

# Long-term impacts of remote working on transport patterns

The capacity of urban transport systems is designed to serve peak demand, which typically coincides with peak commute hours. If commute travel during peak hours can be reduced and/or spread to other hours of the day, transport systems can serve this demand more efficiently and cost-effectively, and this can help achieve wider societal benefits in terms of reduced network congestion, improved air quality, etc. Small reductions in the number of cars travelling at peak times can lead to big improvements in traffic flow. The NRMA estimates that when traffic on congested roads in Australian cities reduces by 5 per cent, traffic speeds increase by 50 per cent.

Remote working, telecommuting, work from home and other flexible working arrangements have been used as travel demand management strategies to reduce peak demand for over three decades now, but uptake of these practices has been historically low. Based on the 2016 Census, we estimate that roughly 2-8 per cent of the workforce in major Australian cities were working remotely on Census day. As a consequence of the COVID-19 pandemic, there has been an unprecedented upsurge in the adoption of remote working practices. At least 40 per cent of the Australian workforce reported working remotely one or more times a week during the peak of the pandemic, and 30 per cent reported working remotely most days.

The pandemic has offered a unique opportunity to test the viability of remote working practices across different jobs and industries, and to assess their impacts on transport patterns. Based on a survey of 2,694 Australian employees and 868 managers in 2020-21 drawn from the 17 largest urban areas in the country, and additional qualitative engagement with 37 Australian employers, we find that:

- Roughly 51 per cent of employees working in large Australian urban areas (populations greater than 100,000) believe that some of their jobs tasks and activities could be done remotely. However, only 16 per cent have formalised remote working arrangements with their employers.
- Ability to work remotely tends to be highest across white-collar sectors, such as information, media and telecommunications, and financial and insurance services, and white-collar occupations, such as professionals, managers, and clerical and administrative workers.
- Larger firms are more able to adopt remote working arrangements. Smaller businesses frequently do not have the resources to build the requisite technical infrastructure and organisational processes to enable remote working.
- For the average Australian employee, the flexibility to work remotely some days is worth \$6,000 in annual full-time wages, or roughly 10 per cent of their wages, but for some it is worth as much as \$24,000.
- Remote working arrangements could reduce weekday commute travel by car by 12-17 per cent and by public transport by 22-31 per cent across large urban areas. Reductions in travel are likely to be greatest on Mondays and Fridays, and for commute trips made to workplaces in CBD locations.
- Remote working arrangements could additionally move roughly 5 per cent of commute trips outside the morning peak period, and 10-20 per cent of commute trips outside the evening peak period.



## The Future

We seek interest from Local councils, state and federal governments, employers, property developers to look at:

1. What are the impacts on firm location decisions, and resulting spatial patterns of employment activity across metropolitan and regional cities? Are businesses downsizing their CBD presence, relocating non-essential functions to areas with lower rents, and transitioning a greater proportion of their workforce to off-site jobs?
2. What are impacts on residential location patterns? Are households relocating further away from work, potentially in more affordable suburbs, exurbs, or perhaps even in other smaller cities and/or regional and rural areas?
3. What are the impacts on the location and provision of supporting services? Changes in location patterns of businesses and households could impact the location of supporting services such as retail, restaurants, public transport, etc. The threat of future pandemics could further change extant approaches to service provision.

## Research Team

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## Partners

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Transport for New South Wales (TfNSW)

IMove Cooperative Research Centre

