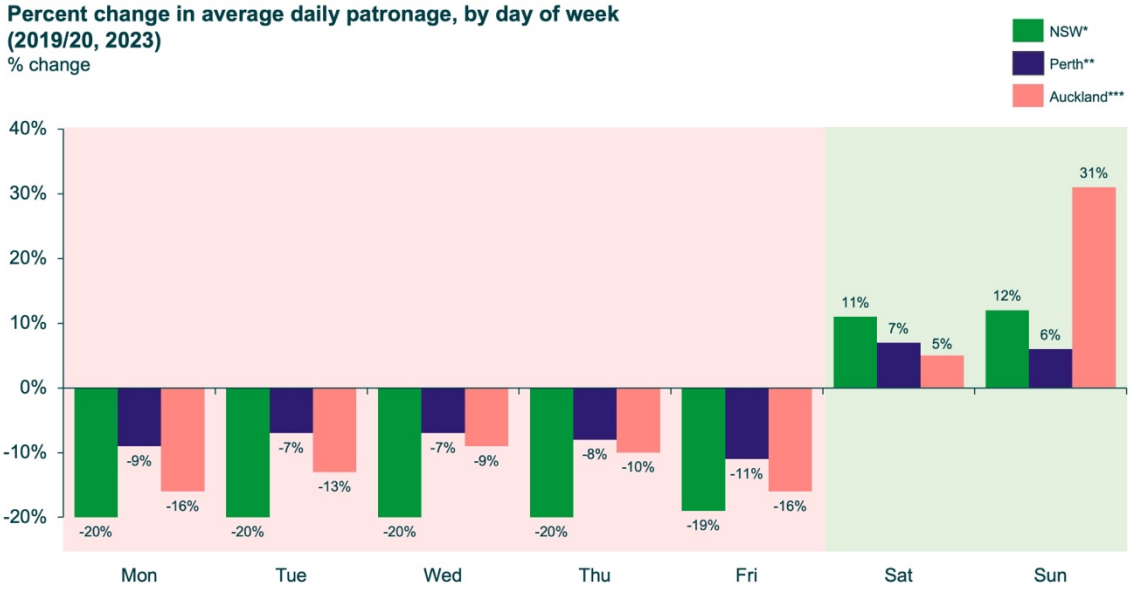
Source: NSW - TfNSW Open Data; Auckland - Auckland Transport

Shifting social and recreational patterns

Placemaking and CBD activation policies implemented post-COVID have led to CBDs and other recreational areas seeing increased public transport traffic, with usage distributed across non-peak hours and increasing travel over the weekend.

Relative to weekdays, weekend patronage has recovered strongly, surpassing pre-COVID levels across a number of ANZ cities. In particular, weekend ferry patronage has increased dramatically in Auckland. By early 2022, Melbourne had surpassed pre-COVID weekend CBD footfalls during major events (e.g., Grand Prix), while weekday footfalls were c.30-40% lower than pre-Covid. This shift from weekday to weekend traffic was reflected in public transport demand.[12] Similarly, visits to parks and nature attractions in the City of Sydney have increased significantly.[13]

There has been a shift from weekday to weekend travel, reflecting a structural change in how people choose to travel

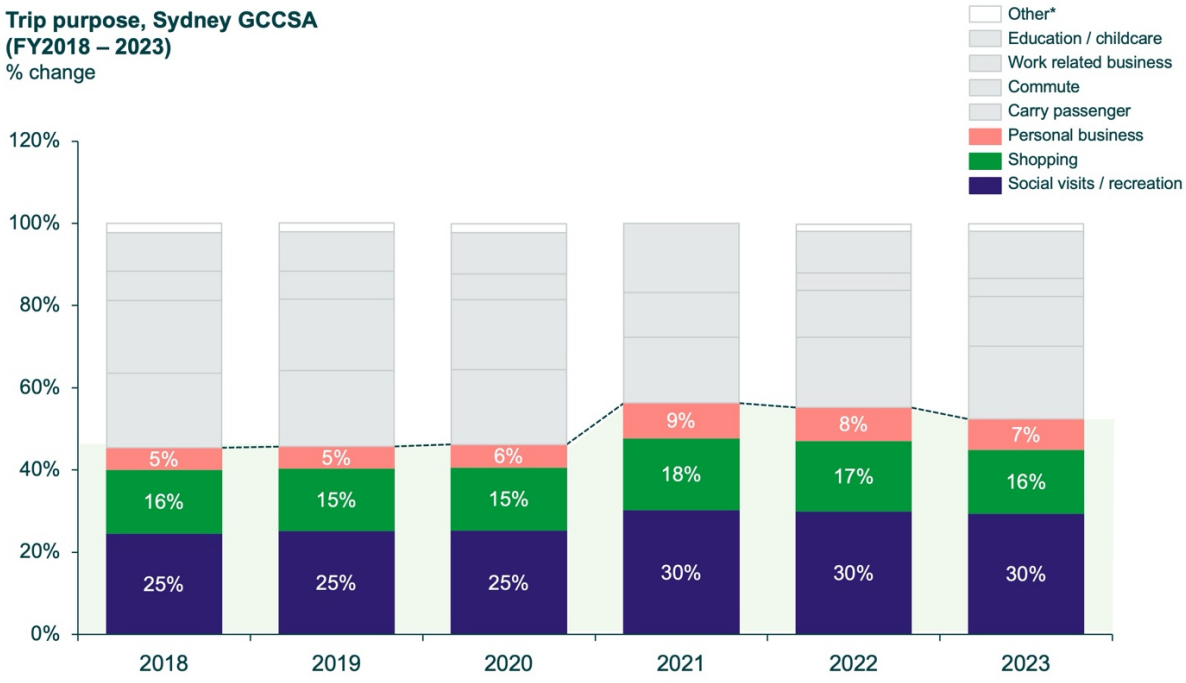


Note: ** Feb 2023 vs. Feb 2020; ** Mar 2023 vs. Mar 2019; *** Nov 2023 vs. Nov 2019*
Source: *NSW - TfNSW Open Data;; Perth (TransPerth) - PTA; Wellington – MetLink; Auckland - Auckland Transport*

The NSW Household Travel Survey was one of the few to publish annual trip purpose data over the entire COVID period, demonstrating a fall in commuting share and a rise in social visits / recreational purposes, which has persisted through 2023.

[12] https://www.theguardian.com/australia-news/2022/apr/14/melbourne-cbd-crowds-back-to-pre-pandemic-levels-due-to-major-events
[13] https://chartingtransport.com/2023/08/08/how-is-public-transport-patronage-recovering-after-the-pandemic-in-australian-and-new-zealand-cities/

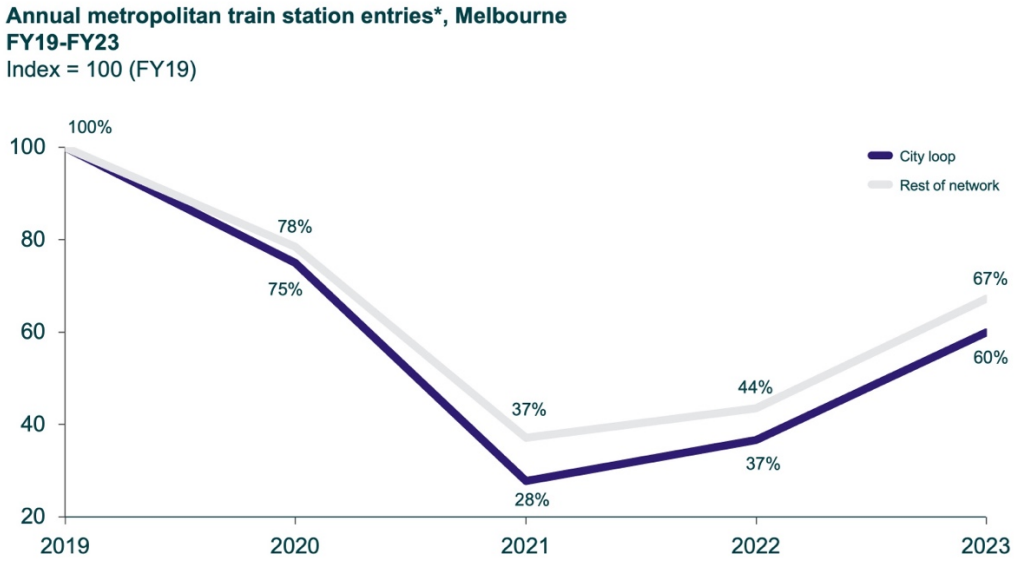
A decline in work related commuting, and a rise in personal, social and recreational travel has persisted through 2023



Note: ** Other in 2021 included work related business and education / childcare*
Source: *NSW Household Travel Survey*

This shift in travel volume away from work purposes, and towards social, recreational or 'personal business' has important implications for public transport planning as the spatial distribution of travel demand has changed. It suggests fewer trips to and from the CBD, and more trips to local areas of amenity closer to where people live. This can be seen in patronage data form the Melbourne metropolitan rail network, where station entries for 'City loop' stations remained 7ppt lower than the rest of the network in both FY22 and FY23.

Travel to and from CBDs is on the decline. Since COVID, Melbourne rail patronage between non-CBD stations has recovered faster than CBD trips



Note: *Patronage estimates are derived from myki ticketing data and factored up to account for the transaction rate.*
Source: *Victorian Department of Transport*

Context for ANZ Public Transport Authorities

Public Transport Authorities in Australia and New Zealand face several broader constraints when trying to drive patronage growth in the current environment:

- The fiscal position of many state / national governments is not as strong, emerging from COVID, as well as reduced economic activity. With consumer outlook being shaped significantly by cost-of-living concerns, political attention has generally shifted to other parts of the economy, such as energy and housing
- Due to constrained finances and significant cost increases for major infrastructure projects underway, there has been a general shift away from committing to major infrastructure projects, with some states seeking rationalisation of existing transport infrastructure pipelines. The forward infrastructure pipelines are likely to be conservative relative to the past and may be largely set for the next decade. In parallel there has been a shift in focus towards achieving cost efficiencies and return on investment for public transport projects
- This is reflected in a refocusing on strategic urban development across many governments – looking to guide future development of the city with mobility in mind and a focus on maximising the utility of current and pipeline infrastructure, rather than building additional transport infrastructure
- Looking forward, public transport is likely to be shaped, in particular, by both urban development policies and the energy transition, requiring a broader set of government stakeholders.

Strategies for increasing patronage

As part of our research, we contacted several public transport authorities across ANZ, as well as global counterparts, and conducted secondary research, looking at what had been implemented post COVID, with direct or indirect impacts on patronage.

By far, the most common strategies observed are those that tend to be relatively straightforward to implement, such as fare discounting or capping.

Less common were strategies that involved more fundamental change to the transport system (e.g., reduction of crowding, improving level of comfort and better regularity / frequency of service)[14] given these solutions can take significant time to implement. However, there is general consensus that factors that require these fundamental changes are important factors that can be some of the most influential for uptake of public transport.

Across our research, there were limited examples of clear cause and effect relationships between initiatives and patronage recovery, as many were implemented in periods where patronage was recovering independent of intervention and / or multiple measures were implemented simultaneously. As such, we also considered other measures implemented previously that were known to have the potential to improve patronage.

It is clear from experience internationally and at home, that **there is no silver bullet for improving public transport mode share.** The research showed to create mode shift, and build patronage, public transport authorities need to adapt to the evolving situation in a flexible way. The following graphic summarises 9 key themes that public transport authorities have employed globally to mode shift to public transport.

9 key themes for improving public transport mode share

1. **Service delivery**
   - Improving reliability (On-time running / cancellations)
   - Better communication (crowding, reliability)
   - Improved bus priority
   - Addressing labour shortages
2. **Service reform**
   - Closer alignment with daily / weekly travel demand
   - Local catchment area service plans Reallocation of capacity and reduction of one-seat journeys
   - Off peak growth
3. **Service innovation**
   - Integration with ride share
   - Integration with micro-mobility and active transport
   - Integration with major events
   - On demand bus services
4. **Pricing**
   - Fare reforms (new post-COVID products)
   - Concessions strategy
   - Corporate programs (e.g., corporate fares bundles for employees)
5. **Cost effectiveness**
   - Bus contract consolidation / depot consolidation / operator efficiency
   - Service rationalization / replacement
   - Reducing fare evasion
6. **Modal competitiveness**
   - Car parking costs and availability to disincentive for car use
   - Car parking fines
7. **Marketing / trip generation**
   - Leveraging growing ESG sentiment to drive mode share
   - Improving perception of network safety and security
   - CBD rejuvenation
8. **Agility**
   - Implementation sprints
   - Business case simplification
9. **Net zero**
   - Acceleration of decarbonisation via rail, bus, and ferry electrification
   - Interim decarbonisation strategies (e.g., hybrid rail, biodiesel etc.)

[14] https://www.pc.gov.au/media-speeches/articles/public-transport-rethink

What have PTAANZ member organisations done to improve patronage?

The PTAANZ Mode Shift Symposium held in Brisbane on 1-2 May 2024 brought together industry leaders to discuss the challenges and opportunities in encouraging more people to use public transport. During the workshop, members shared their experiences with patronage improvement initiatives trialled in their jurisdictions. It was clear that jurisdictions to date have focused on five themes for improving patronage: Pricing, Service delivery, Service reform, Service innovation, and Marketing / trip generation.

In general, contributors to the symposium suggested that initiatives tied to 'service delivery', 'service reform' and 'service innovation' were more successful than fare reform initiatives – and this is consistent with international experience

Pricing

Fare discounting or capping were common strategies which transport authorities have trialled and are also relatively easy to implement. For example, Auckland Transport implemented a 50% fare reduction to bus, train and ferry services between 1 April 2022 and 30 June 2023. This resulted in a marginal uptake in demand over the period. As another example, in May 2024, the Queensland Government announced a 50c cap on all public transport fares in a six month trial. There are also examples of 'free fare' initiatives overseas; in the United States, the DASH bus system in Alexandria, Virgina became free from September 2021 with a commitment to remain free for four years[15].

Evidence suggests that free fares can achieve up to a 30% patronage uplift, some derived from mode share shift (often with a substantial portion coming from active transport). Where deeply discounted fares have been introduced, incremental farebox revenue from new customers is typically substantially less than the farebox revenue lost in discounts to existing customers (i.e. reflecting the fact that public transport demand is "price inelastic").

[15] https://news.trust.org/item/20220310120923-ztyx9/

Case study - Victoria

Fare Capping for Regional Victorian Public Transport provides savings for Victorians, and lifts regional patronage

Motivated by the desire to increase the uptake and affordability of transport for regional Victorians, the state government introduced a fare cap on public transport trips on the 31st of March 2023. This capped the daily fare for regional public transport users to $10.60 – a significant saving for regional Victorians, with a return ticket from Bendigo to Melbourne reducing from $68.80 to $10.60 per day.

After one year the program Regional Victorians saved $50m, with more than 22 million trips taken. By 31 December 2023, regional network patronage had nearly recovered to pre-COVID levels, at 97% of 2019 patronage. V/Line also added hundreds of special services across the network, put on extra carriages, utilised standby coaches and trialed new reservations procedures to meet the increased demand.

Real-time location information for regional train passengers enables better, more convenient journey planning

The Victorian Government provided access to real time information on V/Line train arrivals. This information was made available to Google Maps, Apple Maps, and the department's AnyTrip app. Prior to this, real-time data for V/line train services was only available at stations on platform display boards.

Service delivery

PTAANZ member organisations trialled several initiatives to improve service delivery. This included additional bus lanes, improving safety through live CCTV, and addressing labour shortages to improve service reliability.
Austroads evaluated several ANZ case studies where on-road bus priority has been installed and found that even low-cost projects can deliver significant travel time improvements for buses and significant patronage uplifts.[16] Notably, significant benefits can also be seen with transit lanes (shared lanes for passenger-containing cars and buses). For example, installation of a 2 km T3 lane along Manakau Road in Auckland achieved a c.50% reduction in journey times and increased bus occupancies by 20%.

The safety and security on board and at stations are important factors that influence people's decision to use the public transport network. Initiatives to improve safety on board and at stations have been implemented in Australia and New Zealand. These include the deployment of safety personnel, improved lighting, and the deployment of more CCTV cameras. In Victoria, this has seen the deployment of protective services officers at 216 railway stations from 6 pm to the last available service. [17] In NSW, where there are 10,000 CCTV cameras across the train network, Transport for NSW is using AI technologies on CCTV cameras in certain CBD and Newcastle locations to help make transport safer. [18] In South Australia, QR codes have been used to encourage commuters to report poor behaviour, which then allows security officers to be deployed to locations that require them the most.[19]

[16] https://austroads.com.au/publications/network/ap-r550-17/media/AP-R550-17_Prioritising_On-road_Public_Transport.pdf
[17] https://www.police.vic.gov.au/public-transport-safety
[18] https://www.transport.nsw.gov.au/projects/current-projects/cctv-trial-commences-at-sydney-cbd-and-newcastle
[19] https://www.dit.sa.gov.au/news/archive?a=1248726

Service reform

Increasing the frequency of services, with a focus on off-peak, weekend and contra-peak times was an initiative that jurisdictions have trailed to drive increased public transport mode share. If services have low frequencies this creates a barrier for consumers to use public transport services, resulting in lower patronage. A key threshold for consumers is the point at which they pivot from consulting a timetable before travelling to just turning up at the transit stop, which is generally considered to be services that run every 10 (or sometimes 15) minutes. So-called 'turn-up-and-go' public transport services meet these high-frequency thresholds, delivering sufficiently low waiting times for consumers that frequency does not influence use of the service.

Turn-up-and-go public transport has been captured as a policy objective in many urban plans, e.g. Melbourne's Transport Strategy 2030[20] (targeting services every 10 minutes) and Queensland's Connecting SEQ 2031[21] (targeting peak services every 10 minutes and off-peak services every 15 minutes). Infrastructure Victoria recently estimated that only one-third of Melbourne's population is currently within 10 minutes (c.800 m) of a high-frequency service, proposing investment in bus services as a strategy to double this.[22] In 2018, Victoria's Parliamentary Budget Office costed a 10-year proposal to increase Melbourne metro train and tram frequency to every 10 minutes, 9 am to 9 pm at c.$1.9bn over 10 years (compared to estimated total annual metro revenue of c.$0.8bn in 2018).

Studies looking at the impact of service frequency on patronage have generally found a significant impact, with a conservative consensus view suggesting a 2-fold increase in service frequency can be expected to increase patronage by up to c.30-40%.[23,24,25] Higher impacts have been observed for off-peak / weekend services and in the longer term.

[20] https://www.melbourne.vic.gov.au/SiteCollectionDocuments/transport-strategy-2030-city-of-melbourne.pdf
[21] https://documents.parliament.qld.gov.au/tp/2022/5722T451-4124.pdf
[22] https://www.infrastructurevictoria.com.au/resources/fast-frequent-fair-how-buses-can-better-connect-melbourne
[23] https://www.sciencedirect.com/science/article/abs/pii/S0966692308000306
[24] https://trl.co.uk/uploads/trl/documents/TRL593%20-%20The%20Demand%20for%20Public%20Transport.pdf
[25] https://www.vtpi.org/elasticities.pdf

Case study - Queensland

Real time service capacity tracker to manage crowding on-board trains provides improved amenity for passengers

During COVID the QLD Government introduced a publicly available online indication of the level of crowing anticipated on train services at various times of the day. This was done in order to help customers make choices about social distancing, encouraging them to travel based on their own comfort levels with regards to their health and safety. This information remains available on the Translink website.

The website proved popular initially, as it was widely advertised and social distancing was a key public focus during the pandemic. It continues to receive about 200 hits per day, despite the service no longer being widely advertised.

Maintaining high-frequency services during, and post pandemic leads to review of network design and service levels

During COVID the Queensland Government maintained operation of all services, including high-frequency services. This was primarily to maintain access to employment for essential workers who had no other means of travel, and to ensure that patterns of travel usage were not broken.

Patronage on high-frequency routes serving the CBD remain low compared to pre-pandemic levels due to structural changes to commuter travel patterns. However, at off-peak times these routes appear to be doing very well. This has led the government to shift its focus towards the off-peak network. In aims to service frequencies to provide convenient and flexible opportunities to travel throughout the day, meeting demand for changing travel patterns focused on local communities and away from the previous focus on core, commuter-focused CBD markets.

Service innovation

On-demand transport services are an area of innovation which have the potential to increase public transport ridership. These services allow passengers to book their journeys at a time convenient to them, via an app, to be collected at an agreed location. This solves the first and last mile connectivity issues that are a significant problem in urban mobility. This model of transport also better meets the changing mobility needs of customers, who are now travelling outside standard peak times to avoid large crowds.

On demand transport services have seen success in NSW. The Ponds service operated by Cooee Busway delivered more than 80,000 rides within nine months of launching. The service has shown the potential for wider economic benefits including emissions reduction and socio-economic benefits to the community:

- 55% of passengers made the same journey by private car previously. Half of these passengers were single car users driving and parking at or near the station
- 13% of individuals stated in a recent survey they would not have made the journey if they did not have access to the On Demand service

Marketing / trip generation

The COVID-19 pandemic caused a fundamental shift in the way the community viewed and used public transport. Concerns about public health and social distancing initially led people to private vehicle use, or towards commuting during less crowded, off-peak times – with these behaviours becoming habitual and entrenched over time. Clear messaging to re-build awareness of public transport and promote its use is critical for increasing ridership.

QLD ran an innovative 'Golden *go card* giveaway' in June 2021, in which commuters were given a chance to win a year of free travel. They saw strong adoption with more than 33,500 entries in four weeks. Effective campaigns are not limited to public transport authorities. The Property Council of Australia (QLD) ran a Fridays in the City campaign which reminded people why the city is a great place to visit and work[26].

Modal competitiveness

In addition to measure that increase the attractiveness of public transport, mode share shift can also be encouraged by making private vehicle transport less attractive. Parking is the obvious place to start. For example, Transport for NSW manages a Parking Space Levy in the Sydney CBD and other congested areas of the city such as Bondi Junction and Chatswood[27]. While in Auckland, work is underway to investigate time-of-use charging which would apply in peak periods to reduce congestion and improve travel times[28]. Road-based public transport would be a major beneficiary of this in terms of reduced journey times and improved service reliability.

Much can also be learned from international experience. Part of London's success can be attributed to the direct initiatives it has taken to dis-incentivise car use over time. This includes a congestion charge first introduced in 2003 at £5 (now £15)[29], and the introduction of its Ultra Low Emission Zone (ULEZ) in 2019, in which vehicles that do not meet emissions standards must pay a daily charge of £12.50 per day to drive within the zone[30]. Revenue from the congestion charge and the ULEZ is a direct (hypothecated) funding source for Transport for London.

What are new initiatives that member organisations would like to try in the future?

Symposium participants were asked to identify and rank the initiatives that they would like to try in the future to increase public transport mode share. Further increasing frequency, bus prioritisation, and real-time information were the top three ideas identified, consistent with the theme that service delivery, reform and innovation are areas that are most likely to move the dial on mode share.

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[26] https://statements.qld.gov.au/statements/92504

[27] https://www.revenue.nsw.gov.au/taxes-duties-levies-royalties/parking-space-levy#:~:text=Refresh-,Annual%20levy,Sydney's%20CBD

[28] https://ourauckland.aucklandcouncil.govt.nz/news/2024/06/auckland-council-sets-out-guiding-principles-for-time-of-use-charging/#:~:text=In%202020%2C%20a%20report%20by,school%20holidays%2C%20all%20year%20round.

[29] https://tfl.gov.uk/modes/driving/congestion-charge

[30] https://tfl.gov.uk/modes/driving/ultra-low-emission-zone

Top 10 ideas PTAANZ member organisations want to try to increase public transport mode share

1st	2nd	3rd	4th	5th
Increase frequency, coverage, and network integration	Expand dedicated busway infrastructure	Better multi-modal trip planning with real-time, reliable information	Maximise corporate products (e.g. employers offering PT as a benefit)	Understand new demand, and match services

6th	7th	8th	9th	10th
Build awareness of the network's capabilities for a wider range of trips	Proactive marketing targeting a corridor, rather than individual services	Better ways to capture real-time customer feedback	Reduced fares for new property developments	eBike park and ride – allow access to secure storage using PT card

Conclusion

In the lead up to COVID, public transport authorities around the world were being rewarded for their efforts to improve public transport service levels and quality. Both patronage and mode share gains were rightly celebrated. There is no doubt that COVID was a material setback for public transport, with specific government direction to not use any form of shared transport or dramatically limiting its use during the pandemic and locking in behavioural change towards private transport.

Contributors to the May 2024 PTAANZ Mode Shift Symposium collectively reinforced the fact that public transport authorities and operators in Australia and New Zealand are taking successful pre-COVID strategic initiatives to a new level post-COVID in their efforts to drive patronage recovery across multiple dimensions including the fundamentals of service delivery (i.e. frequency and reliability), service innovation (e.g. integration with other modes and services) and targeted fare reform (for example). All this in an environmentally sustainable manner with hard targets to transition to zero emission fleets. Initiatives to date have largely focused on making public transport more attractive by making it cheaper, more accessible, or more convenient. However, driving mode share shift to public transport should be about both “carrots and sticks”.

With a natural limit to the extent we can drive the attractiveness of public transport, we must increasingly focus on the “sticks”, specifically how we can directly disincentivise private car use as a means of driving mode shift to public transport. London provides a case study for how this can be achieved. While clearly not directly transferable to the Australia/New Zealand context, an impressive c. 65% of London journeys are currently made by “sustainable modes” (i.e. public transport and active transport), with a goal to increase this to 80% by 2041. Much of this can be attributed to progressive measures to discourage private car use through access charges - including those linked to vehicle emissions.

While the efforts of public transport authorities to date have delivered impressive results, we clearly need more to support growth in public transport usage and mode share in Australian and New Zealand cities.