



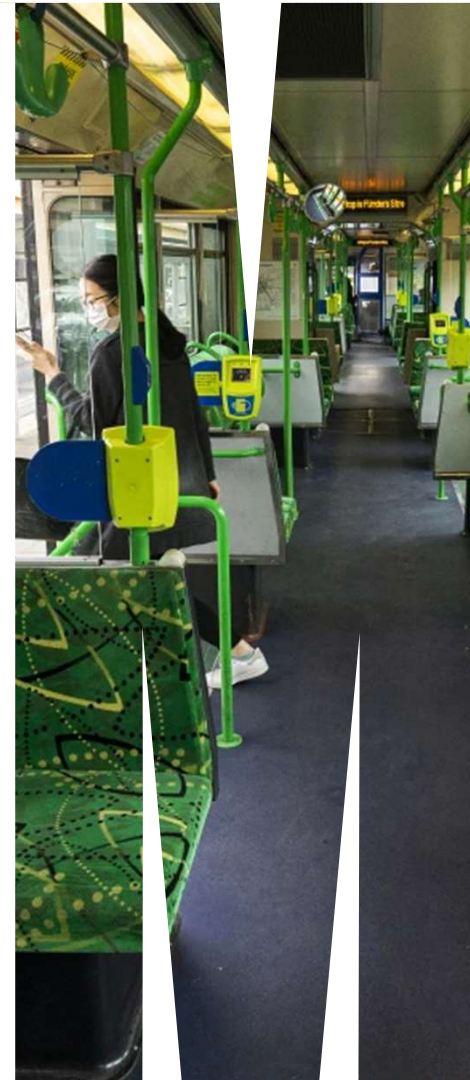
Monday 6th September 2021
AITPM Online Conference Series
Opening Keynote and Panel Session

Impacts of COVID-19 on Mobility Monash PTRG Research Update

Prof Graham Currie FTSE
Public Transport Research Group
Monash Institute of Transport Studies
Monash University, Australia



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Introduction

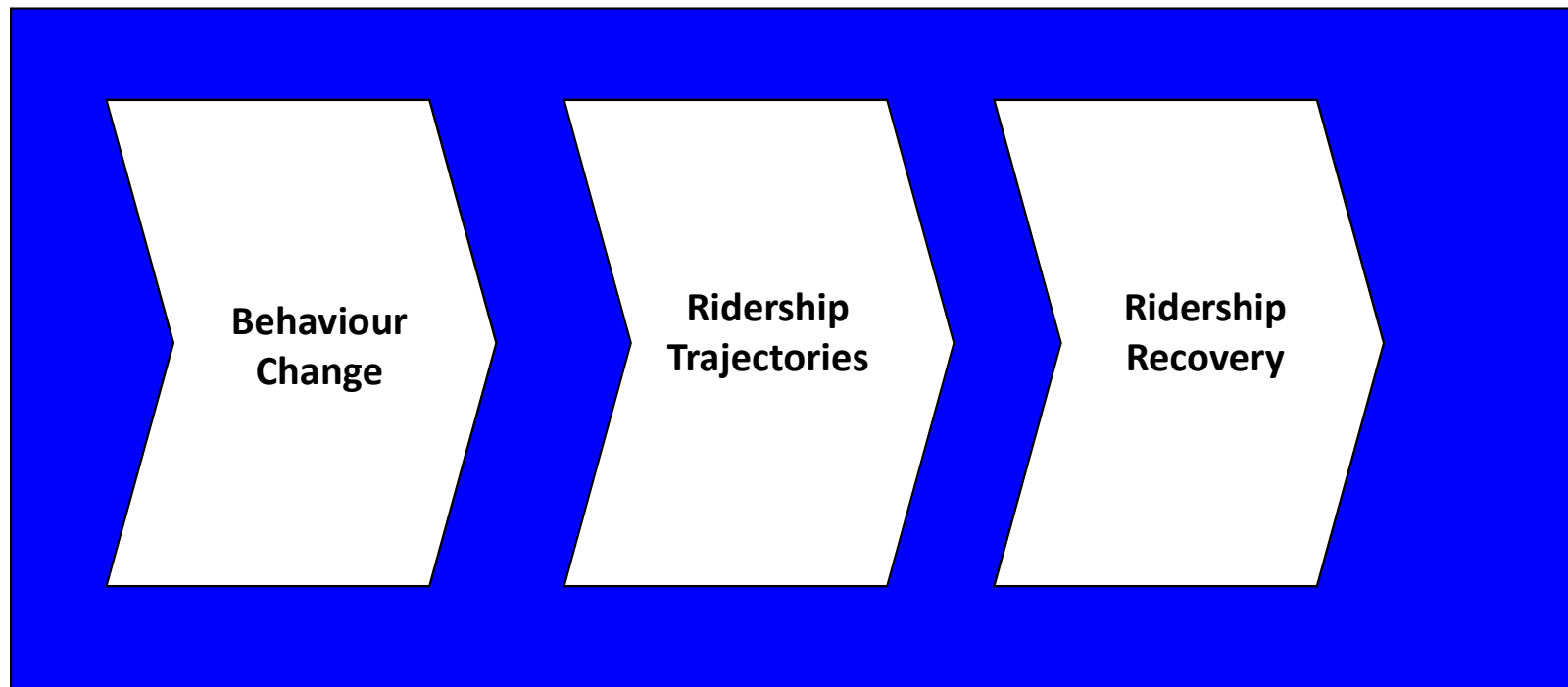
Behavior Change

Ridership Trajectories

Ridership Recovery



This presentation updates PTRG research to understand the long term impacts of COVID-19 on travel in cities





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Behavior Change

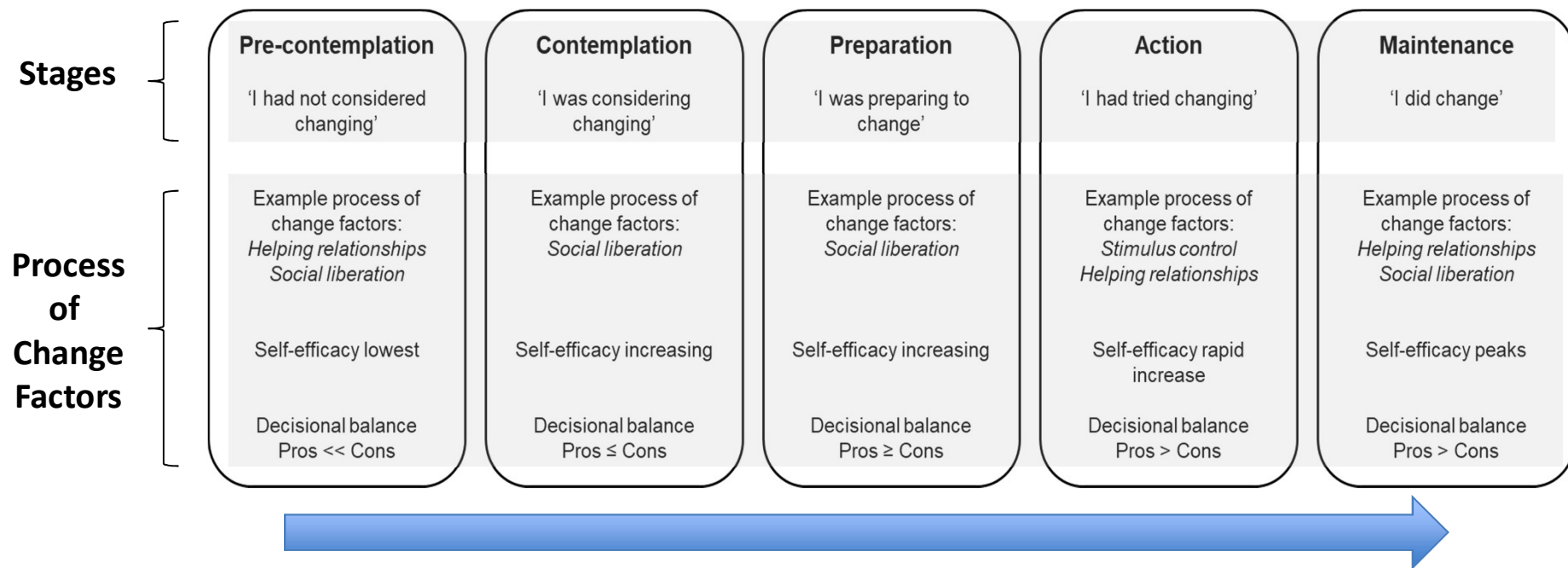
Ridership Trajectories

Ridership Recovery

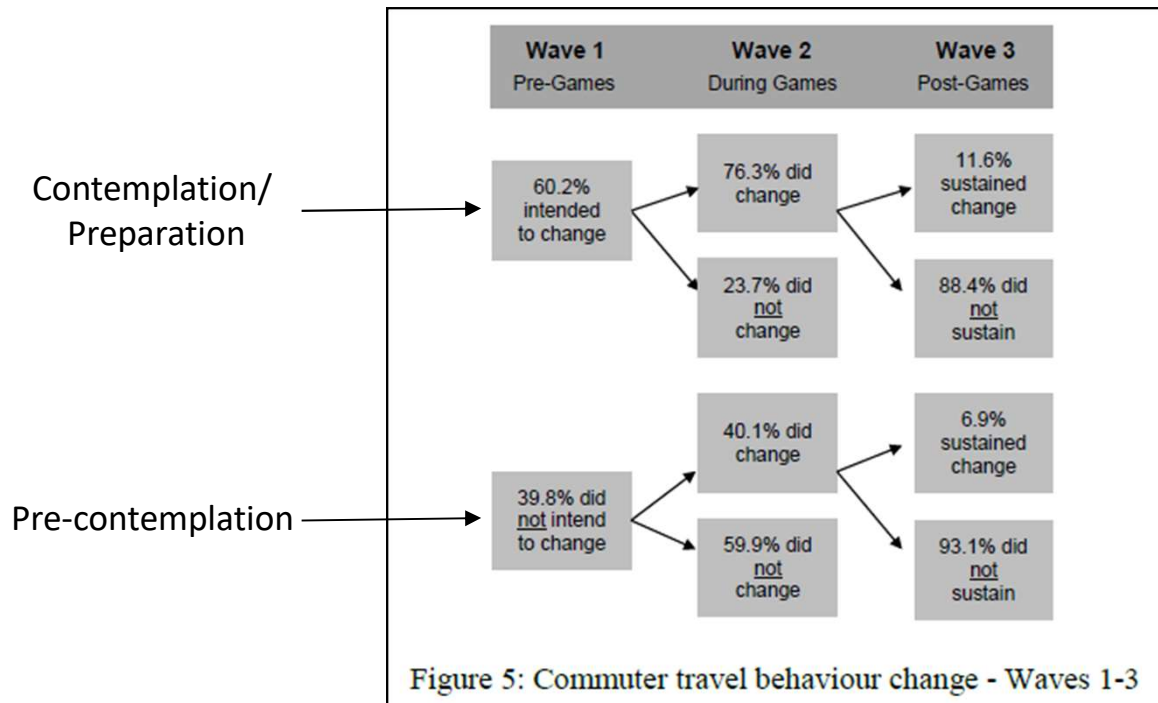


We are exploring long term impacts of C-19 on travel using a behaviour change model called the Trans Theoretical Model (TTM)

The Trans Theoretical Model of Behaviour Change



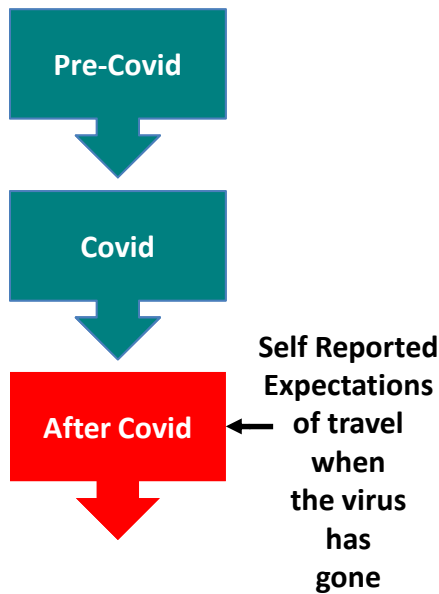
TTM was used to explore long term travel impacts of the London 2012 Olympic travel demand management program – will it work for COVID-19?



Source: Parkes, S. D., Jopson, A. and Marsden, G. (2016). "Understanding travel behaviour change during mega-events: Lessons from the London 2012 Games." Transportation Research Part A: Policy and Practice 92: 104-119

We included TTM questions in our large scale Melbourne online survey

Travel Behaviour Survey



TTM Stage

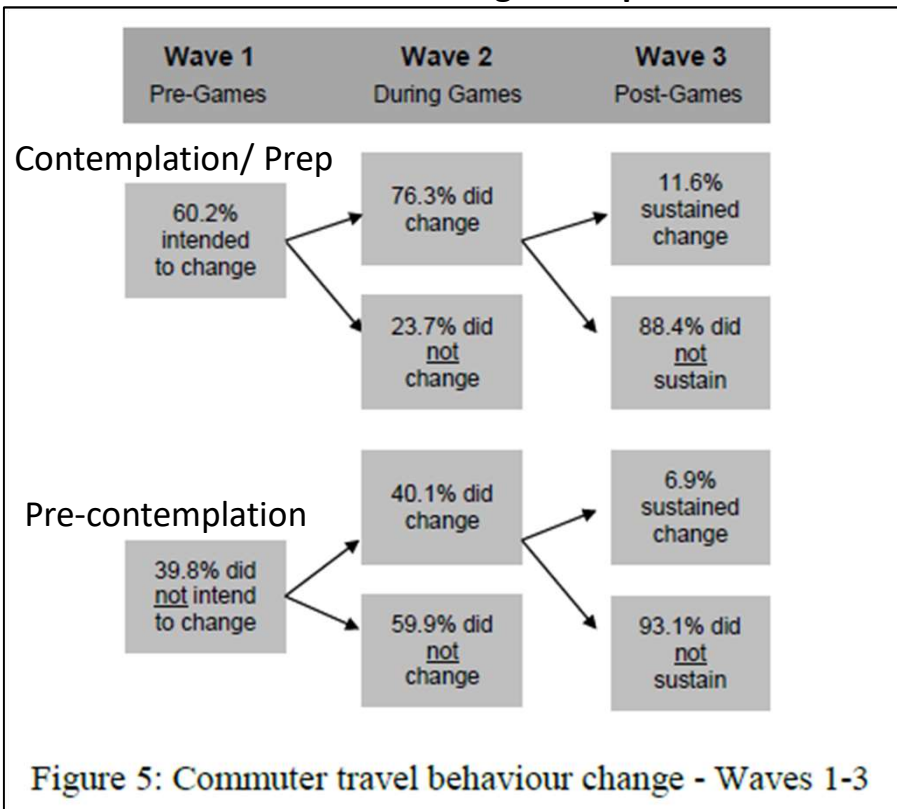
TTM Stage	Survey Question
	Number of times I worked from home
Pre-contemplation	I had NOT CONSIDERED CHANGING
Contemplation	I was CONSIDERING CHANGING
Preparation	I was PREPARING TO CHANGE
Action	I had TRIED CHANGING
Maintenance	I DID CHANGE

Process of Change Factors (Work from Home)

Construct	Measure in our survey	Cronbach's Alpha
Helping relationships	People important to me think that I should work from home more often than before COVID.	0.86
	People important to me will support me in working from home more often than before-COVID.	
	My employer will be supportive of me working from home more often than before-COVID.	
Social liberation	My colleagues will work from home more often than before-COVID.	n/a
Stimulus control	The materials (computer, equipment, internet etc) I need to work are available at home.	n/a
Self-efficacy	Work from home is easy compared to travelling to work	0.76
	I feel comfortable using technology to work from home	
Decisional balance	After the virus has gone, working from home more than before COVID-19 will...	0.96
	...help me in improving my productivity.	
	...help me in saving time	
	...improve my work life balance.	
	...improve my health.	
	...reduce my stress.	
	...give me flexibility	
...be cheaper for me.		
	...be safer for me.	
	...reduce distractions for me.	

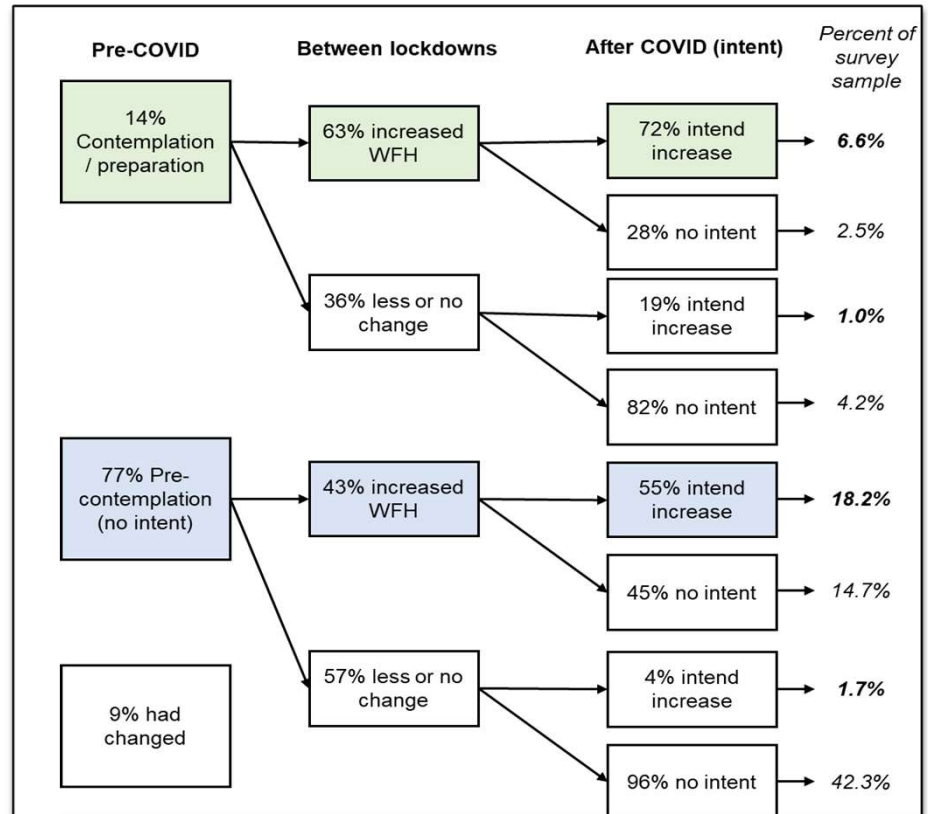
Results show WFH behaviour change was higher both short and long term with Contemplation/Preparation; confirm TTM theory applies to COVID-19

London 2012 TDM Program Impacts



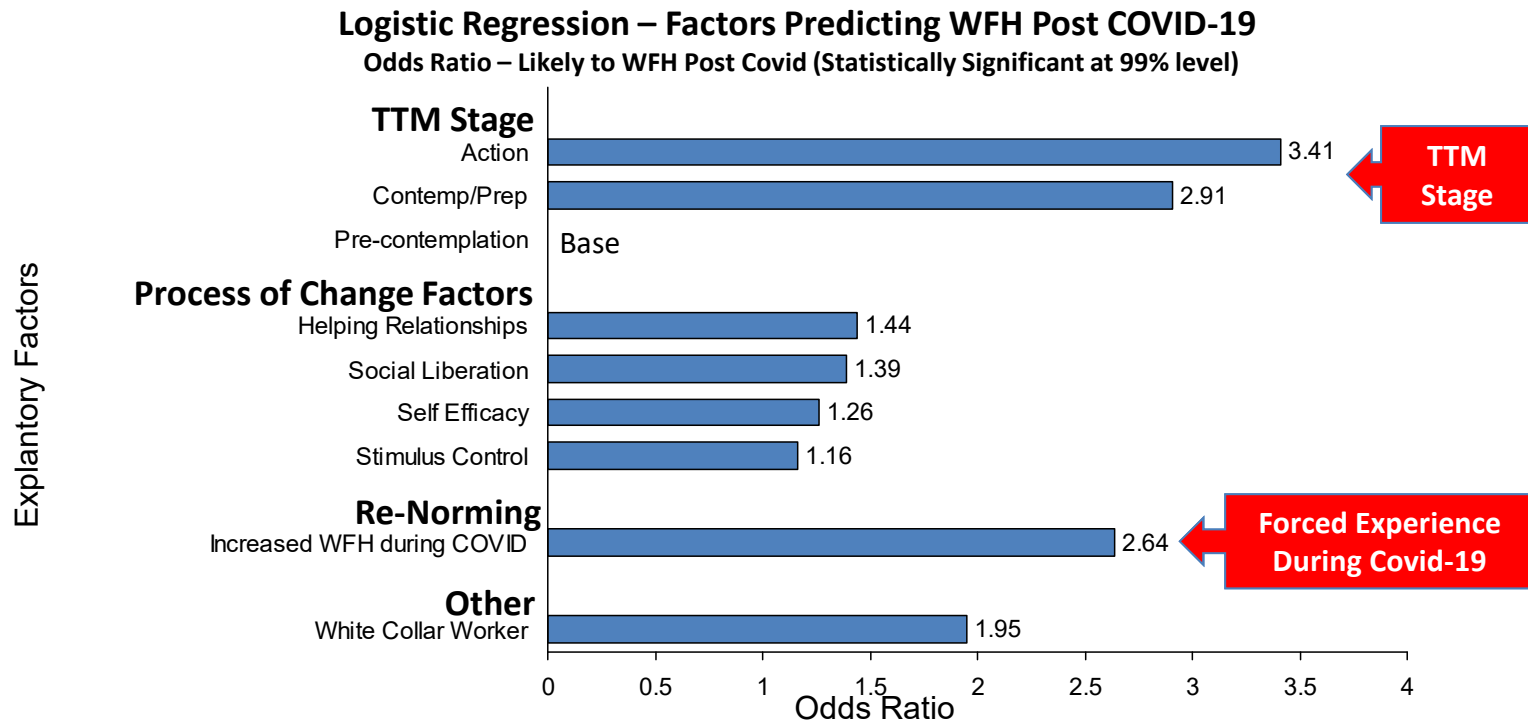
Source: Parkes et al (2016).

Monash COVID-19 Travel Impacts Research



Source: Preliminary results Monash Research 2021

TTM Stage substantially increases WFH as do Process of Change Factors – Re-Norming was also significant; forced WFH during COVID has changed future WFH behaviour



Source: Preliminary results Monash Research 2021



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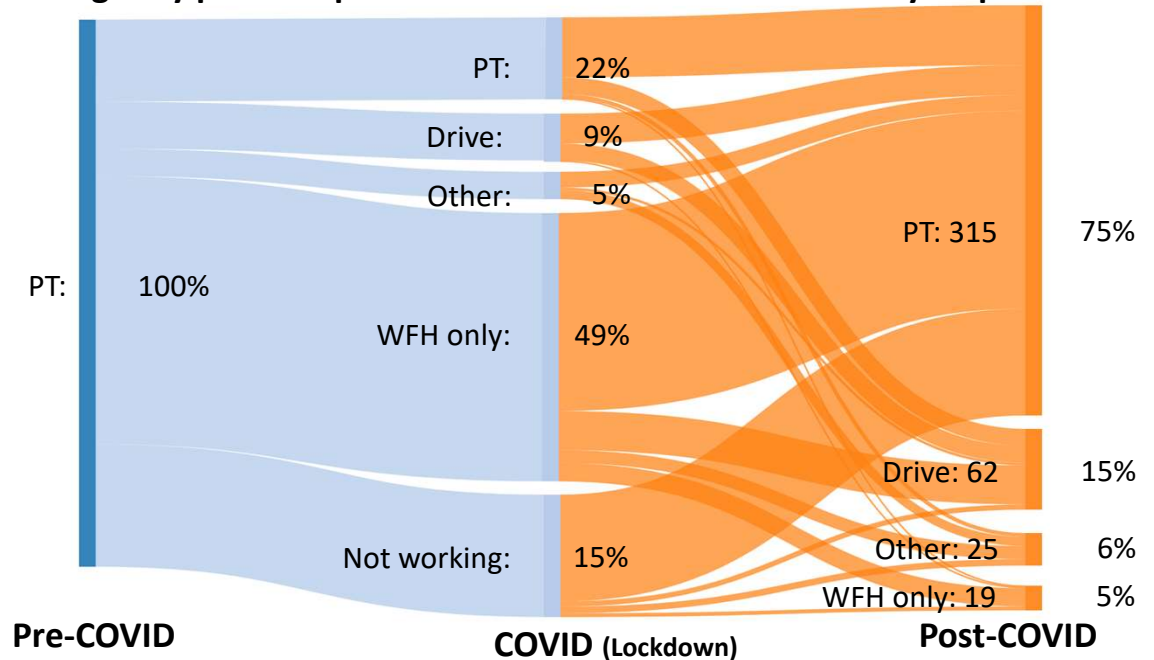


We are researching mobility trajectories of pre-COVID PT users during and also Post COVID to understand the prospects for market futures

Inclusion criteria

- ▶ Working pre- & post-COVID:
 - Full time,
 - Part time, or
 - Casual
- ▶ PT user pre-COVID

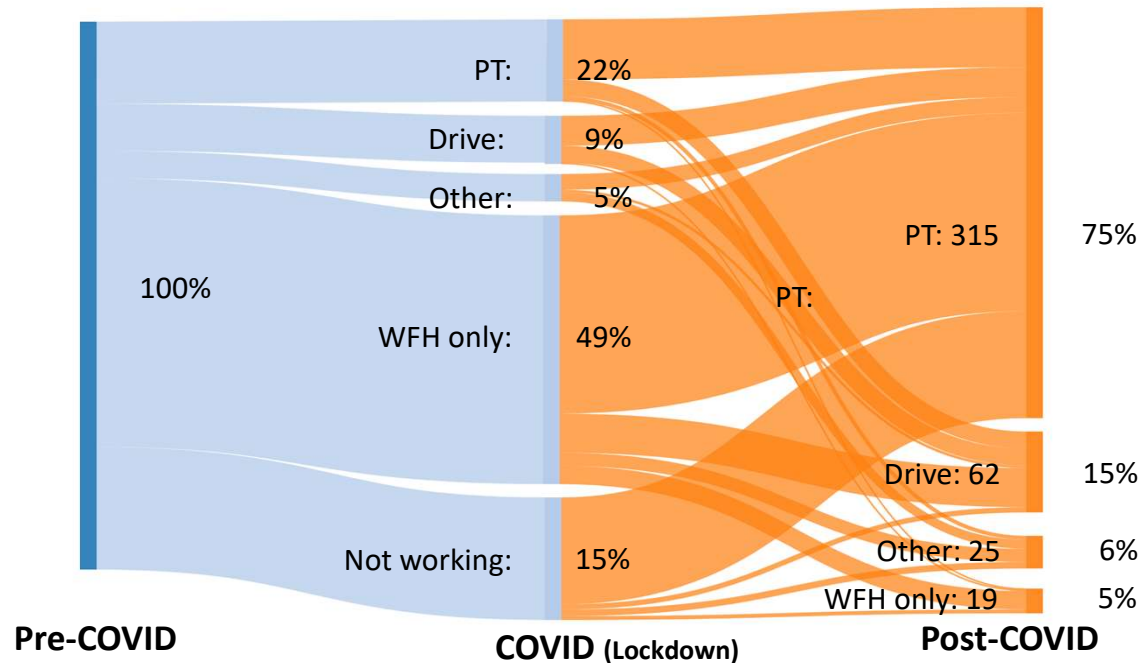
Travel changes by pre- and post-COVID workers who commute by PT pre-COVID



Source: Preliminary results Monash Research 2021

Currently; most of the pre-Covid PT market are WFH (49%), Not working (15%) or driving (9%); 22% are still using PT

Travel changes by pre- and post-COVID workers who commute by PT pre-COVID

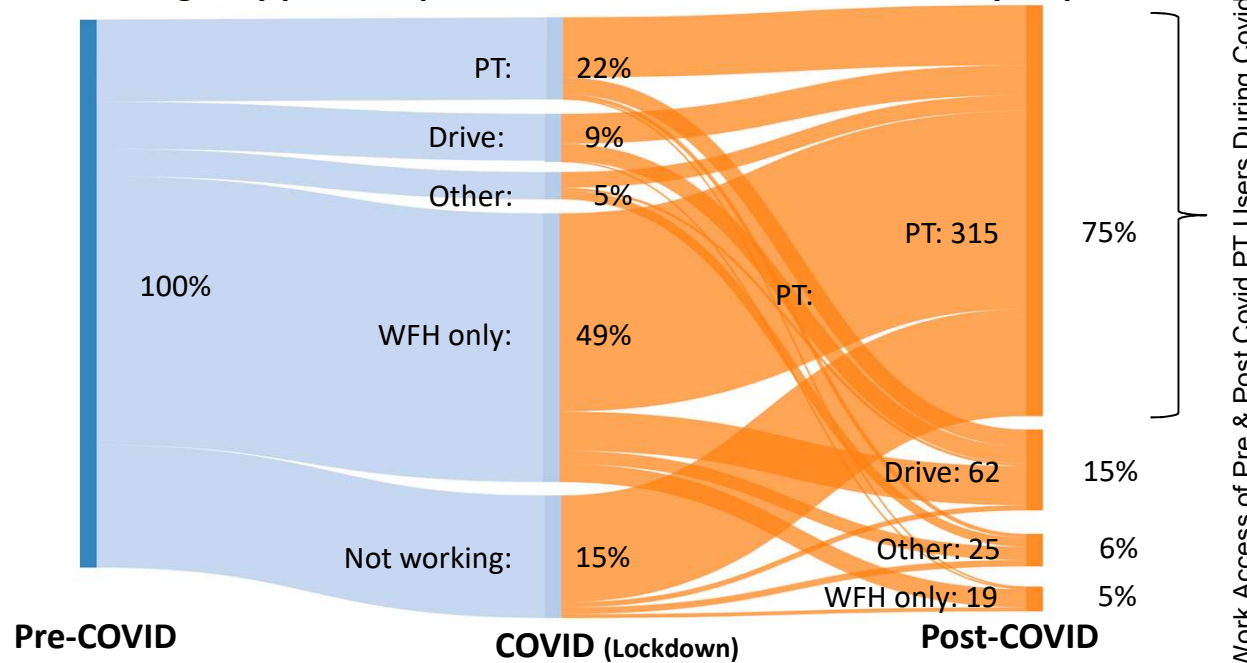


Source: Preliminary results Monash Research 2021

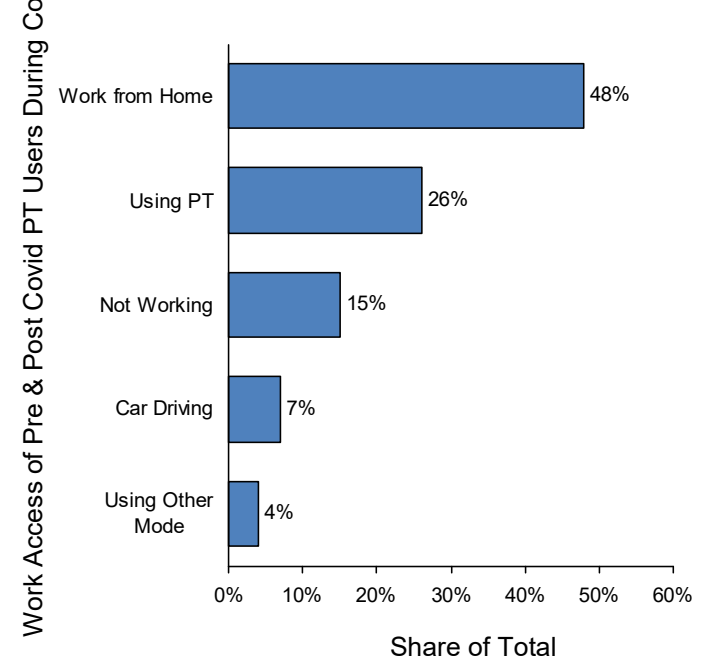


Post-COVID the Mkt will grow from 22% (now) to 75% pre Covid levels – Expected future ridership is currently WFH (48%) using PT (26%) out of work (15%) or using other modes

Travel changes by pre- and post-COVID workers who commute by PT pre-COVID



What is the Future PT Market Doing Now During COVID-19

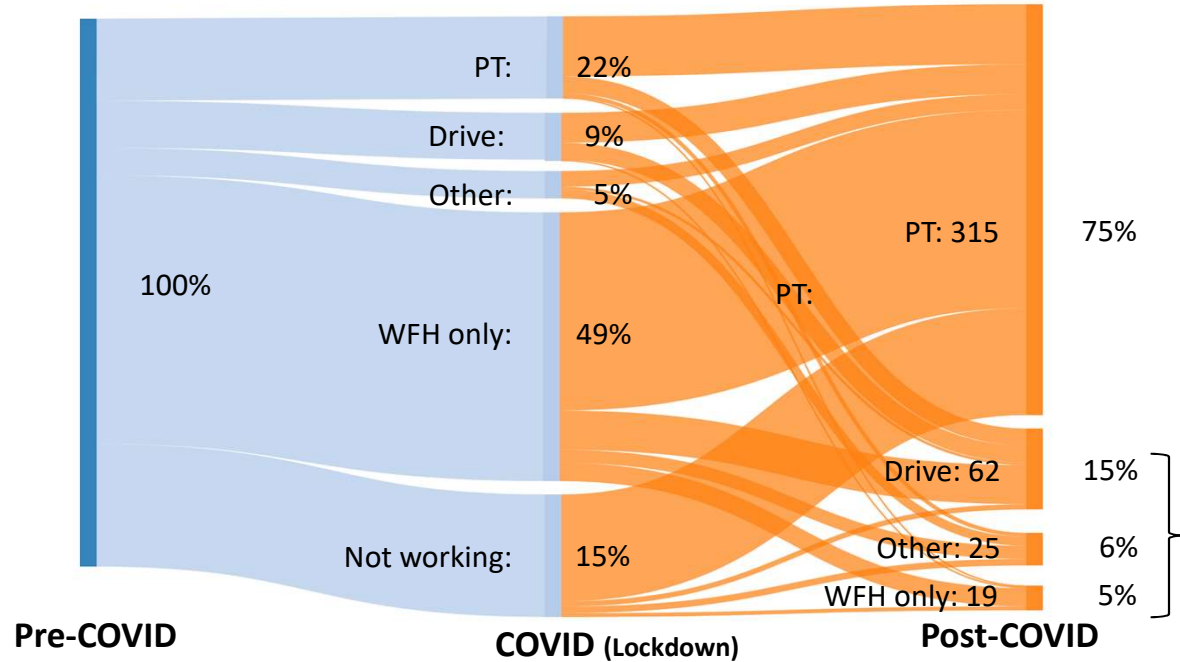


Source: Preliminary results Monash Research 2021

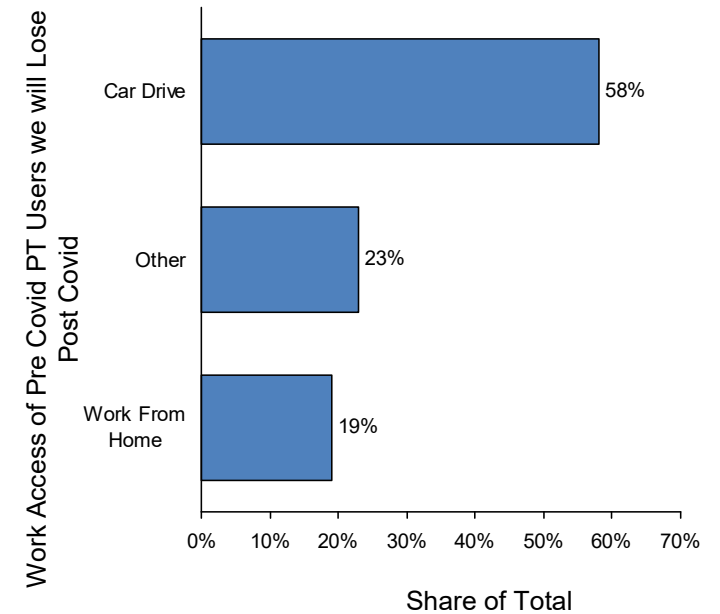


Another Perspective – Post COVID we lose ~25% of our pre-Covid PT market; 58% will drive, 19% WFH; the rest using other modes

Travel changes by pre- and post-COVID workers who commute by PT pre-COVID



Where are the PT Users we will Lose in Future Going to Go Post-Covid

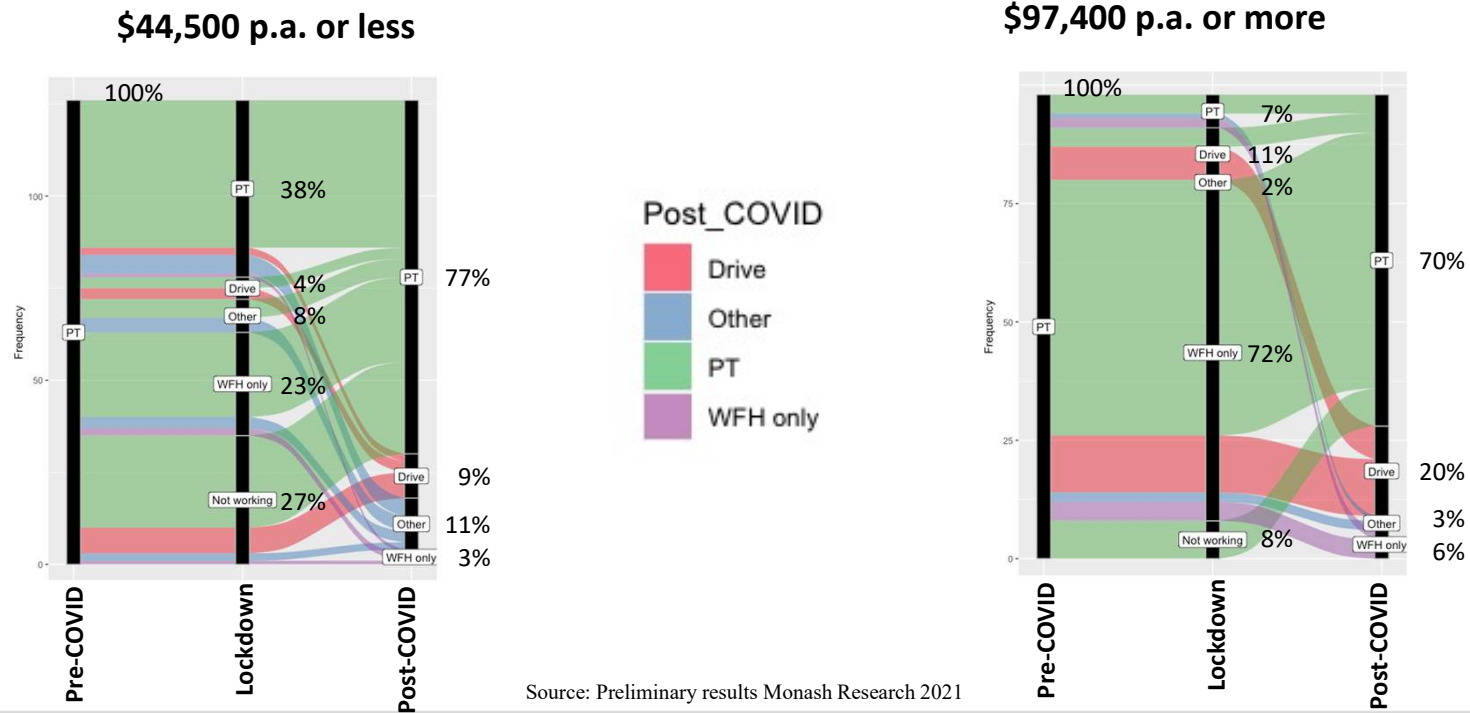


Source: Preliminary results Monash Research 2021



Another Perspective – mobility trajectories – low vs high income have very different trajectories through COVID-19 stages

Travel changes by pre- and post-COVID PT Commuters by income





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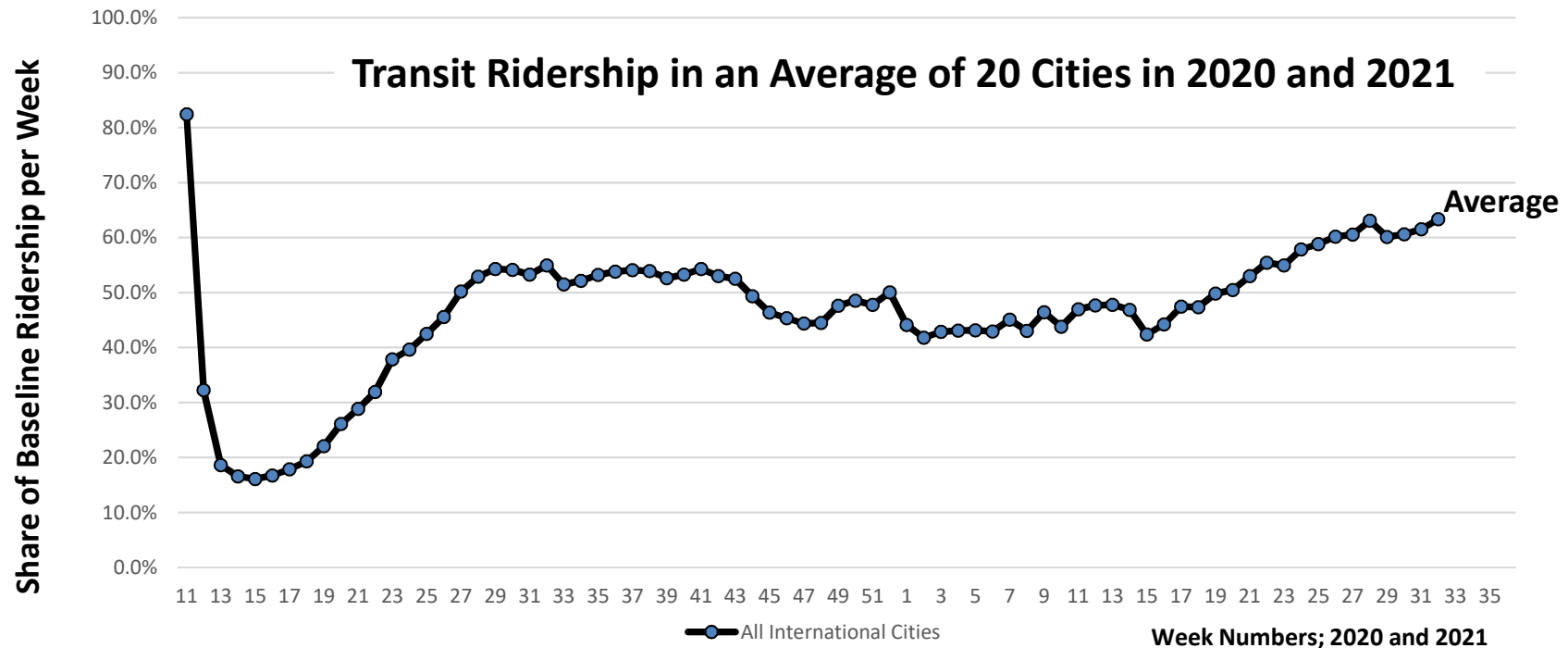
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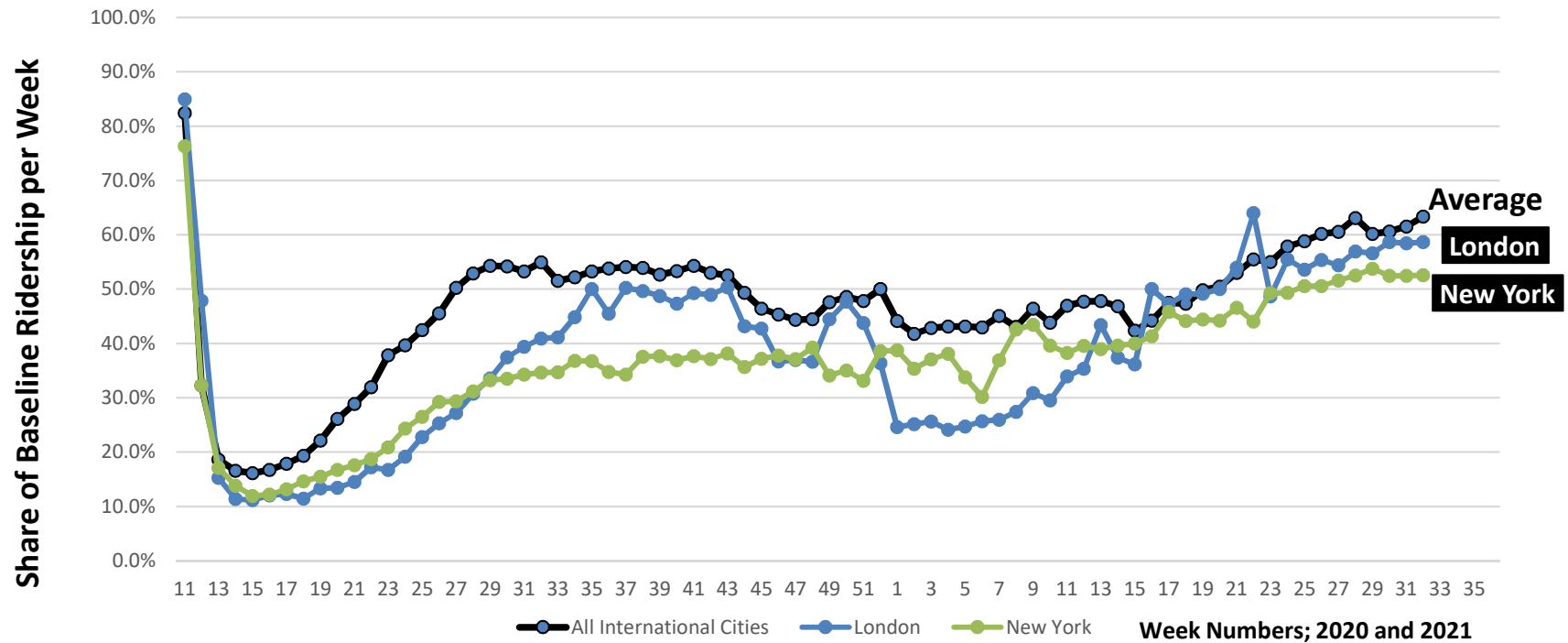


City Transit ridership fell, recovered then slightly declined from early 2020; in 2021 a slow recovery is underway



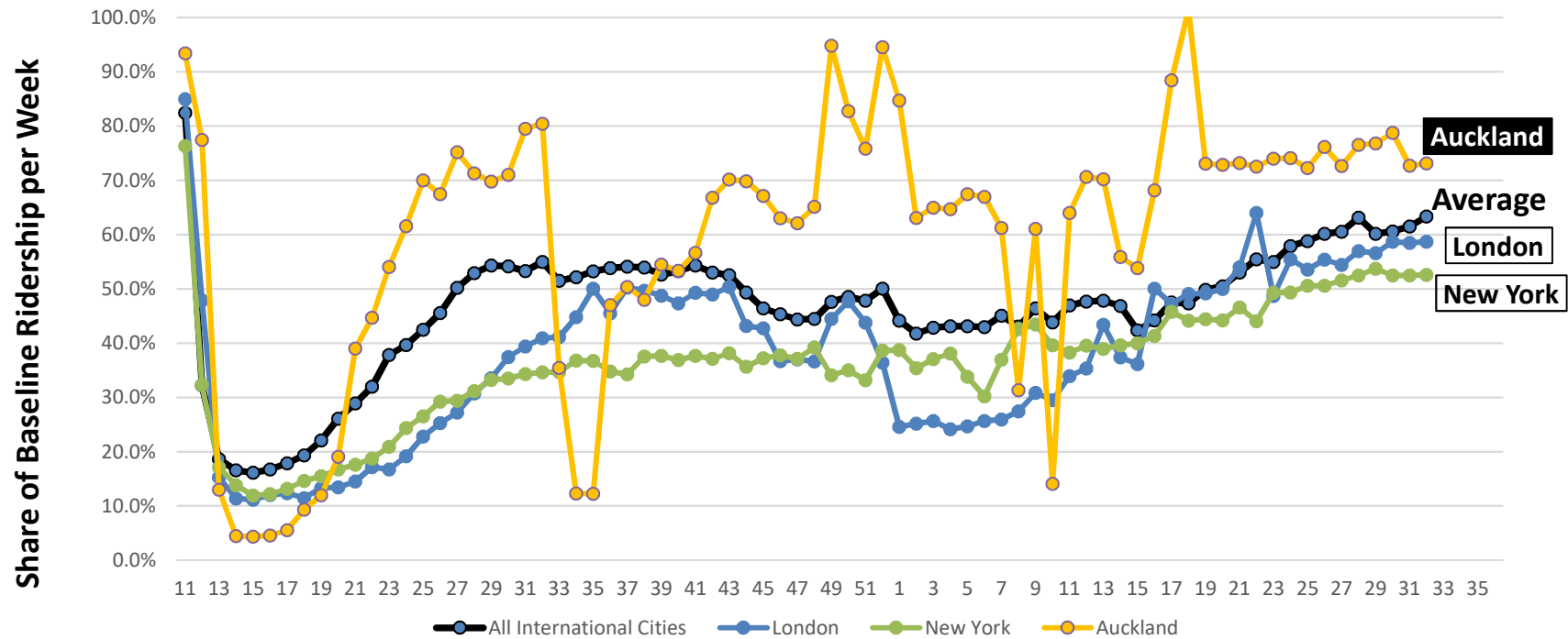
Source: Data courtesy of UITP; cities include Vienna, Oslo, London, Montreal, Madrid, Auckland, Pilsen, New York, Kayseri, Barcelona, Berlin, Vancouver, Chicago, Ottawa, Stockholm, Jersey City, Dijon, Warsaw, Reenes, Toronto

London/New York – Poor Pandemic Containment Cities who Rely on Vaccination – have underperformed but are in a recovery trend



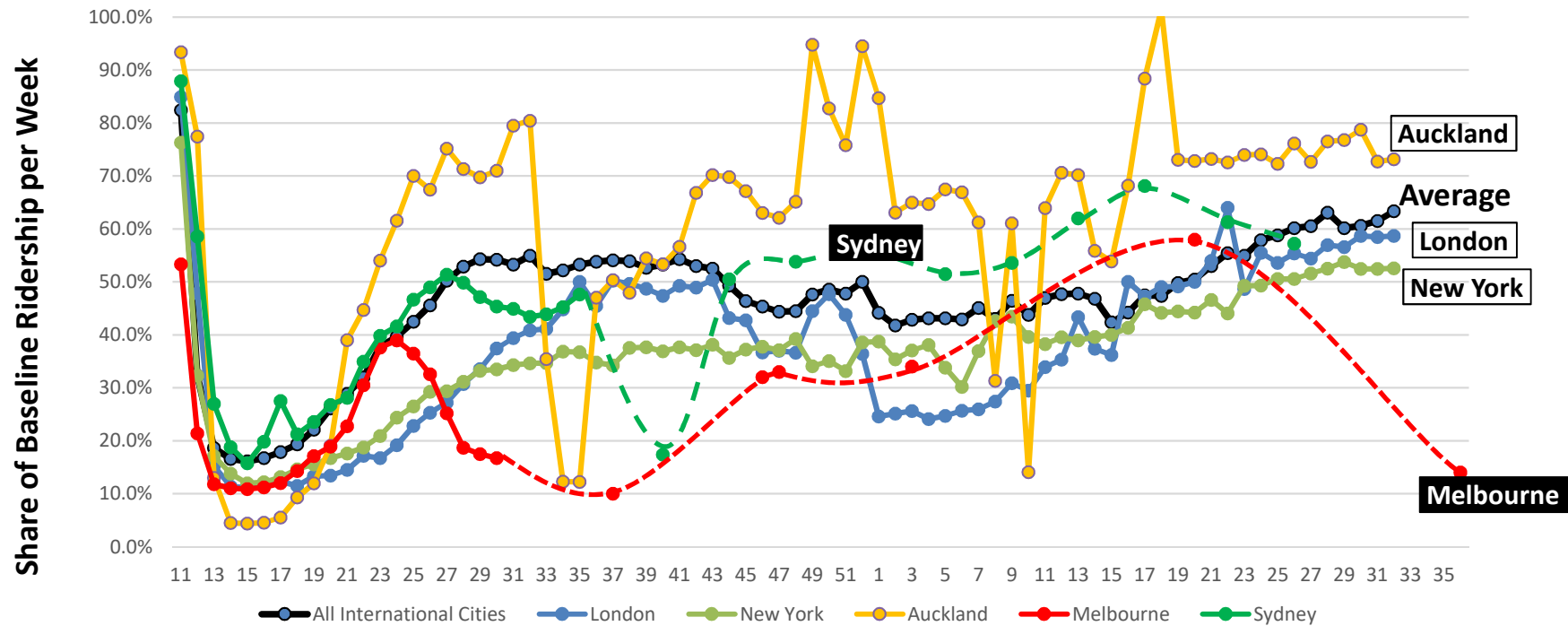
Source: Data courtesy of UITP

Auckland – A Strong ‘Lockdown and Eradicate’ City – has better performance during eradication; and poor during lockdown – but is also on a recovery path



Source: Data courtesy of UITP

Sydney/Melbourne – also Lockdown/Eradicate – have a generally similar performance



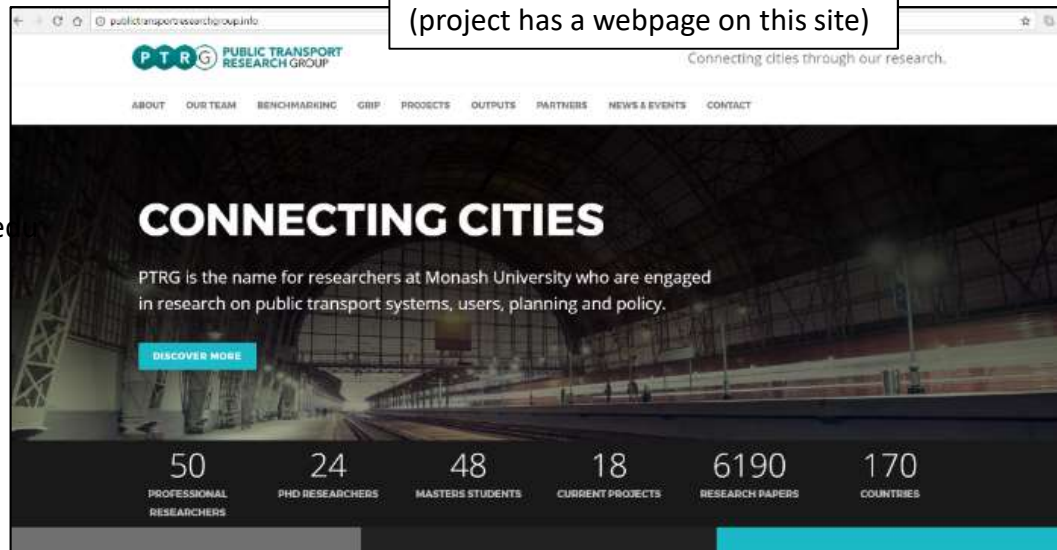
Source: Data courtesy of UITP

Please reach out for more information



graham.currie@monash.edu

Connect with us on
LinkedIn



W: ptrg.info
(project has a webpage on this site)

Researching Transit

RT5 – Long term impact of COVID-19 on Travel Behaviour