AUSTRALASIAN RAILWAY ASSOCIATION

Association Number A03958 | ABN 64 217 302 489

AUSTRALASIAN RAILWAY ASSOCIATION SUBMISSION

To

The Senate Standing Committees on Rural and Regional Affairs and Transport References

On

The role of public transport in delivering productivity outcomes

ARA SUBMISSION

THE ARA

The Australasian Railway Association (ARA) is a not-for-profit member-based association that represents rail throughout Australia, New Zealand and Indonesia. 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 *Senate Standing Committees on Rural and Regional Affairs and Transport References* for the opportunity to provide this submission to the *Role of public transport in delivering productivity outcomes* inquiry. The ARA would welcome the opportunity to meet with the Committee to discuss our submission should public hearings be conducted.

TERMS OF REFERENCE RESPONSES

The need for an integrated approach across road and rail in addressing congestion in cities, including Sydney, Melbourne, Brisbane, Adelaide and Perth

Australia is one of the most urbanised countries in the world. In 2012, 66% of Australia's 22.7 million population resided in our capital cities.[1] By 2061, the Australian Bureau of Statistics forecasts Australia's population to hit between 36.8 and 48.3 million, 74% of which is expected to live in capital cities.[2] Our capital cities are our economic powerhouses. During the 2011-12 financial year, Sydney, Melbourne, Brisbane, Adelaide and Perth collectively contributed more than 60% of Australia's total GDP, cementing their status as the economic hubs of the nation.[3]

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The efficient movement of the population for work and leisure is vital for the continued productivity, economic and social prosperity of Australian cities. The Bureau of Infrastructure, Transport and Regional Economics (BITRE) identified that congestion was costing the Australian economy $9.4 billion a year in 2005 due to lost productivity through additional travel times, increased vehicle operating costs and poorer air quality.[4] By 2020, this is estimated to hit $20.4 billion.[5]

Australians have a long-standing love affair with car travel that has led to the congestion challenge in Australian cities. According to the 2013 Motor Vehicle Census, 13 million Australian passenger vehicles were registered in 2013, more than double the number of registered vehicles ten years ago.[6]

For decades, Australian cities have looked to greater investment in roads to combat congestion but investing in additional roads to accommodate additional cars is not a long-term solution. More roads lead to more vehicles and ultimately, more congestion which causes slower road speeds, longer travel times, heightened pollution, and increased vehicle running costs.

Service coordination and integration between transport modes is vital to the success of a transport system. When Keolis took over the operation of the subway, tram and bus networks in Lyon, it completely redesigned the bus network to better integrate the service with light rail and subway stations. As a result, patronage on Lyon buses increased by 6 per cent. Australian cities should be adopting an integrated approach that efficiently links all modes of transport, combats congestion in the immediate term and provides a transport system that meets the needs of Australia's growing population into the future. According to the True Value of Rail study, "in Sydney… if rail absorbed 30% of the forecast increase in urban travel then congestion, safety and carbon emission costs could be reduced by around $1 billion a year by 2025".[7]

Australian cities will come to a stand-still unless governments take a holistic, whole of system approach that considers the optimal integration of all transport modes according to the requirements of each city. Concentrating investment into one mode of transport will create an unbalanced, inefficient transport system that is unable to meet the growing needs of the population. An integrated transport system with service connectivity between

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transport modes is critical. It allows more people to use public transport as they can move from more origins to more destinations which in turn increases the productivity of the city and therefore the nation.

The social and environmental benefits of public transport projects compared to road

In August 2011, the ARA commissioned Deloitte Access Economics to better understand the social, environment and economic impacts or, "true value of rail". According to the study, compared to road, rail provides the following social, environmental and economic benefits:

- The average passenger train takes 525 cars off the road, reducing road congestion, transport-related carbon emissions and road accidents.
- One additional commuter journey on rail reduces congestion costs by $2 to $7.*
- Per passenger kilometre travelled, road produces more than 40% more carbon emissions than rail.
- Each passenger journey made on rail rather than road in Australia's four largest cities, saves $3.11 in Brisbane and up to $8.41 in Sydney in congestion, safety and carbon emission costs. The social inclusion, reduced infrastructure maintenance costs and fuel security benefits increased rail travel provides are not incorporated into these figures but if included, would further increase the benefit of rail travel.
- Road transport generates almost eight times the amount of accident costs as rail.
- On a cents per kilometre basis, the cost of road crashes is approximately 965% higher than rail crash costs. As a result 1,000 people transferring from cars onto rail would reduce the road crash costs by $650,000 to $760,000 per year.*

  *Depending on the city.

Rail also provides the benefit of greater social inclusion and community connectivity.

The national significance of public transport

Congestion affects the productivity and liveability of cities. These are reflected in the economic and social costs of congestion.

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The BITRE's economic costs of congestion are noted above. The detrimental social effects of congestion include prolonged travel times; the need for motorists to allow increased time to travel to work; the impact on people's ability to access social, cultural, sporting, recreational and medical activities and facilities; transport's impact on housing affordability; as well as increased pollution levels as a result of more traffic.

If no action is taken to alleviate the problem, congestion will cripple Australian cities.

Due to its wide-reaching benefits, whether Australians travel by public transport or not, they still benefit from its existence and use by others. The use of public transport ensures less vehicles and therefore congestion on roads, decreased transport-related emissions and fewer road accident costs.

Conversely, those who travel by public transport also benefit. Public transport increases social inclusion by providing a cost effective transport option for lower socioeconomic classes and the ageing population. Public transport also encourages active lifestyles such as walking and cycling, promoting healthier lifestyles.

Congestion case study

The ARA commissioned Synergies Economic Consulting to examine the extent of Australia's congestion challenge, identify the cost of ignoring the problem and detail the benefits that public transport investment can provide.

Specifically, the study outlines the affect congestion is having on Brisbane and Perth and identifies the road and rail investment required to reduce current congestion levels by approximately 50% (the level according to the BITRE where the cost to reduce congestion levels is equal to the benefits to be achieved).

According to the RACQ, Brisbane is expected to have the highest congestion growth rate of all Australian capital cities over the next decade. Currently around 80% of Brisbane commuter trips are made by private car. By 2031, 15 million Brisbane commuters are forecast to drive to work each day.

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The study found:

- *Brisbane commuters currently lose up to 11 million hours each year due to congestion.*
- *Between 2014 and 2031, without action, congestion will cost the city of Brisbane $48 billion*.*
- *To reduce congestion by 50% in Brisbane, an additional 2,300 km of roads would be required costing an estimated $46 billion*.*
- *Rail requires 57% less investment than road to achieve the same congestion reduction. Specifically, a $20 billion rail investment would achieve the same congestion reduction as a $46 billion road investment.*
- *This investment in rail would take 127,000 cars off Brisbane roads during each peak hour.*

**Figures are in 2014 dollars*

In the years ahead, Perth is expected to remain as Australia's fastest growing city. Western Australia's capital is regularly cited as a city that made timely investments in rail infrastructure and efficient integration with other transport modes but without continued investment, it too will face congestion challenges.

The study found:

- *Perth commuters currently lose up to 14 million hours each year due to congestion.*
- *Between 2014 and 2031, without investment, congestion will cost Perth $33 billion in economic and social costs*.*
- *To halve Perth's current traffic congestion by investing in roads, $40 billion and 2,000 lane kms would be required. To achieve the same congestion reduction with rail, a $25 billion or 38% lower investment would be needed.*
- *Rail investment in Perth would cost 38% less than roads to achieve the same congestion reduction.*
- *Halving Perth's congestion through rail investment would remove 163,000 cars from Perth roads during every peak hour.*

**Figures in 2014 dollars*

As well as contributing to a city's productivity, reducing congestion in cities has wide-reaching social benefits.

The study also found that:

- *Reducing congestion by 50% would give the average Brisbane and Perth commuter an extra 73 hours per year, the equivalent of almost two weeks annual leave.*

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- *Assuming that all cars equally contribute to emissions, reducing the number of cars on the road would decrease car emissions by 23% in Brisbane and 34% in Perth.*
- *Reducing the number of cars on the road and increasing the number of people travelling by rail improves safety, therefore reducing the social and economic costs of road crashes.*

Rail investment, particularly light rail also provides the added benefit of rejuvenating local communities and stimulating urban development.

Australia needs public investment if our cities are to remain important engines of our national economy. Investment in modern, efficient, high capacity heavy and light rail networks is a vital element of the solution to congestion. Tackling congestion is essential to the future economic and social health of our cities and the Australian economy as a whole.

Noting the findings from the study, the study recommends the following policy actions:

1. Develop and implement planning frameworks that effectively target congestion.
2. Establish a long term bipartisan national commitment to implement and fund transport investment according to the growth profile for each Australian city. The national policy commitment must be independent of political and budget cycles.
3. Amend cost-benefit-analysis evaluation methods to include the wider social and economic benefits of transport modes.

The relationship between public transport and building well-functioning cities

A “well-functioning city” is one that is sustainable and capable of meeting the needs of the population into the future. Globally, public transport is being recognised for the vital role it plays in moving and connecting the population for work and leisure and the influence it has on economic and social activity levels.

Light rail has proven to be a powerful tool for urban renewal and regeneration while studies also show a demand for commercial and residential property closer to train stations. A preference to live in close proximity to existing train stations can be capitalised on through transport oriented developments while system extensions and new stations can implement value capture mechanisms to assist with funding.

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The decision of the Federal Government to refuse to fund public transport projects

The ARA is very aware that in the current globally restrictive fiscal climate, public transport has to compete with many other sectors in appealing for increased funding. Looking overseas provides numerous examples of how we might get smarter at funding public transport.

To encourage investment in public transport projects and infrastructure, the ARA is of the view that all levels of Australian Governments must innovate and explore alternate funding mechanisms as well as the introduction of reforms that improve the market for private financing. This could help provide the necessary funding and entice private investment to help fund vital public transport and transport infrastructure projects.

The ARA has prepared a paper titled *Innovative Funding and Financing for Public Transport* which may be of interest to the Committee. The paper explores various funding mechanisms currently implemented around the world to fund public transport. Rather than recommend one revenue raising tool over another, the intention is to spark debate and highlight the innovative funding options that can be implemented to ensure the long-term funding of public transport investment in Australia both at a national and state level.

The paper explores the following funding tools:

- **Value Capture:** capitalising on the increased value that public transport provides for nearby commercial and residential properties, value capture recoups part or all of the increased worth that a transport improvement provides to nearby property. Hong Kong, Downtown Kansas City, The Sydney Betterment Tax and the London Jubilee Line Extension are explored in the paper.
- **Transit-Oriented Developments (TODs):** as well as acting as a tool to encourage greater patronage, property developments at and around public transport stations are being increasingly utilised to generate long-term revenue to support public transport. TODs in Hong Kong and the San Francisco Bay Area are detailed in the report.
- **Congestion Charging:** a user-pays demand-management approach where road users are charged to access roads or areas, generating funds that can be reinvested in

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transport whilst also providing an incentive for road users to switch to public transport. The congestion charging practices in Singapore, Norway and London are in the paper.

- **Payroll Tax:** employees or employers are levied a small percentage of their taxable income that is then hypothecated to fund public transport investments. The paper includes information on the French and Portland, Oregon payroll taxes.
- **Fuel Tax:** a specific amount is added to the fuel price and hypothecated for transport investments. The United States Federal gas and diesel taxes are explored in the paper.
- **Sales Tax:** a percentage of the purchase price is added to the purchase price of goods and services and then drawn upon for public transport investment. The Los Angeles County Sales is also touched upon in the paper.

The paper also highlights that the success of the above tools (and others) to generate reliable funds for public transport investment relies on common criteria. These are:

- **CPI increases:** it is vital that any revenue raising mechanism increases with CPI to continue generating sufficient funds as the economy grows. Failure to do so (as outlined in the Australian and United States Federal fuel levies) stalls the revenue generating capabilities of the mechanism, effectively decreasing the mechanisms' revenue raising abilities each year.
- **Hypothecation:** the benefit to providing a reliable and dedicated source of revenue is that long term planning can then occur. Hypothecating, or dedicating the revenue from a specific revenue-raising tool provides certainty and allows long-term planning and commitments to be made.

In addition to the aforementioned funding tools, the paper also explores the use of Superannuation funds to finance infrastructure projects and provides commentary on the reforms required to attract greater private sector involvement in Australia's infrastructure.

A copy of the paper is attached.

The ARA recommends the Committee consider alternate funding mechanisms to assist in the funding of public transport and that the Committee also reviews reform opportunities to encourage private sector investment.

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The impact on user charges arising from requiring states to fund public transport projects

The ARA believes alternate funding mechanisms should be considered as outlined above. It is not clear that additional charges would be placed on people using public transport as a result of States funding public transport projects. A more likely outcome is a dramatic slowing of public transport infrastructure projects which will exacerbate congestion in capital cities. As demonstrated in Perth, a charge for road users (in this case through a parking levy) which can be used to fund public transport initiatives can be successful. The broader issue of applying a charge to road users which could partly be used to fund public transport and manage congestion in city centers is something the Committee may wish to consider

The Singapore system introduced in 1975 is said to generate $150 million annually and the more recent 2003 London congestion charge generated £148 million in 2009/10 net revenue. Both cities transparently reinvest the revenue in their transport systems. The longevity of the Singapore systems (as detailed in the paper attached to this submission) and the positive results the system has 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 continuous investment.

Any related matter

Changes to cost-benefit-analysis methods

The ARA urges the Committee to ensure the cost-benefit-analysis process for transport infrastructure projects acknowledge the wider benefits of transport infrastructure investment rather than simply recognising travel time reductions. 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 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.

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The role of high speed rail

Connecting cities and regional centres along Australia's East Coast with high speed rail is a visionary project that will transform the nation. By the time high speed rail would be operational, Australia will have a substantially larger population, fuel costs will be different and economic and social activity patterns will have changed. This is not simply another transport project, it is about the future landscape of Australia.

Our cities, highways and airports are congested today. Without high speed rail, 355 million East Coast trips are forecast by 2065. By this time, without alternative transport options, our East Coast will be gridlocked.

Current and forecast travel movements along Australia's East Coast are proof that we have the travel demands to support a high speed rail network. The Sydney-Melbourne air route fluctuates between the 3rd and 5th busiest air corridor globally. 1,362 slots are available at Sydney airport each day.[8] 763 of those are domestic and of those more than half are dedicated to Sydney – Melbourne flights.[9]

High speed rail is about the future of this nation. It will change the way Australians travel, work and live, building and developing regional centres and opening up the country. It will essentially shrink our nation, doing away with geographic isolation between our capital cities and regional centres and encouraging the decentralisation of Australia's urbanised population.

To better understand the potential regional benefits, the ARA commissioned the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney to assess the economic and social impacts of high speed rail in regional New South Wales and Victoria. The ITLS and Sydney University study explored the effects of a 250km/hr network. Considering a 350km/hr network is being considered, the following findings are conservative.

The study found that:

- In 2012 dollars, a 250km/hr high speed rail network Sydney to Melbourne will provide non-work related economic and social benefits worth $5.1 billion per annum.

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- A 250km/hr high speed rail link will increase the household income of regional Australians by 1.3 percent per annum. This is worth almost $1000 per regional Australian household, the cost of comprehensive health insurance cover for one year.

As noted above, a 350km/hr high speed rail network would naturally provide even greater benefits for regional Australia.

In the short term, businesses will experience greater productivity through shorter travel times than current driving or flying options and a mode of transport that is more conducive to working whilst travelling. The productivity benefits for businesses already in regional areas are immense. High speed rail will provide these businesses with a fast, reliable and cost-effective mode of transport to capital cities for their business-related activities.

In the longer term, businesses will be able to use high speed rail connections to relocate to more affordable locations outside capital cities. A high speed rail link will also enable regional businesses to attract the necessary employee talent to their businesses, given high speed rail's positive impact on regional lifestyles. This will increase the competitiveness and productivity of businesses in redeveloping regions.

The ARA urges the Committee to also consider the productivity benefits high speed rail could provide for Australia's East Coast and the nation as a whole.

CONCLUSION

Globally, public transport, including light and high speed rail is experiencing a renaissance. Efficient public transport systems are becoming the focus of cities to cater for growing and forecast populations and to ensure economic productivity and social activity levels are maintained.

A view that greater investment in road will meet the long-term requirements of Australia's growing population is old-fashioned. Transport investment should be made according to the bigger picture with a forward outlook. As outlined above, public transport provides wide-reaching social and economic benefits but integration and service coordination

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between all modes of transport is vital. Cost-benefit analysis methods of transport projects must be amended to encompass the benefits of all transport modes.

Using current funding methods, Governments cannot afford the investment our public transport systems require but cities, states and countries around the world are successfully drawing on alternate funding tools to invest in their public transport systems. By learning from others, dedicated revenue streams can be established to ensure the long term provision of funds for public transport. Likewise, reform to encourage greater private sector investment will ease the pressure on governments.

High speed rail and its ability to connect cities and regional centres on Australia's East Coast must not be overlooked. Similar to public transport and its broad benefits, high speed rail is much more than just another mode of transport and should not be put in the too hard basket.

Public transport plays a vital role in the productivity of our cities and the nation and the ARA commends the Committee for its inquiry.

Specifically, the ARA recommends that the Committees consider the following:

- Ensuring that public transport forms the backbone of future plans for Australian cities.
- That all levels of Government explore and implement innovative funding and financing methods to invest in public transport and transport infrastructure.
- That the productivity benefits high speed rail could provide for Australia's East Coast and the nation as a whole are recognised and a bipartisan commitment to high speed rail is established.
- That planning frameworks effectively target congestion.
- The establishment of a long term bipartisan national commitment to implement and fund transport investment according to the growth profile for each Australian city. The national policy commitment must be independent of political and budget cycles.
- Amendments to cost-benefit-analysis evaluation methods to include the wider social and economic benefits of transport modes.

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[1] ABS 3222.0 - Population Projections, Australia, 2012 (base) to 2101, www.abs.gov.au/ausstats/abs@.nsf/Lookup/3222.0main+features32012%20(base)%20to%202101, sourced 14.01.14

[2] ABS 3222.0 - Population Projections, Australia, 2012 (base) to 2101, www.abs.gov.au/ausstats/abs@.nsf/Lookup/3222.0main+features32012%20(base)%20to%202101, sourced 14.01.14

[3] www.sgsep.com.au/files/GDP_by_Major_Capital_City_0.pdf, sourced 16.01.13

[4] www.bitre.gov.au/publications/2007/files/wp_071.pdf sourced 14.01.13

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[6] Australian Bureau of Statistics (ABS), Motor Vehicle Census, various years

[7] Deloitte Access Economics, The True Value of Rail, 2011

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