



WHAT'S NEXT IN POINT-TO-POINT TRANSPORT?

By Vincent Chin, Mariam Jaafar, Nikita Shelomentsev, and Duong Do

CITIES IN AUSTRALIA AND New Zealand are growing and changing at a significant pace. In addition to having some of the highest population increases in the Organisation for Economic Co-operation and Development, Australasian cities are affected by global trends such as escalating urbanisation, technological transformation, and changes to the nature and location of work. These trends have an impact on the structure and operation of cities—in particular, roads and public-transport networks, and how people travel around in them.

The increased availability of point-to-point transport, through the emergence of ridesharing, has already changed travel behaviour in Australian and New Zealand cities. Governments in both countries have led the world in regulating the point-to-point transport market. All jurisdictions across the region have now incorporated rideshare services such as Uber, Taxify, and GoCatch into legal frameworks to expand competition and innovation. People are using rideshare services, in combination with public and active transport, as well as vehicle sharing to

meet more of their travel needs. A number of benefits to ridesharing have emerged—for example, reduced congestion and car ownership. However, a better understanding of these benefits, and how to leverage them in the future, needs to be developed.

Uber commissioned Boston Consulting Group to look at the near-term potential of the point-to-point transport sector and the possible benefits greater adoption of ridesharing could bring. The findings in this report were developed through research using publicly available transport data, interviews with transport experts, and primary research with passengers in each city. The report covers the following cities: Sydney, Melbourne, Brisbane, Adelaide, Perth, and Auckland.

Ridesharing Has Grown, but Private Cars Are Still Dominant

Reforms to point-to-point transport have allowed ridesharing to play a growing role in Australia and New Zealand. However, private cars continue to dominate urban

transport systems. On average, private cars account for 83% of the total passenger-km travelled by motorised vehicles in 2017 across the six cities studied. (See Exhibit 1.)

High private-car use is due to a number of factors, including:

- Low population density in Australasian cities, which makes investment in public transport less efficient, particularly in outer urban areas
- High average incomes relative to the cost of car ownership, which makes cars more affordable
- Commuters' preference for using private cars because of the flexibility, privacy, and comfort they provide, especially in cities where public transport is arranged in a hub-and-spoke radial model

Road Congestion Is an Ongoing Challenge for Australasian Cities

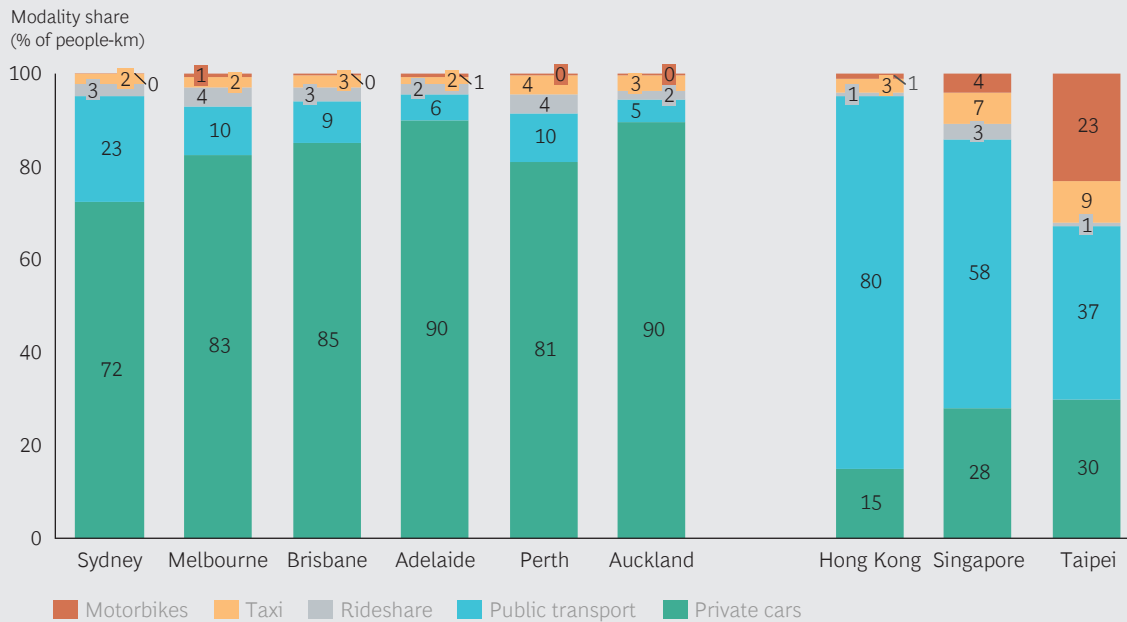
High car ownership, sometimes poor access to public transport, and a growing popula-

tion have made roads in Australian and New Zealand cities more and more congested. It is estimated that in 2017 congestion levels (defined as the additional time it takes to travel during peak congestion hours) ranged between 32% and 48%, averaging 39% in the six cities studied. (See Exhibit 2.)

Congestion imposes a large social and economic cost on cities. In the five Australian cities, the associated social cost of congestion—which includes extra travel time and variability, higher rates of fuel consumption, and poorer air quality—was estimated to be as much as AUD 19 billion in 2015.¹ As the private-car population continues to expand, the total social cost of congestion is expected to more than double the 2015 level by 2030—to AUD 40 billion.²

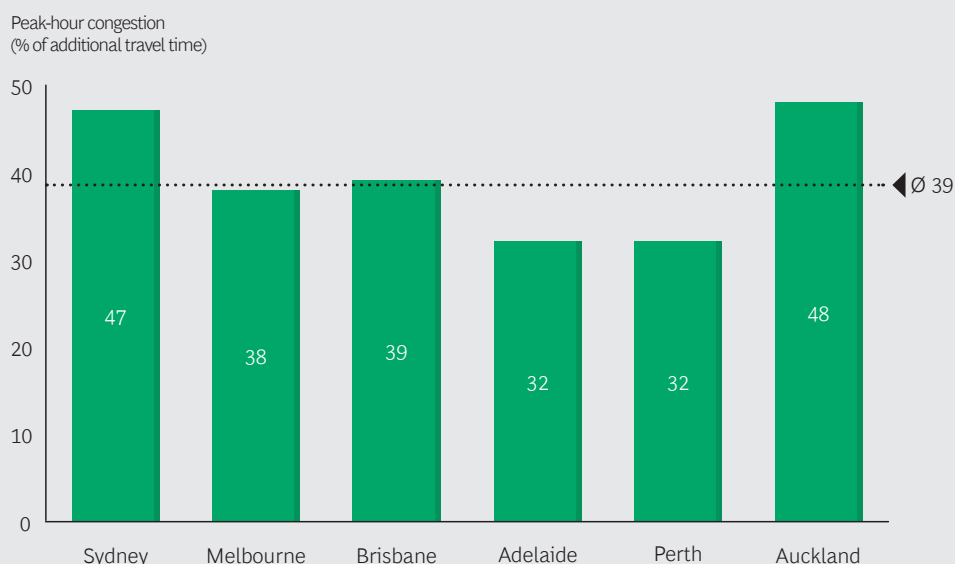
To address the dominance of private-car travel, governments in Australia and New Zealand have made sustained capital investments in public transport over the last few years. Local and state governments have also introduced initiatives to encourage the use of alternative travel options. These strategies include promoting active

EXHIBIT 1 | Share of Transport Modality in Australian and New Zealand Cities



Sources: Australia Ministry of Transport statistics; New Zealand Ministry of Transport statistics; Numbeo Traffic & Time Index, 2017; BCG survey; BCG analysis.
 Note: Walking is excluded from the calculation, although it represents a minor portion of modality at around 0%–3%.

EXHIBIT 2 | Peak-Hour Congestion



Sources: TomTom Traffic Index, 2017; Numbeo Traffic & Time Index, 2017; Australia Department of Infrastructure, Regional Development and Cities, 2016; New Zealand Institute of Economic Research, 2017.

transport (walking and biking), vehicle sharing (such as GoGet and Car Next Door), and various bike-sharing networks.

However, because of the relatively low density of cities in Australia and New Zealand, the majority of households still face limited access to regular transport services. For example, only 35% of dwellings in Sydney, Melbourne, and Adelaide are within 400 metres of a public-transport stop that has a scheduled service at least every 30 minutes during weekday peak and shoulder periods (7 a.m. and 7 p.m.). In Perth, this figure drops to 18%, and it is between 11% and 13% in Brisbane.³

Shared Mobility Could Reduce Congestion in Several Ways

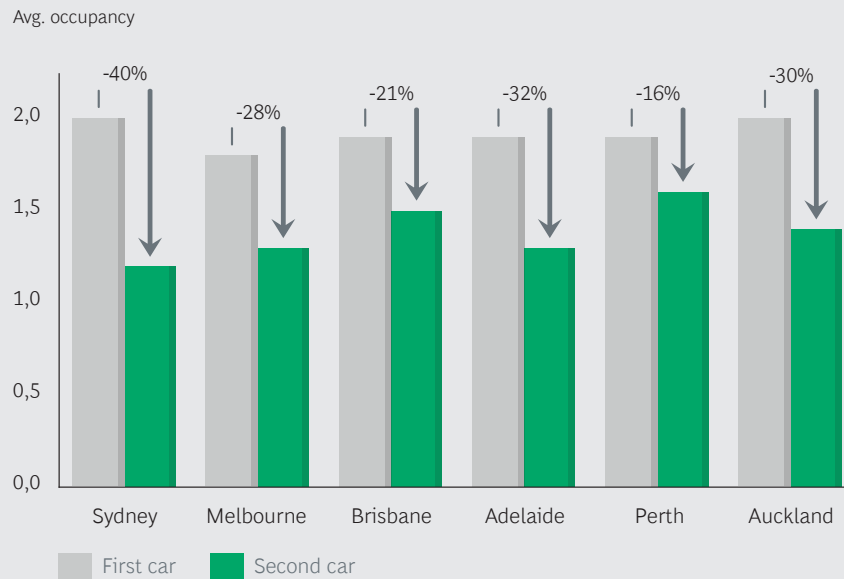
The congestion-policy challenge highlights the need for a different approach in how we operate and regulate our cities' transport systems. Policymakers will need to use a range of options to reduce congestion, such as managing demand and promoting efficient road usage through road pricing. However, this report explores how ride-sharing could help by lowering car ownership, raising network utilisation through pooling, and improving access to public transport and thus the network's reach.

As point-to-point transport and other shared services grow in prominence, they are an increasingly competitive and viable alternative to private-car ownership in major urban areas. The average Australian metropolitan household now spends AUD 17,912 on transport costs annually.⁴

In particular, the economic case for households to remove their secondary cars is strong, because on average these cars are used much less than the primary cars—they have 28% lower occupancy per trip (Exhibit 3) and are driven on 25% fewer days during the week. However, 50% to 62% of Australian and New Zealand households still own two or more cars (Exhibit 4), and 63% of survey respondents plan to buy a car in the next five years.

The high levels of car ownership in Australia and New Zealand indicate that industry and governments need to do more to improve the attractiveness of public transport and new mobility services such as ridesharing. The next wave of innovations in point-to-point transport will help with this. A range of new use cases for the technology introduced by ridesharing platforms will increase car occupancy and utilisation, and also improve access to public transport. These include:

EXHIBIT 3 | Average Occupancy per Car Trip—First Car vs. Second Car



Sources: Demographic Resources Australia; New Zealand Transport & Vehicle Census, 2013; Economist Intelligence Unit; World Bank; BCG survey; BCG analysis.

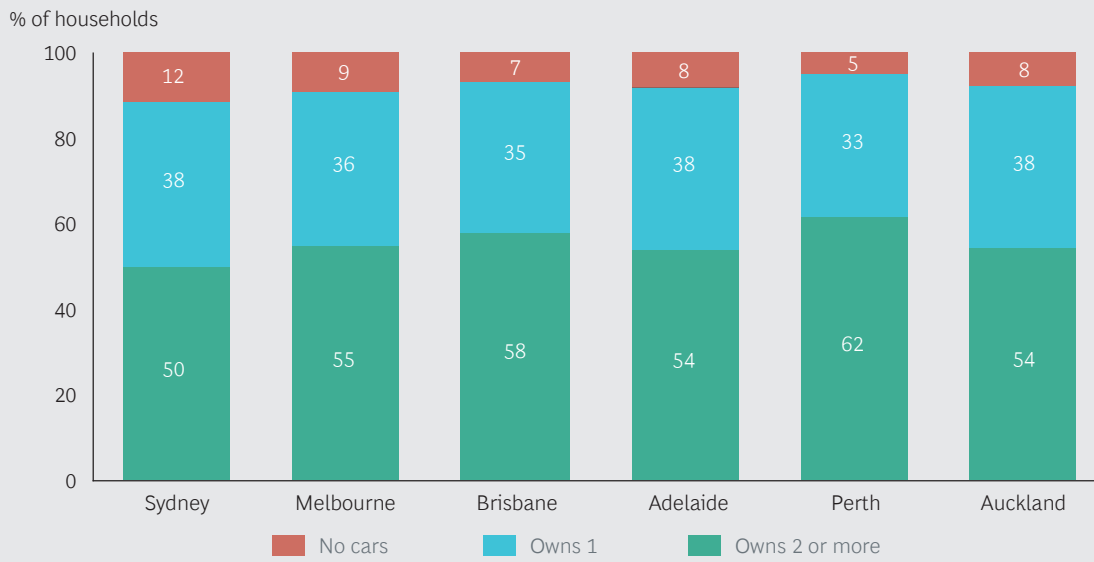
- The introduction of **pooling trips** on rideshare services, to increase vehicle occupancy and passenger-km delivered per vehicle. Pooling has been available in taxis for a long time, but without the support of a technology platform.
- **On-demand public transport.** This leverages technology used in ridesharing to match and pool passengers to improve the efficiency and convenience of public-transport services.
- The use of **destination targeting for rideshare drivers to promote carpooling.** Destination targeting allows drivers to select the area they wish to drive to, matching them only with trips headed in that direction and thus reducing vehicle kilometres as well as, potentially, the number of cars on the road.
- **Promoting multimodality by integrating point-to-point and public-transport networks.** This will extend the reach of a city’s public-transport spine, increasing transport access for citizens at more times of the day and night.
- **New forms of shared micro-mobility.** Enabling and investing in new forms of shared mobility, such as bikes and scooters, would create new options—especially for shorter journeys—and may make choosing a mix of on-demand and public transport even more compelling.

These innovations may drive an even bigger step-change in the transport landscape than the initial introduction of rideshare services in Australia in 2012 and New Zealand in 2014. Whereas low-priced services could lead to some induced trip demand and switching from active or public transport to rideshare services, a robust network of urban mobility options has the potential to lead to more consumers choosing to forgo private-car ownership and opting for shared modes of transport instead. Reducing private-car ownership could deliver many broader economic and social benefits, such as decreasing congestion, freeing up urban space that was previously used for parking, and improving air quality.

Looking to the Future

Australia and New Zealand’s level-playing-field approach to point-to-point transport reform and encouragement of car-sharing has significant and still emerg-

EXHIBIT 4 | Car Ownership by Household



Sources: Demographic Resources Australia; New Zealand Transport & Vehicle Census, 2013; Economist Intelligence Unit; World Bank; BCG survey; BCG analysis.

ing benefits. It has the potential to enhance urban mobility and livability, reduce reliance on private vehicles, and decrease congestion on the roads. Governments and point-to-point operators are already engaging with each other to accelerate these benefits and ensure that they are widely and equitably shared.

The transport system will continue to evolve in the future. New developments, like mobility as a service platform and autonomous vehicles, are certain to disrupt the transport ecosystem further. This inevitability only highlights the importance of collaboration between government and industry. As Australian and New Zealand cities grow and change in the future, it is crucial that innovation and technology-

enabled mobility services be supported. This will help increase the accessibility and operation of our cities' transport systems.

NOTES

¹ New Zealand Transport Agency Research Report 489, 2016; "Avoidable social cost includes private and business time costs, extra vehicle operating costs, and pollution costs," Australia Department of Infrastructure, Regional Development and Cities, Bureau of Infrastructure, Transport and Regional Economics, 2015.

² Australia Department of Infrastructure, Regional Development and Cities, Bureau of Infrastructure, Transport and Regional Economics, 2015.

³ "Creating liveable cities in Australia," RMIT University, 2017.

⁴ Australian Automobile Association, Transport Affordability Index, March 2018.

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