Will travel activity post COVID-19 return to pre-COVID-19 levels? The WFH experience thus far

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"WFH – Remarkably smooth, effective and productive"

"An unintended positive consequence of COVID-19"

I acknowledge the partnership with TMR Qld through iMove and that any data material post Wave 2 is associated with the iMove research Program with permission. All comments are the views of the author alone.











Some Context Setting Statements

- The Future (SR, MR, LR) is very uncertain, volatile and changing as we speak.
- Trend projections are not informative at present.
- The 'New Normal' is not known.
- Key Q: Whatever the 'new normal' will be, when will it display stable (travel) properties going forward?
 - We speculate, on our own research, that this will be no earlier than the first or second quarter of 2021 if there are no more spikes like Victoria (July-September 2020)!
 - We will be tracking this with multiple was of data over the next 18 months (at least) (iMove CRC projects)
- We know that 'Working from Home' (WFH) has a new meaning, and
 - As a value proposition, has garnered increasing support from BOTH employees and employers.
 - While we recognise that WFH or teleworking or telecommuting is not new, the circumstances are.

Some Context Setting Statements continued

- A lot of people have set themselves up to WFH,
 - and that investment suggests some commitment to a preference to WFH.
- We speculate that WFH or elsewhere is unlikely to return totally to pre-COVID-19 levels
 - preferences have changed and the real world experiment has confirmed this.
- The big question however is when and by how much is WFH likely to return to pre-COVID-19 levels?
 - and to what extent possibly (not) return to the bad old ways of road traffic congestion and crowding on PT, especially in urban areas?
 - This has important implications for the way governments and consultants do future strategic transport modelling and applications
 - e.g., the way expansion factors are used from a typical day to a week to a year etc.
- Looking ahead snapshot: Our research (national), preliminary, suggests that we could have as much as 10-25% of pre-COVID19 commuters WFH at least 1 if not 2 days a week
 - But it will vary by occupation, location and household set up.
 - If we take 10% of traffic out of each days peak in metro areas, we have Pre-COVID-19 school holiday traffic or better.
 - We speculate that staggered working hours will gain momentum.
- We have a real opportunity to not turn the clock back: let us not whittle it away!

Evidence on WFH is Accumulating - Some examples

- A survey of 6,000 Australian workers in the public sector and Universities (essentially white collar) has found 39 per cent of those surveyed would be happy to continue working from home some of the time even when the coronavirus pandemic ends. (Community and Public Sector Union, August 2020).
 - Only 11 per cent of those surveyed wanted to WFH all the time, 39 per cent some of the time, 30 per cent most of the time, and 14 per cent only on occasion
- A University of Sydney staff survey (10 June 2020, unpublished) found:
 - The following positives in ranked order for staff:
 - No commute
 - Less distractions
 - Balance work/life access to family/exercise
 - Flexible hours (staggered working hours)
 - The Greatest challenges:
 - not switching off/working longer hours
 - loss of collaboration/social connections
 - reduced workstation quality
 - reduced physical activity
- <u>Committee for Sydney 2020 Sydney Leadership Survey</u> (August) 106/344 organisations replied and:
 - 83% expect to have more of their employees working from home in the post-COVID world.

Evidence is Accumulating - Some more examples

- UK: The Business for Clean Air Taskforce
 - a UK consortium that includes electronics giant Philips, ride sharing platform Uber and French utility firm Engie, with the backing
 of the U.K. govt., concluded that
 - In UK, some 87% of those currently working from home said they would like to continue to do so "to some degree"
 - Should they get their wish, "some 17 million people will continue flexible, remote work an increase of some 58% over the pre-lockdown figure of 10.8 million who worked from home." June 2020
- Singapore is working to ensure that WFH works to support a more efficient transport network and not turn the clock back (but to flatten the peak)
 - Jeremey Yan, Deputy LTA in a talk to 'Calibrate Demand and Supply to better optimise the transport network' says:
 - 'We are working on a plan with employers to try and get the peak 20-25% lower that pre-COVID-19 including staggered working hours, WFH and incentives to support this'.
 - 'We want a good % to WFH.'
- Canada 49% and Norway 37% like, and prefer, to WFH
 - Transdev Survey August 2020 reported at ITS Australia Mobility Summit Sept 2.
- BIS Oxford Economics (Australia)
 - Reducing office space
 - Plan to work at home at least 1 to 2 days per week

ITLS Covid-19 National Travel Survey Waves 1 to 3 March/April, May/June, August/September 2020

<u>Paper #1:</u> Beck, M. and Hensher, D.A. (2020) Insights into the Impact of Covid-19 on Household Travel, Work, Activities and Shopping in Australia – the early days under restrictions, *Transport Policy*, 96, 76-93. <u>https://doi.org/10.1016/j.tranpol.2020.07.00(Wave 1)</u>

Paper #2: Hensher, D.A., Beck, M. and Wei, E. (2020) Working from home and its implications for strategic transport modelling given the changing quantum of commuting trips by car and public transport in the early days of the COVID-19 pandemic, submitted to *Transportation Research Part A*, 1 June, revised 14 September (Wave 1)

<u>Paper #3:</u> Beck, M., Hensher, D.A. and Wei, E. (2020) Slowly coming out of COVID-19 restrictions in Australia: implications for working from home and commuting trips by car and public transport, *Journal of Transport Geography*, 88. (Waves 1 and 2)

<u>Paper #4:</u> Beck, M. and Hensher, D.A. (2020) Insights into the impact of COVID-19 on household travel and activities in Australia – the early days of easing restrictions, *Transport Policy*, 99,95-119. (Waves 1 and 2),

<u>Paper #5:</u> Hensher, D.A., Wei, E., Beck, M.J. and Balbontin, C. (2020) The impact of COVID-19 on the time and monetary cost outlays for commuting - the case of the Greater Sydney Metropolitan Area after three months of restrictions (Wave 2), submitted to *Transport Policy*, 14 September.



Tracking COVID-19, WFH and travel: When did we undertake the first 3 surveys?

- COVID-19 has been impacting on work for a long period of time now:
 - Where WFH is possible individuals and business have made investments into being able to WFH which they will likely want a return on.
 - Organisations may be already thinking about how to rationalise office space as a savings measure on high commercial rents in CBD locations (more prone to being able to WFH too).
 - Acquisition of new habits around travel and work, along with processes and mechanisms to WFH more effectively. Families adjusting to change.



Statewide: Comparing Pre-COVID-19, Waves 1 to 3 on WFH Pre-COVID19 Late March Late May Early Sept



******Work From Home Easier for Some***** Strong evidence of WFH preference



WFH as a Proportion of Days Worked

Work From Home Easier for Some – there are barriers

Barriers to Working from Home



* Wave 2 – Late May

But There Are Benefits Too: we like.....

Benefits of Working from Home



■ 1 st Ranked ■ 2nd Ranked ■ Lower Ranked

* Wave 2 – Late May

Overall WFH has been a Positive Experience (Late May vs Late August)



Working from Home has been a Positive Experience





Relative ("Average") Productivity is Stable (Late May vs Late August)



■Wave 2 ■Wave 3



■Wave 2 ■Wave 3

While Employment is Slowly Returning (All Locations)



And People are slowly returning to Workplaces (outside of home)



Many would Like to WFH More Moving Forward



Supporting WFH as a greater mix of # of Work days

- Days employee would like to WFH as a proportion of how many days they work
- WFH is currently a significantly changed proposition
- Especially contrasting Before COVID-19 with the Desired WFH Future

Proportion of Days WFH	Before COVID-19	Wave 1	Wave 2	Future
Zero percent of work days at home	71%	39%	45%	38%
Up to 20% of work days completed at home	7%	1%	2%	4%
21-40% of work days completed at home	4%	3%	2%	10%
41-60% of work days completed at home	3%	4%	4%	11%
61-80% of work days completed at home	2%	3%	4%	8%
100% of work days completed at home	14%	50%	43%	29%

Incidence of WFH by DoW and State, Wave 3 (Sept), prelim

Broader def	inition						
State	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
NSW	48%	45%	41%	37%	36%	15%	13%
VIC	49%	44%	48%	47%	44%	13%	9%
QLD	28%	29%	28%	28%	26%	12%	9%
SA	23%	16%	23%	19%	19%	6%	6%
WA	35%	38%	27%	31%	35%	15%	8%
TAS	20%	40%	40%	20%	40%	0%	0%
NT	0%	0%	0%	0%	50%	50%	0%
ACT	25%	25%	25%	38%	38%	0%	0%
Total	33%	32%	32%	31%	30%	12%	9%
	* Please not	te					
	The WFH % include the following three codes in Q18						
	Worked from home only (2)						
	Worked from home and one other main location ((4)		
	Worked at many locations incl. home (5)						
	NOT just						
	Worked from home only (2)						

Overall DoW (weekday) is flat. If true, then it might not matter whether we distinguish DoW overall in transport planning and modelling.

Staggered Work Hours (ToD): Leaving Earlier and Later



What is the Financial Story for Commuters?

Commuting time and money cost reductions GSMA (Late May 2020, Wave 2)





What does reduced commuting translate into – Money & Time and GC reductions for the Greater Sydney Metropolitan Area (GSMA)?

Headline Finding: Wave 2 of ITLS Program (Late May 2020)

- 3 months after COVID-19 resulted in restrictions in Australia, we saw an annual travel time reduction for all commuters in the GSMA of \$5.58 billion.
 - This represents a 54.02% reduction in the Pre-COVID-19 total time costs of \$10.3 billion,
 - much of which we would suggest can be associated with reductions in congestions costs.
- Adjusting further for reduced employment volumes relative to pre-COVID-19 levels,
 - the annual time cost reduction for all commuters who still have regular pre-COVID-19 levels of employment are estimated as \$4.4 billion.
- Hence there is \$1.17 billion worth of reduced time costs associated with significantly reduced employment hours, including a loss of employment.
- The implications for road investment linked to congestion in particular is profound, and
 - shows how much of an increase in benefit to society, through congestion busting, can be obtained by more flexible work arrangements, even allowing for some switching into car out of public transport.

Paper #5: Hensher, D.A., Wei, E., Beck, M.J. and Balbontin, C. (2020) The impact of COVID-19 on the time and monetary cost outlays for commuting - the case of the Greater Sydney Metropolitan Area after three months of restrictions (Wave 2), submitted to *Transport Policy*, 14 September.

Annual cost savings for car and public transport commuting trips per passenger late May 2020 (GSMA)

Base: average per passenger before COVID-19	Car	Public Transport	Weighted average for both modes
Annual monetary costs before COVID-19	\$1,950	\$2,482	\$2,105
Annual monetary costs during COVID-19	\$376	\$668	\$461
Annual monetary costs reduction	80.70%	73.09%	78.08%
Annual time costs before COVID-19	\$5,601.76	\$6,421.93	\$5,841
Annual time costs during COVID-19	\$3,289.93	\$1,219.24	\$2,686
Annual time costs reduction	41.27%	81.01%	54.02%
Annual generalised costs before COVID-19	\$7,551.70	\$8,903.54	\$7,946
Annual generalised costs during COVID-19	\$3,666.36	\$1,886.94	\$3,147
Annual generalised costs reduction	51.45%	78.81%	60.40%

Note: The values shown consider all the car and public transport passengers before COVID-19. The cost savings reflect the decrease in the number of trips. Monetary costs include only running costs

The average annual reduction in time costs for car travel is \$2,312 equivalent to \$48.16 per week or \$9.63 per weekday. The average annual reduction in time costs for public transport is \$5,203, equivalent to \$108.39 per week, based on 48 annual working weeks, or \$21.68 per weekday. This is substantial reduction in commuting costs, with the overall average monetary cost of \$34.24 per week being of particular interest in terms of additional gross income available for spending on other items and activities.

Going Forward







Business School



What do we Conclude? THE POTENTIAL BENEFITS ARE HUGE

- WFH promises to be the biggest 'transport' lever for policy makers to reduce congestion and crowding,
 - especially in CBD type locations, and should continue to encourage ongoing WFH
 - We know this may have localised supply chain risks with less business supporting office workers etc. (Structural change will be required)
- The key difference with COVID-19 has been the duration and the extent to which disruption has occurred
 - Broken the back of significant business resistance
 - Much work is still being done, and done more or less as well as before
 - Potential cost savings for CBD employers could drive ongoing WFH
 - Positive benefits for staff re more flexible work, less time commuting
 - Biggest "hurdles" to work from home mentioned in surveys are issues around:
 - Team work, collaboration, social connectedness, spontaneity
- WFH can be used by big corporates to deliver on the sustainability charter which has generally alluded them to date.

The Big Take Aways: Back to the Past – No Thank You!

- A new balance with support from both employees and employers
 - 1 or 2 days a week WFH
 - Flexible work times even if commute to the office
- It is about deliverables and not presenteeism.

- Saving in office rental costs (location choice - office)

- Challenger for property owners, especially in the CBD of large cities
- Rethink suburban office space

Rethink the meaning of sprawl (location choice - home)

- It is a relative construct
- Local suburbanisation takes on a new and appealing meaning
- Revitalisation of suburbia
 - Impressively this aligns well with the desire for a 30 min city!
- Rethink where infrastructure funding should go (or deferring major infrastructure spend) (IA Cap of \$100m a concern)
 - Businesses may need to relocate as well.
 - But CBD businesses that serve CBD workers can still survive with 80% of commuters present at any one time
- Less long distance business travel (esp. the one day trips to a 1 hour meeting Syd-Mel)
- Government and employers working with employees can, and should, take advantage of the unintended positive consequences of COVID-19

- If they do, we might be able to reduce road congestion and PT crowding by (at least) 10-15% in metro areas

- We are truly in Liminal ("Threshold") Time the gateway between two stages in life!
- See David on Channel 9 (lost week: 29 September, 2020) talking about WFH http://www.mediaportal.com/mp/playnow.aspx?u=155818&p=1562087859&key=1407211021915419920338235156712481136139163

We have a lot more to say, but that is for another day **THANK YOU**



Bus Transport

Demand, Economics, Contracting, and Policy



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Additional Material not in online presentation





Work and Work from Home; by State



Average Days Worked per Week

Before COVID-19 Wave 2 Wave 3



Average Days Work from Home per Week

* Small Sample Sizes

Work and Work from Home; by Occupation



Before COVID-19 Wave 2 Wave 3

Average Days Work from Home per Week

Average Days Worked per Week

Peak Spreading is Part of the Mix

- Looking at commute trips



Peak Spreading is Part of the Mix





Preferred Staggering of Hours



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Small Changes can make a Difference

- M1 Sydney Harbour Tunnel (daily traffic counts by month, 2019)
 - Jan/Dec = Summer Holidays $\sim 6\%$ less traffic than peak months
 - April/July = Easter and School holidays $\sim 4\%$ less daily traffic
 - Traffic congestion is noticeably lower



Comparing Early April with Late May 2020: Overall annual reductions after adjusting for changes in volume of work hours (GSMA)

Early April

Total reduction	Car	Public Transport	Total Reduction
Annual monetary costs	\$985,560,275.00	\$854,991,925.35	\$1,840,552,200.35
Annual time costs reduction	\$3,408,934,354.42	\$2,092,664,414.11	\$5,501,598,768.52
Annual generalised costs reduction	\$4,394,494,629.41	\$2,947,656,339.46	\$7,342,150,968.87

Late May

Total reduction	Car	Public Transport	Total Reduction
Annual monetary costs reduction	\$1,556,329,552	\$739,418,692	\$2,295,748,245
Annual time costs reduction	\$2,286,583,569	\$2,120,825,524	\$4,407,409,093
Annual generalised costs reduction	\$3,842,913,121	\$2,860,244,216	\$6,703,157,338

Late September? Less but we speculate: definitely very positive reductions

What does the Data Tell us?

- It shows clearly that things are very slowly sliding away from the "peak WFH" of just after the first wave, but there is a desire to continue some increased level of WFH in the future.
- There appear to be two "negative" forces at play
 - People missing the work environment (travelling to work will now be novel for many; may look forward to it, but maybe short lived pleasure!)
 - Businesses either deliberately or subconsciously just drifting back to "business as usual"
- We have a circuit breaker here and we can all see the benefit of that
 - Increased levels of WFH (perhaps 20-30% of work that can be done from home, being done from home) will have HUGE benefits in the future
 - and it really needs the ongoing support of business and workers to do so.
 - Indeed, the peak is unrealistic and it is not what we are saying,
 - but to allow the system to drift back to the pre-COVID levels would be an epic lost opportunity.

Caveats, Views,.....

- Of course humans are social animals and right now the desire to interact with staff is strong.
- Naturally, WFH will not continue in the volume that it does now
 - But there is a "better" middle ground where people can enjoy the social aspect of work,
 - better term connection and social credits,
 - but also enjoy the benefits of WHF.
- We have now seen and experienced how it could work, we can show significant cost savings, and reduced need for new transport infrastructure (heretical) which could free funding for:
 - Better freight and logistics infrastructure
 - Schools and Hospitals
 - Even a future for koalas

Summary: What might all this mean going forward?

Two main scenarios as alternative futures on the spectrum.

- Scenario 1: Travel will return to the pre-Covid-19 normal within a few months
 - with PT, ride share and private car use showing very similar levels of use as before = crowding and congestion.
 - Working from home (WFH) will return to 'normal' & have little impact.
- Scenario 2: One of the most important policy levers now available, in contrast to pre-Covid-19,
 - is the effectiveness and growing acceptance of WFH.
 - Hence reduced number of weekly commutes
 - And many other positive outcomes

Hensher, D.A. (2020) What might Covid-19 mean for mobility as a service (MaaS)? Transport Reviews, 40 (5).

Beyond commuting to Non-commuting and Workplaces

- Our 4th paper identified a situation as restrictions have been eased (except in Victoria) where large increases in activity were planned for shopping and social and recreation purposes,
 - with people feeling most comfortable about meeting with friends, going to the shops and also relatively comfortable visiting restaurants.
 - Letting one's guard down could be disastrous given that COVID-19 only travels when we travel
 - > And a greater focus of local suburban activity.
- Workplaces will also recognise that having staff WFH is one way to mitigate risk and
 - governments and businesses more broadly will recognise the importance of lowering the chance of further waves.
 - Additionally, having staff WFH and/or ready to WFH quickly is also beneficial in risk management for future disruption.

Post Covid-19 – what Does the Future Hold? Implications for Public Transport (PT) and more generally, including active modes





How PT patronage in Sydney in coming back ('very') slowly August 2020 is 55% down on August 2019





What does Post Covid-19 look like for PT?

Flattening of the curve is now replaced with the challenge to find ways to maintain flattening of the peak now that COVID-19 has done the hard work for us.

'The camel has died' and now we want to preserve 'the low back horse'.

Short term more generally (How long is Short Term?) – Some realities

- Public transport risk and prolonged distancing and crowd avoidance to feel safe.
 - Limit standing
 - Masks and temperature check on entry to PT
 - Automatic entry/exit etc. to avoid touching (Apps available already)
- There will be a slow recovery of patronage (Sydney minimum of ~30% down by end of year)
- Growing popularity of the car with bio-security becoming the new attribute in mode choice
 - The bio-security mobility physical space challenge
 - Encourage car pooling for known persons : 'familiar sharing'
 - Not seeing the claimed growth in traffic congestion yet. CARMAGEDDON effect!
- Traffic congestion may worsen under current pricing, although few signs to date, and especially with low cost electric cars unless increased WFH
 - Government to ensure parking stations and kerbside parking pricing does not become gauging
- New local community spirit (ANZAC day this year get to know your neighbours)
- Social distancing at the office may 'force' employers to stagger attendance given available space
 - Happening already.

What does Post Covid-19 look like for PT?

Longer term more generally

- Employers asked to support staggered working hours and days to WFH
 - Some businesses open longer hours with fewer persons working per hour but still possibly increased hours overall to reduce crowding
 - Might assist in flattening the peaks?
 - Late starts, early finishes?
- Infrastructure needs must be reviewed,
 - Scale down large projects and focus on small investments such as
 - Improved bicycle lanes in suburbia (huge B/C ratio)
 - Improved pedestrian precincts and walking facilities (huge B/C ratio)
 - Freight distribution capacity improvements for deliveries

- Important Policy Message

- With big infrastructure projects on the agenda again, I would much prefer people were looking at ways of making our neighbourhoods work better and improve access to the suburban clusters and affordable housing in the clusters. That is where the \$ should be going but they mainly miss the IA \$100m hurdle!
- Redesign of residential dwellings and workplaces to accommodate efficient and effective office space
 - Will there be employer subsidy support for a home office fit out?
 - Convert CBD office space to socio-recreational space as a tourism precinct (lower rents maybe)
- Decentralisation
 - Suburbanisation? Regionalisation?