

Transporting  
Melbourne  
A call for an  
integrated  
transport plan  
for Melbourne

COMMITTEE  
FOR  
MELBOURNE



## About Committee for Melbourne

Committee for Melbourne (Committee) is an apolitical, not-for-profit, member-based entity that brings together over 140 organisations from Greater Melbourne's business, academic and civic sectors, who share a common vision to make Melbourne a better place to live, work and do business.

As an independent organisation we represent no single interest group or political position, but seek to challenge conventional thinking and to develop innovative ideas to continue to enhance our position as an economically prosperous and highly liveable global city.

## Our thanks

The Committee would like to express its appreciation to our member organisations who helped contribute to the development of this report.

## Purpose

The purpose of this document is to call for the development and publication by the Victorian State Government of a comprehensive plan for an integrated transport system for Greater Melbourne, which incorporates transport, land-use and economic development planning.

## Transport Taskforce

The Committee's Transport Taskforce, led by partner at McKinsey & Company, Ishaan Nangia, aims to foster a greater understanding of Melbourne's transport challenges, identify key priorities for action and advocate for change.

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# Foreword



*Transporting Melbourne* was written prior to the onset of COVID-19, yet its key message remains more relevant than ever. The development and publication of a comprehensive integrated transport plan, which incorporates transport, land-use and economic development planning, is essential for the future of Greater Melbourne. It will provide certainty for the settlement, investment and development activity that is essential for the economy.

COVID-19 has given us some breathing space to review the key elements of a comprehensive plan, taking into account, for example, the impact the pandemic will have on our working and commuting behaviour. Our assessment is that this does not reduce the need for a comprehensive, integrated plan, but may well change the sequencing and implementation of the components of such a plan.

Prior to the health crisis, it was widely recognised that the construction of new transport infrastructure alone was unlikely to effectively deal with the congestion problems being experienced across Greater Melbourne. As we emerge from the COVID-19 health emergency, things might get worse, with governments reassessing major transport infrastructure investments as they accumulate significant debt in the delivery of stimulus and support packages in response to COVID-19. Combined with the expected economic lag, some large infrastructure projects may now be at risk. This presents a major opportunity to consider a suite of lower-cost demand management initiatives. User pricing across the transport network, including for roads, public transport, and parking, could shift travel demand, helping reduce congestion, particularly during peak periods.

Planners and policy-makers will need to consider the impact the adjustments we have made to our lives during the health crisis will have on how Melbourne functions in future. For example, COVID-19 has seen many professionals working from home, with organisations now considering incorporating more flexible working arrangements into their long-term strategies. This may reduce the demand on the transport network.

Social distancing is likely to reduce the capacity of public transport, with bike paths and active transport options more sought after than before. The right infrastructure will need to be in place to meet these demands. The development of fast and reliable transport links to major employment centres as well as improvements in first and last-mile connectivity to encourage greater uptake in public transport, should also be considered.

The rise in people working from home has also tested how effective Greater Melbourne's neighbourhoods are. Increased demand for access to local green spaces, walking and biking paths, supermarkets and health services has been a feature of the pandemic period. To cultivate more liveable neighbourhoods, improvements to local amenity will be needed, such as access to local social activities (cafes, restaurants) as well as better infrastructure for active transport.

The response to this health crisis has reduced pollution across the city - the skies have been clearer and the air cleaner. People now know what is possible. There is an opportunity to remake civic life which will help the natural environment and improve peoples' health, including initiatives to support cycling and active transport. Policies to facilitate the widespread adoption of electric cars and buses could also reduce pollution across Greater Melbourne.

As the economy recovers and we again welcome increasing numbers of new residents and visitors, we must ask ourselves what we must do for Greater Melbourne to remain highly liveable, prosperous and sustainable. Designing and implementing a comprehensive strategic plan, which combines transport, land-use and economic development planning, is a good place to start. The creation in July 2019 of an integrated Department of Transport should help pave the way for the Victorian Government's ability to take a truly integrated approach, working across jurisdictions, departments and in collaboration with the private sector.

*Transporting Melbourne* identifies the key areas that a plan should cover, including demand management, urban development and sustainability, which have become even more important in light of the COVID-19 pandemic.



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# Introduction



Melbourne is recognised globally as one of the most liveable cities in the world. It is safe, boasts a diverse economy, delivers excellent health and education services, and hosts world-class sporting events and cultural attractions.

Underpinning Greater Melbourne's growth and prosperity has been its transportation system. The city possesses the country's largest freeway network, the world's largest tram network, a train and bus network, and international gateways for people and freight through Melbourne Airport and the Port of Melbourne; Australia's largest container port. This system has helped Melbourne become a thriving metropolis.

However, mobility in Melbourne has reached a tipping point. The population explosion Melbourne has experienced in the past decade, combined with growing tourism and trade volumes, has placed our essential services – including our transport system – under great pressure. Prior to COVID-19, peak hour commutes on public transport had become increasingly uncomfortable, while traffic congestion on our roads had worsened. These conditions are expected to return following the crisis.

Melbourne has faced considerable transport challenges in the past and has addressed those challenges through sound policy and infrastructure investment. Whether it was the creation of the Hoddle Grid to help regularise the city's street pattern, the construction of an underground city loop to alleviate the bottleneck between Flinders Street and Spencer Street Stations or the construction of the extensive freeway network to accommodate suburban growth, infrastructure policy plans responded to the challenges at the time. However, the construction of road and public transport projects over the last 20 years has lagged

population, trade and tourism growth, resulting in increasing levels of congestion.

While the construction blitz Melbourne is experiencing is delivering many long-needed projects, there is growing unease that Melbourne's infrastructure is still not meeting our current and future set of challenges. It is considered that current plans for future investment will not be enough to overcome these challenges. The city's meteoric and unprecedented growth is placing our transport assets under immense strain. Skyrocketing project costs, skills shortages, funding constraints, disruptive technologies and the absence of a clear integrated plan, are some of the reasons contributing to a collective sense that the challenge is becoming acute. COVID-19 has complicated matters further.

In addition, our reliance on private vehicles will exacerbate congestion and continue to have negative implications for the planet, with transport being Australia's second largest source of greenhouse gas pollution.<sup>i</sup> Melburnians should look no further than the images of devastation and destruction brought about by the recent national bushfire crisis to understand the importance of reducing our emissions and safeguarding our natural environment. To ensure sustainable urban development and to lower emissions, Melbourne must embrace alternative forms of transport and smart technology solutions for future transport.

As we continue to welcome increasing numbers of new residents and visitors, and as our economy continues to produce and consume more goods and services, we must ask ourselves what it will take to remain a highly liveable, prosperous and sustainable, twenty-first century city.

# Summary of recommendations



## A call for an integrated transport plan

**Recommendation 1:** Publish and implement an efficient and sustainable integrated transport plan that includes land-use and economic plans, to enable seamless mobility throughout Greater Melbourne.

### Governance

**Recommendation 2:** Develop a governance model that encourages strategic decision-making and the development of an integrated transport plan, with targets, timeframes and accountabilities.

## Elements of an integrated transport plan

### Demand management

**Recommendation 3:** Consider a broad approach to incentives and pricing to improve efficiencies of the transport network system, including for example:

- a. Implement one or more transport network pricing mechanisms to help reduce congestion and overcrowding.
- b. Offer different incentives to reduce numbers of people travelling simultaneously to the CBD.

### Infrastructure

**Recommendation 4:** Optimise existing assets through effective demand and congestion management strategies, technology upgrades and asset management practices.

**Recommendation 5:** Improve approaches to cost-benefit analyses to enhance their accuracy with respect to capturing the true costs and benefits of a project.

**Recommendation 6:** Implement measures which help reduce major infrastructure bid costs and ensure that contract risk allocation is designed to maximise market competition and participation.

**Recommendation 7:** Explore and test how various value capture mechanisms could be implemented to fund major transport infrastructure projects.

**Recommendation 8:** Ensure there are enough skilled professionals to deliver a pipeline of key infrastructure projects.



## Technology

**Recommendation 9:** Align the regulatory and physical environment for electric vehicles with overseas best practice.

**Recommendation 10:** Ensure accurate transport data, including mobile data, is (ethically) collected, shared and utilised in real time.

**Recommendation 11:** Ensure Melbourne's urban landscape encourages shared mobility as a pathway towards more efficient and environmentally sustainable mobility solutions.

**Recommendation 12:** Conduct studies and trials to assess the multitude of autonomous use cases, variables and scenarios, to fully understand how traffic congestion will change.

## Land-use planning

**Recommendation 13:** Ensure that the integrated transport plan includes a sustainable land-use strategy which accommodates the needs of individuals and the freight sector.

**Recommendation 14:** Develop a long-term, strategic outlook when developing a comprehensive plan for Melbourne, including the sequencing of projects over time.

**Recommendation 15:** Create an urban environment which encourages the uptake of active transport.

**Recommendation 16:** Reduce rezoning land on Melbourne's urban fringe and develop a comprehensive framework that encourages urban densification.

## Economic development

**Recommendation 17:** Ensure an integrated transport plan drives and facilitates the development of innovation precincts across Melbourne.

**Recommendation 18:** Ensure an integrated transport plan maximises Melbourne's potential to attract national and foreign direct investment.

**Recommendation 19:** Ensure an integrated transport plan considers the needs of the visitor economy.

**Recommendation 20:** Ensure an integrated transport plan considers how Melbourne will integrate effectively with Australia's east coast cities and regions.

# Growth pressures on Greater Melbourne



Melbourne's transit network is under increasing pressure from a multitude of factors. Australia's historic car culture is contributing to our current challenges, as is the absence of a comprehensive, strategic, metropolitan-wide plan. However, three key areas contributing to this problem today include the growth in population, trade volumes and the visitor economy. While the restrictions on mobility in response to COVID-19 has temporarily halted the demand on the transport network, high demand is expected to re-emerge as mobility restrictions ease.

## Population growth

Despite Greater Melbourne's transport system serving us well to this point, it is now under significant pressure. The city's population has grown by over one million people since 2006, which has placed greater demand on our transport infrastructure.

With Melbourne's population having just passed five million people and expected to reach approximately nine million by 2050, the pressure on our transit and freight networks will continue to grow. Increased road use and traffic has seen Melburnians driving 2.7 per cent slower during peak hour in 2018 compared with five years earlier.<sup>ii</sup> This trend is set to continue with freeway delays expected to rise by 12.5 per cent in the morning peak.<sup>iii</sup>

Melbourne's outer suburbs are the fastest growing in Australia. This outward expansion of commercial and low-density residential development to the fringes of metropolitan Melbourne means that approximately 1.4 million Melburnians lack access to quality public transport;<sup>iv</sup> forcing ever-more people onto the road network. This mounting congestion,

combined with inefficient investment in transport infrastructure, will reduce and dissipate the economic gains from an increasing population.

## Trade volume

Domestic and international trade is good for Melbourne. Increased competition for goods and services helps grow the economy and benefits consumers by raising the purchasing power of their incomes.

As the economic centre of Victoria, Melbourne makes up 227 million tonnes of freight task, out of the 270 million tonnes Victoria generates per year.<sup>v</sup> The Port of Melbourne plays a key role in enabling this flow of goods. In 2018-2019, it handled over three million Twenty-Foot Equivalent Units (TEUs),<sup>vi</sup> while Melbourne Airport and Avalon Airport, also play vital roles as gateways for freight.

Melbourne is not standing still; trade volumes are expected to increase significantly over the next three decades. With the population expected to increase, more containers carrying all kinds of consumer goods will continue to enter the market. Despite a potential review into Australia's supply chain network following COVID-19, the import of building materials to construct homes and infrastructure will likely continue to increase, as will machinery, electronic products and fuel; all necessary to help continue powering the economy. Port of Melbourne forecasts that total container trade volumes will grow by 3.5 per cent per annum over the long term, equating to approximately 8.9 million TEUs by 2050.<sup>vii</sup> While the growth in trade will be significant, an important challenge to overcome will be the added congestion on our road network.

## Visitor economy

Over the coming decades, Melbourne and its regions will welcome more domestic and international visitors. With numbers expected to swell, it adds to our need for an integrated transport plan to accommodate this growth.

In 2019, Victoria welcomed 90.6 million international and domestic visitors – up 11.2 per cent on the previous year.<sup>viii</sup> As the international gateway to our city, Melbourne Airport welcomed approximately 35 million domestic and international passengers per year. This number was expected to increase to 67.8 million by 2038.<sup>ix</sup> While the impact of COVID-19 will temporarily reduce visitor numbers and may slightly alter the anticipated number of visitors in the near term, the expected near doubling of passengers over time is still expected to occur which will have a significant impact on the transport network.

Without an efficient integrated transport system, the first impression visitors will continue to experience is a city challenged by congestion and delays. An integrated transport plan is required to ensure that visitors can travel easily throughout Melbourne and Victoria. Despite the temporary reduction in visitor traffic, the projected numbers (see key statistics) continue to be an important guide on the pressures that Melbourne faces in the future.

## KEY STATISTICS: MELBOURNE'S GROWTH PRESSURES

- 9 million: Melbourne's expected population in 2046 (up from 5 million in 2018)<sup>x</sup>
- 1: Melbourne is Australia's fastest growing city<sup>xi</sup>
- 11.5%: increase in average daily commuting times (2002 – 2017)<sup>xii</sup>
- 13%: congestion increase on the Tullamarine Freeway (2013-2018)<sup>xiii</sup>
- \$10.3 billion: annual cost of road congestion to Melbourne's economy in 2030<sup>xiv</sup>
- 68 million: expected number of passengers utilising Melbourne Airport per year in 2037-38 (up from 35 million in 2018)<sup>xv</sup>
- 8%: fall in average speeds (the highest in Australia)<sup>xvi</sup>
- 237 million: approximate number of people who used the metropolitan train network in 2018 (up from 130 million people in 2000)<sup>xvii</sup>
- 900 million: tonnes of freight volume predicted by 2051 (up from 360 million tonnes in 2014)<sup>xviii</sup>

# A call for an integrated transport plan



This report identifies and articulates what our members believe are the key transport-related initiatives that decision-makers and stakeholders must address if we are to remain one of the world's most liveable cities.

Given the growth pressures that Melbourne will continue to grapple with, the capacity of our transit network to cope with demand will be challenged considerably. The Committee believes it is critical that the Victorian Government should aspire to:

**Recommendation 1: Publish and implement an efficient and sustainable integrated transport plan that includes land-use and economic plans, to enable seamless mobility throughout Greater Melbourne.**

This may not appear to be a unique or revolutionary vision; most cities around the world are aspiring to develop an efficient and sustainable integrated transport system. However, as the fastest growing major city in Australia and one of the fastest growing cities in the world, there is a growing urgency to not deliver any solution, but deliver the *right* one for Melbourne.

Given our city's unique cultural, political and economic history, and current circumstances, the development of an efficient and sustainable integrated transport system, which enables seamless mobility for people and goods, and which embraces different modes across the whole journey, must form part of a long-term plan for Melbourne.

The *Transport Integration Act 2010* requires the development of a long-term transport plan

for Victoria.<sup>xix</sup> There is a plethora of plans and frameworks that seek to provide a planning roadmap for how Melbourne should grow. Some of the key documents include The Victorian Infrastructure Plan, Plan Melbourne Refresh, Network Development Plan – Metropolitan Rail, as well as Infrastructure Australia's report *Future Cities: Planning for our growing population*. However, none of these documents offer a truly comprehensive, detailed, strategic framework, outlining how Melbourne will grow in the long-term. A truly integrated plan would mean that those different concepts and plans would be coordinated and able to be interpreted together, with key actions and timeframes articulated.

The Committee commends the Victorian Government on its significant amount of work in coordinating the unprecedented number of transport projects across Victoria as part of its *Big Build* program. Furthermore, the Committee acknowledges *Plan Melbourne Refresh* (PMR), the Victorian Government's key plan which aims to guide Melbourne's growth out to 2050. It is a document which has merit. However, Greater Melbourne requires a strategic plan with greater depth and clarity.

Aside from the inclusion of the various committed infrastructure projects, including Melbourne Metro, PMR does not adequately articulate detail and timelines for long-term projects or policies that will enable efficient and sustainable growth out to 2050. Projects already identified by the Victorian Government as critical to Melbourne's growth, including the North-East Link, the Suburban Rail Loop and Melbourne Airport Rail Link, did not feature in the original PMR, yet were added in a 2019 Addendum. While the capacity to adapt and be flexible is important with any form of strategic planning, a comprehensive plan for Melbourne's connectivity would be expected to include such critical pieces of infrastructure at the outset and how they link to the economic development and land-use planning in the strategy. Details and timing regarding policies and infrastructure regarded as necessary to solving issues of congestion and overcrowding, including transport network pricing, bus rapid transit, bicycle routes and extending Melbourne's tram network, could also be expected to feature in PMR.

PMR could have included more detail about how Melbourne will grow, including expected population distribution in different regions, as well as the type of work and industries that will be developed in those areas. Despite the improvement of some existing policies to address housing affordability, diversity and supply, without articulating in detail about where the population will be distributed at given stages, it is difficult to ensure adequate housing supply and transport services in those areas. Ultimately, Greater Melbourne needs a publicly available plan that clearly outlines where the population might be distributed at various stages out to 2050 and the detailed corresponding policies and infrastructure required to accommodate this growth.

Developing an integrated transport plan must be a priority for authorities, but it cannot be done in isolation. In broad terms, an integrated transport system offers an individual the opportunity to use multiple transport modes, which work in coordination through infrastructure, a fare model and a common validation system, all of which encompass the totality or greater part of a city's territory.<sup>xx</sup> Furthermore, it would allow Melbourne's freight and logistics systems that support and service population growth to be more efficient and competitive. A clear vision for freight that is integrated with community

transport needs will facilitate private investment to make freight transport more responsive to those community, as well as industry, needs.

Other benefits would include the efficient allocation of limited resources, the enhancement of transit capacity, reliability and predictability, a more productive economy and ultimately a seamless experience for the user. The harmonious use of all transport modes would be facilitated by interoperable technologies.

Despite the clear benefits, there is little evidence to suggest that we are moving towards the design and implementation of an effective, integrated transport system. In the absence of a comprehensive plan to deliver such a system, which considers and incorporates elements such as demand management, land-use and sustainable economic development planning, unsatisfactory results concerning the evolution of our transport system and our city more broadly will continue.

With no comprehensive, overarching strategic plan for Greater Melbourne, governments may make ad hoc decisions on what to build and where to build it. To ensure the infrastructure constructed and the policies developed benefit all Melburnians, it is incumbent on governments to ensure a long-term, strategic plan is in place and that it is delivered upon. Its successful implementation will help ensure Melbourne remains a highly desirable destination to live, as well as help the city attract foreign talent, boost productivity and position it as an attractive investment destination.

# Governance



Creating an efficient and sustainable integrated transport system that enables seamless mobility throughout Greater Melbourne and drives economic growth and liveability outcomes, is a complex task. Once a plan is developed, it must be followed up with action. A range of policy initiatives, combined with the design, construction and operation of major infrastructure projects, will need to be implemented over a long period to deliver change.

There are enormous challenges associated with implementing transformative policies or projects. There will always be individuals and interest groups that oppose change. To withstand this inertia, decision-makers would need to:

- Ensure the community is consulted regarding any proposed changes.
- Implement pilot programs to test policies or initiatives.
- Stage the implementation of transformative initiatives to allow time for the community to adjust.
- Show a willingness to make difficult decisions which will benefit Greater Melbourne over the long-term.

One possible factor inhibiting the design and implementation of a world-class, integrated transport system is Australia's and Melbourne's governance structure. The Federal and Victorian Governments (with a plethora of departments and agencies), and 31 metropolitan Melbourne councils, all have a stake in determining how Melbourne grows. It is critical that mechanisms are achieved for all governments to coordinate and plan for issues which transcend organisational remits and municipal boundaries –

including transport, housing stock, urban density, industrial land and *Smart City* infrastructure – in a binding and effectual manner. This requires reform of planning processes more broadly, which must be developed with key stakeholders, including all governments and industry.

Recent changes to the Victorian Government's Transport structure gives us a reason to be optimistic about its ability to work across jurisdictions, departments and in collaboration with the private sector. In July 2019, VicRoads and Public Transport Victoria combined with the Department of Transport (DoT) to become an integrated transport department.

The DoT's new structure reflects the importance of working with the Major Transport Infrastructure Authority (MTIA) which should allow the creation of an integrated transport system. The Committee understands that the DoT will:

- respond much faster and give people the information they need to make the best travel choices.
- make better use of existing road and rail, shifting more journeys onto rail and prioritising public transport on roads.
- respond much quicker to innovation and new transport technologies.
- take a holistic view in planning for the future.
- partner with others to address a range of issues, from safety to reducing environmental impacts.

There are many positive outcomes identified in the DoT's objectives, which align with the ideas for shaping an integrated transport system in



this report. It is also hoped that as a larger department, this will make it easier to co-ordinate across other important departments like Department of Environment, Land, Water and Planning. Such coordination is necessary to ensure that land-use planning and economic development are coordinated within the integrated transport plan.

An optimised governance structure for development of an integrated transport plan, to coordinate all levels of government and stakeholder input, may be required. This would enable Greater Melbourne to develop the *right* integrated transport system to ensure the best outcome for all stakeholders. It will allow for the inclusion of planning principles, which reflect and support community values and aspirations, as well as the implementation of aspirational targets and timeframes for delivery. Sound governance arrangements will also allow for the ongoing review of the plan's implementation against original objectives. Any planning exercise cannot anticipate all changes in circumstances. However, regularly reviewing the plan will enable the flexibility to adapt to changing circumstances.

**Recommendation 2: Develop a governance model that encourages strategic decision-making and the development of an integrated transport plan, with targets, timeframes and accountabilities.**

## GOVERNANCE FRAMEWORKS

*The governance framework examples provided below are at a high-level and do not seek to endorse any particular model.*

### **One-tier consolidated governance:**

encompassing the entire metropolitan area with one governing body (e.g. Brisbane City Council, City of Toronto, City of Auckland).

### **Two-tier (or supra-municipal) governance:**

the introduction of a new tier of government, independent of existing local units (e.g. Greater London Authority, Verband Region, Stuttgart).

**Inter-municipal joint authorities:** local government units come together to form a new body to manage part or whole of a metropolitan area:

**Metropolitan-wide inter-municipal joint authorities:** municipalities sit on an authority together to make decisions across an entire metropolitan area (e.g. Metro Vancouver). Models like this would generally use an indirectly elected council-of-councils.

**Infra-metropolitan inter-municipal joint authorities:** municipalities work together in discrete areas in the city rather than across the entire metropolitan area (e.g. Melbourne Metropolitan Partnerships).

**Special purpose districts:** structures separate from local government which are established to provide a single or range of functions separate to government (e.g. Melbourne Water, Greater Sydney Commission).

**Voluntary cooperation:** collaboration between local governments on an ad hoc basis such as creating bike paths that extend across boundaries, sharing library or other services.

# Elements of an integrated transport plan



The following elements should be considered when designing and constructing an integrated transport system:

1. Demand management
2. Infrastructure
3. Technology
4. Land-use planning
5. Economic development

The impact of various initiatives associated with these elements will be enhanced if they are implemented in conjunction with one another. Initiatives implemented in complete isolation are unlikely to have the desired effect that Melbourne requires.

# Element 1

## Demand management



Historically, Melburnians have opted to own and live on suburban property, encouraging the development of a low-density sprawling city. This worked well for a period. However, given the city's meteoric growth, there are inefficiencies and congestion issues being experienced across the transport network.

Peak-hour traffic congestion and demand on the public transport network across Greater Melbourne has worsened over time. Melbourne's growing freight task has exacerbated this issue. While COVID-19 will likely alter the working and travel habits for many individuals, congestion and overcrowding on the transport network is expected to return in the post-pandemic period.

There are a multitude of options that might increase efficiencies and decrease congestion across the network. Incentives that encourage individuals to use public transport, particularly during off-peak periods, combined with improvements to first and last mile connectivity, would help reduce road network congestion. Furthermore, investment in a metro-style system, with its turn-up-and-go frequencies which minimise station dwell times would encourage greater public transport uptake. Regarding the need for the seamless movement of freight - critical for lowering the costs of doing business - getting more containers onto rail, as well as increasing the fleet of *High Productivity Freight Vehicles*, will help reduce the number of trucks on the road network.

More targeted demand management options could also deliver substantial benefits, including on-demand bus services, the pricing of all parking spaces at various times and locations to manage car travel demand, as well as the integration of ticketing through the network to connect various public transport modes and shared mobility services.

### FAST FACTS

Induced demand is the concept that explains why increasing road capacity encourages more people to drive, therefore aggravating congestion rather than alleviating it. Published evidence suggests that on average and with all other things being equal, a road with 100% increase in lane capacity might be expected to generate an increase in traffic of 36% within 1-3 years and a 62% increase in 5-10 years.<sup>xxi</sup>

Examples of this latent demand can be found in many cities around the world. Between 2008 and 2011, the City of Houston spent US\$2.8 billion to build the widest freeway in North America. The result - a 30% increase in congestion during morning peak hours and a 55% increase during evening peak hours.<sup>xxii</sup> Back home, Infrastructure Australia conducted a Project Business Case Evaluation of the Sydney WestConnex project and found that induced demand reduces benefits by approximately 25%.<sup>xxiii</sup>

The concept of induced demand has been accepted by economists and transport researchers for over 50 years, yet the phenomenon fails to be accounted for in many cost-benefit analyses.<sup>xxiv</sup> Demand management is therefore a critical element of a balanced approach to reducing congestion.

## Road-user pricing

The formulation of a new pricing regime will be critical to the challenge of reducing congestion, improving efficiency of the state's transport network and achieving optimum value-for-money for infrastructure investment. Significant productivity losses and other inefficiencies are expected unless we begin to price our roads adequately.

Road-user pricing is a mechanism whereby drivers are charged for the use of the roads they drive on in place of some other existing charges. The driver is faced with direct costs through pricing that reflects higher demand for particular routes, zones and travel times.

There are many ways that road-user charges could be implemented, including area licensing schemes, continuous charging systems or cordon pricing. Therefore, any proposed charging scheme would vary according to location, time of day and type of vehicle. It will be critical that the implementation of any road-user charges is equitable and does not exacerbate socio-economic inequalities.

Not only would the implementation of one or more of these charges help reduce congestion, they could support government revenue; which is under pressure with the current system of tolls and charges, as well as the financial and economic ramifications of COVID-19. Falling fuel excise revenues, due in part to improvements in vehicle efficiency and the rise in demand for electric vehicles, is generating the financial imperative to introduce one or more of these measures. The revenue generated from these mechanisms could be redirected towards other transport projects.

Road-user pricing can reduce congestion and ensure financial sustainability, so community acceptance about the perceived benefits of new road pricing changes will be essential to any changes in existing pricing mechanisms. Directing all revenue generated in this manner towards much-needed transport infrastructure projects could help convince the community of its merit.

## CASE STUDY CONGESTION CHARGING

To help reduce congestion, London implemented a congestion charge in 2003. Results from 2007 showed a 30% reduction in the number of vehicles entering the designated area and the traffic on 'free passage routes' did not increase. A survey estimated that 40% of those deterred by the charge switched to alternative forms of transportation, while 30% chose to not make the trip at all.<sup>xxv</sup> Despite the reduction in volume, traffic speeds have not increased - primarily due to the reallocation of road space for pedestrians, cyclists and buses.

Stockholm has had similar success after the implementation of a seven-month congestion charge trial in 2006. Despite being unpopular in local polls prior to its implementation and having to overcome various political and legal obstacles, the congestion charge trial proved to be a success. In a referendum conducted in August 2007, two-thirds of the population supported its permanent implementation, including all political parties.<sup>xxvi</sup> With Stockholm achieving substantial congestion reductions, governments around the world can learn from its experience.

Back home, public policy think tank, Grattan Institute, released a report calling for Melbourne to impose a congestion charge during peak hours. The report suggested a *cordon* around the CBD would likely lead to 40% fewer cars on the road during peak hour, a 16% speed increase on roads in the CBD and a 20% speed increase on arterial roads coming into the CBD.<sup>xxvii</sup> Introducing a cordon price in inner Melbourne is supported by Infrastructure Victoria. Its modelling indicates that implementing a cordon charge, as part of a network-wide pricing reform, would deliver substantial benefits for Melbourne.<sup>xxviii</sup>



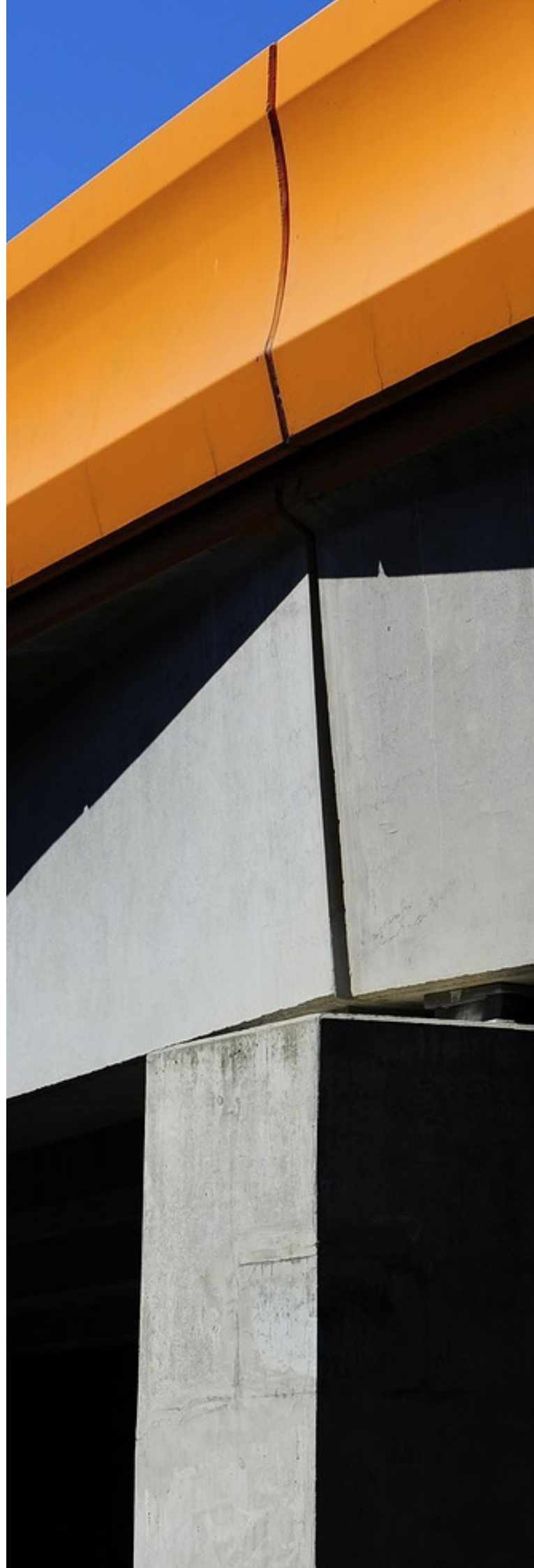
## Commuter incentives

Commuter incentives are reinforcement mechanisms that seek to influence the decision-making of commuters. These incentives inform, persuade and ultimately encourage commuters to consider alternative travel modes or times. Many mechanisms can be used to incentivise commuters. Improving the availability of alternative transport modes, including public transport options, is one such mechanism.

Another mechanism includes pricing strategies that encourage travel during off-peak hours. Free train travel on Melbourne's suburban train network completed before 7am on weekdays is one such initiative. However, for a significant reduction in the number of peak-hour commuters, it appears that additional initiatives should be considered. A price reduction for travel outside traditional peak-hour periods or a price increase during peak hours might encourage a percentage of commuters to travel to work during non-peak times.

Improving the communication of reliable, real-time transport information, will be important. The consequent reduction in wait times might encourage more individuals to consider multiple transport modes, while the integration of real-time data across all transportation modes could help ensure the public transport system rivals private vehicle usage for convenience.

Commuter incentives have been deployed in other jurisdictions with good results. A peak-avoidance incentive was successfully introduced in The Netherlands. The program was a collaboration between government agencies, private companies and universities, and provided financial incentives to those among 500 participants who chose to drive during off-peak hours in four locations throughout the country. This resulted in a 50 per cent reduction in peak-hour trips.<sup>xxix</sup>



## Flexible employment arrangements

There are significant benefits of urban agglomeration. Firms located in Melbourne's Central Business District (CBD) benefit from ready access to talent, ideas, customers and lower production costs. Individuals benefit through lower transport costs, access to high-paid jobs and greater choice in amenity.

Despite these significant benefits, there are costs associated with urban agglomeration, including greater levels of pollution, waste-disposal problems and of course, transit network congestion. Private organisations located in and around Melbourne's CBD could play a role in addressing each of these issues, particularly transport congestion.

Depending on the nature of the organisation and the roles and responsibilities carried out by its employees, many workers could be allowed or even encouraged to work earlier or later in the day, or work longer hours over a shorter work week. If enough employers based in the CBD embrace the idea, it would help reduce congestion during peak hours. Furthermore, the ubiquity of laptops, mobile devices and high-speed internet has made telecommuting possible. More employees that can work from home, even if for one day of the working week, would help reduce congestion on our transport network. The collective response to COVID-19, where thousands of individuals have been forced to work remotely, has demonstrated that working from home can be achieved and continue to allow employees to be productive.

Improved access to Greater Melbourne's designated Metropolitan Activity Centres and the regions through more efficient and reliable public transport services could also be beneficial. It would provide businesses with more options in choosing where they conduct their activities.

## CASE STUDY FLEXIBLE WORKING ARRANGEMENTS IN FINLAND

Finland implemented the Working Hours Act on 1 January 2020, which will impact organizational structures and employee attitudes regarding the work environment. The Act redefines 'workplace' to legally incorporate working hours not tied to a single location. Greater emphasis is placed on time spent working, allowing employees to decide when and where they work for half of their hours.<sup>xxx</sup>

Flexible work hours in Finland did not happen overnight. A survey conducted in 2011 showed that 90% of Finnish companies already offered flexible work schedules for their employees, the most in the world. In the same survey, Australian companies ranked 3rd at 85%.<sup>xxxi</sup>

Melbourne-specific research indicates that a 30% increase in telecommuting among those already permitted to work anywhere could reduce the number of daily commutes from 550,000 to 394,000.<sup>xxxii</sup>

**Recommendation 3: Consider a broad approach to incentives and pricing to improve efficiencies of the transport network system, including for example:**

**a. Implement one or more transport network pricing mechanisms to help reduce congestion and overcrowding.**

**b. Offer different incentives to reduce numbers of people travelling simultaneously to the CBD.**

## Element 2 Infrastructure



Victoria is experiencing an infrastructure boom. With a record infrastructure agenda worth over \$100 billion,<sup>xxxiii</sup> the Victorian Government has committed to a range of new projects that are being built or planned. More will be needed as Melbourne's population grows and we welcome more visitors and trade.

The provision of public transport infrastructure will be essential for Melbourne to efficiently transport nine million people by mid-century. A range of useful road projects have been committed to, but merely building more roads has failed to adequately solve the problem of congestion. Mass transit options must form the backbone of our integrated transport plan. With its capacity to transport large volumes of people in a condensed space, along with the increase of speed, frequency and consistency, optimising the use of our existing public transport infrastructure, as well as investing in the *right* infrastructure projects, will be critical. This investment should consider rail, tram and bus services, which are responsive to commuter demand across Greater Melbourne. Furthermore, the experimentation of new forms of mass transit, including trackless trams, should be considered.

Greater Melbourne has a raft of infrastructure assets already in place, which, if utilised to their full capacity and managed more effectively, could reap enormous benefits for the city. The effective use of policy levers available to government, many of which are described throughout this document, including various pricing mechanisms and incentives, could ensure infrastructure settings are as efficient as possible.

## Optimise existing assets

Major infrastructure projects will be needed to support economic recovery and community development. While many of the current major projects – under construction or planned – are required to ensure the city's transit network copes with increasing demand following the COVID-19 crisis, a comprehensive plan would articulate which existing transport infrastructure can and should be optimised to its full capacity.

Major new projects are expensive. The costs of developing a business case, labour, materials, not to mention the operational costs upon completion, all add up. The Metro Tunnel, West Gate Tunnel and North East Link have a combined cost of \$33.5 billion. These projects will take time to pay off.

Optimisation of existing assets must underpin a plan for growth and guide the need for, and type of, new asset delivery. The addition of 65 new high-capacity trains to Melbourne's existing metropolitan rail service is a good example of optimising our existing rail network.<sup>xxxiv</sup> These trains are based on the world-leading high-capacity platform in terms of quality, design, safety and capability currently operating in Hong Kong. At five minute intervals, these trains could move 30,000 Melburnians on one line across the city every hour.

Another optimisation initiative is the separation of Melbourne's tram network from cars and other vehicles. Trams operating on their own dedicated corridors would improve reliability and travel times, enable additional capacity, as well as improve safety for passengers and motorists alike. Furthermore, allowing for more overnight freight delivery would minimise daily truck deliveries.

**Recommendation 4: Optimise existing assets through effective demand and congestion management strategies, technology upgrades and asset management practices.**

## Value of infrastructure

When it is determined that a piece of transport infrastructure must be considered to fulfil a specified need, it is critical that governments make a proper assessment of the value the proposed investment will deliver. Conducting a thorough cost-benefit analysis (CBA) as part of a business case is a critical step to that end.

A CBA compares the costs of a project against its monetised socio-economic benefits. A CBA will produce helpful financial indicators, such as the benefit cost ratio (BCR). However, a perennial issue with current CBA approaches is that they often presume simplistic and optimistic accounts of costs, timeframes and risks. This can mislead decision-makers and reduce trust when purported benefits are not realised. Furthermore, a more holistic perspective of a project's benefits should be considered. A project with a negative BCR may help governments achieve other important policy objectives, including on issues of health and climate change.

Some costs cannot be monetised but are significant and should be considered. These costs include impacts on biodiversity, heritage, culture and visual amenity. Going forward, it is important that standardised guidance for monetising social values are developed to ensure relevant social benefits are assessed efficiently and consistently. Ultimately, this will improve project evaluation and decision-making.

Furthermore, productivity improvements that result from projects designed to improve access to job density, known as *wider economic benefits*, are the most contentious aspects of the CBA.<sup>xxxv</sup> These benefits have, in some circumstances, little evidence to support their inclusion, yet their very inclusion ensures that, on paper, the overall benefits outweigh the costs.

With finite resources available, the development of a comprehensive and transparent integrated transport plan would clarify which proposed infrastructure projects are of strategic importance to Greater Melbourne's growth and offer greater certainty as to their true costs and benefits.

**Recommendation 5: Improve approaches to cost-benefit analyses to enhance their accuracy with respect to capturing the true costs and benefits of a project.**

## Industry engagement

Effective collaboration between all tiers of government and industry will be vital for the successful execution of an integrated transport plan. When a vision has been set and there is clarity about the outcomes that are desired for the community, it is easier to identify the barriers to successfully implementing the plan. Government and industry collaboration will play a crucial role in overcoming certain barriers.

One barrier governments face is the limited supply of funding for infrastructure projects. The Public Private Partnership (PPP) model, which helps address this issue by allowing private investment in what would typically be public assets, enjoys a relatively good reputation in Australia. However, improvements could be made. Consideration of policies that would open up further private sector investment and facilitate greater infrastructure delivery is essential, especially following COVID-19 which has limited governments' capacity to invest.

For example, when preparing to bid for a major construction project under the PPP model, industry must commit significant resources, with costs running into the millions. These high costs can partly be attributed to the fact that government agencies require highly detailed bids, with optimised design solutions. While a bid cost reimbursement policy is in place for major construction projects, this could be partially offset or avoided if a comprehensive strategy was devised to reduce the bidding costs, which does not impact the value for money that government is seeking.

Another area of engagement requiring attention is the traditional risk-transfer model, which is inhibiting market competitiveness. Organisations with the capacity to deliver major projects are increasingly balking at bidding for complex infrastructure projects due to escalating risks. Uncompromising risk allocation also increases bid costs as bidders seek to minimise their risk exposure by performing extra design and adding buffers to their bids.

**Recommendation 6: Implement measures which help reduce major infrastructure bid costs and ensure that contract risk allocation is designed to maximise market competition and participation.**

## Funding

The financial and economic impact of COVID-19 has severely constrained the Victorian Government's capacity to finance and fund infrastructure projects. However, the need for productivity-enhancing transport projects will be vital as the state and country recovers from the crisis. In this environment, governments must explore innovative mechanisms to unlock new funding streams.

Funding for infrastructure projects can be sourced indirectly from community members, indirectly from infrastructure beneficiaries or directly from infrastructure users. Relying on traditional funding sources, such as user pays and direct government funding contributions, can only form part of the funding solution. All tiers of government should be exploring the full range of funding sources that could help generate the answers to some of our transport infrastructure challenges.

Value capture is a form of funding which warrants attention. Currently being used to fund many projects across the world, including London's Cross Rail, value capture mechanisms ensure that those who benefit directly from public investment in infrastructure, in terms of business revenue or land value, contribute a fair and proportionate amount which is then allocated towards the initial cost of infrastructure provision.

In Australia, value capture is still an emerging funding mechanism which is yet to be widely adopted. While there are many issues that must be addressed if it is to be implemented broadly, all tiers of government should be exploring how it could be utilised to drive revenue when delivering major transport infrastructure projects. Having an integrated transport plan would ensure that value capture opportunities are readily identifiable and can be fully capitalised on.

**Recommendation 7: Explore and test how various value capture mechanisms could be implemented to fund major transport infrastructure projects.**

## Skills

The training and development of skilled workers will be essential as a raft of major infrastructure projects are rolled out across Melbourne over the coming years.

The current glut of major infrastructure projects in Victoria has created a skills shortage, which risks significant delays and cost blowouts. With commitments made to build the Metro Tunnel, Melbourne Airport Rail Link, Suburban Rail Loop, the ongoing level crossing removals and upgrades to regional rail lines, there is a shortage of workers who can design, build and operate the transit network

This situation cannot roll on indefinitely and cannot be repeated. It will require effective policies and substantial investment to ensure enough students are taking up STEM subjects at secondary school, as well as STEM-related tertiary courses and apprenticeships. We must build a workforce with the *right* skills, that can be deployed at the right time. A comprehensive plan for the design and construction of an integrated transport system will provide understanding of the types of skills required into the future and enable planning for the development of enough skilled professionals.

**Recommendation 8: Ensure there are enough skilled professionals to deliver a pipeline of key infrastructure projects.**



## Element 3 Technology



The construction of an efficient and sustainable integrated transport system hinges on the ability to seamlessly connect people and goods, from one point in the city to the other, through a fully optimised and interconnected transport network.

Technological platforms will have the capacity to seamlessly integrate physical infrastructure, transport modes, transport service providers and data management systems; enabling a sustainable mobility ecosystem that aligns demand with supply and caters to individual preferences.

New technologies will have other transport-related benefits, which must be capitalised on. Big data analytics will assist with asset management, including predictive maintenance, as well as traffic management and supply chain management; allowing engineers and other transport-related practitioners to make better decisions and ultimately reduce costs. Furthermore, the ethical use of citizens' smartphone data will help reduce congestion. With enhanced processing power and equipped with sensors that determine location, proximity and orientation, smartphones have the potential to connect with smart city technologies to improve traffic flow.

Despite the expected benefits that will accrue with each new breakthrough in transport-related technology, it will be critical that Melbourne does not allow technology to dictate how the city grows. Failure to develop a blueprint which determines how Melbourne will grow increases the risk of this happening. A comprehensive plan will help authorities understand which technologies are required to achieve the vision determined and reduce the chances of decisions being made which risk further entrenching congestion across the transport network.

### Electric vehicles

In contrast to traditional internal combustion engine vehicles that use liquid fuels, electric vehicles (EVs) are at least partially propelled by electricity. Incorporating road and rail vehicles, as well as aircraft, EVs can be powered in one of two ways; either through self-contained sources, including batteries, generators or solar panels; or via external electricity sources.

With EVs becoming popular around the world, they are now penetrating the Australian market. Australia has experienced a 68 per cent increase in the adoption of electric vehicles and as advances in EV technology continue, significant market penetration is expected around 2027.<sup>xxxvi</sup>

The widespread adoption of EVs will have far-reaching implications for Melbourne. Space and infrastructure for charging stations will be necessary. Furthermore, ensuring our energy grid is resilient and can meet peak electricity demand will be vital and must be planned for.

The successful transition to EVs will have significant benefits for Australian society, including lower transport costs, reduced carbon emissions, less pollution and better health conditions. It is estimated that by 2046, 27 million tonnes of greenhouse gas emissions could be eliminated in Victoria, should we successfully transition to an entire fleet comprising zero emission vehicles.<sup>xxxvii</sup>

**Recommendation 9: Align the regulatory and physical environment for electric vehicles with overseas best practice.**

## Mobility as a Service

Transport options consumed as a service will become a viable option for more Melburnians over personally-owned modes of transport. This preferential shift, known as Mobility as a Service (MaaS), will give commuters the ability to plan and pay for all modes of transportation via one mobile phone application (app).

An app that plans a trip in advance with real-time data will provide the commuter the most efficient and convenient form of travel, whether via singular or multimodal transport options. A multimodal journey may involve active transport, rail and motorised vehicle, including a car-share option. It will personalise travel by catering to our preferences for more active, environmentally-friendly or private travel, or to our needs of affordability or timeliness.

At the systemic level, the centralisation of all transport data would align supply and demand and provide valuable information to transit management systems, thereby greatly reducing transit-network inefficiencies. This in turn will transform how roads are designed and managed, allowing for faster travel times and more room for pedestrians and cyclists.

The Victorian Government must manage the MaaS development process to ensure the best outcomes for Melbourne. With the potential to make single-occupancy vehicle travel more attractive, MaaS may induce more road network congestion. A comprehensive plan for Melbourne, combined with sound regulation, will help ensure a balance of transport modal usage. Furthermore, collaboration between various government authorities with private service providers is critical. This will help ensure transport-related data is collected, shared amongst transport providers and utilised in real time.

**Recommendation 10: Ensure accurate transport data, including mobile data, is (ethically) collected, shared and utilized in real time.**

## Shared mobility

Whether it is a car, bicycle or scooter, the emergence of shared mobility services and the technological platforms underpinning them, are providing commuters with the opportunity to share transport modes. The rise in people working from home during the COVID-19 pandemic has also increased the use of walking and cycling paths; raising the possibility of a cultural shift towards greater shared mobility options.

Rigid timetabling of public transport modes, as well as the high costs of owning and operating a private vehicle, have created the demand for services that offer flexible, affordable and seamless transport options.

The increase in demand for shared mobility services has been driven by a desire for cheaper and greener transport options. By 2025, the global shared mobility market will be worth US\$619 billion,<sup>xxxviii</sup> with cities around the world grappling with ways to manage and regulate this growth in demand.

Technological progress will allow Melburnians to utilise shared autonomous vehicles that can link people to their homes, work and larger transit centres. Agile, on-demand services provided by autonomous mini-buses will help address first and last mile challenges more efficiently.

Provided Melbourne has a plan to grow, new shared vehicle technologies integrated with traditional public transport services, as well as cycling and walking networks, could have a positive impact on our transit network. It will help reduce road congestion, as well as the demand for car-parking spaces, while an intangible benefit will be strengthening our sense of community.<sup>xxxix</sup>

**Recommendation 11: Ensure Melbourne's urban landscape encourages shared mobility as a pathway towards more efficient and environmentally sustainable mobility solutions.**

## Autonomous vehicles

Through an ability to sense its surroundings, an autonomous vehicle (AV), or driverless vehicle, can operate or perform its functions without human intervention. There is a plethora of AVs that can increase efficiencies, including trains, buses, cars and freight delivery trucks.

Many cities and countries around the world have begun to embrace the benefits of public transit AVs. Finland is into the fourth year of a pilot program testing a fleet of autonomous mini-buses in the cities of Helsinki, Espoo and Tampere. The 10-year smart-mobility pilot is attempting to make private vehicles irrelevant through demand-based transport systems.<sup>xi</sup> Meanwhile, by embracing automation, Singapore has one of the most reliable rail services in the world. Like the Finish and Singaporean governments, others around the world are seeing the benefits of automation, in terms of reliability, efficiency and safety.

Whether AVs help or hinder our efforts to ease congestion remains to be seen. Regarding private autonomous vehicles, competing visions for their role in our transport future exist. AVs could drive lower carbon emissions, improve safety, reduce car ownership and reduce the need for car-parking spaces. Less parking spaces may create space for more vehicles to travel through, be transformed into public realms or developed into mixed-use complexes.

However, additional road network congestion may result with greater uptake of AVs. With more people wanting to use these vehicles, their preparedness to travel longer distances and growing demand for larger, more comfortable vehicles, traffic congestion could worsen.

In a positive development, a simulation conducted in Lisbon studying the implementation of a fully autonomous and shared fleet of vehicles showed promising results. With an efficient train network in place, which complemented the fleet, 90 per cent of private vehicles could be removed from the road network.<sup>xii</sup> Therefore, provided governments take a proactive position to the regulation of AVs and there exists supportive transport infrastructure, private AVs combined with shared mobility platforms have the potential to reduce road network congestion.

## Recommendation 12: Conduct studies and trials to assess the multitude of autonomous use cases, variables and scenarios, to fully understand how traffic congestion will change.

### FAST FACTS

Innovation in technology and regulation in California is making the US state the epicentre of AV development. In 2018, 48 start-ups logged 2 million miles of autonomous driving on public roads,<sup>xlii</sup> while Tesla drivers have driven over 1 billion miles with autopilot engaged.<sup>xliii</sup>

Waymo, a Californian-based start-up, has been granted a permit to begin testing passenger transport in their AVs. In the first month of testing, more than 6200 commuters were transported by Waymo.<sup>xliiv</sup>

Australia is experimenting with AVs. The Royal Automobile Club of Western Australia launched the country's first driverless and electric vehicle trial on public roads in 2016. Termed the Intellibus, the automated vehicle takes a journey along the iconic South Perth Esplanade, demonstrating to locals and visitors the changing nature of vehicle technology.<sup>xliv</sup>

## Element 4

### Land-use planning



Given the growth pressures Greater Melbourne is facing, more than ever it is critical that effective land-use planning meets the needs of individuals today, while safeguarding resources for future generations.

Land-use planning is becoming more complex for planning practitioners around the world, with the impacts of COVID-19 adding additional layers of complexity. Urbanisation, global warming, maintaining economic growth, water allocation, as well as poverty and unemployment, are some of the key issues they must grapple with as they set about planning how cities will grow.

A comprehensive integrated transport plan for Melbourne should consider how the city's designated Metropolitan Activity Centres (MAVs) - Box Hill, Dandenong, Epping, Footscray, Fountain Gate-Narre Warren, Frankston, Ringwood and Sunshine - are planned to secure investment in transport, health, education and other services. MAV development will encourage local job creation, in turn helping reduce congestion on our public transport system and road network, thereby facilitating environmental and health benefits.

#### Sustainable land-use planning

An integrated transport plan must consider and incorporate sustainable land-use planning. In doing so, it will help solve some of Melbourne's most pressing challenges now and in the future, including congestion, housing affordability, location of freight and logistical centres, climate change mitigation and adaptation, and economic growth.

Transport planning should drive land-use planning and economic outcomes, and any plan should therefore consider where development

is anticipated or allowed in the future. A comprehensive plan will indicate where the population might be distributed and the level of distribution at various stages. It will articulate the policies needed and the infrastructure required to accommodate such growth at the given periods in time.

Furthermore, greater consideration for Melbourne's freight and logistics sector must be made. Building developments must plan for the servicing of freight deliveries, while buffer zones near industrial land and areas of employment are essential.

**Recommendation 13: Ensure that the integrated transport plan includes a sustainable land-use strategy which accommodates the needs of individuals and the freight sector.**

#### Strategy

An integrated transport plan must be strategically focused; signalling to the community and investors the direction that the city is headed. It must paint a picture of how Melbourne will grow, with its core assets, including the Port of Melbourne and Melbourne Airport, as well as potential additional key assets, forming the basis of a larger vision.

All aspects of transport and land-use planning must be considered when developing an integrated transport plan. Greater detail around planning controls, land reservations, corridor planning and transit-oriented development, will help avoid investor speculation and avoid potentially negative outcomes for the city.



Behavioural mechanisms, like road-user pricing, will need to be included, as well as a pipeline of major infrastructure projects that are needed. This pipeline must spell out the expected timeframes for construction and justify the sequencing of projects.

The importance of an efficient, sustainable and cost-effective freight and logistics industry cannot be understated; it is an essential component of a modern, thriving economy. The long-term design and execution of an integrated transport plan which services our growing freight task must be prioritised. Part of the solution will be to ensure more freight is transported via dedicated train networks.

A revised plan will need to consider the broader and long-term plans for population growth and regional activation. If Melbourne is to decentralise to identified metropolitan and regional growth precincts, there must be widespread understanding of which key precincts will be developed, how they will be developed and when. This added certainty for investors will encourage economic development and growth, and could form the basis for a broader settlement strategy.

One critical and often overlooked aspect of planning is the need for government to consult and collaborate with key utility authorities, particularly with water and energy suppliers, in the development of business cases and prior to any major infrastructure announcements.

### **Recommendation 14: Develop a long-term, strategic outlook when developing a comprehensive plan for Melbourne, including the sequencing of projects over time.**

#### **Active transport**

As Greater Melbourne's key urban development precincts have become more dense, walking and cycling have become an important complement to traditional motorised forms of mass transport. However, with mobility restrictions enforced due to COVID-19, there has been an even greater uptake in active transport. An integrated transport plan for Melbourne should consider these developments and encourage more active forms of transport.

urban environment is critical. For individuals to embrace active transport, there must be a safe and accessible network of walking and micro-mobility paths, along with micro-mobility storage facilities located at stations and key employment precincts. Furthermore, the city's public transport system should offer commuters fast, reliable and comfortable services, to encourage greater uptake.

In addition to reducing congestion on our transport network, active transport improves health outcomes for individuals and helps reduce greenhouse gas emissions. The Victorian Government and local governments should be implementing measures which encourage all forms of active transport.

### **Recommendation 15: Create an urban environment which encourages the uptake of active transport.**

## **CASE STUDY MORE THAN A RAIL LINK**

The long-awaited Melbourne Airport Rail Link looks set to become a reality after both the Victorian and Federal Governments committed funding to the project.

Once constructed and provided it proceeds along the proposed Sunshine route, it will not only deliver a world-class rail service linking Melbourne Airport and the CBD, and remove thousands of private vehicles from the road network, it will unlock broader benefits for metropolitan Melbourne and Victoria's regions.

This project is an opportunity to strategically shape the way Melbourne functions, including how it connects to the growing western suburbs and regions to support Melbourne's liveability and productivity. It could help mitigate population and urban infrastructure pressures and potentially unlock jobs, and housing, in transit-supported precincts.

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## Densification

Prior to COVID-19 Melbourne was grappling with an unprecedented population boom. The extended hours of travel to work was a symptom of a city that had grown too big at too low a density.

Melbourne requires a greater mix of housing across the city, which addresses housing diversity and affordability. Part of the solution will be to build high-density, mixed-use developments along existing transport corridors and to cultivate thriving activity centres outside of the CBD.

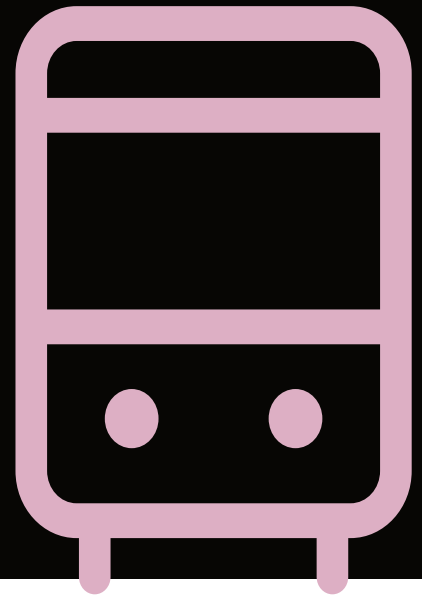
While *Plan Melbourne Refresh* sets out a vision for housing in Greater Melbourne with 65 per cent of new dwellings being developed in existing suburbs, the city continues to sprawl. With plans to rezone 12 new suburbs in Melbourne's urban fringe, which will accommodate the construction of 50,000 new homes,<sup>xlv</sup> it is clear there continues to be a lack of a vision to stem the urban sprawl.

It does not have to be this way. At the very least, there must be consensus regarding Greater Melbourne's boundaries and the prioritisation of construction of new housing around existing transport infrastructure. If the city continues to sprawl, more people will live in car-dependent suburbs, creating a more economically, socially and environmentally unsustainable city.

**Recommendation 16: Reduce rezoning land on Melbourne's urban fringe and develop a comprehensive framework that encourages urban densification.**

## Element 5

# Economic development



There is a strong correlation between the quality of a city's transport infrastructure and the level of economic development. Economic and social opportunities abound when highly-connected and efficient transport networks are in place. Markets become more accessible, as do employment opportunities.

On the flipside, reduced or missed opportunities and a lower quality of life are the result for many cities and their residents that possess transport systems deficient in terms of access, reliability or capacity. An efficient, integrated transport system could encourage investment, job creation and economic growth.

### Innovation precincts

As hubs for the creation and commercialisation of new ideas, the cultivation of successful innovation precincts will be a key determinant of Melbourne's success in the twenty-first century.

Innovation precincts can regenerate under-performing city districts into areas that are desirable for creative companies and workers. They can develop incubators, attract startups and entrepreneurs, and build collaborative networks with industry, universities, science agencies and government departments.

With multiple universities and research bodies located throughout Greater Melbourne, the city is uniquely positioned to leverage these assets to develop innovation precincts. However, integrated transport connectivity is paramount to leverage these assets successfully. Not only must these districts be well-served by public transportation, there must be a comprehensive network of micro-mobility and walking paths to help create an easily accessible environment where people can meet and collaborate.

*City Deals* is the Federal Government initiative designed to bring together the three levels of government, industry and the community, to create place-based partnerships. The model is characterised by the alignment of planning, investment and governance mechanisms, which aims to stimulate urban renewal by accelerating growth and job creation within designated areas. This framework could be utilised to help develop these innovation precincts. However, to reap the full benefits across Greater Melbourne, connectivity to all innovation precincts and linkages between them, should be considered as part of a larger blueprint for the city.

### **Recommendation 17: Ensure an integrated transport plan drives and facilitates the development of innovation precincts across Melbourne.**

#### Investment

Investors, whether they be national or foreign, will be attracted to a city if there are opportunities to make money. Investment considerations include (amongst other things) city governance, the amount and type of land available, taxation policies, the planning system and other regulatory factors.

One major factor that investors consider is a city's transport connectivity as it impacts transaction costs, productivity and economic growth. Cities that can ensure smooth and efficient access to workers, businesses and supply chains will likely attract more investment.

The competition amongst countries and cities to attract investment is fierce. For Melbourne to continue to prosper and attract the attention of investors from around the globe, it must retain

its status as one of the world's most liveable cities. A world-class, integrated transport system is essential for any city aspiring to attain or in Melbourne's case, retain, such status.

**Recommendation 18: Ensure that an integrated transport plan maximises Melbourne's potential to attract national and foreign direct investment.**

**Tourism**

The visitor economy has been an important contributor to a thriving and economically successful Melbourne and Victoria, and will continue to be following the COVID-19 crisis.

Melbourne's CBD is a key gateway to the suburbs of Greater Melbourne and the regions. Therefore, an integrated transport plan must consider how Melbourne connects with the regions and ensure that it is easy for travelers to navigate their way from the CBD to other areas of the city and beyond.

Furthermore, the success of the visitor economy depends on innovative service offerings and marketing efforts delivered at scale. An integrated transport plan will assist industry and government bodies in developing these services, which will further assist visitors.

**Recommendation 19: Ensure an integrated transport plan considers the needs of the visitor economy.**

**Australian East-Coast Megaregion**

As sets of cities and their surrounding hinterlands, across which labour and capital can move around at very low cost, megaregions have replaced the state and cities as the main centres of economic production. Over a decade ago, the world's top 40 megaregions made up just 18 per cent of the global population, but produced 66 per cent of economic activity and 86 per cent of patented innovation.<sup>xlvii</sup>

Australia does not have a megaregion. Instead, our capital cities are dotted around the continent, with a vast distance separating them from each other and global supply chains. Our east coast has three highly productive cities; Melbourne, Sydney and Brisbane. However, as global economies diversify and embrace jobs of the Fourth Industrial Revolution, there is a risk

that the distance between each of our major east coast cities and our global partners, will create greater competition for the same *new economy* jobs. Rather than compete, our cities should become more closely integrated and actively develop economic sectors which complement each other. COVID-19 has added impetus for greater collaboration and coordination across state boundaries to help in the recovery phase and to build greater resilience into Australia's economy.

An Australian East Coast Megaregion offers a vision about how we can respond to these challenges and collaborate more effectively. One critical element of a megaregion is the need for common transportation systems, which help link our key metropolitan and regional centres. The construction of very fast rail or high speed rail linking our cities and regions should be considered as part of an integrated transport plan and the impact this may have on the functioning of Melbourne.

**Recommendation 20: Ensure an integrated transport plan considers how Melbourne will integrate effectively with Australia's east coast cities and regions.**

# Endnotes



<sup>i</sup> Climate Council, “What’s the deal with transport emissions?”, <https://www.climatecouncil.org.au/resources/transport-emissions-and-climate-solutions/>

<sup>ii</sup> T. Jacks, “Clogged city: Melbourne’s traffic slowing down more than anywhere else in Australia”, *The Age*, 27 June, 2019, <https://www.theage.com.au/national/victoria/clogged-city-melbourne-s-traffic-slowing-down-more-than-anywhere-else-in-australia-20190627-p521ue.html>

<sup>iii</sup> C. Butt, T. Jacks, & S. Frederiksen, “How to beat Melbourne’s worsening peak hour traffic”, *The Age*, 2018, <https://www.theage.com.au/interactive/2018/peak-hour-project-second-round/ bespoke-features/melbourne-1.html?resizable=true&v=7>

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