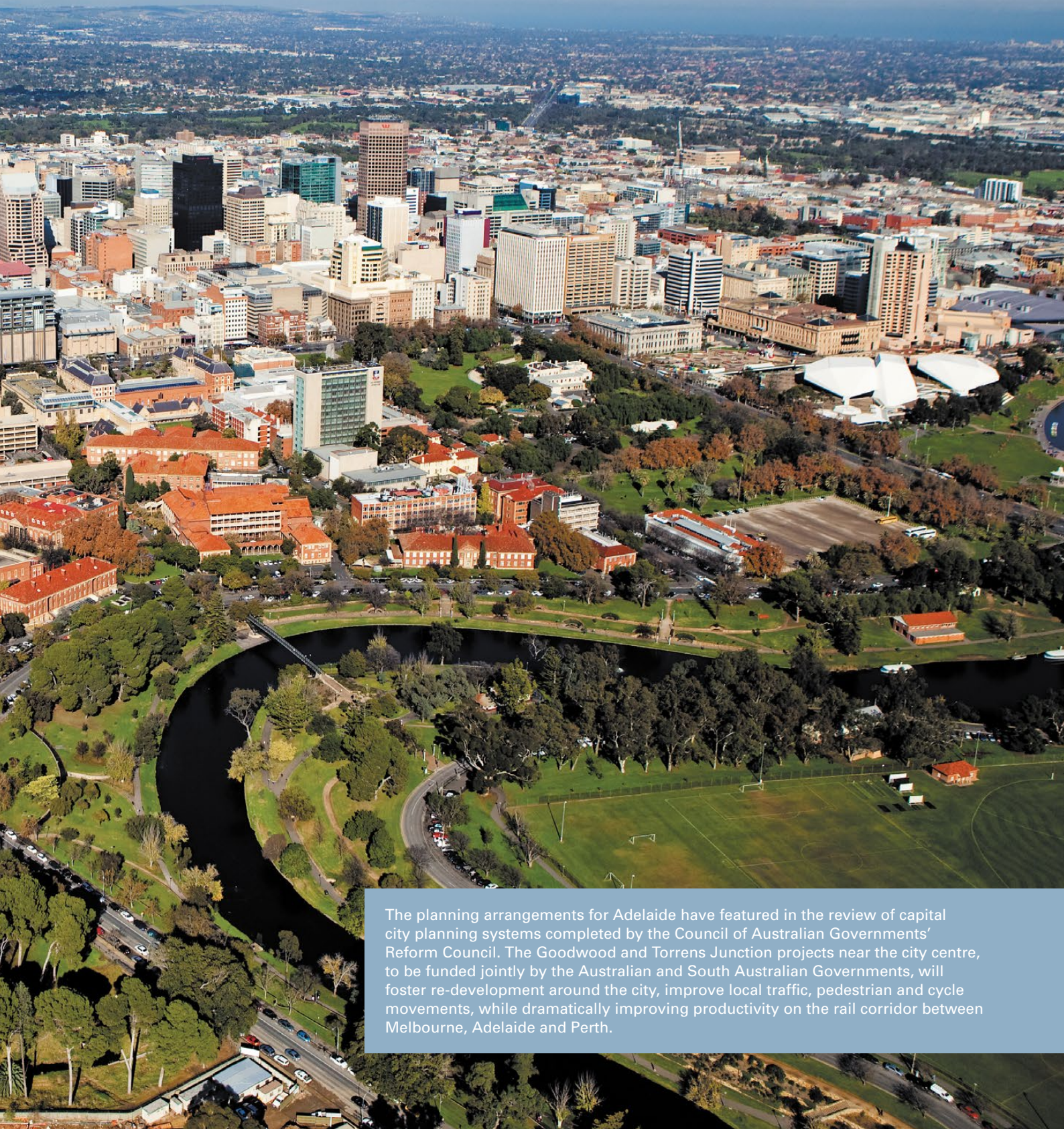


02. Transforming our cities



The planning arrangements for Adelaide have featured in the review of capital city planning systems completed by the Council of Australian Governments' Reform Council. The Goodwood and Torrens Junction projects near the city centre, to be funded jointly by the Australian and South Australian Governments, will foster re-development around the city, improve local traffic, pedestrian and cycle movements, while dramatically improving productivity on the rail corridor between Melbourne, Adelaide and Perth.

Our goal To develop productive, sustainable and liveable cities by taking a long-term view when decisions are made about infrastructure investments.

Our goal

Infrastructure Australia's goal is to work collaboratively with governments, industry and the community to improve the productivity, sustainability and liveability of our cities.

Around 80 per cent of economic activity occurs in our cities. Over 80 per cent of Australia's population growth between 2001 and 2010 took place in the major cities.²⁷ It is critical, therefore, that we get the planning right in our cities.

Infrastructure Australia's interest in transforming our cities is a broad one. It is not just about infrastructure. Our transport networks, our utilities, our communication systems need to serve a purpose – supporting national aspirations for our cities.

Infrastructure Australia advocates for a long-term perspective on city planning, based on a horizon of 50 years or more. We believe that a long-term view is needed because cities will continue to grow and change beyond the 20-30 year focus of most metropolitan strategies and plans.

Key challenges

The key challenges we face in pursuing our goals are significant and include the economic, social and environmental sustainability of our cities. In particular, we need to focus on:

- maintaining productivity;
- adopting a truly long-term perspective (50 plus years) when we make decisions that will shape our cities;
- developing robust planning systems for all of our major cities;
- addressing the impacts of climate change and the cost-of-living implications of rising energy and water prices; and
- ensuring our cities are socially inclusive – not divided.

The way forward

Transforming our cities into productive, sustainable and liveable places requires a coordinated and multifaceted response. Such a response needs to encompass:

- infrastructure funding and financing models that ensure that the maintenance of existing assets and development of new infrastructure meets community needs – now and in to the future;
- an informed community debate on how we manage population growth and urban change; and
- the need to ensure that state and territory metropolitan plans are linked with governments' fiscal strategies and focus both on improved asset management and the creation of new infrastructure, where appropriate.

Recognising our key challenges

Maintaining productivity

During much of the first decade of this century, productivity growth in Australia has been below the average of member countries of the Organisation for Economic Co-operation and Development (OECD).²⁸

Signs of slowing productivity growth are readily observable in our cities, principally in the form of congestion on our transport networks, longer travel times and, often, a mismatch between where can people afford to live and available employment options.

The latter issue is particularly relevant for lower paid workers such as hospitality staff and for people in nursing, teaching and emergency services, who often need to travel long distances to work. As a result, employers in these industries may face a tightening labour pool.

Long-term projections of government finances assume a faster rate of productivity growth than was the case during the last decade. The projections also assume that population growth will play a more significant role in contributing to overall economic growth.

Improving liveability and social cohesion

Australian cities perform well in several international comparisons. Four of the top 10 cities in The Economist Intelligence Unit's 2011 *World's Most Liveable Cities* survey were from Australia.²⁹

Such surveys are not perfect. They often present an 'overseas' view on relative standards of living, rather than the views of local residents. Our focus also needs to be on ensuring that all Australians who live in our cities have the opportunity to access the benefits of living in our cities.

The Council of Australian Governments stated in its December 2009 *Agreement on Capital City Planning* that our cities need to be socially inclusive.³⁰ As a nation, we still have some way to go in meeting this aspiration.

Faced with issues such as decreasing housing affordability, limited access to local employment opportunities, inconsistent access to public transport, and increasing traffic congestion, there is an arguable case that we are making little or no progress in planning for or developing liveable cities. Worse, some of our larger cities appear to face a future of greater division rather than inclusion.

How will our cities be defined in 50-100 years?

Our actions over the next 10 years will have a significant bearing on the result.



Darwin is likely to play an increasingly important role in maintaining our national productivity during the 'Asian Century'.

As a community, we need to ask ourselves whether the portfolio of projects being considered at present is one that maximises the prospects for our grandchildren and great-grandchildren. If not, then we need to debate:

- how many people might live in our cities and where they will live;
- what we want our cities to look like;
- how we want to move around;
- how we pay for infrastructure and the mix of projects that is appropriate to meet our future needs; and
- the scoping of projects, in other words, examining opportunities to cut back on 'nice to have' elements, or elements that are inconsistent with maximising prospects for future generations in a financially responsible way. Staging of projects is an option to achieve this goal.

Housing affordability is a growing challenge, particularly in our major cities. Research overseen by the Australian Housing and Urban Research Institute (AHURI) found that housing affordability is predicted to worsen in the first half of the 21st century as a result of anticipated demographic and housing market changes.³¹

It is clear that housing provides benefits beyond shelter. The AHURI research found that access to appropriate housing influences a range of outcomes for individual households, such as workforce participation, access to jobs and services, family stability and educational attainment.

Declining affordability has implications on a range of fronts: economic performance and labour market efficiency across our cities; social cohesion and polarisation of cities; environmental impacts; and the creation and distribution of wealth through home ownership.

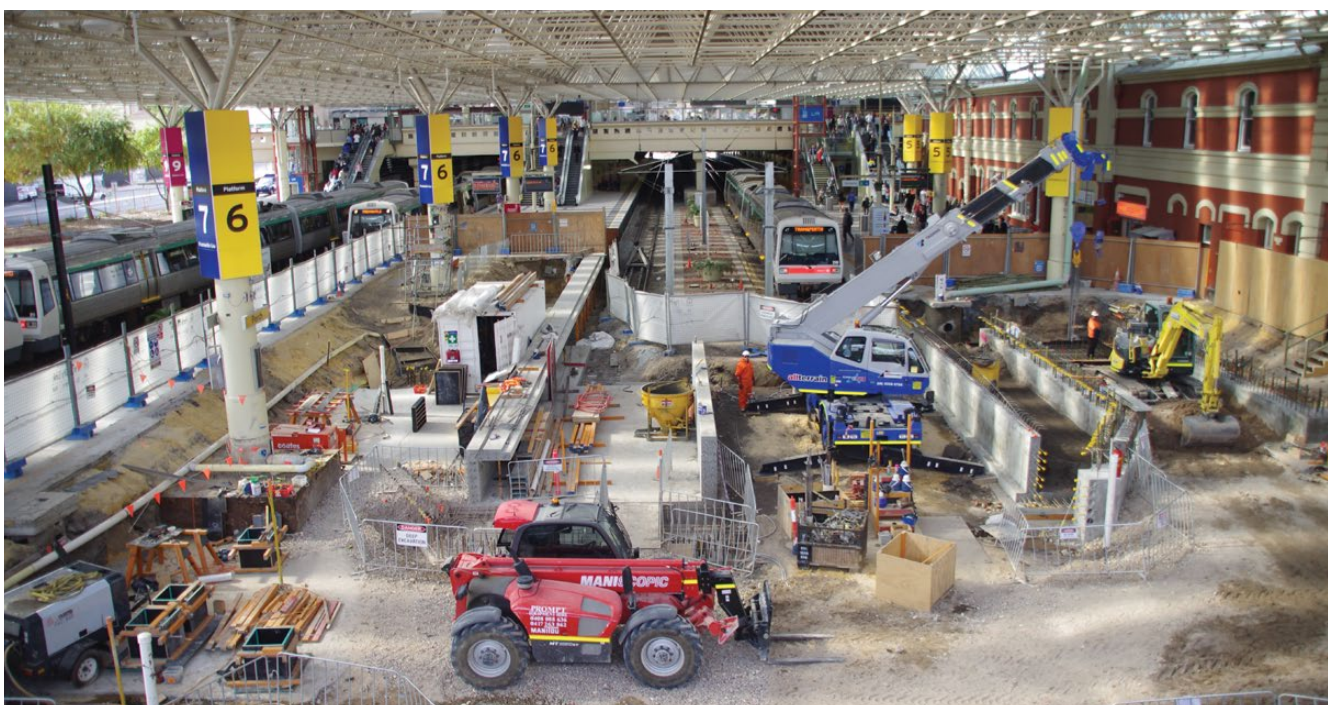
Transport disadvantage, a situation where individuals or households have little or no access to private transport and only limited access to public transport in order to meet their daily needs, is also an area of growing attention and concern.

The intersection of rising housing costs and the establishment of areas with poor transport connections represents a particular challenge for governments and the community.

Government priorities are shifting towards a greater focus on public transport. Infrastructure Australia commends this course of action.

The pattern of investment in transport and other infrastructure can either improve or reduce social cohesion in our cities. The portfolio of projects to be supported by governments should consider:

- how the projects connect with existing networks;
- how the projects are supported by complementary investment in new social infrastructure such as hospitals and educational facilities; and
- the social implications of how projects are funded.



The Perth City Link project, funded by the Australian and Western Australian Governments, involves a significant redevelopment of road and bus facilities at Perth Station. The project aims to foster transit-oriented development and provide an important connection between the Perth central business district and the adjoining suburb of Northbridge.

Addressing the impacts of climate change

Climate change will affect our cities in a range of ways, including:

- more extreme weather conditions, including the effects of heat stress on extremely hot days;
- the potential for extensive damage and loss of life associated with major storm and flooding events; and
- the impact of increased variability in rainfall on water supplies, and the pressure to build often expensive infrastructure, such as desalination plants, to provide water security.

Energy prices are likely to continue rising over the coming decades, potentially rapidly and significantly. This is despite the fact that greater attention is being given to the development of non-traditional sources of oil and electric vehicles.

Some energy sources, such as shale oil, are likely to add to the challenge of reducing carbon emissions. Higher energy prices will lead to an increase in the real cost of driving, and may result in a continued decrease in per capita vehicle usage. As shown in Figure 5, the growth rate in per capita distance travelled in motor vehicles has slowed since the 1980s and since the global financial crisis.

Higher fuel prices will expose those living on the fringes of our major cities to increased transport costs, and potentially increased isolation from employment, educational and recreational opportunities.

Although the prospect of increased fuel prices affects all Australians, including those living in regional Australia, this is a particular issue for the development of Australian cities. It raises questions about what type of transport infrastructure we should invest in, for example roads versus public transport.

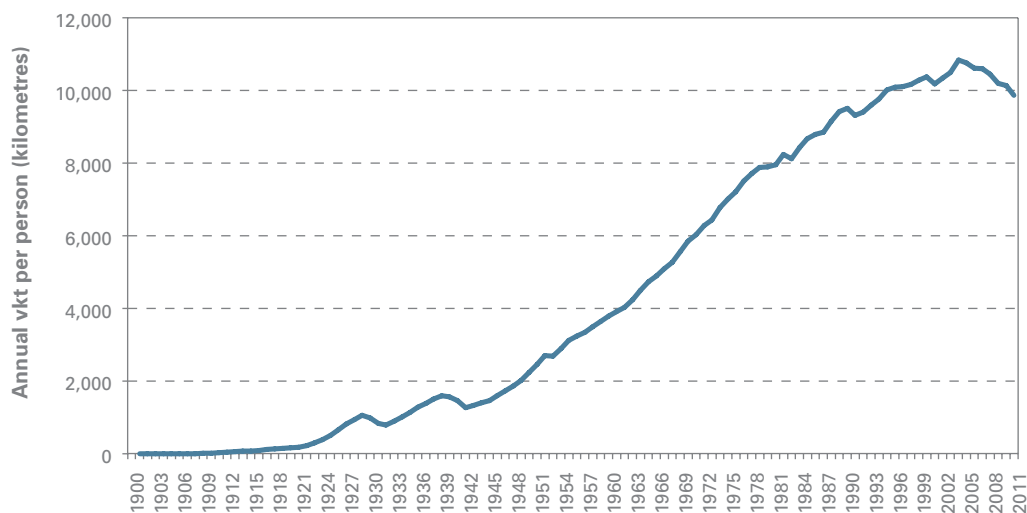
Although difficult to predict, it is prudent to plan for a range of fuel price, technology and demand scenarios when evaluating the need for transport infrastructure.

Is our love affair with the car coming to an end?

International and national research shows that the distance driven per capita is starting to level off and decline.³² Factors influencing this trend include macroeconomic shifts brought about by the global financial crisis and rising fuel prices.

Research released by the Department of Infrastructure and Transport's Bureau of Infrastructure, Transport and Regional Economics in March 2012 attests to this trend.³³

Figure 5 – Australian trend in vehicle kilometres travelled per person



Source: Bureau of Infrastructure, Transport and Regional Economics

The way forward

Shaping our cities: taking the long view

The need to take a long-term perspective is a particular issue for our three largest capital cities: Sydney, Melbourne and Brisbane. The growth being experienced in those cities – and in nearby regional centres such as Newcastle, Wollongong, Geelong, the Sunshine Coast and the Gold Coast – suggests that the challenges faced by the big three cities are qualitatively different and more challenging than in other cities. These challenges include greater pressure to replace older assets and develop new transport links in expensive tunnels.

For example, in the Sydney case, the population of the overall Sydney/Newcastle/Wollongong metropolis is projected to grow from approximately 5.1 million people in 2006 to around 8.1 million people by 2056 (on medium-level assumptions). A century earlier, in 1956, the combined population of Sydney, Newcastle and Wollongong was just over 2 million people.³⁴

How growth is accommodated and managed will have a critical bearing on the lives of millions of people, and on the New South Wales and national economies.

The size of cities reflects their success. It is tempting to wish that our cities could stop growing, but the economic and social consequences of that course must be understood and well-considered. The risk of discouraging growth is that our cities 'stagnate' economically and socially, driving industry, investors and citizens elsewhere. This risks inhibiting Australia's productivity growth and improvements in our quality of life.



This photo of Melbourne in the 1930s emphasises how much our cities have grown and changed over the last 80-100 years. In planning our cities, we need to be thinking about the shape of our cities not just 20 years out but over a much longer period. [Swanston Street Melbourne looking south, Town Hall on the left, circa 1930]

Taking a long-term view



Melbourne Metro offers the potential to act as a catalyst for increasing productivity through the creation of development opportunities and jobs at Parkville near the University of Melbourne and Royal Melbourne Hospital.

Sydney Harbour Bridge

The Sydney Harbour Bridge recently celebrated its 80th birthday. The New South Wales Government took a very long-term view in setting the scope for the bridge – the population of Sydney at the time the *Sydney Harbour Bridge Act* was passed in the early 1920s was around 940,000 people – less than the number of vehicles that use the bridge each week in early 2012.³⁵

The Sydney Harbour Bridge has defined Sydney internationally for the best part of a century. For residents and city planners, the bridge is a key consideration in determining where to live, how to commute and how to manage congestion and improve public transport.

Melbourne's City Loop

Construction of the Melbourne Underground Rail Loop (now known as the City Loop) commenced in 1971 and the project was completed with the opening of Flagstaff Station in 1985. The City Loop provided customers with a choice of five stations around the central business district and added capacity to the rail network.

The City Loop had been conceived of as early as 1929 by Melbourne's Metropolitan Town Planning Commission, which recommended the construction of railway tracks and stations under the eastern and northern sides of the central business district.

The vision was to connect this new line to the existing lines in north Melbourne and Richmond. Forty years later, the *Melbourne Metropolitan Transport Plan* also supported the need for an underground loop.

Since 2004-05 patronage growth on Melbourne's metropolitan trains has grown rapidly. In 2010-11, there were 228.9 million boardings, an increase of 4.3 per cent on figures for the previous financial year.³⁶

The proposed Melbourne Metro project aims to boost rail capacity through the central business district to meet projected rail demand as Melbourne continues to grow over the next several decades.

Brisbane's Story Bridge

The 282 metre Story Bridge is Australia's longest cantilever bridge and was an ambitious engineering feat for the time.

Planning for the Story Bridge began in the 1920s and construction commenced in 1935. The six-lane bridge, which spans the Brisbane River from north to south, was opened in 1940 in front of a crowd of 37,000 people.

The bridge has played a major role in linking the two halves of inner Brisbane and diverting traffic from the central business district. Today, the Story Bridge carries around 100,000 vehicles each weekday (based on 2010 figures).³⁷

The scale of growth and the potential demands for new infrastructure present a particular challenge when viewed in light of the fiscal gaps facing the Australian, state and territory governments. On current parameters, the gap facing future Australian Governments will grow to around 2.75 per cent of gross domestic product by 2050 (almost \$40 billion per annum in current terms), excluding interest payments.³⁸

Long-term projections by the New South Wales and Victorian Governments suggest that the finances of state and territory governments also face particular pressures. For example, the fiscal gap in the New South Wales Government budget is projected to grow, on current assumptions and budget settings, to 2.8 per cent of gross state product by 2050-51.³⁹

Hard decisions about how we pay for our infrastructure or dramatic changes to outlays in other sectors will be required. In the absence of action on these fronts, it is difficult to see how governments will have the capacity to pay for the infrastructure proposed in current plans, let alone that which may be required in the future.

As a nation, we must be prepared to re-think public finances and to ensure that the projects we do invest in over the next 20 years are clearly conceived and contribute to the sustainable development of our cities over the long term.

Facing up to 'wicked' infrastructure problems

In the early 1970s, planning academics at the University of California, Berkeley introduced the concept of 'wicked problems'.⁴⁰ Such problems: are typically multi-causal; involve the risk of unforeseen consequences; have no clear solution; are socially complex; and do not fall within the responsibility of one organisation.

Arguably, more than any of our major cities, Sydney faces a confluence of 'wicked' infrastructure problems over the next few years. Key challenges for the city will include:

- decisions about a second airport;
- decisions about a prospective high-speed rail link, including location of stations;
- road and rail projects across Sydney; and
- movement of freight to and from Port Botany or Port Kembla or the Port Newcastle.

It might be argued that this is an issue confronting the entire nation, not just our cities. There is some basis for that view. Even so, the issues are going to be most pressing in our cities for the following reasons:

- the majority of Australia's citizens live in the major cities and the majority of Australia's gross domestic product is generated in the cities.⁴¹ If we make mistakes in the cities, we affect a rather larger number of people, and at a greater economic cost;
- although there will be exceptions to the rule, rural infrastructure networks arguably have more spare capacity than urban networks. In other words, regional networks should, on the whole, be able to accommodate some growth in demand without necessitating significant new investment in the creation of capacity; and
- the cost of providing infrastructure in our cities is often higher than in regional areas, either because it has to be retrofitted into established networks rather than built in greenfield areas, or because in some cases decisions will be taken to develop new infrastructure in tunnels, usually at a cost per kilometre of 10 times the cost of equivalent works on the surface.

The projections of fiscal gaps suggest that, if the current approach to funding is maintained, the projects that are developed in our cities over the next 20 years may be amongst the last that can be funded through conventional government means.

Improving strategic planning to ensure we are investing in clearly conceived projects in our cities

Melbourne

The Route 86 tram improvement project north of the Melbourne central business district demonstrates a number of positive elements. These include:

- close integration of land use and transport decisions, notably decisions to increase densities along the relevant part of the tram route and invest in upgrading pedestrian amenities; and
- close collaboration between the Victorian Government and Darebin City Council.

The Victorian Government has submitted a proposal seeking Infrastructure Australia's support for further upgrades along the route. Infrastructure Australia is working with the Victorian Government to develop these proposals and pursue this worthwhile model of urban development.

Brisbane

The Brisbane Cross River Rail project has been assessed by Infrastructure Australia as ready to proceed, following four years of solid planning and project development. The level of project development is appropriate given the estimated project cost of \$7 billion for the full project.

Cross River Rail has the capacity to support the balanced development of Brisbane and south east Queensland well into the mid-century.

The scale of the project presents significant funding challenges. The project will almost certainly need to be staged. The new Queensland Government has initiated a review of the project. The review is scheduled to report to the Queensland Government by June 2012. The Government is expected to advise Infrastructure Australia of its views on the project later in the year.



The proposal for Cross River Rail includes a station at Albert Street in the southern part of Brisbane's central business district. The rail project would dramatically improve access to this area, one which is presently relatively remote from the rail network.

Key policy responses to urban growth and change

In December 2009, the Council of Australian Governments set the following objective for its approach to the planning of Australia's cities: "to ensure Australia's cities are globally competitive, productive, sustainable, liveable and socially inclusive and are well placed to meet future challenges and growth".⁴² Set against the challenges described earlier, governments have taken some initial steps in the last year to explore how we might meet that objective. These include:

- the completion of the review of capital city planning systems by the Council of Australian Governments' Reform Council;⁴³
- the Australian Government's release of the *Sustainable Population Strategy*;⁴⁴
- the Australian Government's release of the *National Urban Policy*;⁴⁵ and
- a number of state/territory reviews of metropolitan strategies.

Council of Australian Governments' Reform Council's report on capital city strategic planning systems

The release of the Council of Australian Governments' Reform Council's report on capital city strategic planning systems in April 2012 was a significant milestone in better understanding the strengths and weaknesses of how we plan our cities.

The report reviewed current planning systems against nine criteria which the Council of Australian Governments agreed in 2009 were to provide the platform to "re-shape our capital cities".

The Council of Australian Governments also agreed that by 1 January 2012 all states and territories will have in place plans that meet the criteria and noted that the Australian Government will link future infrastructure funding decisions to meeting these criteria.

The Reform Council found that jurisdictions had taken steps to improve their strategic planning systems during the course of the review. Nevertheless, the report was significant because not one city had planning systems that were fully consistent with the criteria that the governments themselves had set in 2009.

In most cases, current systems were found only to be 'partially' or 'largely consistent' against a criterion. There were relatively few instances where a city's processes were judged to be consistent with a particular criterion.

The Reform Council's report highlights the need for substantial and continuous effort by all jurisdictions, including the Australian Government, to improve metropolitan planning systems. To date, the response of governments to the report has been muted and disappointing.

Infrastructure Australia will continue to advocate for substantial improvements in our metropolitan planning systems. This will remain a core part of the organisation's work over coming years.

Local government reform in Perth

Infrastructure Australia's 2011 report to the Council of Australian Governments highlighted the need for reform in the way we govern our cities. The Western Australian Government's metropolitan local government review addresses that need.⁴⁶ The review is examining options for the structure of local government within Perth, a city with a population of almost 1.8 million people and 30 councils. Perth's population is expected to grow to more than 3.5 million by 2056.

The review is looking at the challenges facing Perth over the long-term, and how the structure of local government in Perth can support implementation of the Western Australian Government's metropolitan strategy, *Directions 2031*. Draft findings have been released for comment – the shortlisted options involve either governance by 12, six or one local council. A final report is expected in June 2012.



Council of Australian Governments' Reform Council's report on capital city strategic planning systems

The Council's conclusions confirm Infrastructure Australia's insights from its assessment of project proposals and from its engagement with jurisdictions on strategy development over the last four years. Key observations include:

1. Current metropolitan planning systems are poorly linked with governments' fiscal strategies. Infrastructure projects that are likely to be 'unfundable', or which cannot be funded without significant policy reform such as transport pricing, are committed to or incorporated in strategic plans.
2. Governments struggle to engage the community in debates about their metropolitan plans and the implicit trade-offs between policy outcomes. Despite earnest efforts to engage the community, our capital city planning systems fail to encourage significant community debate about what types of cities people want and, in particular, whether they are prepared to pay for the infrastructure required to support community preferences.
3. Current capital city planning and project development processes do not adequately engage in scenario planning. More often than not, planning is based on a simple set of assumptions that 'business as usual' conditions will continue to apply. There is an assumption that the 'drivers of change' – for example, demographics, economic fundamentals, energy supply, technological change, environmental issues – will continue to evolve more or less as they have done in the past.
4. Metropolitan planning systems, and the plans which arise from them, tend not to address national policy issues in a substantive manner. Rather, such issues tend to be addressed in the plans in aspirational terms.
5. Policy review processes tend to be set up by individual Ministers or their agencies without substantial regard for their implications for the development or implementation of metropolitan plans.
6. Capital city planning systems tend to focus on new buildings and infrastructure. The reality is that, in 40-50 years, the great majority of the infrastructure we use today will still be with us. The challenge is to look at ways to better manage the assets we have, as well as innovative ways to ensure that current assets meet our future needs. The latter approach could include issues such as making our existing housing stock more flexible through dual occupancy or conversions. Metropolitan plans need to address policy change that encourages better use of current infrastructure assets, as well as focussing on the need for new infrastructure where applicable.
7. Planning agencies tend to be outside the central part of government, and their influence on reform is modest. Metropolitan plans get changed when it suits the political interests of the government of the day or the policy interests of another part of the government. New governments often feel obliged to distance themselves from their predecessor's plans, even though there may be elements in those plans that are worthwhile. This calls into question the long-term integrity and durability of the metropolitan planning process.
8. In the transport sector in particular, metropolitan planning systems appear to give limited credence to the implications of climate change and energy security when determining infrastructure investment priorities.
9. Metropolitan planning systems do a relatively poor job of transparently prioritising investment in metropolitan areas, especially in urban renewal areas.
10. The need for some form of pricing reform, especially in the transport sector but also in the water sector, is not seriously acknowledged at the political level.

New transport investment must be integrated with land use changes in order to leverage that investment – in some cases, planning is focussed on transport infrastructure, without considering how it will shape the area.



Development of larger centres outside our capital cities, such as Coffs Harbour, may be an option for managing population growth. To do so, the country needs to learn lessons from past experiences with regional development policy.

Sustainable Population Strategy

At the time of last year's report, the *Sustainable Population Strategy* had just been released. It was an important step in a challenging area of public policy, one which attracts a range of different views. The strategy was criticised in various quarters for lacking specificity, although its central premise – that population growth has to be managed – is correct.

What has the community confused and concerned is the fact that the *Sustainable Population Strategy* is relatively silent about the detail of what managing population growth might involve. If managing population growth is to be translated from high-level strategy and statements of principle to concrete actions, it must occur through:

- planning and investment decisions at the metropolitan level; and
- debates and subsequent decisions about whether population growth can be encouraged to occur in non-metropolitan areas, either generally or in designated centres.

If we do not have that debate in the community – and soon – we are at risk of drifting through a series of incremental, often reactive decisions over the next decades.

Over the course of the century, several of our major cities will have grown to metropolises of five to ten million people. Without a coordinated response to these population and planning issues, these metropolises could fall well short of the productive, sustainable, liveable and inclusive places to which the Australian, state and territory governments aspire.

The challenge is to foster an informed, constructive public debate.

Given the community's desire for the sorts of higher order attractions and services that are more common in larger centres, growth outside of the capitals might need to be concentrated in a small number of provincial cities.

The history of regional development and decentralisation policy in Australia is not an encouraging one. Past efforts have been fragmented and short-term. This issue would require closer engagement by all levels of government around specific locations outside our capital cities.

An alternative approach is founded on whether, as a nation, we can conceive of and agree upon long-lasting policy and funding arrangements that would enable some of the growth currently projected for hot spots – notably Perth and the east coast cities – to occur in the other capital cities. This will test the ability of the community and governments to debate difficult, contentious issues.

As noted in the *Sustainable Population Strategy*, 'place matters'. Decisions about particular places – for example, the amount and design of new development and the types of infrastructure – will determine whether the aspiration for sustainable population growth is achieved.



Salamanca Place in Hobart exemplifies the notion that 'place matters'.

National Urban Policy

The Australian Government's *National Urban Policy*, also released in May 2011, is an important step in setting the framework for city-making. Infrastructure Australia looks forward to ongoing work by the Australian Government and its agencies to translate the policy into specific, tangible actions.

If it is to be effective, the *National Urban Policy* needs to be applied across Australian Government portfolios, beyond the infrastructure and transport portfolio.

The *National Urban Policy* should be implemented through:

1. clear and consistent decisions on investment: funding only those projects that clearly meet the objectives of the *National Urban Policy*;

2. complementary regulatory and reform decisions of governments, related to, for example, urban planning decisions on zoning, fringe benefit tax treatment on private motor vehicle usage and mandated environmentally sustainable design benchmarks for new buildings;
3. advocacy decisions of government, for example educational programmes; and
4. administrative processes, for instance, challenging deeply ingrained practices of government agencies by ensuring that adequate consideration is given to the spatial and cross-portfolio impacts of decisions.

The Australian Government's decision to establish an Urban Policy Forum, comprising representatives of all levels of government, industry academia and the non-government sector, is also a useful step in providing a framework to guide the broad range of decisions related to our cities. The Forum's first meeting in March 2012 demonstrated broad interest in urban policy, from beyond the areas traditionally associated with city making, and a keen desire for action.

Urban roads

Infrastructure Australia's broad approach to considering urban road proposals has been established for some time.

The 2010 report to the Council of Australian Governments identified the need for urban road proposals – particularly those in our larger cities – to demonstrate a clear focus on making better use of existing road networks and ensuring the efficient movement of both road-based public transport and freight.

The 2011 report to the Council of Australian Governments set clear parameters for the types of proposals we would recommend to receive Australian Government funding. Road proposals need to be scoped in line with the principles outlined in our 2010 report, and provide for tolling/charging that reflects the economic benefits of the project(s), and which sends signals that will influence demand.

Infrastructure Australia applied these principles when framing advice to the Minister for Infrastructure and Transport on project scoping and funding options for improvements to the M5 and F3-M2 corridors in Sydney. In essence, the report recommended the re-scoping of those projects to focus on the movement of trucks, light commercial vehicles such as delivery vans, and road based public transport. We recommended that those re-scoped projects be largely funded through tolls and/or some form of network-wide charging.

This model recognises:

- the need to scope projects in a way that better reflects governments' strategic priorities, for example increasing the share of trips by public transport and improving freight transport;
- the need to factor in the opportunity cost related to any commitments of scarce public capital;
- the need to give greater emphasis to invest in prudently scoped public transport projects, especially given the fiscal constraints facing all levels of government; and
- that road based public transport can make efficient use of well scoped road projects, as well as usefully augment rail based transport.

This approach also has relevance for other cities. For example, it is relevant to governments' consideration of how projects such as the East-West Link in Melbourne, the Gateway upgrades in Brisbane, the Northern Connector in Adelaide and the Gateway project in Perth should be conceived and funded.

Action towards a consistent form of network-wide charging on motorways is likely to be a useful step. Motorway networks in our major cities are characterised by a wide variety of approaches, decreasing the impact of pricing signals.

The Australian Government's decision to commit funding towards the establishment of a dedicated entity – a so-called 'special purpose vehicle' – for the development of future road links in Sydney is a welcome step. Although the initial task of the special purpose vehicle is to develop high value vehicle links in the M5 and F3-M2 corridors, it could be used as a means of moving Sydney's complicated and inconsistent tolling regime on to a common, per kilometre base.

Poor signals for transport choices: Sydney's road network

A user of Sydney's motorway network is faced with a confusing range of tolling arrangements. The M5 is free in some sections and the subject of a toll rebate scheme in others. The M7 uses distance based tolling, capped after 20 kilometres; while the M4 is free. The Eastern Distributor uses a flat toll and the Harbour Bridge and Tunnel apply time of day tolling.

Applying a network-wide charge would:

- remove anomalies in the existing system;
- send a price signal to manage demand on the network; and
- provide funds for maintenance of the network and investment in new transport infrastructure.

The present system of road tolling in Sydney is a legacy of various project-specific funding arrangements and government policies. Rationalising the charging structure on Sydney's motorway network could deliver a range of benefits.

Figure 6 – Sydney motorway tolling arrangements (May 2012)



Source: Base map from New South Wales Government Roads and Maritime Services (formerly Roads and Traffic Authority). Tolling details collected by Infrastructure Australia from relevant information published by tolling operators.

Passenger movement in cities

The majority of governments across the country are aiming to increase the number and share of trips taken by public transport. Infrastructure Australia commends this approach.

Public transport patronage has grown appreciably in recent years. For example, ridership on the Melbourne, Brisbane and Perth public transport networks have all grown somewhat faster than population in recent years.

Infrastructure Australia recognised early in its life that public transport was undergoing a transformation in Australian cities and needed facilitation from a national level. Urban rail funding has vastly increased as a result.

Public transport has grown when options to replace car use are at least comparable with the convenience of driving. As city centres and sub-centres have been growing due to the rapid growth of service and 'knowledge economy' jobs, access by public transport has grown due to the difficulty and cost of enabling car access in dense centres.

Two ways of improving public transport relative to car access are through integrated land use planning and integrated networks of public transport.

Integrated land use planning

Integrated land use planning enables housing and jobs to be located as close as possible to transit so people can easily access the system, preferably by walking. Infrastructure Australia has stressed the importance of this integration with city plans through its project assessment process, including the measured use of agglomeration effects in the economic appraisal of projects.

Integrated networks of public transport

Integrated networks of public transport enable a system to be more effective at reaching a wider number of destinations. In Sydney, Melbourne, Canberra and Perth the use of *Park 'n' Ride* has been an important part of the network. The significant patronage growth in the outer suburbs of Perth is also a result of integrated bus networks which minimise 'transfer penalties' for passengers connecting with the rail system.

Although increasing fuel costs are likely to make public transport more attractive relative to driving, action is still required to address overall transport pricing in cities to better manage demand and encourage the best social, economic and environmental outcomes for the community as a whole.

Several of the public transport projects presented by state and territory governments for Infrastructure Australia's consideration are estimated to cost several billion dollars. The best of those proposals clearly establish a nexus with the jurisdiction's metropolitan plans and specifically link the project rationale to the land use and housing objectives of the metropolitan plan, as well as augmenting the capacity of the entire system.

Infrastructure Australia is supportive of this approach. In an environment where funding for infrastructure will remain tight, it is vital that new projects are used as a catalyst for increasing densities and changing land uses around stations and transport nodes.

In other words, the scale of the land use change needs to be commensurate with:

- the scale of the growth challenges facing a city and the government's plans, for example targets for urban infill development; and
- the size of the project.

The alternative – simply building a new project and not using it as a lever for sustainable development – is likely to impose an economic cost as opposed to creating a net benefit.



Park and ride facilities, whether around rail networks or bus corridors such as this example in Canberra, are an important part of improving the overall attraction of 'trunk' public transport routes.

The future

Infrastructure Australia will continue its work in the following areas:

- advocating improvements in metropolitan planning strategy, including working with the Council of Australian Governments' Reform Council and state and territory governments to improve urban infrastructure planning, particularly with a view to building on the strong foundations of the *National Urban Policy*;
- developing an urban public transport strategy;
- developing a corridor protection strategy; and
- engaging with governments and others about road charging models, including network charging.



The Victorian Government has demonstrated initiative in proceeding with the first stage of a significant upgrade of tram route 86. The project exemplifies many sound elements, notably integration with land use changes along the route, and serves as a model for similar projects in Melbourne and elsewhere.



The background of the page is a photograph of a large, reddish-brown rock formation, likely a granite outcrop, in a dry, open landscape. The rock surface is textured with various cracks and weathering patterns. In the distance, there are more rock formations and some sparse green trees under a clear blue sky.

03.

International gateways and the national land freight network

Road trains are commonplace in outback Australia. With appropriate safeguards, allowing so-called 'B-triples' on to parts of Australia's interstate highway network could extend the growth in the productivity of the freight sector that began 20 years ago with the introduction of B-doubles.

Our goal To increase the productivity of Australia's international gateways and freight linkages

Key challenges

Recent government and industry attention on our international gateways and freight sector needs to be maintained. Rapid implementation of previously agreed regulatory reforms is required. Allowing freight to go off the radar will carry considerable costs for our economy and quality of life.

The way forward

Infrastructure Australia recommends that governments and industry focus on development and implementation of port plans in line with the *National Ports Strategy*⁴⁷, finalisation of the *National Land Freight Strategy Update*⁴⁸ and implementation of regulatory reforms in the freight sector.

Planning effectively for freight will allow us to create a truly national, seamless freight network that enables products to move from ship to shore to door as efficiently as possible, with real productivity gains.



Australia's exports of coal depend heavily on efficient rail transport. This train is transporting coal from Dawson Mine, Moura Coal System in central Queensland.



While coal is still a dominant trade through the Port of Newcastle, other products and containers are being moved in increasing quantities through this key gateway. Newcastle also illustrates that port development can coexist with city regeneration – as seen by the redevelopment in the lower right hand corner of the photo. This was a key theme of Infrastructure Australia’s ‘Ports and Cities’ conference in March 2012.

Understanding our key challenges

Australia is a vast and relatively isolated country. We are heavily reliant on effective and well-planned gateways and road and rail networks to efficiently deliver and transport the products we need for daily use and export.

Just as all governments need to work together to plan places for people, we need to plan places for freight.

An ad hoc approach to freight management – based on generalised assumptions about growth rather than deep analysis of the issues and scoping of the opportunities – will not achieve the outcomes we need.

The national and international importance of our gateways and freight networks makes it essential that we improve investor and industry confidence in our long-term plans for ports and freight. Effective inland connections are essential to support efficient port operations and growth, thus ports and land freight networks must be considered holistically under a national strategy.

Planning for freight also needs to be underpinned by genuine engagement with the community. We need to communicate the case for change, understand community concerns and preferences, identify trade-offs and

develop workable solutions to freight-related problems. Unless we engage with the community on these issues, we will not achieve a social licence to operate. In other words, there will be continuing complaints about noise, safety and other impacts that will constrain the operation of ports, airports, freight terminals and more efficient freight vehicles.

Continued economic growth is heavily reliant on the evolution of a seamless, networked freight system, and the use of the most efficient freight vehicles and technologies. This requires:

- a collaborative approach between industry and government to finance freight infrastructure initiatives;
- a system of linked designated ‘places for freight’, where the most productive vehicles are given priority and which will be extended through the protection now of land corridors and sites for future freight uses; and
- flexible design of freight corridors to cater to multiple freight modes.

This approach is underpinned by an approach to normalise freight policy. Freight has been the poor relation of transport planning. This needs to be changed so that freight is included in best practice land use and transport planning.

Our challenge is to create a seamless freight network to move products from ship to shore to door and back as efficiently as possible.

The way forward

Infrastructure Australia and the National Transport Commission have been working with industry and governments to develop two, interlinked national strategies for ports and freight: the *National Ports Strategy* and the *National Land Freight Strategy Update*.

The Council of Australian Governments is currently considering the *National Ports Strategy* and Infrastructure Australia has presented its advice to the Australian Government on the *National Land Freight Strategy Update*.

National Ports Strategy

The *National Ports Strategy* recommends the development of long-term plans for each major port's jurisdiction, region and precinct. Implementation of these plans needs to be driven by supply chain stakeholders and not merely by governments. For their part, governments should acknowledge the critical importance of ports as places for freight and trade through: their inclusion in planning activities such as city strategic plans; simplifying, streamlining and, where necessary, accelerating approvals; and ensuring that road, rail and land corridor plans appropriately support ports.

The successful transfer of the Ports of Adelaide and Brisbane to private ownership, and the proposed long-term lease of Port Botany are fully consistent with the strategy.

In anticipation of the Council of Australian Governments' endorsement of the *National Ports Strategy*, Infrastructure Australia and officers from the National Transport Commission have:

- approached a range of industry stakeholders to assist with the development of the strategy, including the Minerals Council of Australia, National Farmers Federation, Ports Australia, and individuals with extensive experience in port planning and operations;
- agreed with Port Kembla, New South Wales and the Port of Gladstone, Queensland to use those ports' plans as pilots; and
- assisted in planning activities for the Mount Isa to Townsville supply-chain.

A place for freight

We need to start planning for places for freight now. A coordinated, national approach to freight is the only viable approach.

Infrastructure Australia has identified six essential characteristics to support the development of places for freight:

1. they are subject to an agreed national level planning framework;
2. they have a streamlined approvals process;
3. they are used by the most efficient vehicles;
4. market principles apply to their development and operation;
5. private investment is encouraged; and
6. they enable interoperability and connectivity.



Infrastructure Australia has been working with stakeholders in Geelong to maximise opportunities from investment in the region's port.

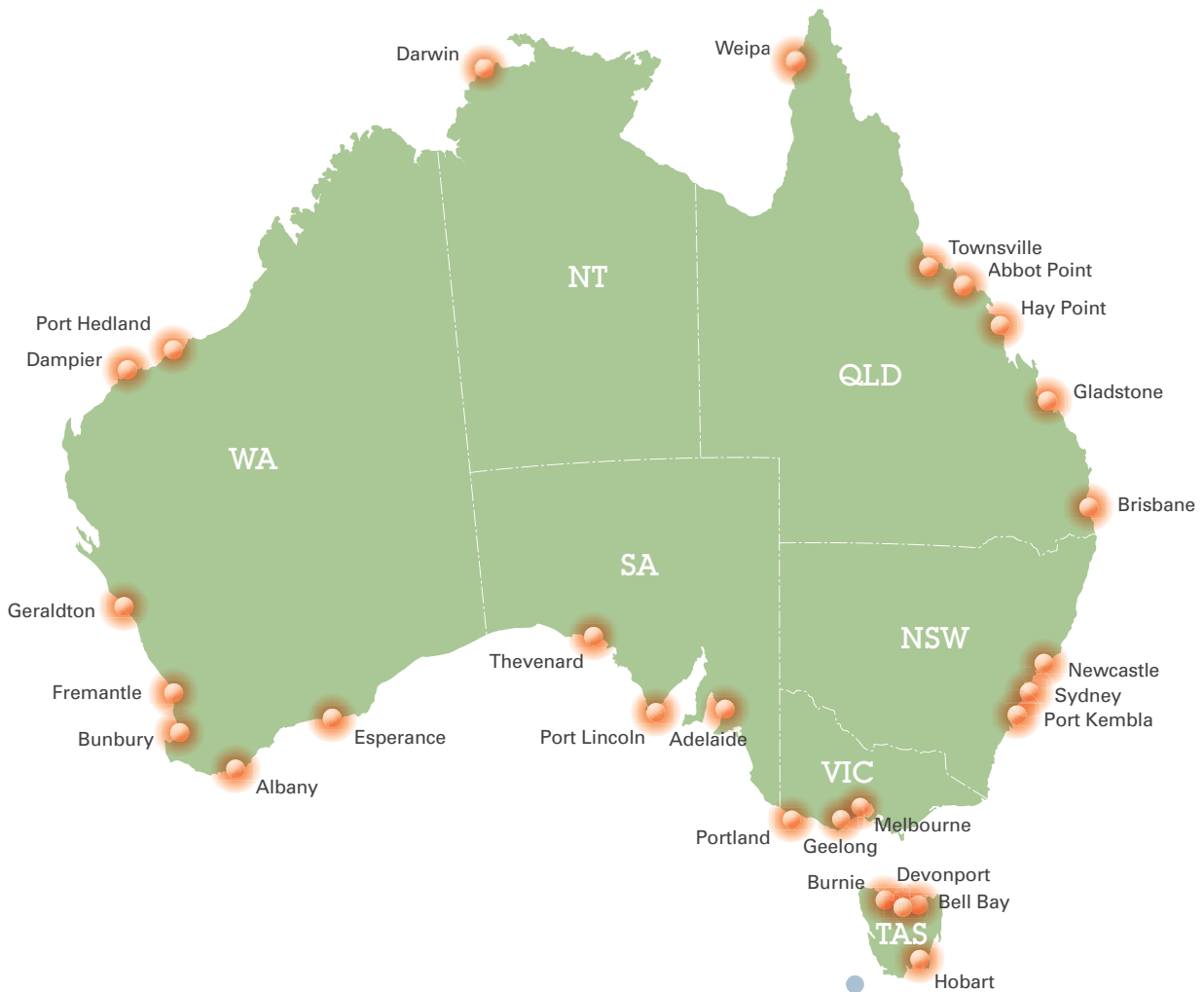
In a welcome move, the newly privatised Port of Brisbane, together with Ports Australia, is preparing a first draft of key performance indicators for Australia's container and bulk ports.

Infrastructure Australia will continue to work with the National Transport Commission, Ports Australia, the Bureau of Infrastructure, Transport and Regional Economics, governments and the private sector to ensure best practice in implementing the *National Ports Strategy*. This includes:

- **research** – in relation to relevant ports, land side links, nodes and sea channels; efficiency improvements; and forecasting, including scenario modelling;
- **key performance indicators and learning-based improvements** – to support improved ports and land side efficiency, planning and performance;
- **planning** – developing long-term integrated master plans for ports;
- **reform** – streamlining the environmental management and assessment processes, as well as reviewing other legislation and regulations, including access pricing reform; and
- **technology** – exploring opportunities for real-time information technology systems to improve performance.

Supply chain stakeholders need to drive the implementation of long-term plans for Australia's major ports.

Figure 7 – Capital city ports and Ports Australia ports with throughput over three million tonnes in 2010-11



Source: Ports Australia and Geoscience Australia

A logical extension of Infrastructure Australia’s proposals for our national ports as ‘places for freight’ is that the critical roads and railways that serve and link the trade gateways should also be regarded as places for freight. This would begin to address the imperative of integrating freight, transport and land use planning policies, especially in our cities. Infrastructure Australia is heartened by the openness of jurisdictions to progress this critical issue, and that some state freight strategies are already pursuing this thinking.

In creating an efficient freight network it is essential that we acknowledge the critical importance of ports as places for freight.

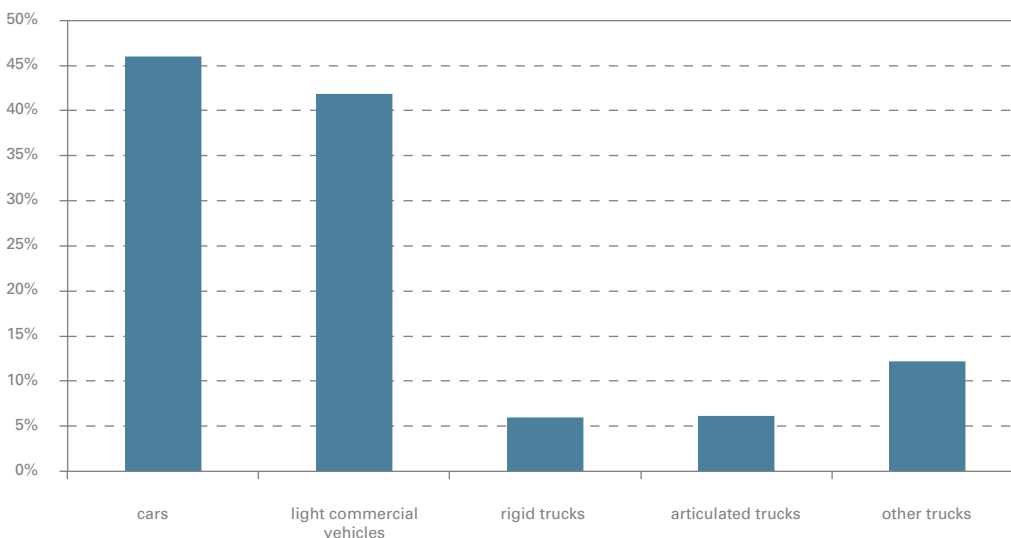
National Land Freight Strategy Update

Australia-wide, freight productivity, safety and community amenity are less than ideal. Freight and passenger vehicles often compete for road access. Figure 9 shows that growth in the use of cars and light commercial vehicles is projected to far outweigh growth in truck movements that handle most of the road freight task.

Lack of certainty about decisions affecting freight adversely affects national productivity and quality of life. In practical terms, this is demonstrated by:

- the transport infrastructure network not reflecting freight demand, as shown by operating restrictions, concerns about infrastructure adequacy, and urban congestion on main freight routes;
 - industry frustration over the limited scope and slow delivery of transport reform, including the failure to address uneconomic restrictions on the use of efficient vehicles; and
 - an incomplete pipeline of nationally significant networked projects that are needed to stimulate freight efficiency.
- establishment of a Standing (Ministerial) Council on Transport and Infrastructure with a priority task to develop a national land freight strategy;
 - as part of the *National Urban Policy*, the Australian Government announced it will require a 20 year freight strategy for each capital city by 2014;
 - substantial advances were made in jurisdictional freight policies including in New South Wales, Queensland and Western Australia;
 - continuing work – albeit with only modest progress – on the Council of Australian Governments’ *Road Reform Plan* trial of incremental pricing for road access;
 - agreement by the Australian and New South Wales Governments that government investment for freight on joint use rail infrastructure in northern Sydney will be accompanied by freight use rights; and
 - a decision to proceed with the development of an intermodal freight terminal at Moorebank in Sydney’s south west.

Figure 9 – Percentage contribution to growth in urban road use 2005 to 2020



Source: Bureau of Infrastructure, Transport and Regional Economics

Action on land freight reform

Through extensive consultation in developing the *National Land Freight Strategy Update*, Infrastructure Australia has identified three key national issues for freight:

1. the need to address road governance issues, to enable a coordinated approach to road use for freight;
2. the need to ensure that freight is considered in strategic planning and long-term land use; and
3. the need to secure a broad-based commitment to reform.

There are concerns about a lack of timely investment and innovation in freight road use. At present, there is no real mechanism in Australia for freight users to directly influence the condition or capacity of roads, and there is virtually no road on which freight is accorded priority. As is the case for railways, it is clear that freight on some roads is much more important than on others. However, unlike railways, roads are grouped according to responsibility by the tiers of government. For the freight industry, this is a governance issue.

The Council of Australian Governments' *Road Reform Plan*⁴⁹ touches on aspects of this issue, for example the potential for direct charging for road use by heavy vehicles. However, broader governance issues that are not addressed include: investment into roads for use by more efficient vehicles; the ability of the freight industry to identify its own road use needs; freight priority; complementarity between freight modes; and whether some roads should be accorded a different status in relation to freight.

There is also the potential to create a national roads portfolio manager, to realise nationally significant economic benefits. This approach would use commercial mechanisms to identify and address strategic deficiencies in roads in regional Australia.

While these may seem substantial advances in policy development, given the generally limited progress on an array of freight issues over many years, industry is understandably sceptical about the real appetite for meaningful reform. In this environment, Infrastructure Australia believes that prompt delivery of the agreed agenda on national transport regulators must be the starting point. Further, Infrastructure Australia considers it essential to demonstrate the benefits of reform in relation to our most important places for freight. It recommends that efforts be focussed on:

1. road governance reform, including competition, user charging and mechanisms to enable and encourage private investment in a national freight network as a start; and
2. two test cases regarding a national freight network that will demonstrate the benefits of reform.

Pilot areas for land freight reform

Infrastructure Australia recommends that the following sites are used as pilot studies for land freight reform:

1. Hume Highway (New South Wales and Victoria): by enabling high productivity vehicles to use this corridor; and
2. Chullora rail terminal (New South Wales): by increasing mass limits on access roads.

The Hume Highway and Chullora rail terminal are ideal test cases for reform. The highway and terminal are among the most important elements of any national freight network. Conversely, unwillingness to identify and resolve productivity impediments at these places would be seen as a lack of commitment to necessary reform in the freight sector.



The B-triple represents a large upwards step-change in road freight productivity, carrying around twice the freight of a standard semi-trailer, while consuming in the order of seven per cent less fuel per tonne of freight than a B-double.

Aviation

Productivity Commission Review – Economic Regulation of Airport Services

The Productivity Commission's review of airport regulation was completed in late 2011.⁵⁰ It found that with some changes, for example increased monitoring of prices and services, the current system of regulation works effectively.

The Australian Government broadly endorsed the Commission's findings.

These developments are an encouraging sign that well-designed regulatory structures, supported by periodic review, can facilitate significant private investment in the nation's infrastructure networks.

The Commission's brief included a reference to examine the provision and quality of land transport facilities providing access to the airports. It found that land transport issues are most extreme at Sydney's Kingsford Smith Airport.

The New South Wales Government's acknowledgement in its November 2011 submission to Infrastructure Australia that a Port Botany and Sydney Airport Transport Improvement Plan is required, and the New South Wales Government's decision to sell a long-term lease of Port Botany, are significant developments.

Infrastructure Australia's March 2012 report on private financing options for various motorway links in Sydney recognises these developments and recommends that the Australian and New South Wales Governments commit funds to the development of such an improvement plan.

Joint Study on aviation capacity in the Sydney region⁵¹

As Australia's most significant international airport, Sydney's Kingsford Smith Airport is a key piece of economic infrastructure. Providing for just over 40 per cent of international arrivals to Australia, it is vital to the Australian economy.

The joint study was overseen by officials from the Australian and New South Wales Governments, and a panel of independent advisers. It was released in March 2012.

Forecasts undertaken for the joint study indicate that, by 2035, the airport will need to manage more than 76 million passenger movements each year. This is double the current demand.

Infrastructure Australia is pleased to see the completion of this important piece of work. The study provides a clear evidence base to plan for the future aviation needs of greater Sydney. It is encouraging to see a joint process undertaken for this work; the Australian and New South Wales Governments must continue to work together to agree an effective means of meeting Sydney's aviation needs.

The study recognises that:

- optimising operations at Kingsford Smith Airport is a necessary short to medium-term response to meet increasing demand; and
- Sydney needs a second airport to effectively cope with the significant increase in demand over the long-term.

A decision on the location of a second airport will shape Sydney and its surrounds for the next century. Badgerys Creek, approximately 60 kilometres south west of the Sydney central business district, is recommended in the joint study.

Wilton was chosen as the second best site and the Australian Government has announced a scoping study into the site.

The future

Infrastructure Australia will work with industry and governments to implement the *National Ports Strategy* and *National Land Freight Strategy Update*.

Infrastructure Australia's primary focus over the next 12 months will be to:

- work with industry and jurisdictions to implement the *National Ports Strategy*;
- secure endorsement of the *National Land Freight Strategy Update* and work with industry and jurisdictions to see it implemented; and
- work with jurisdictions to determine priority supply chains and identify projects to improve the productivity of these supply chains, from mine to port. This work will be underpinned by the *National Ports Strategy* and *National Land Freight Strategy Update*.

Infrastructure Australia intends to work with relevant stakeholders to pursue the resolution of freight productivity impediments through pilot projects, as well as actively participating in efforts to reform road governance.

