

Commonwealth Budget Submission

2019-2020

January 2019



BUDGET SUBMISSION
January 2019

Prepared by Roads Australia
Level 2, 437 St Kilda Road, Melbourne VIC 3004
(03) 9821 5255
www.roads.org.au

 <https://www.linkedin.com/company/roads-australia/>

 @RoadsAustralia

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ROADS AUSTRALIA MEMBERS

Maroon highlight signifies new member in 2018.

FEDERAL BUDGET SUBMISSION 2019-20

ISCA Infrastructure Sustainability Council of Australia

JACOBS

JOHN HOLLAND

kapsch >>>

KBR

KHSA

KOMATSU

LIBERTY ONESTEEL

LAING O'ROURKE

lendlease

LEVEL CROSSING REMOVAL AUTHORITY

LGAQ

mainroads WESTERN AUSTRALIA

MCCONNELL DOWELL CREATIVE CONSTRUCTION™

MIENGINEERS

MONASH University

MOTT MACDONALD

MULTIPLEX

NTC AUSTRALIA National Transport Commission

Netflow

NORTH EASTLINK AUTHORITY

NORTH

OPV OFFICE OF PROJECTS VICTORIA

pitt&sherry

Plenary

Professionals Australia

PROJECT SUPPORT INDEPENDENT COSTING & DELIVERY ENGINEERS

Queensland Government

Q FREE

RAIL PROJECTS VICTORIA

Redflex

RLB Rider Levett Bucknall

RIZZANI DE ECCHER

ROAD FREIGHT NSW

Roadmarking Industry Association of Australia Ltd

NSW Transport Roads & Maritime Services

Rocla

RPS

salini impregilo

SAMSUNG SAMSUNG C&T

SEYMOUR WHYTE

SICE

SLR global environmental solutions

SMEC Member of the Surbana Jurong Group

Stantec

Sydney Motorway Corporation

BOYLAN

Tonkin+Taylor

Tonkin CONSULTING

t | b | h

TRANSMAX

ACT Government Transport Canberra and City Services

tca

NSW Transport for NSW

Transurban

TSA MANAGEMENT

TURNBULL ENGINEERING INFRASTRUCTURE DESIGN

ventia

vic roads

victoriantransportassociation

VIVA EnergyAustralia

WARD

WBHO INFRASTRUCTURE PTY LIMITED

WESTERN DISTRIBUTOR AUTHORITY

WorkPac Group A Smarter Alternative

City of Whittlesea

WSP

WT PARTNERSHIP

wyndhamcity city.coast.country

zitrón

ABOUT RA

Roads Australia (RA) is a not-for-profit, non-political industry association whose 150+ members include all of Australia's road agencies, major contractors and consultants, motoring clubs, service providers, and relevant industry groups.

RA does not advance sectional interests. Instead, we serve as an indispensable focus group, bringing together road and transport agencies and industry players to engage on practical policy issues that are - at their core - about delivering the best transport outcomes for all Australians.

At the Roads Australia Summit in June 2018, more than 40 public sector and industry CEOs met to discuss and prioritise the major issues in infrastructure and transport across Australia.

The CEO Agenda 2018 Report¹, combined with our significant government and industry policy engagement, positions us to contribute meaningfully to the Commonwealth Government 2019-20 budget development.

EIGHT KEY RECOMMENDATIONS

RA recommends the 2019-20 Commonwealth budget deliver:

1. Matching funds to support and accelerate state jurisdiction investments in mass transit solutions.
2. Funding to initiate and support the essential micro-economic reform process in road-user charging and investment.
3. Funding to design and establish a collaborative Transport and Land Use strategic development network across the three levels of government.
4. Funding to accelerate initiatives to support capacity in the construction industry, and to fund not-for-profit industry associations to develop a joint business case for increased skilled migration in the transport infrastructure sector.
5. Funding to support the implementation of the recommendations from the Inquiry into the National Road Safety Strategy, and to implement a national road worker safety awareness campaign.
6. Funding for the Office of Future Transport Technologies over the full forward estimates period to allow the Commonwealth to provide leadership to ensure the uptake of automated vehicles is managed in a uniform manner across the country.
7. Funding to support the urgent investigation into the feasibility of utilising the Dynamic Map Platform application in Australia.
8. Establish and fund international collaborative relationships on Hydrogen Fuel Cell technology.

RECOMMENDATION 1

SUPPORT FOR STATE JURISDICTION INVESTMENTS IN MASS PUBLIC TRANSPORT

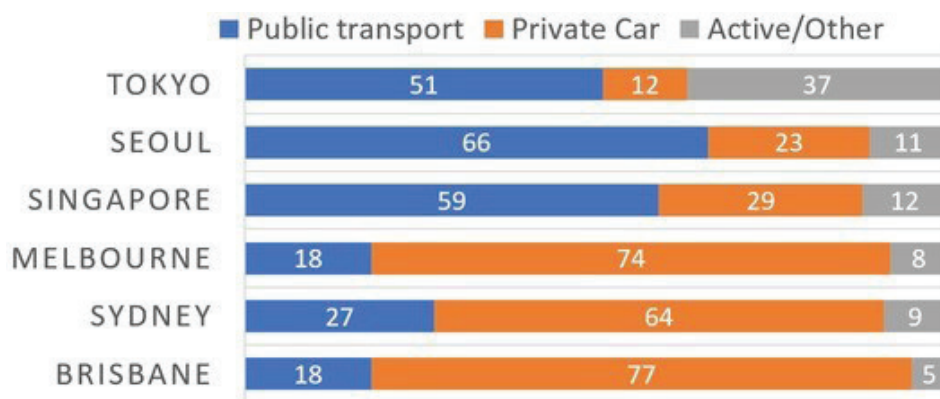
Strategic investment by State governments in suburban rail is already high on the agenda. The reality is we will need exponential investment to cope with the expected population growth that could see Melbourne and Sydney reach 8 million people by 2050.

In September 2018, Roads Australia led a delegation of senior government and industry leaders on a study visit to investigate how major Asian national and city governments were developing their city transport networks to cope with population growth, livability, changing demographics and the introduction of autonomous vehicles. The resulting *Cities for the Future 2018 Report*² offers insights into the priorities and approaches to mass transport and mobility solutions in these countries.

The next decades will see our major cities growing rapidly, presenting huge challenges for governments and societies in delivery of equitable

transport solutions. In Australia, we can learn from the markedly different approaches of our regional neighbours to integration of transport strategy and land use planning, smart infrastructure and technology delivery, transport investment priorities and customer focused mobility solutions.

The contrast between transport mode choices in our near neighbour cities and Australia is stark. Public transport thinking, investment and culture has dominated their strategic agenda for generations. The graph below shows the indicative transport mode shares compared to our near neighbours:





Our city neighbours have been building their metropolitan rail networks as core inter-connectors only since they emerged from the devastation of the mid- 20th century global conflicts.

Today they are modern, strongly interconnected grid networks, with high frequency, fast, affordable, safe and reliable services. What's more, they are being continually upgraded and rapidly expanded.

In Australia's major cities, our rail networks had their foundations in the 19th century. These essentially radial, suburban-to-city centre connectors do not have the interconnectivity, frequency, speed and reliability to make them attractive as the commuter mode of choice.

The lack of connectivity detracts from the unique advantages that our cities, such as Sydney (with its ferries) and Melbourne (trams), already have in their transport mix.

As we look towards 2050, with rapid growth predicted, Australian cities will need massive investment in the renewal and expansion of our public transport systems to maintain the livability we cherish.

Whilst it is heartening to see the emerging support by Federal and State governments for public transport investment, particularly over the past decade, the challenge ahead is neither easy nor short-term.

Rather, it is generational in magnitude.

Recommendation 1

The Commonwealth provide matching funds in the 2019-20 budget to support and accelerate state jurisdiction investments in mass transit solutions.

RECOMMENDATION 2

INITIATING THE CASE FOR ECONOMIC REFORM IN ROAD-USER CHARGING AND INVESTMENT

It is imperative that we move to a fairer, more efficient road pricing and investment model where road users pay according to where and when they travel. To be truly effective, road reform will ultimately have to apply to all vehicles, not just heavy vehicles.

Roads Australia has long been an advocate for sensible transport reform. In November 2016, we welcomed the Federal Government's announcement of a study, to be led by an eminent Australian, into the potential benefits and impacts of road-user charging in Australia.

It is frustrating that the Commonwealth has not pursued the micro-economic reform pathway for road transport with a greater sense of urgency.

The excise component of fuel purchased in Australia is currently more than 40 cents per litre. This is a blunt and inaccurate instrument for recovery of revenue to support building and maintaining Australia's road networks.

The current system is inherently inequitable, as it penalises vehicles with lower fuel efficiency, collects a lower distance-based road-user charge from more fuel-efficient vehicles and hybrid fuel/electric vehicles, and zero collections from electric vehicles.

According to NRMA surveys, most motorists have a low awareness of the scale of the excise component in the bowser price. Most concerning is that the impact of the system is often most disadvantageous to lower socio/economic sector vehicle owners, who are more likely to own older, less fuel-efficient vehicles.





Fuel excise revenues are currently and increasingly inadequate to fund the required investments in, and maintenance of, Australian road networks.

Due to a combination of factors, it is estimated that over the past 15 years excise revenues have fallen by around 23% as a proportion of vehicle kilometres travelled. Moreover, this trend is likely to accelerate with the increasing fuel efficiency of the light vehicle fleet.

The Commonwealth Parliamentary Budget Office reported that fuel excise as a percentage of GDP was around 1.0% in 2016/17, representing 5% of Commonwealth receipts. There has been a steady decline from the 1.7% of GDP level in March 2001, after indexation was abolished.

The re-introduction of indexation in November 2014 has addressed this somewhat, although improvements in fuel efficiency have led to further declines since.

Apart from the Heavy Vehicle PAYGO pricing work carried out by the National Transport Commission, there is limited direct correlation of revenue collection to funding allocations. Direct hypothecation of revenues, collected for the primary purpose of road investment and maintenance, to road network operators, is a critical missing link.

To maintain the confidence of industry and road users, it is essential that road pricing and investment reform models are transparent and equitable for all road users, and linked to clear infrastructure investment plans.

The road market reform work being overseen by the Transport and Infrastructure Council is a step in the right direction. The Commonwealth must ensure that this reform program is fully funded so that genuine road pricing reform can be implemented.

Recommendation 2

The Commonwealth provide sufficient funding in the 2019-20 budget to initiate and support the essential micro-economic reform process in road user charging and investment.

RECOMMENDATION 3

REDUCING RELIANCE ON PRIVATE CAR OWNERSHIP

We strongly encourage the Australian government to take the role of lead collaborator in developing long-term, people-oriented transport outcomes.

Australia has enviable high livability rankings that our major cities currently hold. The strategic thinking on how we turn this around, and the necessary engagement with all Australians in the change process, needs to have the highest possible focus by all governments.

Central to a successful outcome is much stronger collaboration between our tiers of government to integrate transport and land use planning.

As outlined in the *Cities for the Future 2018 Report*³, the Japanese and South Korean governments have a strong collaborative approach with industry and academia in developing and implementing their national transport strategies.

While acknowledging the challenges inherent in Australia's federated model, there are many areas where our current state-by-state approach to strategic transport planning leaves us behind our neighbours. There are many academic institutions working on these important issues, however stronger collaboration and strategic support at the Federal Government level is needed to focus and leverage these efforts.





There is no doubt that demand management of commuting choices will, in the future, be enhanced by integrated charging systems. The message from city governments visited by the RA delegation to Asia was that integrated management of investment, demand and pricing of multi-mode transport will require access to 'big data'.

Human-oriented transportation systems of the future will utilise 'big data' analytics and electronic payment systems in a multi-mode, total journey approach to develop long-term transportation policy and investment priorities.

Expanding the national focus on our growing cities, already commenced through the City Deal process, is strongly recommended. In this process, our major city governments need to be at the table; however, as a precondition they should be encouraged to cast a wider net, collaborating or combining with suburban local governments to harmonise a "whole of city" approach.

Recommendation 3

The Commonwealth provide funding in the 2019-20 Budget to design and establish a collaborative Transport and Land Use Strategic Development Network across the three tiers of government.

RECOMMENDATION 4

PRIORITY INFRASTRUCTURE PROJECTS

Roads Australia supports the continuation of investment in road infrastructure to reduce congestion in our cities and to provide better connectivity for commuters and road transport users.

The record level of current and planned investment in critical transport infrastructure in Australia has been a catalyst for strong growth in the engineering and construction sector.

The importance of a strong and consistent pipeline to our industry cannot be underestimated. For the first time in decades, Roads Australia members are able to contemplate a new graduate or apprentice entering the workforce, with the certainty that projects will be available to give them the variety of experience they require to develop into our next generation of nation builders.

Australia is now well placed to invest in infrastructure that will underpin the economic growth of the country. State transport and infrastructure agencies have put enormous effort into long-term, evidence-based infrastructure pipeline planning. The essential work of Infrastructure Australia in providing independent advice on national priority projects underpins investment decision-making.

The Roads Australia Capacity Policy Chapter has, over the course of 2018, examined a number of issues that constrain the ability of industry and government, in partnership, to deliver the essential and growing national infrastructure program. It is clear that current procurement models do not encourage partnerships that maximise opportunities provided by the significant pipeline of infrastructure work. However, the excellent work of the Australian Constructors Association (ACA) and the NSW and Victorian governments, via the Construction Industry Leaders Forum (CILF), is a step in the right direction.

RA supports this collaborative work to find better, more fit-for-purpose procurement and contracting approaches, which has the potential to deliver huge benefits for all parties. These issues had prominence at the November 2018 Transport and Infrastructure Council (TIC) meeting. Ministers discussed governments' significant infrastructure programs and how best to support capacity in the construction industry to deliver the work over the coming years.

Ministers acknowledged issues raised by industry, including the importance of developing market capacity, improving procurement processes and adopting more market-responsive approaches to risk allocation, as well as improving skills and training.

TIC endorsed a number of high-level principles, reflecting the commitment of all jurisdictions to work with industry to foster the sustainable development of the sector, with a focus on initiatives attracting and retaining women in trades and in leadership roles.

TRANSPORT AND INFRASTRUCTURE COUNCIL PRINCIPLES

- Collaborative-based approaches to procurement, project management and risk allocation promotes safer and more productive delivery.
- Undertaking best practice on bidding, contracting and procurement streamlines processes and reduces costs.
- Rewarding safety performance as well as improvements in security and timeliness of contract payments builds industry confidence and accountability.
- Publication of the pipeline of projects stimulates industry preparedness and increases competition in bidders.
- Joined up approaches for development and delivery of training maximises workforce participation.
- Industry diversity, including greater female participation in the workforce, improves results.
- Packaging procurement activities to match market appetite and capabilities maximises market responses and value for money. ⁴

While Ministers agreed to report back to Council in 12 months on actions taken by their jurisdictions to support the high-level principles, Roads Australia believes specific funding should be allocated in the 2019-20 budget to provide expert advice to support the efforts of industry and governments to deliver this critical initiative.

RA has initiated a program of information sessions for our members to ensure they have the most up to date information of the Commonwealth skilled migration program and process.

The industry is experiencing a critical shortfall in the core skills required to deliver the infrastructure pipeline. More attention is needed on future industry capacity to deliver these projects, and working with Government to remove barriers to access skilled migrants to supplement local shortfalls.

RA recommends that funding be allocated to support not-for-profit industry associations, including itself, ACA, Engineers Australia and Consult Australia, to develop a joint business case for increased skilled migration in the transport infrastructure sector.

Recommendation 4

The Commonwealth provide funding in the 2019-20 budget to accelerate initiatives to support capacity in the construction industry and to fund not-for-profit industry associations to develop a business case for increased skilled migration in the transport infrastructure sector.

RECOMMENDATION 5

ROAD AND ROAD WORKER SAFETY

The unprecedented scale of the national road and related infrastructure pipeline brings with it increased need for works to be carried out in an active traffic environment – increasing the risks faced by road workers.

Road safety and road worker safety is RA's agreed top priority issue. We believe we can make a positive contribution by sharing data and understandings on root causes, risks and injuries; and in the case of work zones, focusing on worker training and culture, the use of appropriate technologies, and driver behaviour.

Roads Australia notes that the Co-Chairs of the independent Inquiry into the National Road Safety Strategy, Associate Professor Jeremy Woolley and Dr John Crozier, gave a presentation to ministers on their final report and recommendations at the November 2018 Transport and Infrastructure Council (TIC).

Ministers discussed and considered the report's findings, acknowledging that several of the recommendations required a coordinated effort across governments. Ministers also discussed the new national road safety governance review that was announced by the Deputy Prime Minister, the Hon Michael McCormack MP.

The review, to be undertaken jointly by the Commonwealth, States and Territories, responds to recommendation six of the Inquiry and will inform a response to many of the other recommendations.

TIC agreed to establish a working group to progress the report's recommendations. All jurisdictions agreed to work with the Commonwealth to develop an implementation plan focused on the Inquiry's recommendations, for consideration by Ministers at the first Council meeting in 2019.⁵





RA supports the recommendations of the Inquiry and calls for sufficient funding to be allocated in the 2019-20 Commonwealth Budget for the rapid implementation of the priorities identified.

Austrroads has acknowledged that working on roads and roadsides poses significant risks to workers and motorists, with changed roadway conditions, disrupted traffic flow, limited working space and movement of construction and public vehicles in close proximity to workers and worksites.

We need to better manage these risks in the context of providing a safer road environment for all users. There is a need to completely re-think the way maintenance is done on the road network so that the roads are maintained in a far better state and the road workers are not exposed to the dangers that currently exist.

The Austroads Board has endorsed a four-part project to facilitate the introduction of a harmonised approach to temporary traffic control at road worksites across Australia, an initiative strongly endorsed by Roads Australia. The Safety at Road Worksites project (BN2019) will undertake four modules of work.⁶

The technical issues to be addressed by the Austrroads work will need to be supported by broad public awareness-building. The Traffic Management Association of Australia (TMAA), supported by industry and some state road agencies has developed a public campaign to highlight road worker safety awareness.⁷ Funding constraints have so far limited the campaign reach to small jurisdictions only.

Roads Australia recommends that funding be allocated in the 2019-20 Commonwealth Budget to further develop the TMAA campaign and to fund national television placements and related support activities.

Recommendation 5

The Commonwealth provide adequate funding in the 2019-20 budget to support the implementation of the recommendations of the Inquiry into the National Road Safety Strategy, and to implement a national road worker safety awareness campaign.

RECOMMENDATION 6

CO-ORDINATING FUTURE TECHNOLOGIES

Better coordination of Australia's autonomous vehicle trials, enabling law and regulatory processes is essential. Our governments should be acting collectively and engaging now on strategies to help remove consumer and societal barriers to the introduction of new autonomous driving technologies.

Australia's productivity and road safety outcomes can be strongly improved by the introduction of autonomous vehicles, initially in the heavy freight sector then through the light vehicle fleet with driverless capability.

The lack of a nationally coordinated and integrated system, ambivalent to jurisdiction borders, will delay these benefits, potentially for many years.

Roads Australia believes Australia's state-by-state approach to AV introduction, while supported by the National Transport Commission's (NTC) regulatory advice, could see a fragmented approach to AV introduction. It is incongruous that our national highway system could see markedly different network control and management systems in place as vehicles transverse state and territory borders.

We could be faced with the dilemma of accepting a significant delay to AV introduction until all states and territories have adequate systems in place; or staggered jurisdictional implementation.

RA welcomes the Federal Government's decision to establish an Office of Future Transport Technologies through which it will provide the strategic leadership necessary to facilitate the operation of automated vehicles and other transport innovations in Australia. It is therefore critical that the Office is properly funded.

As Roads Australia indicated in its 2017 report, *Preparing for the Driverless Revolution*:⁸

- all new vehicles are likely to be fully driverless within 10 years;
- there will be a mixed driverless and manual fleet for up to 20 years;
- shared driverless and manual road sections/lanes within 5 years; and
- driverless trials are now common place overseas; they must now be conducted in Australia.



There are a number of different government projects that are on the cusp of implementation:

- Austroads has published recommendations investigating key road operator data attributes that will be used as part of the Connected and Automated Vehicles system.⁹ The Austroads publication has been recognised as part of the National Infrastructure Data Collection and Dissemination Plan.¹⁰
- The Transport and Infrastructure Council (TIC) has also developed a National Policy Framework for Land Transport Technology¹¹ which aims to establish:
 - a regulatory framework for testing CAVs;
 - national operational guidelines to support the on-road use of CAVs;
 - trials and demonstrations of Intelligent Transport Systems; and
 - a nationally agreed deployment plan for the security management of CAVs.
- The NTC has completed the development of national guidelines governing conditions for trials of automated vehicles; as well as National enforcement guidelines clarifying regulatory concepts of control and proper control for different levels of driving automation. The NTC is also analysing options relating to:
 - safety assurance regimes for automated road vehicles.
 - injury insurance schemes to identify any eligibility barriers for occupants of an AV, or those involved in a crash with an AV
 - the application of current driving laws in an automated vehicles environment; and
 - managing government access to C-ITS and automated vehicle data in a way that balances road safety and network efficiency outcomes and efficient enforcement of traffic laws with sufficient privacy protections for automated vehicle users.¹²

As can be seen, various projects are either well advanced or completed. It is now time to balance the emphasis on research with the responsibility to implement the results.

Recommendation 6

It is important the 2019-20 Budget fully funds the Office of Future Transport Technologies over the full forward estimates period so it can attract the technical skills necessary to allow the Australian Government to provide the leadership to ensure the uptake of automated vehicles is managed in a uniform manner across the country.

RECOMMENDATION 7

ALTERNATIVE ROAD NETWORK MAPPING AND CONTROL

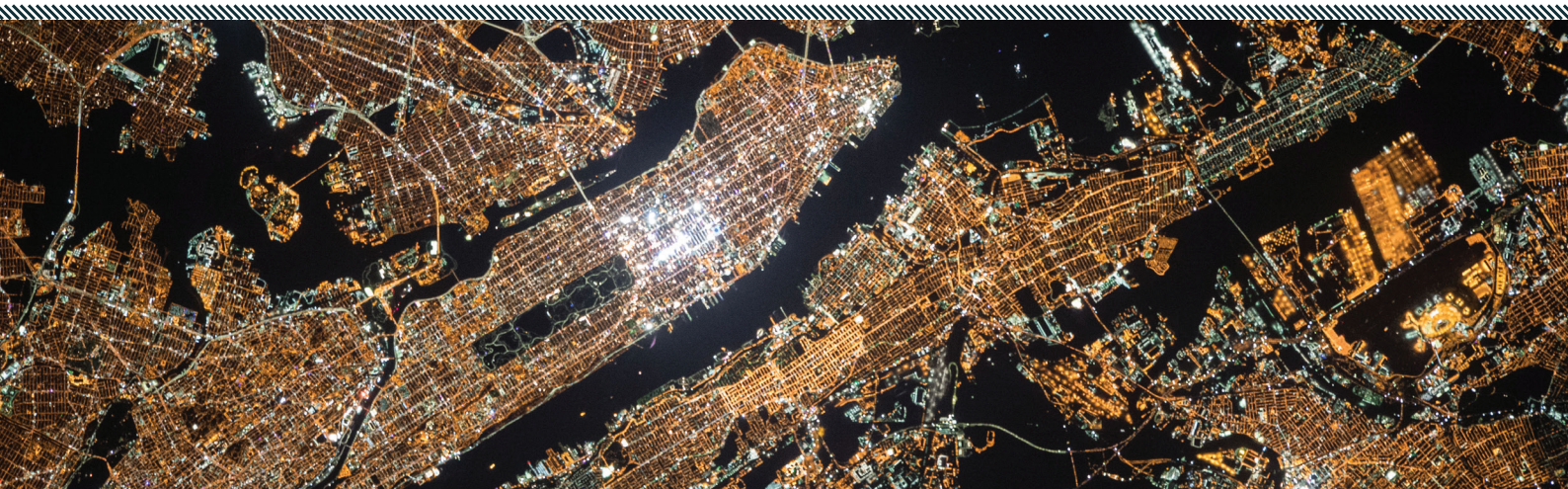
It is not too late for Australia to rethink our current approach to Road Network management in preparation for an autonomous future.

The approach to the development of systems to support the introduction of autonomous technologies in Western countries has been dependent on individual proprietary mapping systems, such as Google and vehicle manufacturers systems, to support vehicle automation and connectivity.

Government officials visited by the RA delegation to major Asian cities in September 2018 all placed a high emphasis on gaining a better understanding of community acceptance of autonomous technologies on the road networks.

There is also a strong safety-first approach, where staged and well-coordinated on-road trials have a government-controlled technology system safety-net.

In all cases, a strongly coordinated development of network control technologies and mapping systems was a key enabler.





Australia can take a big step forward through strategic alliance with one of our key international trading partners.

Japan has an alternative approach, establishing the Dynamic Map Platform (DMP)¹³ as their core vehicle management and control safety net.

This combination of satellite and cadastral mapping systems has the potential to be much more precise and more efficient than collective proprietary systems. To operate in Japan, vehicles must be compliant with the DMP.

The approach offers significant safety and security measures, with future network asset management and road user charging options that will be more difficult to achieve under the alternative approaches.

The satellite system used for the DMP program has a footprint that covers Australia.

Given that over 50% of light vehicles imported to Australia are from Japanese manufacturers, already partners in the DMP program, Australia should urgently consider the potential for high level government collaboration with Japan on this approach.

Recommendation 7

The Commonwealth provide funding in the 2019-20 budget to support the urgent investigation into the feasibility of utilising the Dynamic Map Platform application in Australia.

RECOMMENDATION 8

LOOKING TOWARDS A POTENTIAL HYDROGEN FUTURE

As a potential producer of hydrogen for our future transport fuel needs, Australia should take the opportunity to collaborate with Japan and/or South Korea as Hydrogen Fuel Cell technology develops.

Japan and South Korea are at the forefront of hybrid and EV development in the world. Despite the significant investment in both technologies by the private original equipment manufacturers (OEMs) the Japanese government sees the investment in electric vehicle technology as a stepping stone to their strategic goal of introducing Fuel Cell (hydrogen) powered vehicles into Japan.¹⁴

A Japanese world after 2025, where trucks and buses are running autonomously could also see their electric drive systems being powered by hydrogen as fuel cells are mass produced.

In South Korea, Hyundai vehicles have won both the Hybrid and EV awards for best in class in recent years.

Despite the significant investment in both technologies by the private OEMs, the South Korean government has established their strategic goal of introducing Fuel Cell powered buses with large trials of hydrogen powered buses underway.





Like Japan, South Korea intends to move to a fully hydrogen-powered fleet as mass production of fuel cells ramps up, and both countries are focused on a future where they produce their own transport fuel through the manufacture of hydrogen.

New Zealand recently signed a Memorandum of Cooperation with Japan that signals New Zealand's interest in working in partnership with Japan to develop hydrogen technology.

There will be a significant impact on the electricity grid and electricity demand in Australia as the use of electric vehicles grow.

Hydrogen production could potentially offset this pressure on the distributed electricity grid, with heavy transport the likely first adopter.

Roads Australia believes there is significant benefit for Australia in pursuing strong strategic alliances with major trading partners on hydrogen technologies.

Recommendation 8

The Commonwealth establish and fund international collaborative relationships on Hydrogen Fuel Cell technology.

REFERENCES

- 1 RA CEO Agenda (2018)
https://roads.org.au/Portals/3/Policy/RDA0750%20CEO%20Agenda%20%E2%80%93%202018_WEB.pdf?ver=2018-08-30-110336-107
- 2 Cities for the Future Report (2018)
<https://www.roads.org.au/transportreform> (to be released on February 28 2019)
- 3 Cities for the Future Report (2018)
<https://www.roads.org.au/transportreform> (to be released on February 28 2019)
- 4 Transport and Infrastructure Council Principles (2018)
https://transportinfrastructurecouncil.gov.au/communique/files/10th_Council_Communique_9_November_2018v2.pdf
- 5 Transport and Infrastructure Council Principles (2018)
https://transportinfrastructurecouncil.gov.au/communique/files/10th_Council_Communique_9_November_2018v2.pdf
- 6 Safety at Road Worksites Project (2019)
<https://austroads.com.au/network-operations/network-management/safety-at-road-worksites>
- 7 Traffic Management Association of Australia, Media Files
<https://tmaa.asn.au/media/>
- 8 Preparing for the Driverless Revolution (2017)
https://www.roads.org.au/Portals/3/Policy/RA%20_Driverless_Revolution_Report_2017.pdf?ver=2017-07-21-141744-490
- 9 Connected and Automated Vehicles (CAV) Open Data Recommendations (2018)
<https://www.onlinepublications.austroads.com.au/items/AP-R581-18>
- 10 National Infrastructure Data Collection and Dissemination Plan (2017)
https://bitre.gov.au/data_dissemination/files/National_Infrastructure_Data_Collection_and_Dissemination_Plan-draft.pdf
- 11 National Policy Framework For Land Transport Technology (2016)
https://transportinfrastructurecouncil.gov.au/publications/files/National_Policy_Framework_for_Land_Transport_Technology.pdf
- 12 National Transport Commission, Automated vehicles in Australia (2019)
<https://www.ntc.gov.au/roads/technology/automated-vehicles-in-australia/>
- 13 Cities for the Future Report (2018)
<https://www.roads.org.au/transportreform> (to be released on February 28 2019)
- 14 Cities for the Future Report (2018)
<https://www.roads.org.au/transportreform> (to be released on February 28 2019)

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Prepared by Roads Australia
Level 2, 437 St Kilda Road, Melbourne VIC 3004
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 <https://www.linkedin.com/company/roads-australia/>

 @RoadsAustralia

