

Submission to Infrastructure Victoria's  
Draft 30-Year Strategy

February 2021

The Public Transport Users Association (PTUA) thanks Infrastructure Victoria for the opportunity to respond to the Draft 30-Year Infrastructure Strategy ('draft strategy' below).

Originally formed in 1976 as the Train Travellers Association, the PTUA is the peak advocacy body for users and supporters of public transport in Victoria. The PTUA is a not-for-profit, volunteer community group, with no party-political affiliations, that campaigns for sustainable transport policy focussed on high-quality public passenger transport and rail freight. The PTUA has regularly partnered with local resident and environment groups on specific campaigns for public transport improvements and alternatives to motorway construction. Since 2012 the PTUA has coordinated with Friends of the Earth Australia on community campaigns including Public Transport Not Traffic, and Sustainable Cities, with a focus on (among other initiatives) the Melbourne Metro 2 rail tunnel, the rollout of high-frequency bus services across Melbourne suburbs and regional Victorian cities, and the electrification of the bus fleet.

## General Remarks

The draft strategy contains a number of broad themes to assist with the transition to a much more efficient and sustainable transport system in Victoria. These include a number of upgrades to walking, cycling and public transport infrastructure, the reallocation of existing road space to more efficient modes, and changes to the way existing car infrastructure is priced (shifting from broadly fixed upfront costs to more variable and targeted charges for both roads and parking). These measures broadly align with international best practice, which since the 1990s has definitively stated<sup>1</sup> that governments cannot "build their way out of congestion" by increasing road capacity, and that they must instead provide alternatives to driving and better allocate the existing road capacity. As such, the PTUA broadly welcomes these moves.

Notwithstanding the acknowledgement of best practice, this same mindset of trying to "build our way out of congestion" with additional road capacity remains a strong theme in the draft strategy, contradicting what is stated elsewhere. It is quite inexplicable that Infrastructure Victoria can on one page talk at length about well-founded principles of urban mobility, and craft policies that enact those principles, and then on the next page recommend doing the exact opposite.

In this regard it is extremely disappointing to see Infrastructure Victoria continue to recommend a number of new urban motorways, when the rest of the document provides such an eloquent explanation as to why urban motorways are bad policy. The PTUA expressed similar misgivings in our submission to the previous 30-year strategy in 2016<sup>2</sup>,

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<sup>1</sup> The planning consensus was expressed in 1994 by the UK Standing Advisory Committee on Trunk Road Assessment (SACTRA) in its report *Trunk Roads and the Generation of Traffic*, and has been elaborated in various British and North American sources including Durant and Turner, *The Fundamental Law of Road Congestion: Evidence from US Cities* (Working Paper 370, Department of Economics, University of Toronto)

<sup>2</sup> Public Transport Users Association. *Transport in the Public Interest: Submission on Victoria's Draft Infrastructure Strategy*, October 2016. Many points raised in 2016 apply with equal force in response

and while many of the points we raised then have been taken up explicitly by others—most notably planning expert William McDougall<sup>3</sup> who has devoted his career to advising governments including Victoria’s on the costs and benefits of infrastructure projects—we have not seen these points adequately addressed in the present draft strategy.

The topic of public transport fare reform has received particular emphasis by Infrastructure Victoria during 2020. While the PTUA very much welcomes the conversation that has been started here, and while we support some of the specific recommendations—such as the abolition of the Free Tram Zone<sup>4</sup>, and the adoption of peak and off-peak fares—we strongly oppose the introduction of different prices for different modes of public transport. A good public transport network uses different modes for different tasks, with each mode playing to its strengths to provide a comprehensive and seamless network, as opposed to a disjointed city filled with different modes competing with each other for passengers and wasting resources. A good public transport fare system should reflect the same principles, with fares being based on where and when the user travels, not how the network gets them there.<sup>5</sup>

In general, as in our 2016 submission, we would caution against Infrastructure Victoria setting too much store by ‘new mobility’ initiatives such as autonomous personal transport and ride-hailing services. The former remains a speculative technology in 2021 (particularly in its Level 4 ‘full autonomy’ version which is the only one that removes the need for a human driver), while the latter has been found in North American and Australian experience to not offer substantial benefit over more traditional public transport options either in reducing government subsidies or in reducing urban traffic congestion.<sup>6</sup>

In the context of the Victorian Government commitment to address climate change, the strategy makes mention throughout of the need to reduce carbon emissions, with Draft Recommendations 9 and 10 explicitly arguing for better accounting of the carbon consequences of infrastructure development and operation. Yet much is left unsaid on how Victoria can fully decarbonise its transport network in the short time required to hold global warming to less than 1.5 degrees Celsius, in line with the Paris Agreement. Despite the fact that the debate on electricity generation has become quite toxic and politicised, this sector is now finally heading towards a zero-emissions future.

Transport, meanwhile, is the second-largest source of carbon emissions in Australia as well as the fastest-growing. Yet there is still very little clarity on how the government will address carbon emissions in the transport sector. The PTUA encourages Infrastructure Victoria to explore this in more depth; while in many cases the solutions will be obvious, and large cuts

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to the present strategy.

[https://www.ptua.org.au/files/2016/PTUA\\_IV\\_Strategy\\_Submission\\_201610.pdf](https://www.ptua.org.au/files/2016/PTUA_IV_Strategy_Submission_201610.pdf)

<sup>3</sup> Mr McDougall writes at <https://wmcDougall.com>, On the particular subject of the North East Link and its history following favourable evaluation by Infrastructure Victoria in 2016, see *North East Link—The Perfect Storm*. <https://wmcDougall.com/2020/09/21/north-east-link-the-perfect-storm>

<sup>4</sup> The PTUA made written and verbal submissions to the 2020 Victorian Parliamentary Inquiry into extending the Free Tram Zone, which broadly align with Infrastructure Victoria’s findings. For a copy of our submission see

[https://www.ptua.org.au/files/2020/PTUA\\_FTZ\\_Inquiry\\_submission\\_2020-01-31.pdf](https://www.ptua.org.au/files/2020/PTUA_FTZ_Inquiry_submission_2020-01-31.pdf)

<sup>5</sup> For more see the PTUA’s earlier statement at <https://www.ptua.org.au/2020/09/25/iv-fair-move>.

<sup>6</sup> See for example Christopher Yuen and Jarrett Walker: *Is Ride-Hailing to Blame for Rising Congestion?* on *Human Transit*.

<https://humantransit.org/2018/07/is-ride-hailing-to-blame-for-rising-congestion.html>

to emissions can be made quickly, there are many other cases where the solutions will be very difficult to determine, and emissions will take longer to eliminate. It will require a well-resourced and influential body like Infrastructure Victoria to conduct the kind of thorough investigation required to know the best path to decarbonisation.

Infrastructure Victoria's role is to take a long-term view of Victoria's needs and effective strategies to address these, including to put forward recommendations that may not align with the current policy regime. Infrastructure Victoria need not be confined, for example, by the artificial distinction between 'capital' (good) and 'operating' (bad) expenditures insisted upon by current Treasury accounting principles, which attempt to impose a private-sector notion of 'hard assets' on public infrastructure which actually has little or no exchange value in a conventional sense.

Infrastructure Victoria could therefore advise usefully on how an upfront capital sum, when expressed as a series of annual cash flows using a suitable discount rate, could support additional *operational* expenditure initiatives to maximise the value of existing infrastructure.

A \$20 million one-off capital expenditure on a railway station car park, for example, is equivalent in present value at a 7% discount rate to approximately \$5 million of capital expenditure plus \$1 million of annual operating expenditure on a feeder bus service capable of accommodating more prospective train travellers. In this way, the value of multimodal network planning in supporting capital expenditure on transport infrastructure can be acknowledged.

## Responses to individual recommendations

### Recommendation 01: Accelerate the uptake of EVs

The PTUA's broad position on electric vehicles is that they will ultimately need to form an important part of the transport landscape, but it is important to frame the policy question in the right way. What we need is fewer internal combustion engine (ICE) vehicles; replacing these with EVs is one means to that end, but it is not the goal in and of itself; and indeed a straight like-for-like replacement is not the best policy outcome.

As has been noted elsewhere in the strategy, electric vehicles do not emit carbon from their tailpipe, but most of the other externalities associated with cars—including traffic congestion and the road toll of injuries and deaths—are still present with EVs<sup>7</sup> <sup>8</sup>. Therefore, the highest priority should be mode shift: giving people opportunities to walk, cycle or take public transport for as many trips as possible, so that they can leave their cars at home more often, or indeed sell their cars (whether going entirely car-free, or much more achievable, shifting

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<sup>7</sup> PTUA, *Submission to the Select Committee on Electric Vehicles* (Melbourne: Public Transport Users Association, July 2018), 1-6, <https://www.aph.gov.au/DocumentStore.ashx?id=2ff4b441-0420-4f51-9b2c-6a1f1500a727&subId=613747>.

<sup>8</sup> Farhad Manjoo, "There's One Big Problem With Electric Cars," *The New York Times*, 18 February 2021, <https://www.nytimes.com/2021/02/18/opinion/electric-cars-SUV.html>

from a multi-car household to a single-car household with substantial cost of living savings). As the saying goes: we need fewer cars, not newer cars.

This can be achieved principally through government investment in these alternative transport modes, as discussed throughout the strategy, though tools like congestion charges and other changes to road charges can play a role in this. Changing the composition of the state's car fleet from ICE to EV should be the secondary priority from a policy perspective.

That said, the specific measures proposed in Recommendation 01 to increase the proportion of EVs in the vehicle fleet do broadly align with this policy imperative, and the PTUA would be supportive of these measures. However, the advantages of EVs will only be realised if they displace use of ICE vehicles and not if their use is additional<sup>9</sup>. Rather than promoting uptake (of EVs) in and of itself, the goal should be increasing the proportion of EVs in the vehicle fleet which can also be accelerated by the retirement of ICE vehicles without replacement. We are particularly supportive of the push to transition buses and coaches to EVs as soon as practical, given that these vehicles run significantly higher numbers of kilometres than standard private cars and, in effect, allow people to travel by EV without the upfront vehicle purchase cost or having to deal with charging issues.

We do note that the draft recommendation is to specify standards and plans for a network of EV charging infrastructure, but does not mention the funding of such a network; the PTUA does believe that it may be appropriate for the government to assist in funding the network where there is clear market failure, particularly in the early stages of rollout, and particularly in remote areas of the state where it's less likely the private sector could justify investment. This would directly address one of the primary impediments to the uptake of EVs<sup>10</sup> and be a much more effective use of taxpayers' money than partially funding the purchase of imported vehicles for private use by households that have the financial capacity to buy a new car<sup>11</sup>.

## Recommendation 09: Specify climate scenarios and carbon value in assessing infrastructure

The PTUA supports specification of climate scenarios and carbon value in assessing infrastructure. We particularly note that the emissions enabled by the proposed infrastructure must be counted in these assessments; in the transport context, this must include realistic assumptions about the percentage of EVs to ICE vehicles in the traffic which will use roads, as well as realistic modeling that accounts for induced demand. Broadly, building new mega roads will induce more people to drive more often; and for most of the crucial next two decades of climate action, the vast majority of these cars will be ICE vehicles. To the extent that induced travel is undertaken by private EVs, this will add to aggregate electricity

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<sup>9</sup> Rajeev Syal, "SUVs and extra traffic cancelling out electric car gains in Britain," *The Guardian*, 26 February 2021, <https://www.theguardian.com/environment/2021/feb/26/suvs-and-extra-traffic-cancelling-out-electric-car-gains-in-britain>

<sup>10</sup> Amelia Thorpe, Declan Kuch and Sophie Adams, "On an electric car road trip around NSW, we found range anxiety (and the need for more chargers) is real," *The Conversation*, 8 February 2021, <https://theconversation.com/on-an-electric-car-road-trip-around-nsw-we-found-range-anxiety-and-the-need-for-more-chargers-is-real-154071>.

<sup>11</sup> PTUA, *Submission to Select Committee on Electric Vehicles*, 9.

consumption and increase the stationary energy decarbonisation task. It should also be noted that use of private EVs charged by domestic PV systems reduces the export of electricity from those PV systems that could instead displace fossil fuel-generated electricity or reduce peak net demand on the grid. By comparison, building new light or heavy rail infrastructure will induce more people to leave their cars at home and take public transport instead, a mode which is already extremely low-carbon by comparison and which is intended to be completely powered by renewable electricity in the near future<sup>12 13</sup>.

Furthermore, use of direct per-passenger-kilometre emissions comparisons between private motor vehicles and public transport are likely to understate the climate benefits of modeshift away from private vehicles due to the effect of “transit leverage” which reduces private passenger vkt by more than the amount of alternative transport use<sup>14</sup>. Infrastructure assessment should recognise the carbon, congestion, public health and other benefits of this effect.

## Recommendation 10: Strategically review climate consequences for infrastructure

The PTUA would support transport infrastructure being assessed on these criteria. We note that a number of mega road projects have proceeded in recent years, despite the significant local environmental destruction associated with their construction, and despite the broader environmental destruction caused by inducing more traffic - traffic which is still overwhelmingly ICE vehicles, and which will continue to be ICE vehicles for much of the crucial next decades.

The concerns of the PTUA and many environmental groups have been dismissed on the basis that the vehicles that use these roads will ultimately be EVs; even setting aside the other problems that induced traffic causes, the extremely slow uptake of EVs shows that these roads will accrue a significant “carbon debt” before that transition happens.

A key consideration in these assessments must be the phenomenon of induced demand; building significant road infrastructure encourages people to drive and contribute to urban sprawl through dispersed travel patterns, while building significant public transport infrastructure (and/or improving public transport service levels) encourages them to take public transport instead of driving.

Another key consideration must also be that the world has a finite carbon budget, and the year at which we reach “carbon neutral” is not the only (or even the most important)

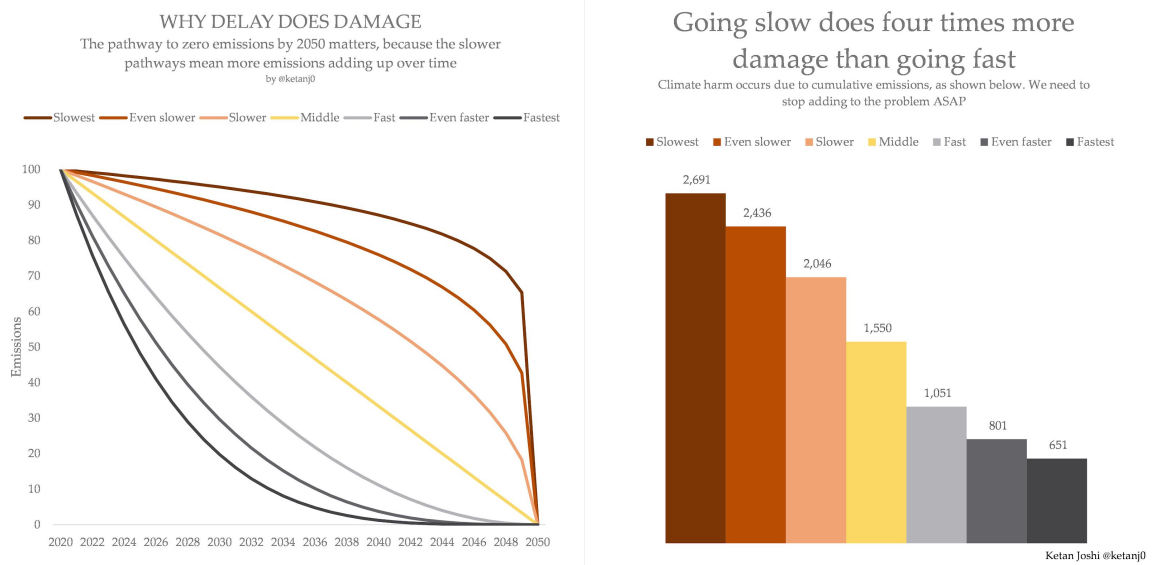
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<sup>12</sup> Christopher Carey, “Melbourne’s trams set to run on solar power,” *Cities Today*, 12 August 2019, <https://cities-today.com/melbournes-trams-set-to-run-on-solar-power/>

<sup>13</sup> Sophie Vorrath, “Victoria seeks 600MW wind and solar to power hospitals, schools and trains,” *Renew Economy*, 2 September 2020, <https://reneweconomy.com.au/victoria-seeks-600mw-wind-and-solar-to-power-hospitals-schools-and-trains-20495/>

<sup>14</sup> John W Neff, “Estimating Values Of The Transit Land-use Multiplier Effect From Published Federal Highway Administration And Federal Transit Administration Data,” (Paper presented at 54th Annual Transportation Research Forum, Annapolis, Maryland, March 21-23, 2013), accessed February 22, 2021, <https://ageconsearch.umn.edu/record/206949/>.

consideration in determining whether we will hold global warming to 1.5 degrees in line with the Paris targets - how much we cut within the next 10-15 years will determine how much of the carbon budget we use up, and therefore how much budget remains between then and 2050<sup>15</sup> (see Figure below). As such, although roads infrastructure may ultimately be used by zero-emissions vehicles in 2050, it is how those roads are used in 2022, 2023, 2024 and up till 2035 that will determine how much of the carbon budget these roads will spend, and therefore must be a key focus of the government's reviews of climate consequences for infrastructure.



**Figure 1:** The pace of decarbonisation has a major impact on the amount of additional greenhouse gas that accumulates in the atmosphere and the ensuing damage<sup>16</sup>.

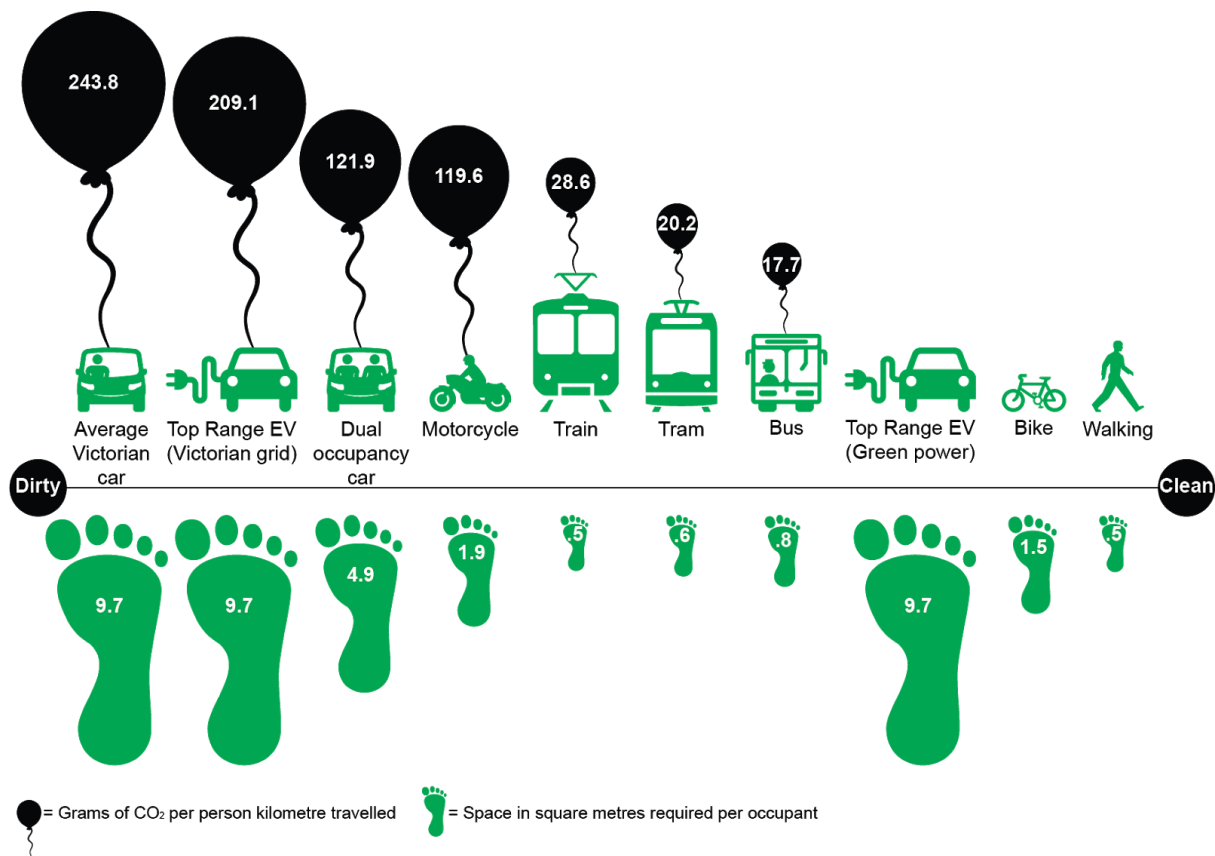
Unmitigated climate change would have serious impacts on both natural and human systems. Shifting weather patterns would affect the ability of plant and animal species to persist within their current ranges, leading species' ranges to shift with the climate. Human activities, such as habitat fragmentation by roads, can constrain species' migration and fragment populations with negative impacts on their viability<sup>17 18</sup>. Travel by private car requires much more space to be allocated to transport infrastructure than other modes of transport and can be a major cause of animal mortality.

<sup>15</sup> Will Steffen, "Labor's climate policy is too little, too late. We must run faster to win the race," *The Conversation*, 24 February 2020, <https://theconversation.com/labors-climate-policy-is-too-little-too-late-we-must-run-faster-to-win-the-race-132263>.

<sup>16</sup> Ketan Joshi on Twitter <https://twitter.com/KetanJ0/status/1360310004729999367>

<sup>17</sup> Olivier Honnay et al., "Possible effects of habitat fragmentation and climate change on the range of forest plant species," *Ecology Letters* 5, 4 (2002): 525-530, <https://doi.org/10.1046/j.1461-0248.2002.00346.x>.

<sup>18</sup> Marleen M. P. Cobben et al., "Wrong place, wrong time: climate change-induced range shift across fragmented habitat causes maladaptation and declined population size in a modelled bird species," *Global Change Biology* 18, 8 (2012): 2419-2428, <https://doi.org/10.1111/j.1365-2486.2012.02711.x>.



**Figure 2:** In addition to the carbon emitted, cars require significantly more space per occupant than more efficient modes such as walking, cycling and public transport<sup>19</sup>. As previously noted, steps are already underway to fully power Melbourne’s trains and trams by clean energy<sup>20 21</sup>.

Roads and parking for private cars consume additional land that could instead be reserved for native habitat, public open space, housing or commercial activity. Attempts to translocate species or offset the destruction caused by motorway projects have shown limited success<sup>22 23 24 25</sup>. In addition to competing with natural systems for land, these roads and parking also contribute to the urban heat island effect which would exacerbate deadly heatwaves in a

<sup>19</sup> Institute for Sensible Transport <https://sensibletransport.org.au/>

<sup>20</sup> Christopher Carey, “Melbourne’s trams set to run on solar power”

<sup>21</sup> Sophie Vorrath, “Victoria seeks 600MW wind and solar to power hospitals, schools and trains”

<sup>22</sup> J.L. Silcock et al., “Threatened plant translocation in Australia: A review,” *Biological Conservation* 236, (2019): 211-222, <https://doi.org/10.1016/j.biocon.2019.05.002>.

<sup>23</sup> Lisa Cox, “It’s an ecological wasteland’: offsets for Sydney toll road were promised but never delivered,” *The Guardian*, 10 February 2021, <https://www.theguardian.com/environment/2021/feb/10/its-an-ecological-wasteland-offsets-for-sydney-tollway-were-promised-but-never-delivered>.

<sup>24</sup> Lisa Cox, “Development should stop’: serious flaws in offsets plan for new western Sydney airport,” *The Guardian*, 17 February 2021, <https://www.theguardian.com/environment/2021/feb/17/development-should-stop-serious-flaws-in-offsets-plan-for-new-western-sydney-airport>.

<sup>25</sup> Martine Maron et al., “Conservation: Stop misuse of biodiversity offsets,” *Nature* 523, 7561 (2015): 401-403, <https://www.nature.com/news/conservation-stop-misuse-of-biodiversity-offsets-1.18010>.



warming climate<sup>26</sup> <sup>27</sup>. Since they require much less space per person, a larger role for walking, cycling and public transport would allow land to be spared for native habitat and other green spaces that would strengthen climate resilience.

## Recommendation 17: Prepare for increasingly automated vehicle fleets

While the PTUA notes that the automotive industry's promises of automation have for several decades been long on promises and short on results, we are supportive of the measures proposed in this recommendation. We would note that things like flexibility in minimum parking requirements and flexible kerb space are compatible with scenarios where more people use public and active transport, not just scenarios where people drive automated vehicles. The PTUA also notes that the reduced parking demand from autonomous vehicles is achieved by empty return traffic for other trips or cheap parking, except rare times where vehicle passenger demand is even in both directions and all travelling on vehicles rented by passengers for individual trips. Preparations for automated vehicle fleets need to be sensitive to the needs of pedestrians and bike riders, not inconvenience and obstruct them in the name of vehicular progress.

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<sup>26</sup> Andrew Gissing and Lucinda Coates, "Australia's 'deadliest natural hazard': what's your heatwave plan?," *The Conversation*, 18 January 2018, <https://theconversation.com/australias-deadliest-natural-hazard-whats-your-heatwave-plan-90165>.

<sup>27</sup> AECOM, *Economic Assessment of the Urban Heat Island Effect*: Report prepared for City of Melbourne (Melbourne: AECOM Australia Pty Ltd, 14 November 2012), <https://www.melbourne.vic.gov.au/sitecollectiondocuments/eco-assessment-of-urban-heat-island-effect.pdf>.



**Figure 3:** <https://twitter.com/DavidZipper/status/1363952364961546251>

## Recommendation 18: Facilitate integration of PT with new mobility services

The PTUA does not believe that passengers should have to use a motor vehicle in order to access public transport, whether that vehicle is owned by them or a third party provider. The spatial and temporal coverage of regular public transport services should be adequate to provide a genuine transport option in its own right.

Fares provide access to an integrated multimodal network of scheduled fixed-route services. Unregulated and on-demand services can lead to poor coverage (e.g. chasing profitable routes/times only and/or cannibalising other services<sup>28</sup>) and/or high unit costs (e.g. chasing individual passengers with meandering flexible routes<sup>29</sup>) and/or non-accessible services (e.g. avoiding more complex passenger requirements<sup>30 31</sup>), as well as poor safety and employment conditions in the gig economy (which complicated efforts to contain COVID-19<sup>32</sup>) and uncertainty over commercial sustainability of venture capital financed

<sup>28</sup> Paul Mees, *A Very Public Solution* (Melbourne: Melbourne University Press, 1996), 142-145.

<sup>29</sup> Jarrett Walker, "What is "Microtransit" For?," *Human Transit*, published 28 August 2019, <https://humantransit.org/2019/08/what-is-microtransit-for.html>.

<sup>30</sup> Andrew J Hawkins, "Uber and Lyft are terrible at providing wheelchair-accessible service, and here's the proof," *The Verge*, published 23 May 2018, <https://www.theverge.com/2018/5/23/17384600/uber-lyft-wheelchair-accessible-fail-nyc-report>.

<sup>31</sup> John Morris, "Wheelchair Accessible Uber: The Dirty Truth," *Wheelchair Travel*, published 13 March 2016, <https://wheelchairtravel.org/wheelchair-accessible-uber-dirty-truth/>.

<sup>32</sup> Julian Teicher and Bernadine Van Gramberg, "Far too many' Victorians are going to work while sick. Far too many have no choice," *The Conversation*, published 30 July 2020,

operations<sup>33</sup>. Rather than reducing congestion, ride hailing services can actually increase car use at the expense of public transport and worsen congestion<sup>34</sup>, as well as undermine road safety<sup>35 36 37</sup>. Integration with third party service providers also raises privacy risks for users.

## Recommendation 19: Incorporate personal mobility devices in regulation

The PTUA is broadly supportive of personal mobility devices forming a greater part of Victoria's transport mix. While eBikes may provide less of a health and environmental benefit than conventional bikes, they are a substantial improvement on driving on both counts; however it is not clear that eScooters offer the same health and environmental benefits as traditional active transport<sup>38 39</sup>.

We note that in many cases, good old-fashioned principles of urban mobility will be the best way to support these new devices—for example, the best thing the government can do to support eBike uptake is to provide safe cycling infrastructure, of the type that protects conventional human-powered bicycles. Nonetheless, there is a need to update regulations for these devices.

We would agree with the intention of pushing for consistent regulations across the State, which should be as transparent as possible and not reliant on ad hoc ministerial improvements. We would also support the Victorian government in pushing for consistent regulations across all states and territories, however should it prove difficult to find nationwide agreement, this should not delay the state from updating its own standards.

The regulatory framework for these mobility devices should broadly take into account the amount of kinetic energy involved; that is, the speed and weight of the device and its rider. Under this framework, it may be appropriate to consider eScooters and eBikes in the same

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<https://theconversation.com/far-too-many-victorians-are-going-to-work-while-sick-far-too-many-have-no-choice-143600>.

<sup>33</sup> Hubert Horan, "Uber's Path of Destruction," *American Affairs* 3, 2 (2019): <https://americanaffairsjournal.org/2019/05/ubers-path-of-destruction/>.

<sup>34</sup> Mi Diao, Hui Kong and Jinhua Zhao, "Impacts of transportation network companies on urban mobility," *Nature Sustainability* (1 February 2021), <https://doi.org/10.1038/s41893-020-00678-z>.

<sup>35</sup> Laura Bliss, "Uber and Lyft's Link to Traffic Fatalities," *Bloomberg CityLab*, published 27 October 2018, <https://www.bloomberg.com/news/articles/2018-10-26/uber-and-lyft-have-been-linked-to-rising-traffic-deaths>.

<sup>36</sup> John M. Barrios, Yael Hochberg and Hanyi Yi, *The Cost of Convenience: Ridehailing and Traffic Fatalities* (Cambridge MA: National Bureau of Economic Research, February 2020), <https://www.nber.org/papers/w26783>.

<sup>37</sup> Noli Brazil and David Kirk, "Ridehailing and alcohol-involved traffic fatalities in the United States: The average and heterogeneous association of uber," *PLoS ONE* 15, 9 (2020): e023874, <https://doi.org/10.1371/journal.pone.0238744>.

<sup>38</sup> Markus Kazmaier, Tessa T. Taefi, and Tim Hettesheimer, "Techno-Economical and Ecological Potential of Electric Scooters: A Life Cycle Analysis," *European Journal of Transport and Infrastructure Research* 20, 4 (2020): 233-251, <https://doi.org/10.18757/ejtir.2020.20.4.4912>.

<sup>39</sup> Alberto Vela, "Cycling is greener and healthier than "micro-mobility" options," European Cyclists' Federation, published 17 February 2020, <https://ecf.com/news-and-events/news/cycling-greener-and-healthier-%E2%80%9Cmicro-mobility%E2%80%9D-options>.

category as conventional bikes, allowing them to travel at comparable speeds and requiring them to use bike lanes and paths (and/or the general roadway, as cyclists currently can) rather than footpaths.

Increased uptake of personal mobility devices will increase pressure on shared spaces currently used by pedestrians and cyclists. This underlines the need for reallocating road space to vulnerable road users and providing separate spaces for pedestrians and people using bikes and other mobility devices to reduce conflict between these quite different forms of transport<sup>40</sup>.

## Recommendation 20: Transform road network operations for all current and future modes

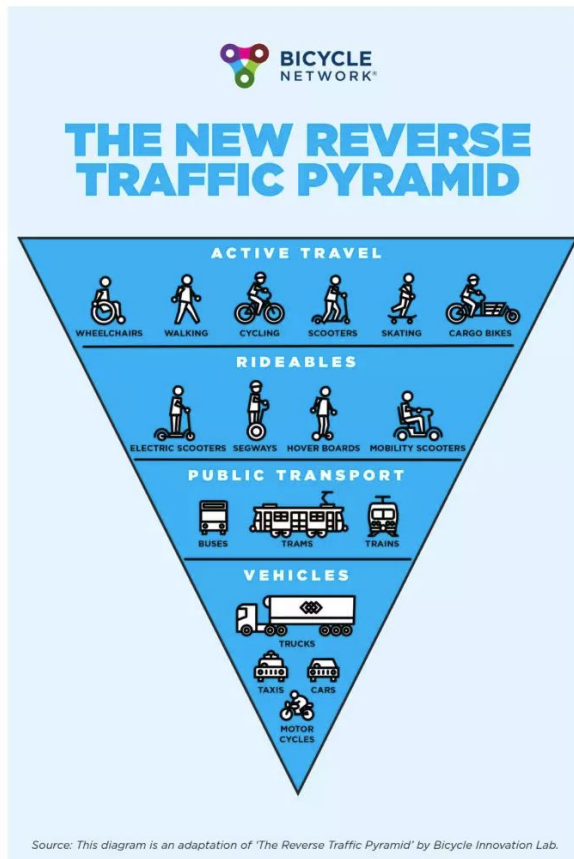
The PTUA supports changes to road network operations that overcome the negative effects of many decades of prioritising private motorised transport over other forms of access. Greater transport network efficiency and equity can be obtained by giving priority to more space-efficient modes of transport (see Figure 2 above) and providing genuine transport choice that is lost under widespread car-dependence. This will include measures such as effective priority treatments for road-based public transport (e.g. lanes and lights), and improving connectivity, safety and amenity for growing numbers of traditional active transport users and newer micro-mobility users.

A core principle of this transformation must be the valuing of people over vehicles. For example, a tram capable of carrying several dozen passengers should not be delayed by single occupant motor vehicles - not to mention zero occupant autonomous vehicles. Attempting to accommodate vehicles by placing restrictions on people (including active transport) could seriously harm liveability, amenity, equity and transport choice<sup>41</sup>. This principle will also be relevant to draft recommendation 17.

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<sup>40</sup> Victoria Walks, *Shared paths - the issues* (Melbourne: Victoria Walks, Accessed 22 February 2021), [https://www.victoriawalks.org.au/Assets/Files/Shared\\_paths\\_the\\_issues\\_v1.pdf](https://www.victoriawalks.org.au/Assets/Files/Shared_paths_the_issues_v1.pdf).

<sup>41</sup> Angie Schmitt, "Autonomous Car Industry's Frightening Vision for Cities," Streetsblog USA, 2 August 2019, <https://usa.streetsblog.org/2019/08/02/autonomous-car-industrys-frightening-vision-for-cities/>



**Figure 4:** The Reverse Traffic Pyramid shows the appropriate priority for road network operations<sup>42</sup>.

## Recommendations 24-26: Port of Melbourne capacity; Bay West Port; Land for freight terminals

Regardless of the specific locations to be used, the PTUA is strongly supportive of measures to increase rail's share of Victoria's freight task, due to the detrimental impacts truck freight has on Victoria's roads, environment and urban amenity. While reducing mode share along key intercity routes is a key priority, intra-city truck traffic is of particular concern, given the outsized impact trucks on urban roads can have on localised particulate pollution, noise pollution, road safety, and congestion.

<sup>42</sup> Bicycle Network, The new reverse traffic pyramid, accessed 26 February 2020, <https://www.bicyclenetwork.com.au/tips-resources/bike-friendly-communities/new-reverse-traffic-pyramid/>

## Recommendation 27: Construct an outer metro road and rail corridor

The PTUA strongly opposes the construction of an outer metro road corridor. Ring Roads have been shown to be ineffective at making traffic flow more smoothly, in part because they are not principally used by people travelling around the city but act as feeders for radial roads into the city, and in part due to the general induced traffic effect that comes from significant investment in large road projects. Any putative benefit of the outer metro road must be evaluated against the alternative of better management of the parallel, existing Western Ring Road (including the effect of selective tolling on CityLink in artificially directing general traffic into this corridor).

An outer metro rail corridor may have some merit, and steps should be taken to secure the land required for this. We would caution, however, that the rail aspect should not be used to “greenwash” a motorway project.

## Recommendation 33: Publish Victoria's transport plan

The PTUA supports the publication of Victoria’s transport plan, as the lack of transparency is restraining both public and private investment. A more transparent plan would not only ensure a clearer and more evidence-based series of public infrastructure works, but would also allow the private sector to plan investment in transit-oriented developments of commercial and residential properties adjacent to public transport hubs, therefore reducing the imperative to build car-dependent, sprawling developments.

The PTUA strongly supports the idea that the plan should include how the government and public service intend to achieve specific targets such as zero emissions. The plan should also include specific targets for higher mode share for public and active transport - noting that this is not only relevant to achieving emissions targets, but also relevant to reducing road trauma, reducing the economic costs of congestion, improving public health outcomes with regards to particulate pollution, obesity and active lifestyles, and many other government goals.

## Recommendation 34: Review the infrastructure contribution system to cover gaps

The PTUA supports reviewing the infrastructure contribution system to cover gaps, particularly in public transport service provision.

In the case of growth areas without existing high-quality public transport (e.g. greenfields growth areas and large brownfields redevelopments), contribution funds should also be used for the initial operation of PT services. These should run at usable frequencies when residents start to move in, rather than waiting until residents have already built their lives around the lack of PT service, and car-dependence is baked in.

## Recommendation 35: Support more homes in priority established places

The PTUA supports the recommendation to provide more homes closer to jobs and services, particularly public transport services. The principles of mixed-use zoning and transit-oriented development will be crucial to this, allowing people to live within walking distance of many of the trips they need to make on a daily basis, and within walking distance of public transport that can take them to other destinations, minimising the need to own a car. This has significant benefits in terms of reducing congestion and demand for parking, reducing carbon emissions, reducing urban sprawl and the impact on green hinterland, and increasing the health of residents through increased incidental exercise.

We encourage this recommendation to be applied to regional cities like Geelong, Ballarat and Bendigo as well as Melbourne, as urban sprawl has fundamentally the same undesirable effects in these cities as well, and there is considerable appetite to address these issues locally. The Ballarat Strategy, for example, lists increasing infill development as a priority, but the City of Ballarat has struggled to achieve this in practice<sup>43</sup>, due in part to State planning laws they cannot override.

We also note that “priority” places should reflect public transport service quality, not just infrastructure or location; it’s not the proximity to bus stops but the quality of buses that stop there. Existing levels of service and connectivity with the broader public transport network should be taken into account when selecting priority sites, and where service levels may not currently be adequate at an otherwise suitable location, government should commit to improving service levels alongside approval of the location.

## Recommendation 38: Partner with local governments to fund pedestrian infrastructure

The PTUA strongly supports this recommendation, particularly noting the priority of providing good links to railway stations.

This recommendation should apply to all Local Government Areas across the state, not just those in Melbourne.

Synergies and cost efficiencies may be obtained by considering both walking and cycling infrastructure at the same time in such a partnership, however this must be predicated on the assumption that pedestrians and people on bikes should be separated both from each other and from motor vehicles on such infrastructure<sup>44</sup>.

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<sup>43</sup> Jolyon Attwooll, “Mapped: How Ballarat tilted west,” *The Courier* (Ballarat), 5 December 2020, <https://www.thecourier.com.au/story/7040865/sprawl-alert-the-two-suburbs-dominating-new-home-builds-while-cbd-falls-behind/>.

<sup>44</sup> Victoria Walks, *Shared paths - the issues*.

## Recommendation 39: Transform cycling in Melbourne, Ballarat, Bendigo and Geelong

The PTUA is strongly supportive of efforts to provide safe, segregated cycle infrastructure to make cycling a more prominent option for short-to-medium trips.

We particularly approve of improving cycling infrastructure and bike parking as a measure to take pressure off railway station car parking. Demand for free car parking at train stations is “fundamentally insatiable” and attempts to provide it are prohibitively expensive; that money is much better spent on cheap walking and cycling infrastructure (and/or feeder buses)<sup>45</sup>.

## Recommendation 40: Improve walking and cycling data

The PTUA is broadly supportive of efforts to improve walking and cycling data.

We do however note the privacy implications inherent in collecting large amounts of data about people’s movements, and the potential for government overreach in both what is collected and how the data is used. The DOT should therefore follow the privacy principle whereby data that is not strictly necessary is not collected in the first place - for example, a system that provided simple headcounts of people passing through key intersections would be preferable to a system that tagged individuals who passed through that intersection and tracked them throughout the city.

Notionally “anonymising” or “de-identifying” these people would not alleviate these concerns, due to the ease with which a person’s identity can be reverse-engineered from “anonymised” data. A salient example of this was the 2019 study<sup>46</sup> which identified the myki card belonging to Anthony Carbines MP.

## Recommendation 41: Reallocate road space to priority transport modes

The PTUA strongly supports the reallocation of road space to priority modes, such as public transport and active transport.

Melbourne’s tram network could be made significantly quicker and more punctual for relatively little cost if trams were given dedicated lanes and/or traffic light priority in key areas. This could significantly ease pressure on the road network, by giving some drivers a fast and reliable alternative to driving. This would also make better use of existing assets, both in terms of allowing throughput of more people per road lane per hour, and in terms of allowing each tram to make more end-to-end runs per day. The latter of these would also

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<sup>45</sup> Nathan Pittman, Crystal Legacy, John Stone and Rebecca Clements, “\$500m for station car parks? Other transport solutions could do much more for the money,” *The Conversation*, 8 April 2019, <https://theconversation.com/500m-for-station-car-parks-other-transport-solutions-could-do-much-more-for-the-money-114908>

<sup>46</sup> Mary Gearin, “‘Shocking’ myki privacy breach for millions of users in data release,” *ABC News*, 15 August 2019, <https://www.abc.net.au/news/2019-08-15/myki-data-spill-breaches-privacy-for-millions-of-users/11416616>.



have a significant effect on ongoing operational costs, as a tram that can quickly and efficiently run end-to-end without being held up in traffic makes more efficient use of the tram driver's time and wages.

Broadly similar arguments can be made for much of Melbourne's bus network, depending on the level of congestion on the particular roads in question. Given that most of Melbourne's population is not within reach of the heavy or light rail networks, and are therefore reliant on buses to meet their public transport needs, it is crucial that buses are not overlooked when reallocating space to more efficient modes. Given that many bus routes also run quite infrequently, and that there may be public or political opposition to bus lanes being installed and then being perceived as empty, it may make sense to package the installation of bus lanes with improvements to service frequency.

The PTUA is also strongly supportive of measures to improve active transport infrastructure, such as widening footpaths or providing dedicated and protected cycling infrastructure. When used in isolation, these transport modes can provide viable alternatives to car travel, and have a significant impact on congestion; however these modes are not always used in isolation, and can form part of a multi-mode trip involving public transport<sup>47</sup>. Most public transport journeys will involve at least a short walking trip at either end, for example, so improvements that encourage active transport are important for increasing public transport mode share as well.

While it is not strictly speaking a reallocation of road space, the PTUA notes that many of the existing road rules that seek to allocate road space in an efficient way are not adequately enforced. For example, road rules preventing vehicles queuing across intersections, pedestrian crossings, bicycle crossings and level crossings (Road rules 128, 128A and 170-175), queuing across or driving on lanes for other modes (Road Rules 76, 153-157) and giving way to buses departing bus stops (Road Rule 77) are anecdotally observed not to be enforced very stringently by Victoria Police, with many flagrant examples occurring in front of police without them taking action. For example, these issues can have a particularly severe impact on tram punctuality, when cars in violation of Rule 128 block tram tracks; even though the tram may have a dedicated lane and be facing a green light, they cannot proceed.

Where Victoria Police are unable or unwilling to enforce these laws at the time of the incident - perhaps due to concerns that pulling the driver over would exacerbate problems with vehicle movements and/or present a safety risk - a combination of existing red light cameras and new reserved lane cameras could potentially be used to fine offending motorists, and this should be coupled with a public information campaign to make sure drivers are aware that they must not violate these rules. These rules already seek to allocate road space to priority modes, with their effectiveness weighted down by the lack of enforcement.

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<sup>47</sup> Samuel Nello-Deakin and Marco te Brömmelstroet, "Scaling up cycling or replacing driving? Triggers and trajectories of bike-train uptake in the Randstad area," *Transportation* (24 January 2021), <https://doi.org/10.1007/s11116-021-10165-9>.

## Recommendation 42: Redesign tram routes

Assuming the Melbourne Metro 1 rail tunnel is served by the high frequency services required to attract St Kilda Road/Swanston Street corridor journeys from tram to train, the PTUA supports the reallocation of tram resources from this corridor to elsewhere on the network, including to the western end of the CBD, to complement the rail tunnel. This also aligns with the historical MMTB practice of operating many St Kilda Road tram services via William Street in addition to Swanston Street.

Careful planning of routes is needed to ensure that adequate capacity is provided along all CBD streets, including short peak shuttle services where required to augment other routes. Capacity concerns would be eased by removal of the Free Tram Zone.

The temporary realignment of tram route 12 from Collins Street to La Trobe Street during part of 2020 demonstrated the value of a full time tram route via Spencer and La Trobe Streets which at present is lacking. Provided resources can be managed to ensure current service levels are maintained in Collins Street, consideration should be given to restoring full time operations via La Trobe Street.

The PTUA also recommends several extensions of tram lines to connect to destinations and interchanges, as detailed in our response to draft recommendation 43. These tram extensions would help make higher service levels viable on whole tram routes, not just the inner-core.

## Recommendation 43: Activate urban renewal with new tram links

The PTUA supports the proposed tram extensions to Fishermans Bend, Arden, and the former defence site at Maribyrnong. We note that the potential siting of Melbourne Metro 2 stations is likely to have an impact on the choice of route for Fishermans Bend trams, and urge that planning for both projects be coordinated (noting that both light and heavy rail will be needed, given the size and planned uses of the precinct).

The PTUA also suggests a number of other new tram links, many of which are shorter than those suggested by Infrastructure Victoria, which in many cases would link light rail to heavy rail, to provide for a more integrated public transport network. These extensions include:

- An extension of the Vermont South 75 tram line to Knox, to better serve this area, and also reinforce Knox district centre as a public transport destination and interchange
- The West Maribyrnong 57 tram should be extended from its present terminus along Military Road to better serve its catchment population in Avondale Heights and East Keilor.
- Route 48 North Balwyn to Doncaster Shoppingtown, where it could provide interchange with the future Suburban Rail Loop station
- Route 58 Toorak to Hartwell (connecting to rail and the Coles headquarters)

- A new route from Caulfield along Burke Road, incorporating the Camberwell section of route 72, then north to Doncaster Road and the Eastern Freeway and on to Ivanhoe
- Route 3 East Malvern to the railway station, and on to Chadstone Shopping Centre
- Route 5 Malvern to Darling railway station
- Route 6 Glen Iris to Ashburton railway station
- Route 67 Carnegie to the railway station, and on to Chadstone Shopping Centre
- Route 11 West Preston to Reservoir
- Park Street, South Melbourne, to St Kilda Road, to permit creation of a new east-west tram route linking Albert Park, South Melbourne and South Yarra.

## Recommendation 44: Plan for PT accessibility, including tram stop upgrades, to achieve the 2032 targets

The PTUA strongly supports the planning for and achieving the 2032 accessibility targets, including releasing the plan to do so within a year.

We do however note that the accessibility targets require different aspects of the public transport network to be completed at different times. While the Infrastructure Victoria strategy notes that the whole network, including tram rolling stock, must be fully accessible by 2032, it fails to mention that the target for the tram stops themselves is in fact much earlier, in 2022. VAGO's 2020 report on the Accessibility of Tram Services<sup>48</sup> indicated that only 27% of tram stops are currently accessible, so this target appears to be very difficult to achieve.

While it is unlikely that the remaining 73% of tram stops could be upgraded in less than two years, it is still incumbent on the government to work hard to complete this task as soon as possible - and well before 2032 if possible. The detailed plan that the government releases should reflect this and target not just a simple percentage of stops but also spatial distribution and integration with other routes and trip generators<sup>49</sup>.

## Recommendation 45: Adopt peak and off-peak PT fares

The PTUA supports a peak and off-peak fare structure. The PTUA supports the current trial of off-peak fares but recommends off-peak zone 2 only fares be introduced and the weekend cap be replaced by counting all weekend fares as off-peak. Consideration should also be given to replacing Earlybird free train travel before 7:15am with a discount that applies on all modes. These changes would make the off-peak discount system simpler, fairer and more easily understood by public transport users.

The PTUA supports replacing weekly Myki Passes with weekly caps, reducing incorrect purchasing and making the system easier to understand and use.

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<sup>48</sup> VAGO, *Accessibility of Tram Services* (Melbourne: Victorian Auditor-General's Office, October 2020), <https://www.audit.vic.gov.au/report/accessibility-tram-services>.

<sup>49</sup> PTUA, *Submission to the Inquiry into Expanding Melbourne's Free Tram Zone* (Melbourne: Public Transport Users Association, January 2020), 9-10, [https://www.ptua.org.au/files/2020/PTUA\\_FTZ\\_Inquiry\\_submission\\_2020-01-31.pdf](https://www.ptua.org.au/files/2020/PTUA_FTZ_Inquiry_submission_2020-01-31.pdf).

The PTUA strongly opposes the abolition of longer term Myki Passes. They encourage off-peak travel by regular PT users and make regular use of PT and low-car lifestyles more financially attractive in a relatively simple manner, compared with alternatives. As desirable network planning initiatives (referred to elsewhere) improve the usability of the system for a broader range of travel uses than white-collar commuting, this will likewise enhance the value of Myki Passes well beyond the white-collar workforce, leading to equity benefits that would not be fully realised were Myki Passes to be abolished.

The extra PT use generated by Myki Passes (and likely to be so generated in the future) is almost exclusively off-peak and on weekends when the system has capacity for extra passengers, making both the marginal cost to the system and any need for demand management relatively low. Daily caps already provide same-day complimentary additional travel for passengers travelling in more than two 2-hour blocks within the same zone(s) on the same day.

The issue of fare reform is complex, and we continue to consider and refine our position.

## Recommendation 46: Price each PT mode differently

The PTUA opposes mode based fares because they would work against the principle of a well-designed multi-modal public transport network. Public transport modes must work together to provide competitive transport options to transport users. Different fares would undermine this, and risk introducing excessive complexity in the fare system.

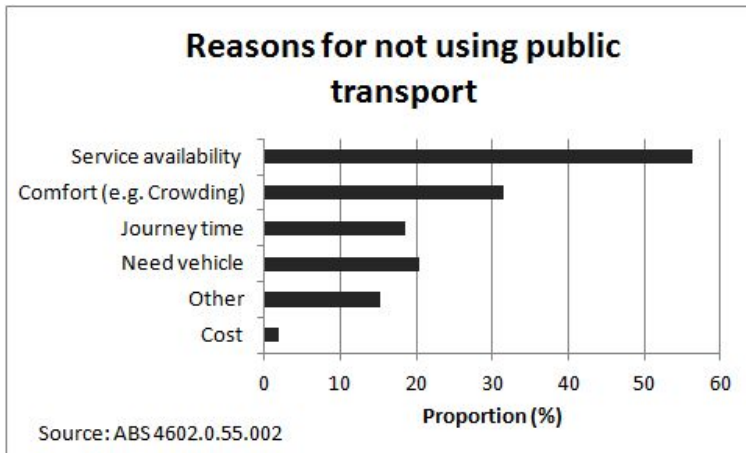
There is a fundamental concern here that the recommendation is responding to a situation of inadequate service provision and attempting to resolve this using a price signal that does not address the underlying cause of the situation.

So while it is true much of Melbourne's bus network is underused, the prime cause of this is not fare levels, but slow indirect routes<sup>50</sup>, and insufficient frequencies to attract people out of their cars. Limited operating spans also reduce the usefulness of services and force potential passengers to use other modes instead—most obviously private cars—due to, for example, the unavailability of bus services for one direction of their return trip<sup>51</sup>.

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<sup>50</sup> PTUA, *Driven around the bend – Melbourne's meandering bus routes* (Melbourne: Public Transport Users Association, May 2012), [https://www.ptua.org.au/files/2012/PTUA-Bus\\_route\\_reform\\_2012.pdf](https://www.ptua.org.au/files/2012/PTUA-Bus_route_reform_2012.pdf)

<sup>51</sup> Chris Loader and John Stanley, "Growing bus patronage and addressing transport disadvantage—The Melbourne experience," *Transport Policy* 16, 3 (2009): 106-114, DOI: 10.1016/j.tranpol.2009.02.001.



**Figure 5:** ABS survey showing why people do/don't use PT which has cost near bottom of reasons

Monday to Friday		Saturday Public Holidays (1)		Sunday Public Holidays (2)	
AM		AM		AM	
4		4		4	No service
5		5		5	
6		6		6	
7	32	7		7	
8	32	8	32	8	
9	32	9	32	9	
10	32	10	32	10	
11	32	11	27	11	
PM		PM		PM	
12	32	12	27	12	
1	32	1	27	1	
2	32	2		2	
3	32	3		3	
4	32	4		4	
5	32	5		5	
6	32	6		6	
7	32	7		7	
8		8		8	
9		9		9	
10		10		10	

**Figure 6:** Infrequent services with limited operating spans do not provide a realistic and reliable option for most people and will fail to attract significant patronage even when operating<sup>52</sup>.

<sup>52</sup> Declan Martin on Twitter: <https://twitter.com/declanmartin75/status/1326709323418906624>

## Recommendation 47: Abolish the Free Tram Zone

The PTUA strongly supports the abolition of the Free Tram Zone with the savings redirected to improving the coverage and accessibility of the tram network, consistent with Draft Recommendations 43 and 44 respectively. The rationale for this is covered in our recent submission to the Inquiry into Expanding Melbourne's Free Tram Zone<sup>53</sup>.

## Recommendation 48: Remove annual charges while introducing distance-based pricing for EVs

The PTUA is broadly supportive of this. Our position is discussed in more detail in response to Recommendation 55.

## Recommendation 49: Appoint an independent transport pricing adviser

The PTUA would support an independent transport pricing adviser in principle. However, we note that this has had mixed results in other jurisdictions, with Sydney's IPART being an example where poor advice has been given. Broadly, this independent adviser must have strong expertise and experience from a transport planning background, rather than approaching the topic from an economics background. This is because the underlying issues with attractiveness of public transport in Victoria are related to network planning, not to pricing *per se*.

## Recommendation 50: Increase and extend the Melbourne Congestion Levy on parking

The PTUA is broadly supportive of the measures proposed to increase and extend the Melbourne Congestion Levy. However, we note that some of the non-CBD locations listed for introduction of the levy, such as Melbourne Airport and large shopping centres, do not always have good access to public or active transport as viable alternatives to driving. We also note that, for example, on days of particularly high demand like Boxing Day, buses may bypass shopping centres like DFO Essendon<sup>54</sup> due to excessive traffic congestion - prioritising precisely the wrong modes.

Therefore, if these non-CBD locations are to be considered for the parking levy, this should be done in concert with improving public transport access to these locations - noting that, for example, the Airport should have improved bus access from nearby neighbourhoods as well as Airport Rail from Sunshine and the city; and for example if Chadstone is served by a new

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<sup>53</sup> PTUA, *Submission to the Inquiry into Expanding Melbourne's Free Tram Zone*.

<sup>54</sup> [https://twitter.com/Transdev\\_Melb/status/1209897863179841537](https://twitter.com/Transdev_Melb/status/1209897863179841537)

tram it may still need improved bus access from other directions. Revenue from the parking levy could be nominally used to fund or subsidise the improved public transport access.

An important precursor to such charging is the replacement of any planning provisions that impose parking requirements with measures to accommodate diverse means of access such as cycling end-of-trip facilities and integration with safe active transport networks and public transport interchanges.

## Recommendation 51: Incorporate congestion pricing for all new metropolitan freeways

The PTUA broadly considers this to be an inadequate half-measure. Only incorporating congestion pricing on new metropolitan freeways would leave alternative routes and feeder roads uncharged, and therefore not sufficiently address the problems caused by this congestion.

Taken in isolation, this recommendation could also provide cover and justification for unnecessary new metropolitan freeways to be built - if their proponents can make the spurious argument that they will be tolled and therefore not have the detrimental effects we know are associated with metropolitan freeways inducing traffic. It is the PTUA's firm view that no new metropolitan freeways should be built, for the reasons outlined elsewhere in this document.

## Recommendation 52: Trial full-scale congestion pricing in inner Melbourne

The PTUA would be supportive of full-scale congestion pricing in inner Melbourne. This would address the concerns we have with Recommendation 51, by making sure that the pricing regime is geographically comprehensive and does not discriminate between new freeways, old freeways and old surface streets.

Noting that some other jurisdictions have implemented exemptions to congestion prices (and similar schemes) for electric or other low-emissions vehicles, the PTUA would wish to note its opposition to this practice. Electric vehicles do not produce tailpipe emissions, but they do cause most of the other problems that ICE vehicles cause, including the very congestion this pricing would be designed to reduce<sup>55</sup>. They should therefore be subject to the same congestion prices, and different policy levers should be used to transition Victoria's vehicle fleet to lower-emissions options (such as those outlined in Recommendation 55 below).

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<sup>55</sup> PTUA, *Submission to Select Committee on Electric Vehicles*, 7-8.

## Recommendation 54: Price parking at major PT hubs, all train stations and park-and-rides

The PTUA is supportive of the notion that the prices of car parking should reflect demand, but also the capital cost of building the parks, the congestion and emissions they induce, and the opportunity cost of the land they are built on.

The revenue from pricing station parking should not be reinvested into additional parking at stations. Instead, it should be directed to more efficient alternatives such as improving feeder bus services and/or active transport infrastructure - which use less land, and create less congestion and fewer emissions.

## Recommendation 55: Phase out fixed RUCs and introduce user-pays charging

The PTUA broadly supports the shift of Victoria's road user charges from fixed upfront costs to more variable charges, which more accurately reflect the externalities caused by driving.

Broadly, the PTUA would be supportive of statewide distance-based charging which added a congestion charge component in key areas of congestion. We also would note the importance of keeping road user charges as equitable as possible, and so support discounts for concession holders.

The recommendation for heavy vehicles to be charged more than light vehicles is a sensible one. The recommendation for EVs to be charged less than ICE vehicles has merit on grounds of reduced carbon emissions, but as outlined above, we note that many of the other negative externalities inflicted by ICE vehicles are still inflicted almost equally by EVs<sup>56</sup>; as such, the PTUA would support this in principle but would caution against the price differential being too significant or for lower charges for EVs to become an incentive to drive instead of using active or public transport.

Though the PTUA does not have a firm view on this issue, we do note that stamp duty is broadly progressive based on vehicle price (which should broadly correlate with the vehicle owner's capacity to pay) and that abolishing stamp duty could therefore result in a road user charge system that is more regressive, forcing a proportionally higher burden onto those with less capacity to pay. IV should consider these equity issues, and either retain some form of progressive stamp duty as part of the RUC mix, or else ensure that the replacement charges have a similar effect. Ensuring that alternative forms of transport—active transport and public transport—are available and affordable would be a crucial aspect of delivering equity in transport pricing reform.

The PTUA does not support the abolition of TAC charges, however we do believe that they should be reformed in order to more accurately reflect the externalities of road trauma. The current flat TAC charge means that low risk drivers and vehicles are subsidising high risk

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<sup>56</sup> PTUA, *Submission to Select Committee on Electric Vehicles*, 1-6.



drivers and vehicles<sup>57</sup>. Moving to risk-based premiums would reduce costs for safe drivers and lower the overall social cost of road trauma<sup>58</sup>, particularly if they also include a distance component<sup>59</sup>.

## Recommendation 62: Reshape the metro bus network

The PTUA is strongly supportive of a significant reshaping of the metro bus network. As highlighted elsewhere, most of Melbourne is not within range of the train or tram networks, and is reliant on buses for at least part of their public transport journey; and Melbourne's bus network has not seen the kinds of improvements that the tram and train networks have seen in recent decades.

We would note that bus route reform should make buses fast, frequent and direct, and that generally speaking they must complement trains and trams to maximise the overall usefulness of the network, rather than wasting resources on buses that compete with trains and trams, as in Recommendation 46. Often this will mean buses running perpendicular to trains and trams, to feed passengers onto those higher-capacity modes, rather than running them parallel to them.

We would support the idea that the northwest and southeast of Melbourne should be prioritised for reform, to be completed in time for MM1's opening in 2025, and for other areas of Melbourne to follow soon after.

## Recommendation 63: Connect suburban jobs through premium buses and road upgrades

The PTUA supports measures to connect suburban jobs through premium buses. The PTUA opposes road capacity increases because they would induce more traffic.

The Suburban Rail Loop will be a transformative project for Melbourne's rail network, allowing for fast and high-capacity transport perpendicular to its mostly-radial existing network, and connecting key destinations that do not currently have a heavy rail connection such as Universities. Running fast, frequent buses between these destinations in the short term is a very sensible idea.

On-road bus priority measures will be an important element of this to ensure journeys are reliable and competitive with car travel.

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<sup>57</sup> PTUA, *Submission to the Inquiry into the Increase in Victoria's Road Toll* (Melbourne: Public Transport Users Association, 30 April 2020), 7-8, [https://www.parliament.vic.gov.au/images/stories/committees/SCEI/Inquiry\\_into\\_the\\_Increase\\_in\\_Victorias\\_Road\\_Toll\\_/Submissions/S86\\_-\\_PTUA\\_Redacted.pdf](https://www.parliament.vic.gov.au/images/stories/committees/SCEI/Inquiry_into_the_Increase_in_Victorias_Road_Toll_/Submissions/S86_-_PTUA_Redacted.pdf).

<sup>58</sup> Mary A. Weiss, Sharon Tennyson and Laureen Regan, "The Effects of Regulated Premium Subsidies on Insurance Costs: An Empirical Analysis of Automobile Insurance," *Journal of Risk and Insurance* 77, 3 (2010): 597-624, <https://doi.org/10.1111/j.1539-6975.2010.01360.x>.

<sup>59</sup> Todd Litman, *Distance-Based Vehicle Insurance Feasibility, Costs and Benefits* (Victoria BC: Victoria Transport Policy Institute, 8 June 2011), [https://www.vtpi.org/dbvi\\_com.pdf](https://www.vtpi.org/dbvi_com.pdf).

Even with the Suburban Rail Loop set to serve Monash University, there remains a need for a high speed, high capacity public transport link and accompanying bus feeder connections along the Wellington Road corridor to Rowville, not just to serve current travel demand, but also to help prompt transit-oriented development and more walkable neighbourhoods in outer eastern Melbourne.

## Recommendation 64: Increase suburban rail corridor services and capacity

The PTUA strongly supports increasing suburban rail corridor services and capacity. The PTUA strongly supports continuing to upgrade service frequencies to “turn up and go: service levels (services at least every 10 minutes) for more of the day and notes that this can be done on most of the network without capacity increases because the infrastructure is already there for peak services. Beyond these, we support improvements being made with relatively cheap and simple upgrades to infrastructure, such as rail duplication and signal upgrades.

The PTUA strongly recommends the following among desirable suburban rail duplications for inclusion in the final Infrastructure Victoria strategy:

- Westona to Laverton
- Gowrie to Upfield / Roxburgh Park
- Mooroolbark to Lilydale
- Ferntree Gully to Upper Ferntree Gully
- Ashburton to Alamein

## Recommendation 65: Reconfigure the City Loop for cross-city services

The PTUA supports a plan for reconfiguring the City Loop for cross-city services.

Care should be taken to minimise impacts during construction, but completion of this project will help provide additional rail capacity and reliability through the central city, which will be needed as Melbourne continues to grow. The PTUA supports development of a business case for duplication of the Upfield line and electrification to Wallan, to use both the additional loop capacity currently used by the Sunbury line on the Northern loop until MM1 opens, and future capacity from City Loop reconfiguration.

## Recommendation 66: Prepare for Melbourne Metro 2

The PTUA strongly supports preparing for and constructing MM2, to allow more and faster services from the Werribee and Mernda lines, as well as potentially the Geelong line. It will also boost capacity on the Hurstbridge and Williamstown/Altona Loop lines, and provide heavy rail access into Fishermans Bend, which will be essential to ensure the success of that precinct.

The PTUA also supports the recommendation to introduce bus routes between Newport and Fishermans Bend, and between Victoria Park and Parkville, in the short term as a way of establishing travel patterns and building patronage for when MM2 opens.

## Recommendation 67: Protect a future option for a new cross-city motorway

The PTUA strongly opposes, as unnecessary and wasteful, any future cross-city motorway and therefore any preparation for such a motorway. Melbourne does not need any more motorways, even on the 20–30 year time horizon suggested in this recommendation. The East West Link project has been proven time and again to not even come close to net economic benefit, even with extremely generous assumptions about travel time savings which do not adequately account for the generated traffic such a large road project would induce. It has been rejected repeatedly by infrastructure experts and the voting public alike (the latter twice) and it is disappointing that some observers still cling to the fantasy that it may one day become viable or desirable—when no-one envisages any such case for the Inner London Ringway, to take one example.

Instead, the government should be using the next 20–30 years to improve Melburnians' alternatives to car travel in line with its own principles under the *Transport Integration Act*, making the city less car-dependent and ensuring that the traffic demand that some might use to justify construction of such a motorway never arises in the first place.

20-30 years is enough time to completely change the character of a city, if the government is focussed on achieving positive outcomes for liveability and reducing the impacts of traffic. Far from building more motorways, by then we could be considering removing existing ones, as has happened in cities like Utrecht, Seoul and San Francisco<sup>60</sup>.

## Recommendation 68: Prioritise and oversee infrastructure delivery in growing communities

The PTUA supports prioritising and overseeing infrastructure delivery in growing communities.

In addition to the need to provide appropriate infrastructure to growing communities, it is important for IV (and the government) to remember that infrastructure is only part of the equation—particularly in public transport, services are the other key aspect, and this aspect often suffers most in growing communities. Bus services should begin as soon as the first residents start moving into the area, not five or more years later as is often the case. Although there may be relatively low uptake while houses are still being built and residents are still moving in, this kind of “loss leader” is necessary to establish good transport patterns at the time new residents move in - an approach that will result in higher PT usage in later years. The “better late than never” approach to serving new areas with buses often results in

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<sup>60</sup> Darío Hidalgo, "Traffic Evaporation: What Really Happens When Road Space is Reallocated from Cars?," *The City Fix*, 18 February 2021, <https://thecityfix.com/blog/traffic-evaporation-what-really-happens-when-road-space-is-reallocated-from-cars/>.

households owning two or more cars, and establishing car-dependent habits which leave those new buses relatively under-utilised.

## Recommendation 69: Expand rail access in outer suburbs

The PTUA strongly supports expanding rail access in the outer suburbs. The growing areas of Melton, Wyndham Vale, Wallan and Clyde all need frequent high-capacity suburban rail services.

The opening of Melbourne Metro 1 (MM1) will enable more trains through the inner city core and therefore the PTUA strongly advises that work on at least Melton is completed in time to open concurrently with MM1. The PTUA strongly supports premium bus services to Woollert and Clyde and along the Mornington Peninsula. The PTUA supports a rail link to Woolert, for which Melbourne Metro 2 is likely required, although planning and land acquisition can take place well in advance of MM2 opening.

## Recommendation 70: Expand and upgrade Melbourne's outer suburban road network

The PTUA does not agree that outer suburban roads should continue to be expanded, as this leads towards more car dependence. While safety improvements should rightly be pursued, these should be focussed on safety, not increased capacity.

Where possible, bus and bicycle lanes should be implemented in preference to additional traffic lanes. High quality pedestrian paths and crossing locations should also be provided, particularly along arterial roads.

## Recommendation 71: Target 30% tree canopy coverage in new growth areas

The PTUA strongly supports tree canopy coverage in both new growth areas and existing areas. Trees provide shade for pedestrians, including those accessing public transport. Trees adjacent to footpaths and cycling paths, on both public and private land, beside streets and roads and separate paths are particularly important for this. This objective would be aided by favouring space-efficient modes of transport that spare land for vegetation rather than private motor vehicles that consume disproportionate amounts of land for roads and parking<sup>61</sup>.

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<sup>61</sup> FOE, *Submission to the Inquiry into Environmental Infrastructure for Growing Communities* (Melbourne: Friends of the Earth Melbourne, October 2020), 1-7, [https://parliament.vic.gov.au/images/stories/committees/epc-LA/Inquiry\\_into\\_Environmental\\_Infrastructure\\_for\\_Growing\\_Populations/Submissions/231\\_2020.10.02\\_-\\_Submission\\_-\\_Friends\\_of\\_the\\_Earth\\_Melbourne.pdf](https://parliament.vic.gov.au/images/stories/committees/epc-LA/Inquiry_into_Environmental_Infrastructure_for_Growing_Populations/Submissions/231_2020.10.02_-_Submission_-_Friends_of_the_Earth_Melbourne.pdf)

## Recommendation 78: Revise the Murray Basin Rail project plan

The PTUA strenuously opposes the recommendation to downgrade the Murray Basin Rail Project.

The MBRP as originally conceived would have been a huge step-change in rail freight efficiency in Victoria, bringing the Murrayville, Yelta/Mildura, Sea Lake and Manangatang lines onto Standard Gauge for the first time; reopening the Maryborough-Ararat SG link; Dual-Gauging Maryborough-Ballarat-Gheringhap/Geelong; and generally restoring track bed quality and increasing axle loads throughout. In addition to the obvious benefits of restoring track quality and increasing tonnages, this would have complemented the work completed in the 1990s to Standardise the main line to Adelaide via Gheringhap, Maroona and Ararat, and the line to Portland – meaning that the whole west of the state would be on SG, and that freight from all these destinations would have quick and easy access to ports at Portland, Geelong and Melbourne.

With the Murrayville and Yelta/Mildura lines converted to SG, and the Maryborough-Ararat line reopened, but the Sea Lake and Manangatang lines and the Maryborough-Geelong link still BG, the project is essentially half-finished. This means that freight from the north west now has a longer and slower trip to port than it did a few years ago, while freight in the north has seen relatively little change.

While the proposed repair and improvement works on existing-gauge track are all sorely needed, they would still leave freight on the Murrayville and Yelta/Mildura lines with a longer path to the ports of Geelong and Melbourne than before the project – travelling via Ararat adds about 135km to their journey to Geelong, and over 170km to the journey to Melbourne.

This means a huge competitive disadvantage for rail freight compared with road freight, which can travel direct to any port it pleases, and which sees continued investment in roads without needing to jump through the same hoops rail projects do. This increased competitive advantage will see more trucks on our roads, which means more congestion, more road damage and maintenance costs, and more carbon emissions in our atmosphere – poor outcomes indeed.

The arguments publicly made by the government relating to freight-passenger conflicts in the Ballarat area seem to be entirely spurious, given that it is long-standing practice for the vast majority of freight trains to travel at night when passenger train numbers are lower (precisely because these conflicts already exist).

Infrastructure Victoria should support the MBRP to be completed as per the original plan. While current funding allocations will not allow this to happen in the short term, IV should recommend to government that all work currently being undertaken makes provision for later Standardisation (eg through the use of gauge-convertible sleepers) and that government proceed with the Standardisation process in the medium term.

At a minimum, the complete details of the review into the MBRP must be released publicly so that the assumptions that went into this review can be given proper scrutiny by the public.

## Recommendation 79: Fund an ongoing regional rail freight maintenance programme

The PTUA strongly supports an ongoing regional rail freight maintenance programme. As outlined elsewhere, rail freight is significantly more efficient than road freight on a number of measures, including congestion, carbon emissions and the financial cost to road maintenance. Improving the rail freight network and committing to a program of ongoing maintenance, as a means of encouraging more of Victoria's freight task onto rail, is sensible economic policy.

### Insight: Faster rail for the regions

The PTUA acknowledges that capacity and frequency are priorities for regional rail. Given that capacity and frequency are still such substantial issues on many of Victoria's regional passenger lines - particularly longer-distance lines - it is appropriate that these are treated as the highest priority in the short term. However, many of these issues will be substantially addressed upon completion of works already pledged by government or under construction, so it is appropriate that proper consideration for speed is given when planning future upgrades.

A notable absence from IV's strategy is any plan for decarbonising regional rail travel. While taking a diesel train is a more sustainable option than driving a private ICE car, due to lower CO2 emissions per passenger-km, it is far from a zero-emissions option, and the emissions from diesel trains will need to be resolved in the relatively near future.

Work conducted by Network Rail in the UK as part of their Traction Decarbonisation Network Strategy indicates that battery electric and hydrogen fuel cell trains have very limited applications, with the technology as it currently stands; these are essentially limited to short, lower-speed branch lines which see very little train traffic. Where passenger trains run at 160km/h or faster, and particularly where those trains run frequently, Overhead Line Electrification (OLE) is the preferred solution. (In addition, OLE is the only suitable option for decarbonising freight rail, so there may be some co-benefit where freight trains and passenger trains use the same lines at different times of day, as is common in Victoria).

It will therefore be necessary for OLE to be installed on, at minimum, the "commuter" lines to Geelong, Ballarat, Bendigo, Seymour, and the Latrobe Valley; there is also a strong case for OLE to be extended to Shepparton, and for trains to run considerably more frequently to this growing regional city - which has been historically significantly underserved for a regional city of its size and distance from Melbourne. Installing OLE on long-distance lines to places like Warrnbambool and Echuca would need to be subject to more detailed analysis, and if it did proceed, would likely be part of a later phase of works.

If these main commuter lines will be electrified with OLE, and V/Line would therefore need to procure a new fleet of electric trains to run on these lines, it would be short-sighted and wasteful for these new trains to have the same top speeds as the existing VLocity trains. Procuring trains with a modest increase in top speed, such as 200km/h, would be the sensible and financially responsible move at that point.

## Recommendation 85: Reform regional PT to meet local needs

Regional Victoria's population densities and public transport needs vary substantially between larger regional cities, small towns and rural areas; cities like Ballarat are much more like suburban Melbourne than they are like a rural town like Patchewollock. It is crucial that Infrastructure Victoria understands this, and does not in any way advocate for a "one size fits all" approach to regional public transport. Seeing language about "not replicating city-style models" is distressing to see for people who live in regional cities like Ballarat, when proper city-style bus services - ones that run frequently, seven days a week, and for a wide span of hours - is precisely what they need; the Department of Transport has a shameful history of treating regional cities like one-horse country towns, and IV must not perpetuate this.

The PTUA cautions that IV or the Department should not look at current patronage data for fixed-route services to determine that a route is "low-ridership" and conclude that there is low demand, and therefore the route can be replaced with a "flexible" on-demand service. Victoria's bus network is characterised by incredibly poor service, and in a time where train and tram ridership has increased, bus ridership has stagnated and even fallen; this is not because there is no demand, it is because the Department and government has abjectly failed to improve bus services in the same way as it has improved train and tram services. It is very often the case that where ridership is low, it is not because of low latent demand, it is simply because the service is so poor - the bus is too slow, too indirect, too infrequent, and/or shuts down too early in the evenings.

"Flexible" on-demand bus schemes have a long history of higher per passenger subsidy than timetabled route bus services, and constantly struggle to attract significant ridership. They may have useful application in situations where demand genuinely is low, and will necessarily remain low; examples might include very small towns, or perhaps late-night services in larger regional centres that could run once fixed-route services cease for the evening. But the priority, in regional cities and larger towns and during daylight hours, must be to provide improvements to the service levels of conventional fixed-route and fixed-timetable bus routes, in line with accepted best practice.

## Recommendation 94: Expand social housing in regional centres, in locations with good access

The PTUA supports the recommendation that new social housing be in locations served by good walking access and good public transport to services. It is crucially important that people who may not have access to a car can still access the services they need, as well as jobs and leisure and other aspects of civic engagement.

It is worth reiterating the basics of what "good public transport" is. This includes frequencies that mean that social housing residents aren't waiting around all day for services or connections, and can therefore make key appointments on time; a good span of hours, so that residents can attend early-morning jobs or get home from activities late in the evening; and seven-day timetables, so they can access these things on weekends as well.