

# HIGH SPEED RAIL

An intergenerational project to transform the nation



## The Plan for Australia

A 350km/hr high speed rail network along Australia's East Coast is back on political, public and media agendas. Connecting cities and regional centres with high speed rail will change the way Australians work, live and travel, building and developing regional centres and opening up the country.

A 1,748km preferred route has been identified:

- **Stage one:** Sydney, Southern Highlands, Canberra, Wagga Wagga, Albury Wodonga, Shepparton, Melbourne.
- **Stage two:** Sydney, Central Coast, Newcastle, Taree, Port Macquarie, Coffs Harbour, Grafton, Casino, Gold Coast, Brisbane.

## Population & Patronage Forecasts

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. 763 domestic slots are available at Sydney airport each day and of those more than half are dedicated to Sydney – Melbourne flights.

According to Phase 2 of the High Speed Rail Study, in 2009, 152 million trips were made along Australia's East Coast. By 2065 without high speed rail, travel on our East Coast is forecast to reach 355 million trips. Our cities, highways and airports are congested today. In 2065, without alternative options our East Coast will be gridlocked.

If the preferred high speed rail network is fully operational by 2065, forecasts indicate that 83.6 million passengers would travel by high speed rail annually.

## Routes and Travel Times

The proposed route includes four city centre stations, four city-peripheral stations and 12 regional train stations. Overseas experience highlights the importance of station location and integration with existing transport modes. The ARA believes the station in Canberra should be at Canberra airport and consideration should be given to link the network with Sydney and Melbourne airports.

Overseas experience shows that people will commute an hour for work and three hours for recreation. City-centre to city-centre, the following travel times are possible:



## Economic Benefit

Economic assessment has found that the network could deliver positive economic benefits. The Sydney – Melbourne line would have an economic benefit cost ratio (BCR) of 2.5 whilst the whole network has a BCR of 2.3 meaning for each dollar invested, benefits valued at \$2.50 or \$2.30 would be returned.

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## Cost

Stage one of the project is priced at \$49.9 billion. This equates to \$23 billion to link Sydney, the Southern Highlands and Canberra with a travel time of 64 min Sydney - Canberra. Another \$26.9 billion would extend the line to Melbourne, linking Australia's two largest cities and four key regional centres with a Melbourne - Sydney travel time of 2 hrs 44 min.

The largest construction cost, 29% is for 144km of tunnels, almost half of which (67 km) are required to get in and out of Sydney.

The ARA believes there is scope to lower the high capital cost estimates. The Government could reduce its financial investment through alliances with airports, transport oriented developments and introducing real estate value uplift capture along the route and around stations, by acquiring larger parcels of land than are needed and selling land back to developers.

## A High Speed Snapshot

HSR routes	Distance	Travel time	2065 Forecast passengers	Cost
Line 1: Sydney-Melbourne	894km	2hrs 44mins	18.76M people/yr	\$49.9B \$56M/km
Stage 1: Sydney-Canberra	283km	64mins	5.19M people/yr	\$23B \$81M/km
Stage 2: Canberra-Melbourne	611km	2hrs 10mins	2.7M people/yr	\$26.9B \$44M/km
Line 2: Sydney-Brisbane	854km	2hrs 37mins	10.86M people/yr	\$64.1B \$75M/km
Stage 3: Sydney-Newcastle	134km	39mins	4.75M people/yr	\$18.9B \$141M/km
Stage 4: Brisbane-Gold Coast	115km	Not yet modelled	2.2M people/yr	\$11B \$96M/km
Stage 5: Brisbane-Newcastle	606km	2hrs 28mins	Not yet modelled	\$34.3B \$56M/km

## High Speed Rail Around the Globe

2014 marks half a century of operation for the Japanese Shinkansen, or "Bullet Train". The French opened the TGV in 1981 and the German ICE commenced operation in 1991. During its 50 years of operation, the Shinkansen has maintained the highest safety record of zero fatalities and an almost perfect on time running record. The average annual delay for the Shinkansen is 0.6 minutes (including downtime for the 2011 earthquake).

[www.ara.net.au](http://www.ara.net.au)

## Opening up Regional Australia

High speed rail will essentially shrink our nation, doing away with geographic isolation and encouraging the decentralisation of Australia's population.

Australia is one of the most urbanised countries in the world. With our population projected to increase to between 30.9 and 42.5 million people by 2056, we either have a number of mega cities with few people in between or we develop regional Australia and reduce congestion.

The study found that high speed rail could open up regional Australia, providing the potential for economic development and productivity growth as a result of tourism and changes to commuting patterns.

## Next Steps: Making it a Reality

High speed rail is not simply another transport project. This is about the future landscape of Australia. 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.

High speed rail is about the future of this nation. This visionary project cannot be delayed any longer.

To make high speed rail a reality, the following steps should be taken:

1. Governments to formally commit to high speed rail
2. Finalise and protect the corridor
3. Infrastructure Australia to assess high speed rail
4. Establish a High Speed Rail Authority
5. Put the project to the market

