



Association Number A03958 | ABN 64 217 302 489

AUSTRALASIAN RAILWAY ASSOCIATION SUBMISSION

To

Department of Prime Minister and Cabinet

On

Smart Cities Plan



THE ARA

The Australasian Railway Association (ARA) is a not-for-profit member-based association that represents rail throughout Australia and New Zealand. Our members include rail operators, track owners and managers, manufacturers, construction companies and other firms contributing to the rail sector. We contribute to the development of industry and government policies in an effort to ensure Australia's passenger and freight transport systems are well represented and will continue to provide improved services for Australia's growing population.

The ARA thanks The Hon Malcolm Turnbull MP and The Hon Angus Taylor MP for the opportunity to provide this submission to the Smart Cities Plan.

For further information regarding this submission, please contact Emma Woods, General Manager Passenger and Member Services via ewoods@ara.net.au or 02 6270 4512.

THE IMPORTANCE OF OUR CITIES

The ARA welcomes the Federal Government's "renewed national focus on our cities", both metropolitan and regional. As the engine-rooms of the nation, bringing Local, State and Federal Governments together to plan and invest in our cities collaboratively will be vital to securing the future prosperity of Australia.

Efficient public transport systems are vital to the productivity of and success of our cities and urban centres. Our cities drive the economy and wealth of the nation. Collectively, Sydney, Melbourne, Perth, Brisbane and Adelaide CBDs employ 10.6 per cent of the population.¹ Considering that only 0.6 per cent of the population live in these CBDs, public transport links in to, out of and within city centres is vital to not only maintain but continue to improve the nation's productivity.²

Similar to other countries, Australian cities faces the following challenges:

- **a growing and urbanised population:** Australia is one of the most urbanised countries in the world. 35 per cent of Australia's population resides in Melbourne and

Sydney and Australia's larger capital cities are growing at triple the rate of regional areas.³

- **expanding and geographically spreading cities:** 74 per cent of Australia's population is expected to live in a capital city by 2061.⁴
- **congested roads, airports and flight paths:** By 2020, road congestion is forecast to cost Australia \$20.4 billion annually through lost productivity as a result of time wasted in traffic.⁵
- **increasing greenhouse gas emissions:** On a per capita basis, Australia is the highest carbon emitter in the OECD and one of the highest in the world.⁶

Improved and integrated public transport systems are the solution to each of these challenges.

THE ROLE OF RAIL

Cities of all sizes around the globe are increasingly people-focused, investing in integrated transport systems that link high-capacity metro systems with light rail, regional rail and other public transport modes to encourage active and engaged community-based lifestyles.

Rail provides the backbone of public transport systems in metropolitan and regional centres. Continued improvement of rail in our cities through technology, infrastructure investment and expansion will increase the service and capacity offering and position rail as a viable alternative to the car.

Over the past decade, due to significant investment in new lines, upgrading and electrification of existing lines and procurement of new rolling stock, passenger rail patronage has boomed in Australian cities, particularly on the rapidly expanded Perth rail system, Melbourne's extensive heavy and light rail network, Victoria's upgraded regional rail system and Sydney's city network now moves more than 1 million people each work day.

In 2012, 71 per cent of Australians travelled to work or study by private vehicle (a 1 per cent decrease from 2009) and only 16 per cent travelled by public transport.⁷ During the same

period, 2012, Australia's rail networks moved more than 850 million passengers.⁸ That is 16.4 million passengers per week or 2.3 million people each day of the year.

For Australian passenger rail networks to function effectively in the service of our cities and its people, significant new levels of funding are required to maintain and upgrade existing systems and provide additional capacity to better manage future patronage growth. Our cities and regions will only continue to prosper with continued improvements and expansion of existing public transport systems and seamless integration with alternative modes of public transport.

POLICY COMMITMENTS

The ARA has long advocated for all levels of Government to have an active role in the funding, planning, regulatory reform and coordination of transport. The Smart Cities Plan appropriately picks up on each of these key roles of Government and outlines the three pillars, or drivers; smart investment, smart policy, and smart technology. The ARA supports the three proposed pillars and the active role that the Plan proposes all levels of Government will play in implementing these pillars.

The ARA welcomes the Federal Government's following commitments to reform:

- **\$50 million for infrastructure planning:** Long term planning that incorporates all modes and all levels of Government is vital. Australian cities need plans that ensure the necessary level of capacity on current systems, that new rail projects are identified and constructed to boost capacity and that future corridors are identified and preserved. The ARA has been advocating for the establishment of medium to long term city plans or 'City Blue Prints' that all parties agree to, to provide plans for our cities and remove public transport and infrastructure investment from political cycles, minimise opposition from other parties, allow faster project implementation and provide certainty to industry and developers. Cities should be viewed as a network to ensure interoperability between transport and urban planning.

Planning must be holistic, provide certainty and introduce transport connections in the planning and construction phase, not post-construction.

- **Establishment of an infrastructure financing unit:** The ARA has long advocated for innovative funding and financing mechanisms to deliver Australia's infrastructure needs and thus the ARA supports the establishment of a dedicated infrastructure financing unit to work closely with the private sector to determine funding and financing solutions. An added benefit or aim of the infrastructure financing unit should be the consolidation of fragmented funding pools into a dedicated Integrated Infrastructure Fund. This will reduce administrative costs and increase transparency.
- **Inviting State and Territory Governments to partner on City Deals:** As Australia's population continues to grow, pressure on our cities, their infrastructure and amenities will heighten, increasing the importance of Governments at all levels and the need for medium to long term plans. As noted above, the ARA recommends Capital City Blue Prints are developed and implemented in Australia. The City Deals concept aligns with the proposed 'Blue Prints' and thus the ARA is supportive of the concept.

CONCEPTS

30 minute cities

The ARA supports the concept of '30 minute' cities and specifically, the acknowledgement that achieving these types of cities will require considerable investment to improve public transport services, complimented with demand management.

Achieving the 30 minute principle will be heavily reliant on the ability to reduce road congestion by enticing Australian's out of their cars. This will be dependent on the provision of better public transport services, both in the areas serviced and the actual service provided. Customers expect a service that is frequent, affordable, accessible, integrated and reliable. The three pillars of the Smart Cities Plan; smart investment, smart policy and smart technology will all drive improvements to public transport service.

Demand management

The ARA supports the Smart Cities Plan's acknowledgment that demand management will have a role to play in Australian cities. By charging road users to access certain roads or areas of a city, congestion charging reduces road congestion and transport-related emissions by encouraging road users to adopt alternative transport options. These systems generate significant revenue that should be re-invested in public transport offerings.

Congestion charging systems have proven to be successful tools at reducing and managing road congestion, increasing public transport patronage levels, reducing emissions and generating substantial funds to reinvest into transport systems and infrastructure.

There are four general types of congestion charging or pricing.

- 1. Cordon Area:** Drivers are charged to enter a zone, or "cordon area". The charge can be a fee each time a driver enters the zone, a flat daily rate or a variable fee depending on the time of travel and vehicle driven. Singapore and London both use cordon-based congestion charging to manage road congestion. A London case study is detailed below.
- 2. Single Facility:** Charges are applied for the use of a "single facility" such as a specific road (or lane on a road), bridge or tunnel. Again, these charges can be a flat daily rate, variable depending on the vehicle and time of travel or a set fee each time the facility is accessed.
- 3. Toll ring road/s:** Ring roads typically circle a city. A toll ring road can include either a single-facility toll where road users are charged to access a lane on the ring road in return for less traffic and a faster journey or, the ring road can act as the barrier to tolled roads entering the city. Norway uses toll road charging extensively which is discussed below.
- 4. Distance-based:** Vehicles are equipped with a distance-monitoring system and road users are charged according to the vehicle type and distance driven within the charging zone.

Congestion charging would be challenging to introduce in Australia as it would be likely to generate significant opposition. However, with strong political will, it could be done. The

longevity of the systems around the globe, such as Singapore and Oslo, and the positive results the systems have achieved, are proof that a congestion charge can be a successful tool to improve the transport system of a city whilst providing a source of revenue for long term investment.

In its June 2013 National Infrastructure Plan, Infrastructure Australia recommended seven funding reforms, one being “user pays – user says” which made the case for “users to make a direct contribution to infrastructure and in turn, get a say on the level of service provided”. Introducing congestion charging within Sydney, Melbourne and Brisbane that are each particularly challenged by road congestion would not only improve the flow of traffic but also establish significant funds to invest in the transport systems of those cities.

CASE STUDY: Bergen and Oslo, Norway

Norway implemented toll road charging, not to manage traffic demand but to fund and fast-track infrastructure improvements for more than 70 years ago and consequently, is the most commonly cited example of demand management.

Bergen introduced Norway’s first toll ring road in 1986, the first in the Western World. The system was introduced to raise funds to fast-track the implementation of a 1983 masterplan for the city which included additional parking and roads. Buses were exempt from the charge but other vehicles entering the tolled area between 6am and 10pm Monday to Friday were charged. Cars paid 5 Norwegian Krone (NOK) and trucks paid 10 NOK. The system was initially forecast to raise 35 million NOK (£3.2 million) but by 2000 it was generating about 70 million NOK a year for the city. Approximately 20 per cent of the funds raised went to operating costs, whilst 70 per cent was used for road construction, and the remaining 10 per cent was put in a fund⁹.

Oslo followed and is now recognised globally for three toll packages it has implemented. The first toll ring scheme opened in February 1990 with a similar goal to Bergen, to generate funds for road construction and in doing so, reduce road construction times from 35 to 15 years¹⁰. 10 per cent of revenue from package one was earmarked for public transport investments but this was revised to 20 per cent. The system was not designed to

manage traffic and yet estimates suggest that the toll ring road charge resulted in up to 10 per cent of motorists “rejecting” car travel¹¹.

Oslo’s second package was introduced and run between 2001 and 2011. This included a shift in the allocation of funds with 45 per cent allocated to public transport. The 10 year package was said to generate 1.85 billion euros and was used to fund a new metro ring, new bus lanes, improvements to the reliability, user-friendliness and attractiveness of public transport networks as well as the modernisation of stations. Collectively these public transport improvements funded through Oslo’s ring roads achieved a 7 per cent increase in public transport patronage and a 1.5 per cent reduction in vehicles on roads¹².

Oslo’s third and current package was introduced in 2008 and is scheduled to run until 2030. This package allocates 60 per cent of revenue to public transport improvements and aims to promote environmentally friendly transport options that increase mobility levels of Oslo residents. Oslo’s increasing allocation of revenue to public transport aligns with a global shift that recognises the wider benefits of public transport.

CASE STUDY: London, United Kingdom

In February 2003, according to the UK Department for Transport, Central London’s traffic had slowed to speeds averaging 13 km/hr.¹³ To reduce road congestion and increase travel speeds, a cordon area congestion charge was introduced on 17 February 2003. Using an Automatic Number Plate Recognition system, cameras photograph vehicles between 0700 and 1800, Monday to Friday that enter or exit the congestion charging zone (8 square miles, or 21 square kilometres inside the city’s inner ring road in the London CBD). Commercial and private vehicles are charged once and can enter and exit multiple times without additional costs. Motorbikes, mopeds and bicycles are exempt, individuals who live within the zone receive a 90 per cent discount, and vehicles with nine or more seats or Ultra-Low Emission Vehicles status (cars emitting 75g/km of CO₂ or less)¹⁴ also receive a discount.¹⁵

The flat daily fee commenced in 2003 at £5¹⁶ and today costs £11.50 if paid in advance or £14.00 on the day.¹⁷ The system was introduced to reduce congestion within the London CBD, improve London bus services, improve journey times and reliability for road users

and the distribution of goods and services and encourage Londoners to travel by public transport. By UK Law, revenue raised through the congestion charge must be reinvested to improve London's transport offering. During the 2009/10 financial year, the congestion charge generated £148 million in net revenue, the majority of which was used to improve bus operations in Greater London.¹⁸

Prior to the introduction of the scheme in 2003, London bus services were increased to accommodate transferring road users. According to the sixth Annual Impact Report, after the first two years of operation, the congestion charge achieved a 30 per cent drop in congestion (against pre-charging congestion levels in 2002)¹⁹. More than a decade on and congestion levels are said to be 27 per cent lower than what they were in 2002, meaning 80,000 fewer cars in the area each day.²⁰ Cycling levels are also reported to be up 66 per cent since 2003.²¹

The system has faced varied criticisms but continues to undergo review and public consultation. According to the Victoria Transport Policy Institute, the London congestion charging system could be improved by:

- adopting a distance-based charging approach;
- varying the fee according to time;
- varying the fee according to location, ie higher rates for more congested roads;
- reducing the high overhead costs; and
- further improvements to the transit system (particularly the Tube).²²

High Speed Rail

Connecting cities and regional centres along Australia's East Coast with High Speed Rail (HSR) is a visionary project about the future of Australia. HSR is a transformative project which will benefit a large part of Australia's population living in capital cities and regional centres along the East Coast.

HSR is not just another rail project. It is a nation-building project and the funding should reflect this and be drawn from a special allocation. HSR funding should not compete with or detract from funding for other required rail or public transport investments.

The ARA has been vocal on its position that the Federal, State and Local Governments should collaborate to preserve the corridor for HSR. The role of the Federal Government in this will obviously be vital to lead the way. The 2013 Federal Government Study identified the need for 144 km of tunnels between Brisbane and Melbourne. This is equal to 29 per cent of construction costs. The longer we take to preserve the corridor, the more our cities will expand, increasing the amount of tunnelling required into and out of cities and thus increasing the cost of the project.

Global experience shows that people will transfer from plane to HSR if the trip is under three hours. Over three hours and people will continue to fly. As a result, the success of HSR in Australia relies on its ability to travel between capital cities in under three hours. Modelling shows at 350km/hr, the required travel times are achievable, thus confirming HSR's suitability for the future of Australia's East Coast.

The ARA believes the Government could reduce its financial investment by introducing funding mechanisms such as value capture along the route and around stations, acquiring larger parcels of land than is required for the corridor and selling the land back to developers, as well as encouraging Transit-Oriented Developments. The ARA is of the view that it would be unlikely that the project could be solely funded through innovative funding though. Ultimately, the first step requires the preservation of the land for the route.

Faster rail

Infrastructure investment to improve the public transport service offering for regional centres would be a more affordable and timelier solution than the current HSR proposal. Improvements to the quality of existing track and regional rollingstock as well as signalling system upgrades will provide improved service and permit faster rail connections using existing rail lines.

The value of incremental improvements must not be underestimated. Gradual infrastructure upgrades that permit speed increases of 10km/hr will still vastly improve the service offering and rail's ability to compete with road on longer regional and inter-city routes.

The ARA recommends the Federal Government works closely with State and local Governments to identify and act on the opportunities available in this space. The ARA notes the following potential projects where track, signalling and rollingstock upgrades would deliver faster, more reliable services from key regions into their respective cities:

- **Canberra to Sydney:** Improved track and rollingstock to provide 200km/hr top speeds for sub-three hour transit times.
- **Newcastle to Sydney:** as above, improved track and rollingstock to improve travel times.
- **Wollongong to Sydney:** as above, improved track and rollingstock to improve travel times.
- **Brisbane to Cairns:** as above, improved track and rollingstock to improve travel times.
- **Melton Rail Duplication/Electrification:** Duplicate the line from Deer Park West to Melton and electrify the line from Sunshine to Melton to improve capacity and reliability on the line, which serves both Ballarat and Melbourne's western suburban growth areas.
- **Sydney Metro Bankstown to Liverpool:** constructing a dedicated metro route from Bankstown to Liverpool as an extension to Sydney Metro Phase 2 could be an economic game-changer that drives the economic productivity of the region.
- **Electrification of the Melton, Geelong, Bendigo and Ballarat lines in Victoria**

Victoria's regional rail service, V/Line highlights the benefits that investment in regional rail can provide. Between July 2009 and June 2015, the Regional Rail Link, a multi-billion dollar project delivered 90 km of track for regional Victoria. The project saw the separation of metropolitan and regional services and the construction of dedicated tracks for the Geelong, Bendigo and Ballarat services through the metropolitan system from Sunshine to Southern Cross Station.²³ On track for patronage growth of 21 per cent this year alone, the V/Line service is an example of "build it and they will come" or proof that investment into regional services to connect regional centres with capital cities leads to rail patronage growth.

Additionally, the ARA highlights the following projects where rail extensions will benefit outer-lying suburbs:

- **Ellenbrook rail link:** A 20-km rail link from a point on the Midland line to the fast-growing outer suburban area of Ellenbrook in Perth's north-eastern suburbs.
- **South West Rail Link Extension Corridor (Badgery's Creek Airport):** The proposed public transport corridor will connect with the South West Rail Link and into the existing rail network, providing service to those areas as well as the airport.
- **Butler to Yanchep rail extension:** A 13.6 km extension of the Northern Suburbs Railway with 3 new stations and provision for a fourth future station.
- **Beerwah to Maroochydore:** constructing the Sunshine Coast rail line from Beerwah to Maroochydore.

With regard to outer-lying suburbs and the continued expansions of our cities, the ARA urges the Federal Government to adopt a policy to introduce fixed transport connections, including heavy or light rail, in the planning and construction phase, not post-construction.

Green urban spaces

The ARA recommends consideration is given to adopting the key principles of the Infrastructure Sustainability Council of Australia (ISCA) through the IS rating scheme. ISCA is a member-based, not-for-profit council that provides its IS rating scheme as "an industry-compiled voluntary sustainability performance rating scheme"... to evaluate "the sustainability (including environmental, social, economic and governance aspects) of infrastructure projects and assets."²⁴ The ACT and South Australian Governments, as well as light rail operator, Keolis Downer are current industry members. The ARA recommends consideration is given to the IS rating scheme to assess and improve the IS rating of future transport infrastructure projects. This would need to be implemented from the design stage of a project and fed through all stages.

Further, modern light rail systems and enhancements to heavy rail train stations lend themselves to tree planting and green spaces to help contribute to the green urban space concept.

SMART INVESTMENT

Broader Cost Benefit Analysis

The ARA supports the Smart Cities Plan's proposal to prioritise projects that meet broader economic objectives.

As well as reducing travel times, public transport has the ability to connect members of the community from all socio-economic demographics, reduce greenhouse gas emissions and improve road safety and consequential road accident costs by taking cars off the roads. These benefits all contribute to the overall productivity of a city and therefore the ARA would argue should be included to generate a true cost-benefit-analysis of transport investment projects.

Investment in infrastructure should be tailored to support broader reforms that improve land use and create greater certainty for private investment in urban and remote areas.

The ARA welcomes the revision of the National Guidelines for Transport System Management to achieve consistent economic benefits and cost benefit analysis processes. As part of this review, the ARA recommends that a detailed post completion review is added to the investment decision-making process to assist in identifying continual improvement opportunities that will streamline costs, resources and time required.

Investing in public transport

The ARA welcomes the statement that the Federal Government will invest in urban rail as well as roads. According to the State of Australian Cities report (2014-15), 80 percent of Australia's gross domestic product (GDP) is attributed to cities with a population of 100,000 or more while 64 per cent of GDP is produced in a city with a population over 1 million.²⁵ The contribution of these cities to our GDP highlights not only their importance but also why the Federal Government has a role to play in funding all types of infrastructure in our cities, including urban rail. Currently, passenger rail systems in Sydney and Melbourne are experiencing unprecedented investment from their respective State Governments.

Financial support from the Federal Government would allow greater investment in these and other Australian cities.

The Smart Cities Plan provides considerable focus to public transport's ability to influence job clusters, housing and travel time savings but the ARA recommends that the inclusive nature of public transport is also recognised.

Passenger rail provides extensive access opportunities for people with all levels of ability or inability. Integration of all modes of transport so that a seamless transport journey is available helps position public transport as a viable alternative to the car. When car travel is not a viable option, the integration of public transport systems is even more important.

Transport modes must work collaboratively to maximise the service offered to customers. There is a need to ensure that the passenger rail sector is effectively integrated with other modes of public transport (buses, ferries), paratransit (taxis, car sharing) and active transport (walking, cycling). Only in this way will passenger rail and other complementary modes of transport provide a seamless, complete mobility package that will drive mode shift from cars to public transport over the longer term.

Passenger rail operators have made a commitment to continuously improve the accessibility of passenger rail systems. This includes improvements to infrastructure and rolling stock and the customer experience as a whole for those with disability. Over the past two decades, significant investment has delivered accessibility improvements at rail premises and to rolling stock. Passenger rail operators have consulted with the disability sector individually and collectively regarding accessibility plans and investment decisions to ensure that all accessibility improvements are developed in collaboration with those with disability and their representative organisations. Considerable investment is still required to ensure legislated targets for accessibility are met by passenger operators. As complete accessibility cannot be provided immediately, ARA passenger rail members have concentrated their efforts on upgrading facilities where the greatest number of customers will benefit from the investment. Prioritisation for these types of upgrades is based on a number of factors, including station patronage, local demographics, access to educational and health services, parking, bus services, shopping, tourism and how stations form a network or provide interchange opportunities.

Disability Transport Standards were introduced in 2002. Due to the historic nature of some rail assets, such as underground train stations and the widths of their platforms, some aspects of the standards are impractical and impose significant regulatory and financial burdens on the passenger rail sector, making compliance a great challenge for operators. The ARA seeks the Federal Governments' continued support as the industry works to modernise the Disability Transport Standards.

Value capture

Continued investment and expansion of public transport is crucial for the success and productivity of the nation. Long term investment into public transport requires a fresh look to ensure all priorities in transport, infrastructure, health and education can be funded. Multiple innovative funding and financing mechanisms have been used to successfully deliver infrastructure projects around the world.

Value capture mechanisms have a long and successful track-record funding public transport infrastructure and supporting public transport services around the globe. This provides a significant opportunity for Australian governments to recoup part of their infrastructure investment, allowing further investment in infrastructure projects.

A clear commitment by government to invest in transport hubs as well as a commitment to a project pipeline will provide certainty to private investors and encourage greater property development around public transport systems. Government will need to determine the legislative and administrative actions required to introduce and capitalise on value capture mechanisms.

With regards to value capture, the ARA recommends:

- Projects are assessed on a case-by-case basis as experience shows there is no consistent increase in property value.
- Value uplift revenue recouped by government must be hypothecated and reinvested transparently in public transport.
- Governments should develop value capture policies that include greater use of TODs to provide supporting revenue for public transport systems.

- That revenue recouped through value capture is collected at a State level.

SMART POLICY

Taxation Bias – creating road congestion

In addition to the elements already commented on within the Smart Policy section, the ARA recommends that as part of the Smart Cities Plan, the Federal Government introduces the ability for employers to offer salary sacrificed public transport tickets to their employees.

The current taxation system is biased towards the car. Employers can offer employees salary sacrificed cars which has the detrimental effect of encouraging Australians to drive rather than travel by public transport, effectively adding more cars and therefore congestion to our roads.

According to a 2015 paper by the Tourism and Transport Forum, “the current arrangements deliver preferential treatment of salary-packaged cars while public transport is taxed at 46.5 per cent.”

The ARA recommends that as part of the Smart Cities Plan Smart Policy lever, the Federal Government revises the taxation system to incorporate public transport passes into the salary sacrificed offering to encourage Australians onto public transport. Provision for employers to offer salary packaged public transport passes will encourage commuters onto public transport, reducing taxation system bias and having the broader effect of reducing road congestion and creating healthier Australians as public transport commuters are proven to walk five times more than those who drive to work. Further, the ability for transport agencies to provide their employees with a salary sacrificed transport ticket has the added benefit of immersing their employees in the public transport system, providing improved employee knowledge and understanding of the system which in turn allows them to better focus their efforts / investments / plans for improvements to the system.

Of note, in Brisbane this year, an Australian first was announced, offering eligible employees from about 300 Queensland organisations the ability to salary sacrifice bus

travel within the South-East Queensland TransLink network. RemServe, the Australian Tax Office salary packaging provider, estimates that those who earn \$70,000 and take 10 trips a week across four zones could save under \$1500 a year under the plan, while inner-city workers travelling two zones earning \$65,000 could save \$1100. Transport Minister Stirling Hinchliffe supported and welcomed the plan, urging the Federal Government to extend the concession to all public transport.

SMART TECHNOLOGY

To maximise the service offering on existing rail networks, modern technologies and integrated systems such as automated train control, intelligent transport solutions and asset management tools will allow operators to run trains closer together while increasing safety and infrastructure capacity to accommodate patronage growth, current and forecast.

Operators are embracing new technologies to improve existing infrastructure resilience and effectiveness and the customer experience. Apps that use real time data made publically available by operators are increasingly providing customers as well as station staff with access to real time information on the service and any unplanned disruptions. Better data usage will drive greater productivity in service delivery and assist in identifying and implementing improvement opportunities.

Although technologies can assist in optimising the service offered by existing infrastructure, expansion and upgrades to infrastructure is still vital of the puzzle in meeting the needs of our growing population.

Operators continue to improve fuel usage and energy efficiency to decrease operating costs and improve environmental performance. Continued Government support of these programs will ensure sustained improvement in this space.

A national approach to rollingstock orders

High capacity, metro-style rollingstock consisting of single-deck carriages, less seating and more doors allows faster loading and unloading of passengers, increasing service capacity and heightened on-time reliability.

Australian passenger rail networks require the continued purchase of rollingstock to replace their ageing fleets and accommodate growing and forecast patronage numbers. Rollingstock procurement tends to be volatile, high profile, complex and influenced by political and operating considerations. Procurement challenges are seeing the cost to deliver rollingstock increase year-on-year, a cost incurred by governments.

State Governments are the primary investors in new rollingstock but there is currently no national collaboration to achieve economies of scale. State governments order independently as the need arises and in doing so, they stipulate state-based specifications, component variations and standards that provide manufacturing challenges that add to the total cost and at times, project timelines. This lack of cohesion has resulted in procurement inefficiencies, creating a sporadic investment cycle and a 'lumpy' flow of orders which hinders the growth of Australia's rail manufacturing sector and ultimately increases the cost to government.

Whilst rail manufacturers are likely to retain a local role in repair, maintenance and refurbishment, the future of Australia's rail manufacturing industry is heavily dependent on its ability to remain relevant to key customers. As the ultimate owners of passenger rail operations, state governments are the rail manufacturing industry's main customers.

Like other Australian manufacturing sectors, rail manufacturing faces considerable challenges to remain competitive globally. Cohesion between states to satisfy demands and plan nationally for the future is essential. Harmonisation of rollingstock standards and procurement is a priority that will benefit industry and governments.

Rail is a victim of Federation. But we can overcome this. The ARA recommends that Governments work with Industry to develop a Rail Industry 'White Paper' that identifies the

steps required to establish a nationally coordinated passenger rollingstock procurement process and in doing so, secure the future of Australia's rail manufacturing sector.

In November 2013, the ARA commissioned Deloitte Access Economics to identify improvement opportunities for passenger rollingstock procurement in Australia²⁶. The study found that over the next 30 years, approximately \$30 billion will be spent by state governments on the procurement of heavy rail passenger rollingstock to meet increasing patronage demands and replace ageing fleets. During this time, improved procurement processes and planning, such as improved scale, reduced planning and design costs and harmonised componentry could save state governments almost \$6 billion.

Nationally harmonised rollingstock orders will benefit industry and governments alike.

A national ticketing system

Australian jurisdictions have adopted smart ticketing systems such as the Opal card in Sydney and Myki in Melbourne. These systems provide extremely useful data on patronage and system use for operators and while they continue to be refined for improved customer experiences, the long term plan should be the establishment of a nationally integrated smartcard ticketing system that provides micropayments. This could broaden the rail operator revenue base for reinvestment in the system rather than seeing each jurisdiction individually invest in their systems.

CONCLUSION AND RECOMMENDATIONS

In summary, the ARA commends the Federal Government for its Smart Cities Plan.

We welcome the Federal Government's commitment to fund urban rail as well as road projects but look forward to more detail surrounding the various elements proposed in the Smart Cities Plan. At this stage, the ARA makes the following recommendations:

- Ensure that public transport forms the backbone of future plans for Australian cities.
- That the Federal Government acts on the statement that it will invest in urban rail.
- That the \$50 million infrastructure planning commitment contributes to the establishment of Capital City Blue Prints or plans to take infrastructure planning and investment out of political cycles.
- The infrastructure financing unit should also act as a consolidation of funding pools into a dedicated Integrated Infrastructure Fund to reduce administrative costs, improve transparency and provide a clear funding body for infrastructure.
- If demand management is introduced, 50 per cent of revenue should be dedicated or hypothecated back into public transport improvements.
- The Federal Government should lead the preservation of the corridor for High Speed Rail (HSR) to future-proof the project and limit the associated tunnelling costs.
- Before HSR becomes a reality, the priority in the fast rail space for the Federal Government should be improving existing regional to intercity routes by upgrading track, signalling and rollingstock to provide services with travel times that compete or beat road. Incremental infrastructure upgrades should not be overlooked.
- In relation to green urban spaces, the ARA recommends consideration is given to adopting the key principles of the Infrastructure Sustainability Council of Australia (ISCA) through the IS rating scheme for infrastructure projects.
- As our cities continue to expand, the ARA urges the Federal Government to adopt a policy to introduce fixed transport connections, heavy or light rail, in the planning and construction phase, not post-construction.
- A detailed post completion review should be added to the investment decision-making process to assist in identifying continual improvement opportunities that streamline costs, resources and time required with the applied Cost Benefit Analysis process.
- That the inclusive nature of public transport is also recognised in the Plan, such as public transport's ability to provide mobility for people of all levels of ability or inability, and that the Federal Government continues to support the rail industry as it works to modernise the Disability Transport Standards.
- With respect to value capture;
 - o Projects are assessed on a case-by-case basis as experience shows there is no consistent increase in property value.

- Value uplift revenue recouped by government must be hypothecated and reinvested transparently in public transport.
- Governments should develop value capture policies that include greater use of TODs to provide supporting revenue for public transport systems.
- That revenue recouped through value capture is collected at a State level.
- That the taxation system is amended to incorporate public transport passes into the salary sacrificed offering, providing employers with the ability to offer their employees salary packaged public transport passes, a lever that will assist in shifting Australian out of their cars and onto public transport.
- That the Federal Government continues to support and provide financial assistance to trial new technologies to assist rail and other public transport operators to continue embracing innovative technologies that improve the customer service experience and increase network operations and capacity using existing infrastructure.
- That a national, harmonised approach is adopted to procure rollingstock, a measure that will save state Governments an estimated \$6 billion and will provide certainty to local suppliers, helping to support Australia’s rail manufacturing industry while decreasing the cost and time required for highly specified rollingstock orders.
- That smart ticketing systems are transitioned to a nationally integrated smart ticketing system to save governments by providing national economies of scale and also providing customers, local and overseas travellers with the benefit of a nationally integrated ticketing system as offered in other countries.

1 PwC Geospatial Economic Model (GEM). All values are real FY13. Locations are based in ABS SA2 classifications
 2 PwC Geospatial Economic Model (GEM). All values are real FY13. Locations are based in ABS SA2 classifications
 3 www.abs.gov.au/ausstats/abs@.nsf/Products/3235.0~2012-Main+Features-Main+Features?OpenDocument
 4 www.abs.gov.au/ausstats/abs@.nsf/Lookup/3222.0main+features62012%20%28base%29%20to%202101
 5 https://bitre.gov.au/publications/2007/files/wp_071.pdf
 6 www.garnautreview.org.au/pdf/Garnaut_Chapter7.pdf
 7 www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features40July+2013
 8 <http://ara.net.au/UserFiles/file/Publications/Australian%20Rail%20Industry%202014%20web.pdf>
 9 Osmose, The Oslo Toll Ring (Norway) Case Study, 2002
 10 Osmose, The Oslo Toll Ring (Norway) Case Study, 2002
 11 City of Oslo – Agency for Urban Development, Impact on public transport of the Toll Ring in Oslo Norway, October 2012

- 12 <http://ec.europa.eu/environment/europeangreencapital/winning-cities/previous-finalists/oslo/index.html#sthash.WjS1Cj9z.dpuf>, sourced 04.08.13
- 13 Michelle Dix, Director of Congestion Charging, Transport for London, How much does the scheme cost: the London experience, date unknown
- 14 www.carbuyer.co.uk/reviews/recommended/beat-londons-congestion-charge#ixzz4AIHE5Gpy
- 15 www.visitlondon.com/traveller-information/getting-around-london/congestion-charge, sourced 22.07.13
- 16 Transport for London, Demand Elasticities for car trips to Central London, September 2008
- 17 www.visitlondon.com/traveller-information/getting-around-london/congestion-charge#RJT4SmVZYRs0rmOg.97
- 18 www.tfl.gov.uk/roadusers/congestioncharging/6723.aspx sourced 17.07.13
- 19 Transport for London, Sixth Annual Impacts Monitoring Report, July 2008
- 20 <http://content.tfl.gov.uk/congestion-charge-factsheet.pdf>
- 21 <http://content.tfl.gov.uk/congestion-charge-factsheet.pdf>
- 22 Victorian Transport Policy Institute, London Congestion Pricing Implications for Other Cities, November 2011
- 23 <http://ptv.vic.gov.au/projects/rail-projects/regional-rail-link/>
- 24 www.isca.org.au/is-rating-scheme/is-overview/is-rating-tool
- 25 State of Australian Cities 2014-2015, sourced online: https://infrastructure.gov.au/infrastructure/pab/soac/files/2015_SoAC_full_report.pdf
- 26 Deloitte Access Economics, Opportunities for Greater Rollingstock Procurement Efficiency (2012)