

# A NEW VEHICLE NEEDED TO DRIVE MELBOURNE'S FUTURE ECONOMIC DEVELOPMENT

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In an increasingly connected world economy, Australia's capital cities are the drivers of economic growth and development.

Importantly, cities like Melbourne, Adelaide, Sydney and Brisbane - with their critical mass of export-oriented industries, employment, recreational, leisure and entertainment and essential services - are where most people want to, if not need to be. Australia's cities are our most productive places; they are big and getting bigger, and with good reason. Places like Melbourne offer people more opportunities for employment and they provide industry with ready access to skills, services, suppliers and markets.

In June 2014, there were an estimated 4.44 million people resident in Melbourne, an increase of 95,700 from twelve months earlier. Between June 2013 and June 2014, Melbourne experienced the largest rate of population growth of all capital cities in Australia. Melbourne's rate of growth for this period was 2.2%, accounting for 90% of Victoria's total population growth.

In June 2014, Melbourne was home to approximately three-quarters (76%) of Victoria's total population.

Population growth is good, but unfortunately, like other major metropolises, the prospects for Melbourne's continuing productivity growth are being compromised by a failure of the city's infrastructure - particularly its transport infrastructure - to keep pace with a rapidly-growing population. With history to guide us, the following attempts to explain why this is the case and importantly, how the problem might be addressed.

## IN THE BEGINNING...

Transport technology has dictated the location, form and structure of cities throughout the world since time immemorial. Australia's major cities were established at the natural ports where flows of goods and people could be facilitated. Natural, mineral and agricultural resources were carted to ports and loaded on ships for export. Capital and consumption goods were imported and distributed.

Once established, the cities were indispensable to Australia's subsequent period of economic development. Immediately part of a 'global economy', they were the link between the British economy and a natural environment of abundant and accessible resources.

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When sail gave way to steam, ports were expanded and coal flowed to the docks and out through the harbours. Steam locomotives expanded the collection and distribution systems and doubled and then redoubled the payloads. The cities became hives of activity focused on the movement of goods and increasingly, the movement capital. This was accompanied by the administrative and regulatory infrastructure these processes demanded. By housing the essential markets for the exchange of produce and capital, the cities enhanced their role in enabling Australia's economic growth and development.

In the nineteenth century, gold rushes and strong demand for agricultural exports generated significant

inflows of capital for investment in transport and other nation-building infrastructure. The cities began to swell and they became ‘Dickensian’ in nature. Dirty industries existed alongside worker housing and disease and pollution became intolerable.

**URBAN SPRAWL’S FIRST WAVE**

The first to escape the cesspits that Australia’s cities had become were the wealthy classes – the leaders of industry and the professionals. They moved to greener areas and availed themselves of horse-drawn vehicles (carriages and trams) to commute. Very quickly steam trains radiated out from the city and the process of suburbanisation began in earnest.

Despite what some modern-day policy-makers may argue, it wasn’t the car that initiated this process. Suburbanisation was accelerated by the development of cable cars. After that came electric trams and the electrification of the train lines. By the start of the twentieth century Melbourne had one of the most advanced transport systems in the world (not to mention the best sewerage system).

**IMMIGRATION AND ECONOMIC DEVELOPMENT**

In the first half of the twentieth century Australia became pre-occupied with wars and a depression. However, after the Second World War Australian governments embarked on an unprecedented ‘nation building’ phase. Migrants flowed in and major foreign investments were attracted to set up business behind Australia’s high tariff wall. Huge infrastructure projects were commenced, including the Snowy Mountains Hydro-Electric Scheme and the Latrobe Valley electricity generation plants. The nation embarked on what has been described as the ‘long (economic) boom’.

Growing consumer wealth combined with the economies of mass production in the motor vehicle industry began to expand the scope of car ownership. The wedges between the radial rail systems were quickly filled in with low-density housing and the suburbs began to spread inexorably across the landscape. Melbourne’s built form began to adjust as industries fled the inner areas. Again, the transport technology of the day was dictating Melbourne’s evolving structure.

**TOWARDS A KNOWLEDGE ECONOMY (AND GREATER DISPARITY)**

Over the past 25 years or more, Melbourne’s economy has evolved away from manufacturing towards an emphasis on services and logistics. The city has become polarised with a concentration of the high-paying jobs in the

centre and middle ring areas where property values have skyrocketed. There are many notions on why property values are so high, including ‘negative gearing’, but the real reason is the increasing number of relatively high-income households competing for what is a finite resource – an inner area location. Lower-income households have been relegated to the fringe.

Despite healthy rates of growth, cities such as Melbourne are now beset by many problems, including social polarisation and compromised economic productivity. Congestion on the roads is throttling the city. The idea that Melbourne will grow to a population of almost eight million by 2051 – as put forward in the Victorian Government’s metropolitan planning strategy, Plan Melbourne - is a frightening prospect.

Plan Melbourne anticipates adding the equivalent of an AFL Grand Final crowd to the population of Melbourne every year for the next 36 years without identifying where these people can be accommodated. Apparently, most are to be crowded into high-rise apartments. The Victorian Government’s ‘flagship’ transport projects are the new metro line, an airport rail link, some rail line upgrades and extensions and an outer ring road. Taken together, it could be argued these projects will likely do little more than apply old transport technologies to perceived deficiencies that have existed for decades.

**BACK TO THE FUTURE**

The question therefore needs to be asked, where has Melbourne’s city-building gone wrong? The answer is that Melbourne’s transport systems are still stuck in a time warp. If someone from 1900 was transported 115 years into the future, they would still recognise Melbourne’s train and tram system, with the possible exception of the graffiti. Melbourne’s fixed rail transport systems have expanded only marginally over the past century or more and some of the signals are the same ones that operated in 1900. And while there are computer-aided monitoring systems now in place, these date from the 1980s! It begs the question, is anyone else using a 1980s computer?

Our time traveller would no-doubt be impressed by Melbourne’s freeways, especially the ones with sculptures like the cheese sticks. But she would have to ask the question, what are these roads for and why won’t the traffic move? As demonstrated in an August 2015 article in the Sunday Herald Sun newspaper, it was faster to travel the inner-city’s roads in a horse and cart 100 years ago than it is by car and tram today.

On the same streets in an 8.7 kilometre journey from the corner of Bell Street and Sydney Road in Coburg to Flinders Street Station, it was shown that during Friday

peak hour a horse and cart would have beaten a Ferrari by seven minutes. Stopping at almost all of the 41 traffic lights along the way - the car took 43 minutes, only marginally better than 45 minutes it took to travel the same route by tram. But during the First World War, a horse on the same (then dirt) streets took just 36 minutes.

**IS MELBOURNE REALLY THE WORLD'S MOST LIVEABLE CITY?**

In August 2015, for a fifth year in a row, The Economist's Intelligence Unit ranked Melbourne the world's most liveable city for stability, healthcare, culture and environment, education and infrastructure. This is great for politicians and policy-makers charged with the task of managing and promoting the city. It's also very good for those who hold well-paying jobs and who can afford to live in the city's inner and middle-ring suburbs.

But in reality, not everyone can be so fortunate. The fact is, the 'world's most liveable city' is faced with a situation where: many households are isolated on the urban fringe; housing in the 'jobs-rich' areas of the inner and middle-ring suburbs is unaffordable for lower-income households; and economic productivity is severely constrained.

In the jargon of urban planners, the city has become inequitable, environmentally unsustainable and economically less productive (than it should be). As a result, Melbourne is destined to become far less 'liveable'.

Government policy on these issues is in need of a re-think. At the Federal level more freeways are the answer despite the fact that with unrestricted access (at minimal marginal cost) travel patterns quickly adjust to take up new capacity. At the State level there is some recognition that investment in mass transit is required. Projects such as level crossing grade separations, rail upgrades and a new metro line are a step in the right direction, but these projects are only playing catch-up. The fact is they should have commenced fifty years ago.

**ROADS? WHERE WE'RE GOING WE DON'T NEED ROADS**

In the final scene of the 1985 film *Back to the Future*, Doctor Emmet Brown returns from the year 2015 to collect Marty McFly and take him back to the future. When Marty tells the Doc they don't have enough room to get the DeLorean up to the required 88 miles per hour to travel through time, the Doc confidently replies, "Roads? Where we're going we don't need roads".

With the prophecy of the *Back to the Future* movies not realised, it's fair to assume that for the foreseeable

future we'll still need some roads to move around our metropolitan centres. So what of the next thirty years? For our cities, the future looks bleak with the levels of forecast growth and the lack of a vision for how transport technologies are going to be applied to dictate outcomes.

To address this issue the main goal should be to even out what urban economists refer to as 'accessibility indices' across the city. By this we mean making all areas reasonably accessible to the full range of jobs and urban goods and services. This could help turn the 'twenty minute city' from rhetoric into reality.

If this is achieved congestion will be managed and the city will be more equitable and productive. Importantly, property prices will be moderated, as the demand will be more widely spread. Evening out accessibility is the key to the city's future.

But how do we even out accessibility? To answer this let's look at future transport technologies.

The first area to look at is the application of Intelligent Transport Systems (ITS) that can get more out of the existing road network. ITS improves transportation safety and mobility by integrating advanced, wireless communications technologies into transportation infrastructure and vehicles. It processes and shares information that can prevent vehicle collisions, keep traffic moving and reduce environmental impacts. Coordinating traffic signals, giving signal priority to transit lanes, electronic information signs and variable speed limit signs are all possible.

ITS enables 'autonomous and connected vehicles', allowing cars to continually communicate to the vehicles around them so each are aware of the others' speed, heading and direction. Connected vehicles also help in recognising and alerting drivers to dangerous situations. By adding communication points in hazardous road areas and intersections, the technology extends crash-reduction capabilities by allowing automatic control of signal timing, speed management, and operation of transit and commercial vehicles. ITS can be coupled with electric vehicles to produce even more environmentally sustainable outcomes.

The second area to look at is the self-driving car. Autonomous cars use a combination of laser scanning, GPS, optical cameras and big-time processing power to analyse millions of possible roadway scenarios and then take the appropriate action. The ultimate goal for autonomous vehicle technology is to make the vehicle so intelligent that no driver input is needed. Many of us have lived long enough to know we shouldn't scoff at new ideas of this kind.

The third area to look at is the application of these technologies to mass transit. Self-guided vehicles such as buses on dedicated busways are feasible today. There are already examples of dedicated busways in major cities like Brisbane for example. From there, it's a case of just adding the technology.

The fourth area to look at is 'Transit Oriented Development' (TOD). To date this has been the panacea for the future but its effectiveness alone is questionable at best. Higher densities around transit stations can increase accessibility and this living environment suits many people. But while it is a necessary initiative, it is insufficient to deal with the scale of the challenges facing cities such as Melbourne.

If we are serious about planning for the future of Melbourne some intense effort must be put into exploring the application of new transport technologies. The challenge remains, however, to solve the funding quandary. In other words, where will the money come from?

### **IT'S ONLY A MATTER OF DOLLARS AND SENSE**

The answer is that funds will come from congestion or road user charges. Continuing to allow the marginal cost of using roads to be quite minimal will lock us into a very bad future for the city. This is the highway to hell. The alternative - congestion charges - even at modest levels can raise very large amounts of capital that can be invested in the transport system of the future. Such charges will manage demand for road use and will enable investment into the required metro system, the self-guided buses and the transport technologies that are essential to provide the level of accessibility the city will require.

It's fair for one to ask then, how will these changes benefit those living on the urban fringe? The first point to make on this issue is that an inequitable city will have greater adverse implications for lower and middle income earners than it will for the rich.

The second point is that, with the sorts of changes suggested here, those households earning lower than average incomes will have ready access to a greater range of jobs and the cost of their travel will be affordable for them on the new efficient transit systems. Of course, Melbourne's most disadvantaged residents will have access to concession cards, a device that doesn't work for private car travel.

With the funding problem solved the task would then be to look at financing. 'Funding' deals with 'who pays' while 'financing' deals with spreading the cost over time

via debt. The debate about whether debt is appropriate to bring infrastructure investments forward is a shallow one dominated by ideology.

The fact is that long-lived infrastructure that delivers social, environmental and economic dividends is appropriately debt-financed. This aligns the cost with the delivery of benefits over time. For this reason alone, it is critical that assessment of the benefits and costs of candidate infrastructure projects is removed from the partisan political process.

So, with the benefit of hindsight, it's time for planners and economic development practitioners to start looking to the future and facilitate a debate into what kind of cities we want. Moreover, there is a need for research into new transport technologies and for a campaign to educate politicians and the community of the imperative to charge for road use and the economic and social benefits of debt funding.

In the future we may still need roads, but with the right funding mechanisms in place, combined with investments in new transport technologies, how those roads are used by residents, workers and industry will contribute to a far more productive, prosperous and liveable Melbourne.

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