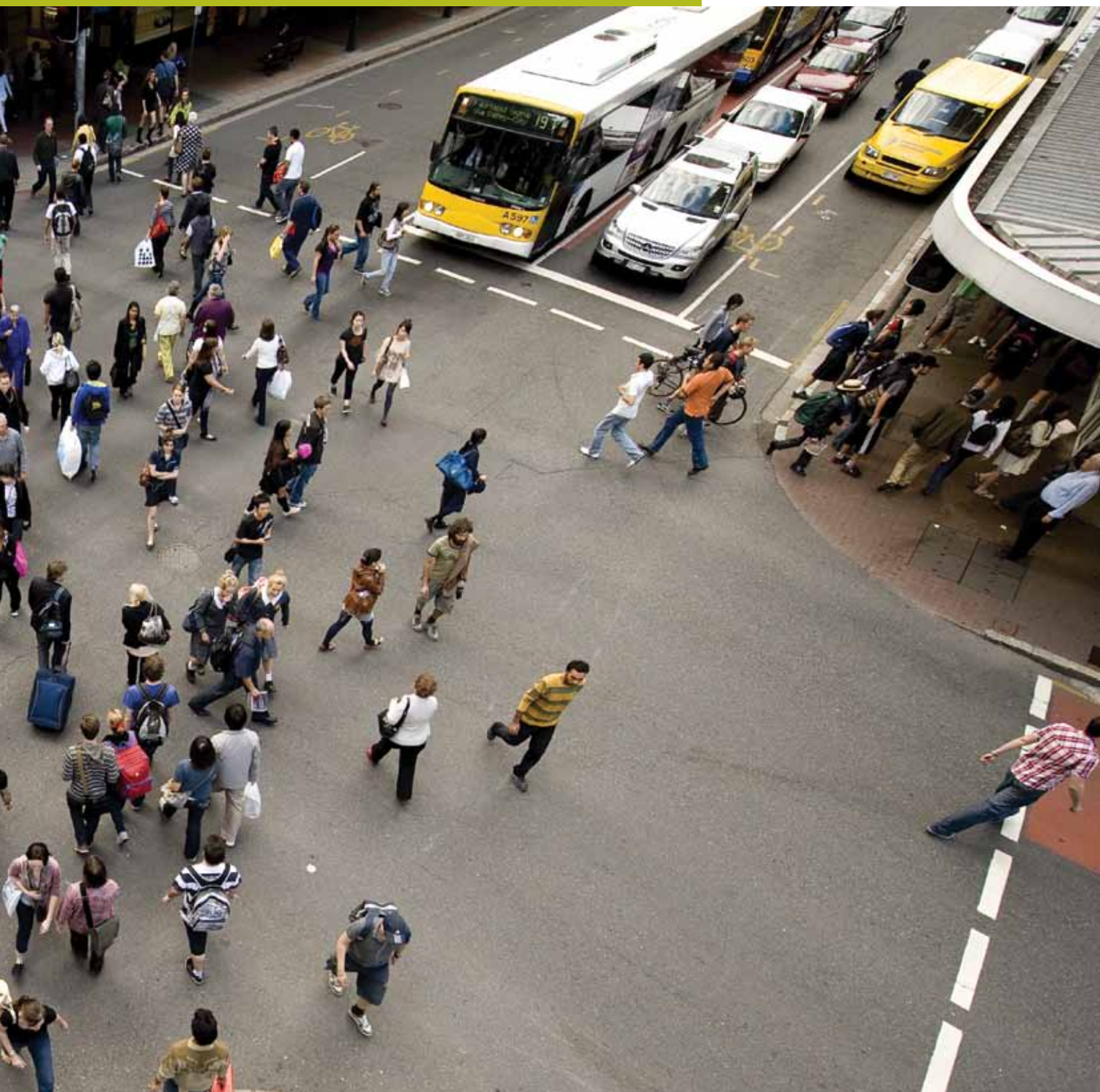
Brisbane, QLD

Chapter 3



Chapter 3

Productivity

Productivity and competitiveness are key goals for nations as they grow the economy and improve living standards. Australian cities are major units of the national economy and are where most Australians live. However, productivity has been at a standstill or declining for some key indicators for cities.... Therefore, a National Urban Policy is essential to overcome these impediments to the economy and improve living standards.

Future policy challenges for transport—for example, growing urban congestion and more sustainable transport—are bigger and more complex than ever before. We need a cooperative national 'whole of transport' solution, which takes into account all modes and all users.

National Transport Commission

Productivity is vital for Australia's future prosperity and wellbeing and cities are crucial to Australia's productivity. Cities are centres of economic activity, where the workforce, businesses and institutions come together. Australia's major cities are home to four out of five jobs in Australia's high growth industries of construction, health care and social assistance – industries that have collectively contributed 34 per cent of jobs growth in the last 10 years.

Many factors contribute to productivity improvement, including the skills of the workforce, infrastructure investment, technology, openness of the economy and trade barrier liberalisation, and workplace relations. How efficiently our cities connect people, industries, businesses and markets, and how effectively their economic and human capital is utilised, has a significant impact on the economic performance of our cities and their contribution to national productivity growth.

A key challenge facing Australia is the imperative to lift economic productivity to ensure that Australia's economy is built to compete and prosper in the global economy and continues to deliver wellbeing and quality of life for all Australians.

Productivity gains can be achieved by facilitating efficient and effective connections between people, businesses and markets. How effectively economic and human capital is combined has a profound impact on the productivity of our cities and their contribution to the national economy. Cities, by their concentrated form, provide immense opportunity for productivity growth, but how large cities, in particular, are planned and managed can present challenges to productivity. For example the avoidable cost of congestion in capital cities is equivalent to 1 per cent of GDP and is forecast to more than double 2005 levels to reach $20 billion a year by 2020 if nothing is done[1].

The Australian Government has been pursuing an extensive reform agenda to improve productivity, recognising that productivity growth is crucial to increasing living standards and contributing to the wellbeing of Australia's people. The Australian Government's policy agenda for productivity includes infrastructure investment, education and skills development, and supporting innovation and technological adoption. These initiatives are all aimed at securing the nation's long term prosperity whilst maximising opportunities for all.

Cities offer the potential for significant productivity gains, particularly where specialised or complementary activities can cluster together. The benefits that accrue from such concentrations of activities, known as agglomerations, include greater opportunities for innovation, the sharing of

[1] Bureau of Infrastructure, Transport and Regional Economics (2007) Working Paper 71

knowledge and services, and more specialised labour markets. Cities also provide economies of scale so that scarce resources, such as land and infrastructure, can be more efficiently and effectively utilised.

The Australian Government's goal is to harness the productivity of Australia's people and industry, by better managing our use of labour, creativity and knowledge, land and infrastructure. The government is currently undertaking a comprehensive set of reforms to advance this productivity agenda.

PRODUCTIVITY	Objectives and priorities
1. IMPROVE LABOUR AND CAPITAL PRODUCTIVITY BY:	Australia's productivity growth has been relatively low over the last decade. With our changing demographics reducing our available workforce relative to population size, our prosperity and standard of living is at risk of decline into the future. Improving the performance and use of both labour and capital is required to secure long-term national productivity. Sustained and targeted investments in people and capital are required into the future.
– Aligning workforce availability and capacity to meet labour force demand	Misalignment between workforce supply and demand occurs either when there is too much or too little capacity in the general population, or when people are unable to access jobs even if they are available and willing to work. In order to support economic development in cities and their regions, our planning and investment decisions about social and economic infrastructure should assist in managing sustainable population growth and distribution, and accessibility to jobs and education, with a focus on aligning workforce availability and capacity to meet labour force demand.
– Supporting education, research and innovation	While the nation develops many innovative approaches to city problems, in too many instances opportunities to generate new wealth for the nation are missed. Supporting education and research will increase people's capacity. There is an opportunity to foster more innovative approaches within our cities and share this knowledge, information and experience.
2. INTEGRATE LAND USE AND INFRASTRUCTURE BY:	The distribution of people and jobs, inadequate infrastructure, and conflicting land use activities, can limit the productive capacity of our cities. We can make significant structural differences to the productive capacity of our cities through more effective integration of land use and infrastructure, and build on the competitive advantages of our cities through agglomeration and high accessibility.
– Integrating planning of land use, social and economic infrastructure	The shape of our cities cannot be changed quickly or easily, and yet planning and shaping of our cities has profound economic, environmental and social consequences. There are several ways to maximise yields on land use, improve productive capacity, and leverage investments in infrastructure. One such means is to increase densities surrounding transport corridors, interchanges, and activity centres.
– Investing in urban passenger transport	Transport infrastructure is costly in terms of both capital investment and maintenance. Yet it is often not managed or used to its full capacity. Connecting centres and facilities with well targeted, reliable, high frequency, low cost, integrated active and public transport networks can provide greater accessibility options for urban populations. Placing a priority on non-car transportation systems and networks, such as public transport and active transport, is an important step in achieving better productivity, sustainability and liveability objectives. Smart infrastructure, pricing and travel demand mechanisms can further serve to improve the effectiveness of transport networks.

– Protecting corridors, sites and buffers	A major impediment to the placement of new infrastructure or the expansion of existing infrastructure is the lack of planning for, and protection of, critical infrastructure corridors and sites. A further concern is the adequate protection of sufficient buffers to prevent facilities from being encroached upon by incompatible land uses. Best practice approaches to plan and protect corridors, sites and buffers are required as part of integrated land use and infrastructure planning.
3. IMPROVE THE EFFICIENCY OF URBAN INFRASTRUCTURE BY:	Well targeted, high quality infrastructure is vital to lift the productivity of our cities. Infrastructure is costly in terms of both capital investment and maintenance. Yet it is often not managed or used to its full capacity. To achieve improved efficiency it is important to create an environment conducive to well targeted infrastructure investment. This includes ensuring impediments, whether they are tax, regulatory, or market imperfections, do not prevent or distort private investment (or financing) in infrastructure where it would otherwise have taken place. It is also important that we maximise public and private investment in infrastructure by investing in worthwhile projects that have a return higher than the cost of capital.
– Maximising returns on new and existing infrastructure	Ensuring our roads, railways, ports, airports, communications, water and electricity networks can adequately provide for economic and population growth is a constant challenge. To achieve improved efficiency, we need to look at maximising triple-bottom line returns on investment in infrastructure. The Australian Government is continuing to work with industry, State, Territory and Local Government to facilitate the provision and efficient use of nationally significant infrastructure.
– Taking into account operational and maintenance costs of infrastructure and assets	The costs of operating and maintaining infrastructure and assets can place a financial burden on governments, industry and communities. Inefficient or ageing infrastructure can also waste water and energy, and generate excessive greenhouse gas emissions. Before building new infrastructure, or undertaking major refurbishment, consideration should be given to the long-term operational, maintenance and replacement costs.
– Connecting private investment capital to infrastructure and assets of high public benefit	Private business is a major contributor to the infrastructure and built form that shapes and drives our cities. Quality infrastructure planning and prioritisation that gives long term certainty can encourage private sector participation in our nation's infrastructure, including through successful public-private partnerships that deliver greater economic and social benefits from capital investment.
– Utilising smart infrastructure	New technologies can improve and enhance safety, efficiency, cost-effectiveness and environmental performance of existing infrastructure networks, and reduce the need for costly new investment. Smart infrastructure encompasses a broad range of information and electronics technologies. The use of smart technology in new and existing infrastructure promotes the optimal use of our infrastructure assets.
– Enhancing connectivity through the National Broadband Network	Increasing the capacity for industry and communities to access information and services, and to conduct business transactions online, is required if we are to improve our international competitiveness, overcome the geographical isolation of our cities, and reduce the need to travel both internally and across borders. An accessible high speed National Broadband Network is fundamental to improving communications and connectivity for businesses and communities and to maximise the application and benefits of smart infrastructure.

Improve labour and capital productivity

The findings of the *2010 Intergenerational Report* indicated that there would be a need for productivity growth to improve living standards while managing the pressures associated with an ageing population. There are many areas in our cities that do not make best use of the labour force. As skills and innovation are fundamental to productivity, this potential can be unlocked by supporting education and employment opportunities in these areas, as well as improving transport networks to make these areas more accessible. In doing this, we must harness the agglomeration benefits that cities provide, and foster better connections between people and business.

Aligning workforce and labour demand

The outer suburbs of our capital cities and major regional centres are experiencing population growth pressures and housing and transport affordability pressures. The proximity of existing and planned housing to employment centres is a growing problem in a number of our major cities – especially in the outer metropolitan growth areas. This can limit access to social and economic opportunity. The need for people to travel long distances from greenfields areas to access jobs in the centre of cities also places strain on transport infrastructure.

The establishment of local employment precincts combined with improved skills and participation of the local workforce in these places can:

- improve liveability in these areas through reduced travel times to jobs and services, and potential reduction in congestion;
- promote economic diversification and improved economic resilience in our major cities; and
- improve productivity and prosperity.

Supporting education, research and innovation

Enhancing flexibility and capability in our cities means integrating skills, innovation, creativity and infrastructure into industry development and transformation. This includes making the most of our education and training system so that supply and demand for training are better aligned and responsive to structural changes to the economy and students are able to make more informed training choices that match future work opportunities.

The Government is investing in capabilities in our cities. Enhancing Australia's skill levels will enable us to successfully adapt to change. A substantial reform agenda increasing opportunity for skill development has been agreed to by COAG. Through this agreement, we have set targets to increase human capital development such as increasing year 12 completion rates to 90 per cent by 2015 and halving the proportion of Australians aged 20 to 64 without Certificate III or above by 2025. Key reforms to education and training include:

- implementing universal access to early childhood education;
- the Smarter Schools National Partnerships to boost foundation skills in schools;
- uncapping the number of public university places (from 2012) to allow universities to offer a place to eligible students;
- implementing the *Skills for Sustainable Growth Strategy 2010* budget package, including measures to boost literacy and numeracy skills of Australians in the workforce.

The Government is also supporting industrial transformation by helping workers and employers move into higher, value-added activities.

The Australian Government's investment in innovation, technology and entrepreneurship will build a competitive, highly-skilled economy into the future.

Over the next decade the *Powering Ideas* agenda involves:

- reforming university funding arrangements and boosting investment with a focus on excellence and transparency, and increased support for postgraduate research students;
- investing in science and research infrastructure and taking an innovative approach to the commercialisation of research to enhance Australia's competitive edge; and
- improving innovation skills and workplace capabilities, including management and leadership skills.

This investment is underpinned by investment in infrastructure that maximises opportunities for new industries, such as Commonwealth investment in the National Broadband Network, public transport, rail and roads. Better price signals in the use of infrastructure will also promote more efficient and effective use of and investment in infrastructure.

Further initiatives to improve labour and capital productivity

To help align workforce and labour demand the Australian Government will:

- Implement a new funding program, the Sustainable Communities -Suburban Jobs program, which will allocate $100 million to support State, Territory and local governments to plan and provide for employment precincts, manufacturing hubs and multi-function developments close to residential area. The program aims to result in reduced travel times to work and services.

To support education, research and innovation to help cities realise their productive potential and our national productivity goals, the Australian Government will:

- Implement comprehensive productivity reforms including the Skills for Sustainable Growth Strategy, a National Resources Sector Employment Taskforce, Education Investment Fund, and Trade Training Centres in Schools Program as part of a productivity policy framework to build a high-skill, high tech, low pollution economy that will succeed independent of our mineral wealth
- Implement the Government's Building Australia's Future Workforce package which includes:
  - $558 million to deliver around 130,000 training places tailored to the needs of different industries and regions through a National Workforce Development Fund
  - Continuing investments to the apprenticeship system with $200 million to assist apprentices to progress and complete their training in a more timely way

Hobart, TAS

- $1.75 billion to partner with the States and Territories on reform of the vocational education and training system
- $263 million to deliver core skills.

Integrate land use and infrastructure

The Australian Government and its COAG partners have acknowledged the need for long-term planning and investment strategies to support urban growth and change. This is particularly reflected in the national criteria for future strategic planning of capital cities that call for long-term (15 to 30 year) integrated strategic plans supported by medium-term (5 to 15 year) prioritised infrastructure and land-use plans.

Integrating planning of land use, social and economic infrastructure

The Australian Government is working with State, Territory, Local Governments and industry to ensure that future, city-shaping infrastructure is properly integrated with current and proposed land uses.

The National Ports Strategy and draft National Land Freight Strategy have been developed by the Australian Government working with the States and Territories. These strategies will guide future governance and planning to ensure that ports and freight transport systems are better planned and integrated, including in metropolitan areas. They will inform the future investments and reform policies of the Australian Government, and will guide the transport and logistics industry and State and Territory Governments in the long term development of critical city infrastructure.

Likewise, the Sydney Aviation Capacity Study will address the short, medium and long term needs of Sydney, and will take account of both future aviation needs of the Sydney region and broader planning and infrastructure needs for residential growth and economic development. It is a demonstration of the more integrated approach to land use and transport planning being undertaken by the Australian Government. It will ensure that the Commonwealth and NSW Governments are jointly taking a long-term strategic approach to examining aviation needs in Sydney and the surrounding region.

There is broad agreement across most governments that appropriate intensification of land use around specific transport corridors and activity centres would help to achieve sustainable outcomes. Most State and Territory governments have planning policies that target a certain percentage of infill development to meet population growth. Many also have policies to improve the number of people within walking distance to public transport or work.

Maximising the potential yield of land along public transport corridors and around major activity centres is a key to reducing urban sprawl and metropolitan expansion, and gives people the opportunity to live closer to jobs, facilities and other activities. Better integration of land use with transport and social infrastructure can also increase the operational efficiency of existing infrastructure and reduce the need for expensive capital outlays.

Investing in urban passenger transport

Connections between land uses and associated household and economic activity within cities are supported by land transport infrastructure. The Australian Government is committed to improving these connections. The Government is providing $36 billion through the *Nation Building Program* and the *Building Australia Fund* to support the development and improvement of our national network of highways and rail lines, as well as providing some support for off-network roads, fixing road 'blackspots' and additional measures to improve heavy vehicle movements and regional roads.

Nation Building Program and the Building Australia Fund

Since 2007, the Australian Government has made a historic shift to support transport infrastructure, including unprecedented public transport investment in our cities. This includes funding for a major rail project in every State capital city on the mainland:

- Noarlunga to Seaford rail extension and Gawler Line in Adelaide;
- The Northbridge Link in Perth
- Moreton Bay Rail line in Brisbane
- Regional Rail Link in Melbourne
- The Parramatta to Epping Rail Link in Sydney.

Urban Passenger Transport

The Gold Coast Rapid Transit project is one example of the way that Australian Government investment is focussing on the critical needs of growing urban centres. This project will ease congestion through the growing commercial and tourist hubs of Southport, Surfers Paradise and Broadbeach and will also improve access along the corridor to services. Likewise the significant $2.5 billion investment in the Ipswich Motorway will link commuters from Ipswich to Brisbane, increasing productivity and reducing congestion.

Early works have commenced on the Regional Rail Link project in Melbourne. It will provide a dedicated dual track link from Geelong, Ballarat and Bendigo to the Melbourne business district, separating V-Line regional services from metro rail services. This will expand the capacity of the network and significantly reduce congestion on both the rail and road networks. The Commonwealth's $3.2 billion investment in this project will improve the productivity of Melbourne. Additionally, the project will provide opportunities for urban redevelopment and infill along the corridor.

The Perth City Link project that will commence construction later this year will sink rail lines in the CBD to help revitalise the Perth city and allow further redevelopment of the City centre. The project will remove the rail line divide between Perth and Northbridge and will result in a number of productivity and efficiency benefits for people and businesses in Perth.

The Australian Government is also investing in new urban rail upgrades in Adelaide, which will better link outer metropolitan communities with the work and recreational facilities across the city.

Urban roads

The South Road Superway project that has commenced in Adelaide will be the biggest road construction project in South Australia's history. It follows the recently completed Northern Expressway link between Gawler and Northern Adelaide, which has improved the efficiency of freight into the Port Adelaide area. Work on reducing congestion and maximising traffic flow on the Western Ring Road in Melbourne is progressing well. The Australian Government is contributing $900 million to this $1.2 billion project, which involves lane widening and safety improvements on one of the city's busiest road networks.

The F5 widening project in south-west Sydney (from Narellan Road to Brooks Road) will improve safety, reduce travel times and assist workers in Campbelltown to commute to major employment centres in south and western Sydney.

Protecting corridors, sites and buffers

Through its historic *Nation Building Program* the Government has invested heavily in improving the movement of people in and around our cities, helping to move freight more efficiently between our businesses, ports and markets.

The Government's investment is addressing the increasing freight task in our urban centres. The Government established the Moorebank Project Office in 2010, to work through the issues and options for the development of an intermodal terminal at Moorebank on Commonwealth owned land in Sydney. Moorebank represents a significant opportunity to shift freight from Botany Bay onto rail – equal to the capacity of more than one million trucks which would otherwise need to use Sydney's roads each year from 2020. This project (subject to environmental and other approvals processes) will not only benefit Sydney, it will result in significant efficiencies in freight movement, which will benefit the nation.

These examples of some of our major projects in our cities demonstrate the strategic investment that the Government is making to enable our cities to become more liveable, more productive, and more responsive to projected growth.

Further initiatives to integrate land use and infrastructure

To further progress land use and infrastructure integration, the Australian Government will:

- Apply the principles and objectives of the *National Urban Policy* to future investment in infrastructure to the second *Nation Building Program* and other Commonwealth investment programs
- Ensure that projects funded through the second *Nation Building Program* are aligned with the COAG review of capital city strategic planning systems
- Implement a new funding program, the *Liveable Cities Program* to facilitate tailored local solutions to urban design and infrastructure challenges in our 18 major cities. This program, along with other Australian Government investment programs, will support:
  - public transport projects which facilitate increased residential density and employment nodes to improve transport connectivity within cities and accessibility to employment and services
  - road and rail infrastructure projects which increase the capacity of our cities to function more efficiently and effectively now and into the future
  - projects and reforms that deliver better use of infrastructure to ensure maximum benefit for Australian businesses and communities
  - urban renewal projects which are linked to accessible public transport and which provide mixed income housing, improved housing affordability and access to employment opportunities in our cities
  - the development of 'second CBDs' in our largest cities of urban centres, such as Parramatta for Sydney, that will create a better distribution of opportunity and lifestyle choice
  - the identification and preservation of sites and corridors for the future growth of our cities
  - projects which incorporate walking and cycling infrastructure to enhance local networks
- Require, as a condition of funding for the second *Nation Building Program*, that each capital city has in place, by 2014, a 20 year freight strategy consistent with the *National Land Freight Strategy* to:
  - identify the key demand forecasts, key bottlenecks and pressure points
  - ensure that land use planning systems adequately provide for freight terminals and transportation corridors, including buffer zones, and take into account ports and aviation freight hubs
  - ensure that freight planning and decision-making focuses on achieving whole-of-supply chain productivity gains

  - identify a range of proposed investment plans, performance indicators and regulatory and pricing reform initiatives to facilitate meeting the forecast freight system demand
  - Consider travel demand management policies to reduce congestion in our cities

- Commission Infrastructure Australia to further review how nationally significant transport, communication and energy corridors, sites and buffers in our major cities can be better planned, protected and managed, while minimising disruption to communities. Building upon the findings of this work, the Australian Government will:
  - make the planning and protection of national infrastructure corridors, nodes and buffers a requirement to be eligible for Commonwealth infrastructure funding
  - identify Commonwealth lands that could form part of economic infrastructure corridors/nodes, and protect them from sale or incompatible alternate use
  - further develop an effective national land use planning framework for land near airports and flight paths. The framework will support the protection of operational airspace and processes to ensure that communities are not exposed to unacceptable levels of aircraft noise
- Engage with capital city airport operators, and States and Local Government on coordinated and integrated planning on and around airports through existing Planning Coordination Forums. This will include improving planning and investment in public transport links to our airports
- Use the outcomes of the 2011 joint *Sydney Basin Aviation Capacity Study* to inform policy, investment and decision-making for future aviation needs in the Sydney region
- Work with States and Territories to implement the *National Ports Strategy* by August 2011, which will improve and reform port governance and planning. The *National Ports Strategy* covers both bulk commodity ports and container ports, identifying:
  - the most effective regulatory and governance frameworks
  - ways to improve land planning and corridor preservation
  - better use of reforms to improve landside efficiency, reliability, security and safety
  - the future infrastructure requirements of Australia's ports, including road and rail links

Darwin, NT

Brisbane, QLD

- Work with States and Territories to plan and develop strategic intermodal freight hubs, which will improve freight flows and remove many large, heavy vehicles from our urban roads.

Improve the efficiency of urban infrastructure

The Australian Government has recognised that infrastructure is fundamental to the productivity of the nation and has established Infrastructure Australia to advise the Australian Government on priorities for nationally significant economic infrastructure.

Maximising returns on new and existing infrastructure

Well targeted, high quality investment in infrastructure is vital to lift the productivity of our cities and our nation. In many Australian cities population growth has outpaced infrastructure, leading to inefficiencies and greater costs to the economy. We need to overcome such shortfalls by ensuring that both existing and new infrastructure is used more efficiently in our cities, whether through better planning and integration, competition and regulatory reforms, pricing signals, or more innovative technology.

The Australian Government is committed to the implementation of national transport regulators that enable more seamless national regulation of the $61 billion transport industry. By 2013 there will be single national laws covering maritime safety, rail safety and heavy vehicles. This will reduce the number of regulators across the country from 23 to three. These microeconomic reforms will improve safety, simplify the compliance task for transport operators and boost national income by up to $30 billion over the next 20 years.

Taking into account operational and maintenance costs of infrastructure assets

The Australian Government is undertaking significant reforms to the way infrastructure projects of national significance are planned, assessed, funded and regulated. A more structured approach to infrastructure planning and assessment, as advocated by Infrastructure Australia through its seven step, '*Reform and Investment Framework*', will be applied to developing long term national infrastructure strategies. Taking into account operational and maintenance costs of infrastructure assets and how these are to be shared across the spheres of government will be incorporated into this approach.

Connecting private investment capital to infrastructure and assets of high public benefit

Modernising Australia's infrastructure is an enormous task, one that is ultimately too big for government to achieve alone. It will require greater involvement from the private sector, including the superannuation industry, to leverage the best outcomes for our social and economic infrastructure. It is therefore important that Australian governments help provide a policy and regulatory environment which makes it attractive for the private sector to invest in social and economic infrastructure.

Utilising smart infrastructure

Technology opens up ways for us to use infrastructure much more efficiently. Smart infrastructure can allow road and rail traffic to flow more steadily, gaining greater capacity of the infrastructure and lowering energy consumption.

The Government has invested $90 million through the Australian Rail Track Corporation (ARTC) for a trial of the Advanced Train Management System.

Efficient motorway performance is critical to Australia's economic performance. Motorways are also important connectors to our international gateways. Motorways carry a far higher proportion of traffic than their share of pavement. For example, the Brisbane motorway network comprises two per cent of Brisbane's total road network but carries 37 per cent of Brisbane's total traffic task in terms of distance travelled and 54 per cent of the commercial vehicle traffic task.

Effective system control through integrated data collection sensors and control tools improves real time management of motorways to secure a higher and more consistent level of motorway performance. This produces travel time savings and improved reliability in the network, which has clear productivity benefits.

Geelong, VIC

Additionally, smart technologies applied to managed motorways enable better use of existing infrastructure, delivering better network performance, without the need for expensive capital upgrades that cost governments billions of dollars.

Specific benefits of managed motorways tools include:

- Variable message signs: deliver an 8 to 13 per cent increase in travel speed
- Ramp metering: delivers a 13 to 26 per cent increase in travel speed, an increase in volume (throughput of traffic) of between five and 30 per cent and a 15 to 50 per cent reduction in road accidents.

A trial of dynamic co-ordinated freeway ramp signals on the Monash Freeway in Melbourne delivered a number of benefits including time savings, reduced delays and savings in fuel usage and greenhouse gas emissions.

Reducing congestion in cities is important for community well-being. The Treasury's *'Australia's Future Tax System'* notes that the typical costs associated with congestion include travel delays, variable travel times (unreliability), high vehicle operating costs (including higher rates of fuel consumption), reduced productivity, increased driver and passenger stress, additional greenhouse gas emissions, poorer urban environment and air quality and, as a consequence, higher health costs.

Managed motorways can be effective in reducing congestion on busy roads, thus also delivering important sustainability and liveability outcomes from our transport network. Reductions in road accidents, not only improves safety outcomes but also reduces delays, ensuring people can move from their workplaces to their homes safely and quickly. The rapid growth of our cities, as well as the outward expansion of cities over the last 50 years, has created significant congestion on city roads, which has an impact on residents' quality of life and reduces, family social time and productivity.

By addressing road congestion, managed motorways can support more sustainable cities. Given that vehicles under congested conditions use more fuel and emit more pollutants than vehicles under free-flow conditions, these systems deliver important sustainability improvements through greater fuel efficiency and reduced emissions attributed to cars and trucks idling on congestion roads.

Enhancing connectivity through the National Broadband Network

In the face of increasing global competition, the Australian Government has recognised the importance of high speed information and communication networks to support innovation and future economic development and has committed up to $27.5 billion in equity for the delivery of the *National Broadband Network*.

Further initiatives to improve the efficiency of urban infrastructure

To further improve the efficiency of urban infrastructure, the Australian Government will:

- Implement the *Infrastructure Investment* and *Financing Reforms* package of measures to improve the quality of infrastructure development and private sector opportunities to invest in infrastructure, including in urban areas. The reforms:
  - enhance the role of Infrastructure Australia (IA). Additional funding of $36 million over the next four years has been committed to continue and strengthen Infrastructure Australia to develop long-term strategies to tackle infrastructure bottlenecks, improve our vital freight networks, and promote private funding of domestic infrastructure by investors like superannuation funds. IA will also publish project assessments and cost benefit analyses where information is not commercially sensitive
  - establish special tax provisions to attract up to $25 billion of private and superannuation investment in Australian infrastructure. This will improve certainty for early stage

losses and alleviate risk by removing the *Continuity of Ownership Test* and the *Same Business Test* and uplifting early stage losses to the government bond rate
  - enhance the transparency of planning, implementation and evaluation of infrastructure projects
  - ensure that the Government undertakes post-build evaluations of Australian Government funded projects
  - establish a comprehensive *National Infrastructure Construction Schedule*, listing large economic and social infrastructure projects in Australia to complement the *National Priority List*
- Introduce a *National Smart Motorways* trial ($61.4 million over three years) to retrofit congested motorways in our capital cities with new technology which improves traffic flow, cuts energy use and emissions from idling cars, and achieves greater productivity from existing infrastructure
- Continue to encourage the States and Territories in best practice use and delivery of *Public Private Partnerships* (PPPs) in infrastructure procurement where these provide value for money, and investigate innovative approaches to managing patronage risk to encourage private investment in urban infrastructure
- Work with State, Territory and Local Governments to finalise the *National Land Freight Strategy* by the end of 2011. The strategy is a blueprint for a truly national, integrated and multimodal transport system capable of moving goods quickly, reliably and efficiently.

Toowoomba, QLD

National Smart Managed Motorways Trial

The Australian Government will provide $61.4 million over three years for the development of a national smart managed motorways trial to improve congestion, lower urban emissions, and expand the capacity of existing outer city road infrastructure networks.

The program will fund smart infrastructure road projects identified by Infrastructure Australia as demonstrating high benefit-cost ratios and improving traffic demand management and the overall efficiency of the transport flows in major cities.

Efficient motorway performance is critical to Australia's economic performance. Managed motorways use system control through integrating data collection sensors and control tools to improve real-time management of motorways to secure a higher and more consistent level of motorway performance. This results in travel time savings and improved reliability, improved road safety and lower greenhouse gases emissions.

An initial set of projects that would be eligible for funding have been identified by Infrastructure Australia:

- an upgrade of the M1 West Gate Freeway in Melbourne (Western Ring Road to Williamstown Road section) to level 3 Intelligent Transport System (ITS). The Nation Building program is currently funding an upgrade of the M80 to ITS level 3. This project would complement the M80 upgrade and close a gap in the network which is projected to have the highest volumes of freight in Australia
- feasibility, project development and early works funding for the M4 (Western Motorway) in Sydney to introduce a managed motorway system, including ramp metering and potential freight prioritisation
- funding to introduce smart technology to the Gateway Motorway (Nudgee to Bruce Highway section) in Brisbane, including pole mounted variable speed limits, ramp signalling, travel time signs and variable message signs; feasibility funding and trials of technology, such as ramp metering on the Perth road network – including the Roe Highway and Graham Farmer Freeway.

All projects will be jointly funded by the Australian Government and the relevant State Government.

Funding will be subject to State and Territory Governments signing *National Partnership Agreements* on the establishment of Single National Jurisdictions for heavy vehicles, interstate rail operations and maritime regulation.