The National Rail Program: Investing in rail networks for our cities and regions
## Contents

FOREWORD ................................................................................................................................. 3

DEMAND FOR RAIL IS RISING - AND MORE INVESTMENT IS NEEDED TO MATCH .................. 6
- Australia’s city rail networks .............................................................................................. 7
- Growth in regional rail patronage .................................................................................. 8

RAIL AND HOUSING AFFORDABILITY .................................................................................... 9

NEW INVESTMENT IN RAIL ...................................................................................................... 10
- $10 billion National Rail Program .................................................................................... 10
- $792 million investment in Perth’s Metronet .................................................................. 11
- $500 million investment to upgrade critical rail connections in regional Victoria .... 11
- $30 million investment to support the development of Tullamarine Rail Link .......... 12

Urban Rail Plans ..................................................................................................................... 12

INVESTIGATING FASTER RAIL LINKAGES BETWEEN OUR CITIES AND SURROUNDING
REGIONAL AREAS .................................................................................................................. 13
- What is the Australian Government’s plan to develop faster rail linkages
  between our cities and surrounding regional areas? ................................................ 14
- Key strategic passenger rail corridors .......................................................................... 15
Foreword

Australia’s big cities and regional centres are growing fast - and like other big cities around the world that means rail is increasingly important to help people move around our cities, and between our cities and their surrounding regional areas, quickly and efficiently.

That is why, in the 2017-18 Budget, the Turnbull Government has announced a major, long-term commitment to investment in passenger rail networks in our big cities, and between our cities and their surrounding regional centres.

The $10 billion National Rail Program is designed to help make our cities more liveable and efficient as they grow, reduce the burden on our roads, provide more reliable transport networks, and support our efforts to decentralise our economy and grow regional Australia.

The Turnbull Government will work with state governments and the private sector to determine the priorities for investment under this program - so that we can plan and deliver on the new and upgraded passenger rail services which will be needed as our cities grow and change.

This brochure explains why we are making this investment, how it will be allocated, and the benefits that it will bring.

The Hon Darren Chester MP
Minister for Infrastructure and Transport

The Hon Paul Fletcher MP
Minister for Urban Infrastructure
As Australia’s biggest cities grow, their rail networks are very important – and becoming ever more so.

Passenger rail is the most efficient way of moving large numbers of people quickly.

As our cities become larger, improving their passenger rail networks is important in key ways:

- New or extended rail lines can support the release of new land for housing, either on the outskirts of the city or in areas experiencing urban renewal.
- Rail is the most efficient way to move people quickly to and from our CBDs and other employment clusters. As the number of jobs in CBDs and other employment clusters rises, we need higher capacity rail connections in and out of these locations.
- Rail corridors are well suited to apartment and townhouse living. This mode of living is increasingly popular, and will represent a growing share of homes as our big cities grow and the population density rises.
- The regional communities surrounding a city are closely integrated economically and socially with that city; just look at the number of people who commute between Geelong and Melbourne, the Blue Mountains and Sydney, and the Sunshine Coast and Brisbane. Some commute five days a week, and others will do a mix of a couple of days in the city and the rest working from home. Better rail connections can help that integration, benefiting the city and its surrounding regional areas.
Predicted population growth in major Australian cities


For these reasons the Turnbull Government is making a major national commitment to improving the rail networks in our big cities, and between the cities and their surrounding regional areas.

Turnbull Government investments in passenger rail projects around Australia
Demand for rail is rising - and more investment is needed to match

There is a clear trend in our big cities - the number of people using rail is rising. Perth’s metropolitan rail network has expanded significantly, for example. Urban heavy rail patronage in Perth grew 102 per cent between 2001-02 and 2015-16, reflecting underlying demand – and growth in our rail networks.

**Urban heavy rail patronage growth in major cities between 2001-02 and 2015-16**

Source: figures based on Bureau of Infrastructure, Transport and Regional Economics estimates
Australia’s city rail networks

As the populations of our cities rise, as roads become more congested, as employment and residential patterns change, and as rail services improve, Australians are making a choice to use rail more.

From the nineteenth century until the middle of the twentieth century, rail was extremely important in our big cities and the rail networks grew rapidly during this time. Melbourne went from 91 km of track in the decade 1850-59 to 581 km of track by the decade 1930-39, making long-lasting impacts on the shape of Melbourne today.

But as the share of people with cars rose, and as our cities expanded rapidly with the growth of lower density suburbs particularly after the Second World War, rail usage declined. Since the 1950s the extent of new rail construction in our cities has been quite modest. In Melbourne, for instance, there was a decline of approximately 66 km of track.

The strong shift back to rail today is seeing new lines under construction in our big cities, such as Sydney Metro Northwest, Melbourne Metro, and the Perth Forrestfield Airport Link. Some will provide new capacity at the core of the network; some will connect fast growing suburban areas which today have no rail.

In addition, a number of large-scale rail projects are presently in either early or advanced planning, such as Cross River Rail in Brisbane, rail to Western Sydney and to Western Sydney Airport, a rail link between Melbourne’s CBD and Tullamarine Airport and extensions to the Perth metropolitan rail network. The lead times on large rail projects are long and at this stage it is not certain which of these projects will be confirmed and when they will proceed. However, over the next five to ten years many of these projects are expected to commence construction.

Currently passenger and freight rail share track and other infrastructure in cities around Australia. While passenger trains are generally given priority over freight services, the performance of the freight rail sector can therefore influence the performance of passenger services. The operation of freight services on lines also carrying passenger trains can reduce the frequency with which passenger services can run. The Melbourne to Brisbane Inland Rail project will free up capacity for passenger services in Sydney, as a share of freight traffic will no longer need to pass through Sydney’s heavily congested network.
Growth in regional rail patronage

Rail connections between our big cities and surrounding regional areas are equally important, and are showing strong growth. Regional rail patronage in Victoria, for example, has grown strongly over the last decade.

Regional rail patronage growth in Victoria between 2003-04 and 2015-16

Source: figures based on Bureau of Infrastructure, Transport and Regional Economics estimates.

There is scope to improve these connections, so that services have higher speed, higher frequency and better reliability. To achieve this, it makes sense to examine such measures as improvements to bridges or tunnels or gradients which today slow down trains, or the targeted replacement of stretches of winding or steep track to allow higher speeds; electrification of track which can presently only be used by diesel trains; and new generation signalling and train control technology which allows more trains to be run safely in a given time period.
There is a clear link between improved rail services and housing affordability.

We need a supply of new housing which matches population growth. New or extended rail lines can support the release of new land for housing, whether it is on the outskirts of cities, in areas experiencing urban renewal or in our regional communities.

Rail corridors are well suited to apartment and townhouse living, which is typically more affordable than living in a fully detached house. If we can build more rail corridors, that will mean more opportunities to offer high quality urban living around stations (including shopping centres, community facilities, cafes and restaurants, open spaces and apartments and townhouses). A clear benefit of living in an apartment or townhouse close to a station is that you have excellent rail connectivity to the rest of the city including employment areas.

Many people commute into our cities from surrounding regional areas, sometimes five days a week, and sometimes doing a mix of a couple of days in the city and the rest working from home. More affordable housing in regional areas is often a reason for making this choice. If we can improve the rail connections between our cities and surrounding regional areas - through services which are quicker, more frequent or more reliable - we can offer more Australians this option, and also make it a more attractive option if the journey time is a little less than it is today.
The Turnbull Government will invest $10 billion over a ten year period for the National Rail Program. This Program will fund investments in major passenger rail projects in our big cities and investments to improve passenger rail connections between our big cities and their surrounding regional areas. This $10 billion rail investment is designed to help make our cities and regions more liveable and efficient as they grow, reduce the burden on Australian roads, provide more reliable transport networks, and support our efforts to decentralise our economy and grow regional Australia.

Under the Program, a total of $10 billion is committed over ten years, allowing for the long lead times typical of major rail investments. Significant planning work is required before construction can commence.

This program has been designed so that the Australian Government can make major funding commitments to several transformational urban rail projects (including on rail connecting our big cities and their surrounding regional areas) over the next decade.

The Australian Government’s funding contributions to these projects will be provided as part of an overall package of support, alongside funding provided by the relevant state government and the direct beneficiaries of the project.

The Australian Government will contribute towards the cost of planning major rail projects under this Program. Funding has already been committed to the cost of planning for Cross River Rail in Brisbane. Similar funding was offered for Melbourne Metro and we have committed $30 million towards the cost of planning a rail link from the Melbourne CBD to Melbourne’s Tullamarine Airport.

Guidelines for the provision of funding under the National Rail Program will be issued in due course, but factors to be considered are likely to include:

- The scale and city transforming nature of the project;
- The extent of state government funding provided;
- The extent of funding secured from other sources, including the private sector and including through value capture mechanisms;
- Whether land around the stations is zoned for higher value use, such as apartments and urban living;
- Whether the project has a positive impact on housing affordability;
- Whether the business case for the project has received a positive recommendation from Infrastructure Australia; and
- The project being consistent with the recommendations of the urban rail plans being developed by the Australian and state Governments, if appropriate.

$792 million investment in Perth’s Metronet

The Turnbull Government is committing $792 million to support the development of Western Australia’s Metronet. This commitment is subject to positive assessment of business cases by Infrastructure Australia for projects, including proposals for extensions to the Thornlie line and the Joondalup line to Yanchep.

This significant commitment to Western Australia includes $49.6 million to remove the heavily congested Denny Avenue rail crossing, by replacing it with a new rail bridge. This investment will complement the development of the Metronet project by reducing train delays at Kelmscott Station.

The Australian Government will work in partnership with the Western Australian Government to deliver this significant package in the coming years.

$500 million investment to upgrade critical rail connections in regional Victoria

The Turnbull Government is committed to the development of regional communities, including through reductions in travel times and better transport connections that make it easier for people to move between regional and metropolitan centres for business, education and recreational purposes.

Victoria is Australia’s second fastest growing economy and its population is forecast to reach 7.7 million in 2031. Regional centres are likely to play a growing role with over 2 million people living outside greater metropolitan Melbourne by this time. Between 2010–11 and 2014–15, the Geelong corridor experienced growth of more than 22 per cent, the highest of any corridor.

For this reason, the Turnbull Government has committed to delivering a $500 million rail package to be made available from 2017-18 to enable rail works in regional Victoria.

This $500 million investment will improve connectivity to regional cities and includes $290 million to upgrade the Gippsland Line, $100 million to upgrade the North East Line, $100 million to upgrade the Geelong Line and $10 million to plan for future improvements to the Shepparton Line. These works will require agreement with Victoria.
$30 million investment to support the development of Tullamarine Rail Link

The Turnbull Government has committed $30 million for business case development to develop a rail link between the CBD of Melbourne and Tullamarine Airport. Such a link is critical to the effective functioning of Melbourne’s transport system as the city continues to grow strongly.

This $30 million of funding is being provided for planning for this connection, including identifying an appropriate route, determining the cost, and developing a funding and financing strategy. This work will be done in co-operation with the Victorian Government and with relevant private sector organisations.

Tullamarine Airport is Australia’s second busiest, with 34 million passengers in 2016. The airport is expecting strong growth, with passenger numbers expected to rise to 60 million by 2030. Around the world, as airports reach a certain scale they typically move from bus to rail connectivity. This has significant advantages including offering a reliable trip time between the city and the airport, and the chance to offer high frequency services. In Australia, Sydney and Brisbane Airports have a rail connection to the city and there is a rail line presently under construction between Perth Airport and the city.

The Tullamarine Freeway, the main road connection to the airport, is already one of the most heavily congested roads in Melbourne carrying 210,000 vehicles per day in its busiest section. A rail line will alleviate congestion of this crucial arterial road and unlock capacity for the growing population in Melbourne’s north-west.

A rail connection to Tullamarine Airport could include a small number of stops between the airport and the city, providing a fast, reliable connection to the city for any new stations along the alignment. It is also possible that the rail line could continue beyond the airport, opening up new areas for affordable housing, with the benefit of fast connections to jobs at and around the airport, and in the city. The route, design, number of stops, operating model and other characteristics of the service will be determined during the planning process, and there will be community consultation as part of this process.

Urban Rail Plans

The Australian Government has committed to undertaking an in-depth investigation with the state governments into the current and future needs of our urban rail networks in Sydney, Melbourne, Brisbane, Adelaide and Perth, as well as their surrounding regions, over the next 12 months. This will include technical research and analysis considering:

- current standards of existing infrastructure;
- forecast network capacity constraints;
- integration of state government strategic urban land-use and transport plans;
- housing affordability and supply, transport affordability and accessibility; and
- key transport solutions.

These plans will provide a much better picture of the investment required to meet the growing demand for frequent and reliable commuter rail services in Australia’s major cities, allowing the Government to take a measured, methodical and considered approach to new investments.
Investigating faster rail linkages between our cities and surrounding regional areas

Our capital cities are projected to grow significantly through the next decades. Faster rail links can deliver important benefits for people living in major regional centres and orbital cities, and provide opportunities for those living in major capital cities to consider relocating to housing away from the major capital cities.

In recent years there have been a number of proposals put forward for faster rail connections between our cities and surrounding regional areas. Some involve incremental improvement to existing rail networks; for example improvements to bridges or tunnels or gradients which today slow down trains. Others involve building brand new track suitable for very high speed rail, at speeds of 250 km/h or more. Other ideas which have been proposed are somewhere between these two ends of the spectrum.

While the benefits of high speed rail are easy to visualise, what is not well understood is that our existing regional rail services, often using tracks built in the nineteenth century, run at well below the speeds and frequencies that conventional rail can achieve. For example, the average speed today between Sydney and Wollongong is 56 km/h over an 82 km long track. Among the factors that constrain the speed is that at one location there is a tunnel only large enough for one line, meaning trains often need to wait for the train coming from the other direction before they can pass through. The rail networks surrounding Melbourne, Brisbane, Adelaide and Perth face similar issues. If existing rail lines can be upgraded, speeds of up to 100 to 160 km/h are potentially achievable depending on the location and the extent of the upgrade.

Investments in new lines, and in upgrading existing lines, can be very expensive - frequently running into the billions. While rail has primarily been a state government responsibility, there is a role for the Australian Government to play in supporting investment in transformational rail projects which will help our cities and their surrounding regional areas to function more efficiently and be more liveable.

As we consider how to get the best impact through improving rail connections between our cities and their surrounding regions, it is therefore important to consider both new rail lines and upgrades to existing rail lines.
What is the Australian Government’s plan to develop faster rail linkages between our cities and surrounding regional areas?

The Turnbull Government will commit $20 million to plan for faster rail links between our cities and surrounding regional areas.

There are two principal opportunities we will consider. The first is opportunities for a new rail or an extended rail line between a major city, and surrounding regional centres, particularly as a means of opening up new locations for housing. The second is opportunities to improve existing regional rail connections, so that existing lines will support faster or higher frequency connections, again with a particular focus on supporting areas of affordable housing that have good rail connectivity to the city.

The Turnbull Government will carry out a three step process to identify projects to receive funding. We will issue a prospectus describing the program and the opportunities and call for initial proposals in response. Initial proposals will be sought by September 2017.
Proposals could come from private sector proponents or consortiums, such as consortiums of property owners and developers and specialist high speed rail companies. State governments might also bring forward such proposals. For example, such proposals might involve a proposal for a new stretch of line which would connect into an existing line into one of our big cities, and would provide rail access to new greenfields areas where a new town or towns would be built by a developer or consortium of developers.

Alternatively, state governments could bring forward proposals to improve or extend existing lines. Such proposals might involve improvements to bridges, tunnels or gradients which slow down trains. Proposals could also involve replacing stretches of winding or steep track which prevent trains running at high speeds, the electrification of track presently allowing only for diesel trains or new generation signalling and train control technology which would allow trains to be run more frequently.

The prospectus will specify the criteria that would be applied by the Australian Government in selecting, from the initial proposals, a short list of up to three projects that would go forward to business case development.

Key criteria would include the time savings over existing means of travel to the regional locations (including existing rail and other means such as road); the extent of new housing opportunities to be opened up; and value for money (with a key factor to be the number of new users of the new or upgraded line delivered per million dollars invested).

The next stage would be business case development, which would be completed by the middle of 2018. The Australian Government will commit a total of up to $20 million for the development of up to three business cases. The project proponent would also be expected to provide funding, and the Australian Government would match that funding up to an agreed total, with the Australian Government’s maximum contribution on an individual business case to be $8 million. Business cases would be assessed by Infrastructure Australia once developed.

The final stage will be a decision by the Australian Government as to whether it will provide funding. The Turnbull Government expects that decisions would be made in relation to at least one business case in time to allow a funding commitment to be made by the end of 2018.

**Key strategic passenger rail corridors**

The Australian Government has identified key strategic passenger rail corridors where there would be significant benefit in providing faster commuting times. Improvements to these corridors would deliver economic, social and regional benefits to communities, including the potential to provide expanded opportunities for housing.

The strategic rail corridors are:
- Brisbane-Sunshine Coast
- Brisbane-Gold Coast
- Brisbane-Ipswich
- Brisbane-Toowoomba
- Brisbane-Northern NSW
- Sydney-Central Coast
- Sydney-Bathurst
- Sydney-Newcastle
- Sydney-Wollongong
- Sydney-Southern Highlands
- Sydney-Goulburn
- Sydney-Canberra
- Melbourne-Albury-Wodonga
- Melbourne-Seymour
- Melbourne-Shepparton
- Melbourne-Bendigo
- Melbourne-Ballarat
- Melbourne-Geelong
- Melbourne-Latrobe Valley
- Perth-Mandurah.

The Australian Government will be particularly interested in proposals for improvements along these corridors, but will also consider proposals in relation to other corridors (including those surrounding other big cities such as Perth and Adelaide).