NSW LONG TERM TRANSPORT MASTER PLAN

TfNSW MASTER PLAN

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TfNSW DISCUSSION PAPER

Discussion Paper
February 2012

NSW GOVERNMENT | Transport for NSW

NSW Long Term Transport Master Plan – Discussion Paper

February 2012

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FOREWORD

The NSW Government has committed to delivering a *Long Term Transport Master Plan* in 2012.

The *NSW Long Term Transport Master Plan* Discussion Paper has been developed to enable you to have your say on the future of transport planning in NSW.

The Discussion Paper outlines current transport trends, emerging issues and key challenges facing our State over the next 20 years and beyond. The paper is the first step in developing the *NSW Long Term Transport Master Plan*.

NSW needs a long term plan to shape decision making and build on the Government's current transport commitments, which include a $13.1 billion transport and roads investment this year for projects such as the North West and South West rail links and Pacific Highway upgrades.

Transport in NSW helps to shape cities, sustain lifestyles and build economies. Transport for NSW is leading the delivery of the *NSW Long Term Transport Master Plan* by seeking to understand the priorities of our customers – whether they be commuters, councils, businesses or transport and freight operators – so we can develop a transport system in the best interests of the whole State.

The Discussion Paper is an important aspect of a state-wide process for determining the future of all modes of transport as it examines key transport issues, challenges and opportunities for Sydney and the regions and takes into account the need to support population increases, job creation, economic growth and land use strategies.

I commend the Discussion Paper to you and encourage you to help us plan for the future of transport in NSW by making a submission by 27 April 2012. Submissions will feed into the development of the draft *NSW Long Term Transport Master Plan* for release mid-year.

Les Wielinga
Director General

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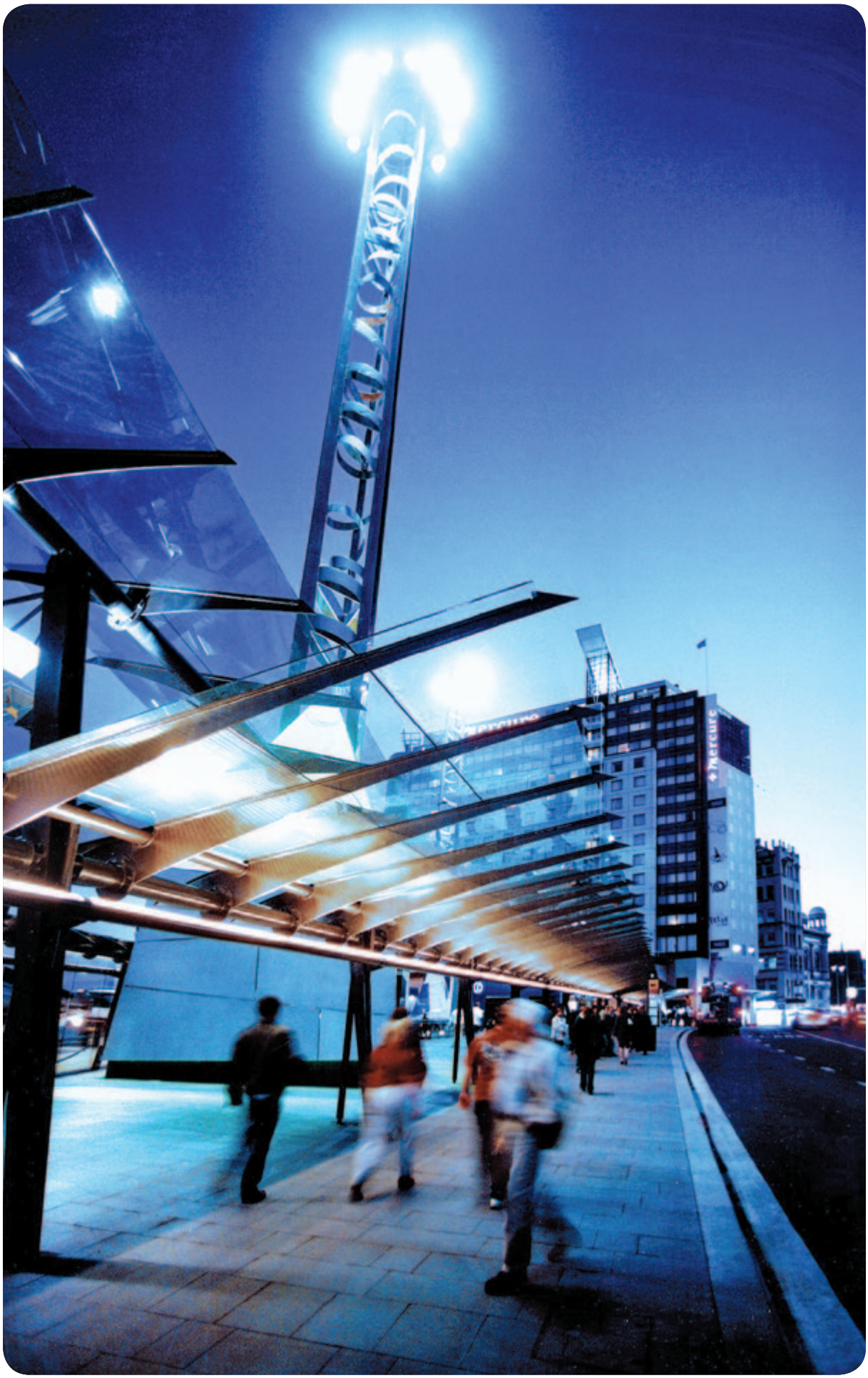

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CONTENTS


TfNSW
MASTER PLAN
TfNSW
DRAFT PLAN
TfNSW
DISCUSSION PAPER

1 THE PURPOSE OF THIS DISCUSSION PAPER

This Discussion Paper has been developed to seek input from the people of New South Wales and other interested parties on what you think are the priorities, issues and solutions for meeting the State's transport needs over the long term. The NSW Government has committed to developing a *NSW Long Term Transport Master Plan* (the Plan) that will provide a solid foundation for developing the transport system NSW will need for the future. The Plan will cover a 20 year time frame and its focus will be on setting the objectives for transport and identifying the priorities that are needed to establish a truly integrated transport system that can meet a wide range of needs.

This Discussion Paper calls for detailed submissions from the community and business. It is an important mechanism for people to provide input to the development of the *NSW Long Term Transport Master Plan*. Each section of the Discussion Paper is centred on a key question. In addition, a number of strategic questions have been included in the paper to assist you with the preparation of submissions. You may not want to consider all the questions and you may have others that come to mind and wish to comment on. Information on how to make a detailed submission is on page 11.

1.1 What is the NSW Government's vision for transport?

The NSW Government is determined to deliver change for the people of NSW — to rebuild the State and make it number one.

The NSW Government's priorities are set out in a document titled *NSW 2021*. This is the Government's 10 year plan to guide policy and budget decision-making to deliver on community priorities for public services and the provision of infrastructure. This calls for real and lasting change in transport across the State. *NSW 2021* emphasises that an integrated transport system needs to ensure that different transport modes work together and that the interests of customers are put first.

The NSW Government has set up a new integrated transport authority, Transport for NSW, to ensure that the needs of the customer are placed at the centre of the planning and decision-making of the transport system. This means delivering to the people of NSW a world class transport system. This will not happen quickly but the Government is committed to charting the right course from the outset and taking the necessary steps that will move NSW towards this goal. The NSW Government's vision for transport is shown in Figure 1.

Figure 1 – The NSW Government's vision for transport

- To put the customer first by ensuring that the transport system is designed around the needs and expectations of the customer
- To ensure that the transport system of the future is fully integrated by ensuring that planning, policy and regulation occur in one place
- To grow patronage on public transport by making it a more attractive choice
- To maintain and improve a comprehensive network of smooth-flowing roads in metropolitan, regional and rural NSW
- To enable the transport system to support the economic development of the State with a particular focus on improving the coordination of freight
- To promote coordination and integration across all transport modes and all stages of decision-making
- To provide clean, reliable, safe, efficient and integrated transport services
- To ensure that the transport system of the future will be strategic and multi-modal, serving the needs of all customers whatever the purpose of their journey.

In order to realise this vision, we need to plan, develop and deliver an integrated transport system that will ensure the needs of customers are reflected in the development of transport infrastructure and the delivery of transport services. Passenger and freight services have to be tailored to the needs of customers and be efficient and affordable.

Our customers' needs are diverse and we need to ensure that the evolution of the networks support those needs.

In respect of public transport, this could be through high frequency 'turn-up-and-go' services for short-haul commuter trips and express services for longer journeys. We must also improve the customer experience for everyone. We need to make choices about the way the rail network will develop and how other modes will support it in the future.

Light rail and buses have an important role to play. They complement and support the heavy rail system, extending the reach of the transport system by cost-effectively delivering services on lower density routes.

The road system needs to be joined up and efficient, providing sufficient space for public transport and freight services, as well as giving priority to high occupancy vehicles to encourage more efficient use of available capacity.

The transport system also needs to promote cycling and walking, which are vital in supporting the sustainability, amenity and efficiency of the overall transport sector.

Technology will play an important role in enhancing the customer experience and in improving the reliability and capacity of services and reducing travel times.

Our State's regional, interstate and international connections are vital to productivity and to the competitiveness and performance of our economy. The transport task is growing and our major connections need to deliver, in a timely fashion, the additional capacity and performance expected of a modern, efficient transport system in order to support future growth in our economy.

To achieve an integrated customer-focused transport system, further thinking is also required about how we undertake land use planning so that transport can most effectively support the growth that is predicted for the future. A shared vision with the new Metropolitan Strategy for Sydney and the new strategic regional land use plans that are being developed by the Department of Planning and Infrastructure is very important.

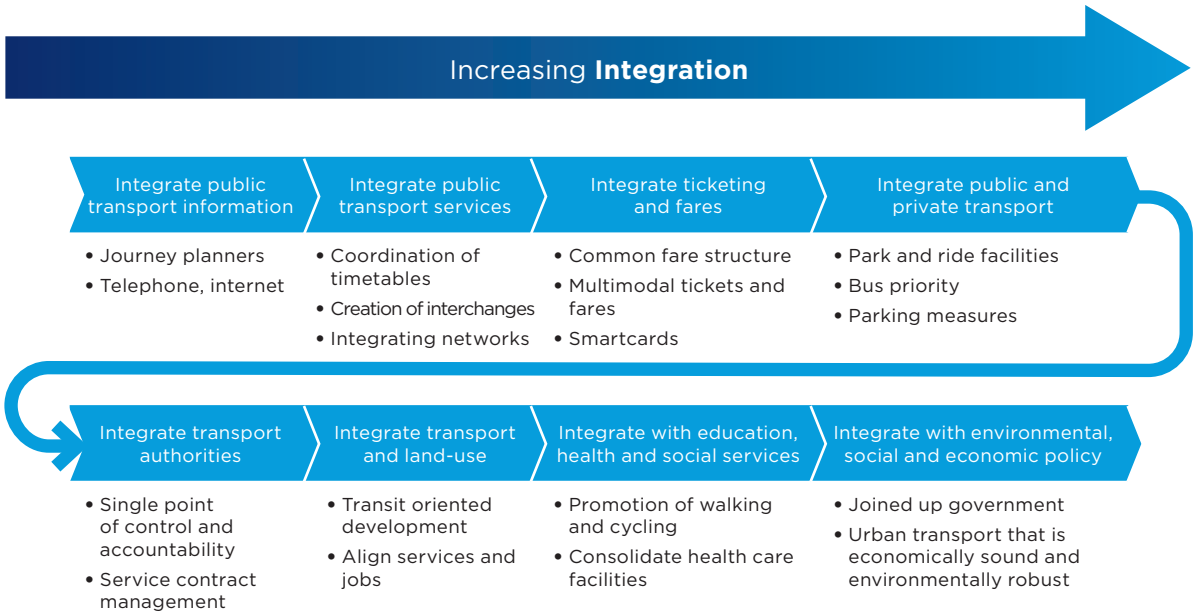
1.2 What is the aim of the NSW Long Term Transport Master Plan?

Determining how the transport system should evolve to meet many different customer needs and deliver a truly customer-focused transport system requires careful long term planning based on rigorous evidence and meaningful engagement with the community. This is why the NSW Government is taking a fresh approach to transport planning in developing the *NSW Long Term Transport Master Plan*. The Plan will identify the next set of priorities for transport, identify how we will meet the future needs of our customers and ensure a competitive and sustainable transport strategy is in place to support the State's development over the next 20 years.

The Plan will start with today's challenges and then anticipate the future transport needs of the community over the next 20 years. It will address transport needs in metropolitan, regional and rural areas. It will tackle the increasing congestion in our cities, work on creating strong connections with regional centres, and have a strong focus on improving the State's overall productivity. It will provide a sound basis upon which future investment decisions can be made.

To achieve an effective and sustainable transport system for the future, planning for the next 20 years needs to focus on various levels of transport integration and making the decisions that will achieve this. One view of integration is shown in Figure 2.

Figure 2 – Levels of transport integration

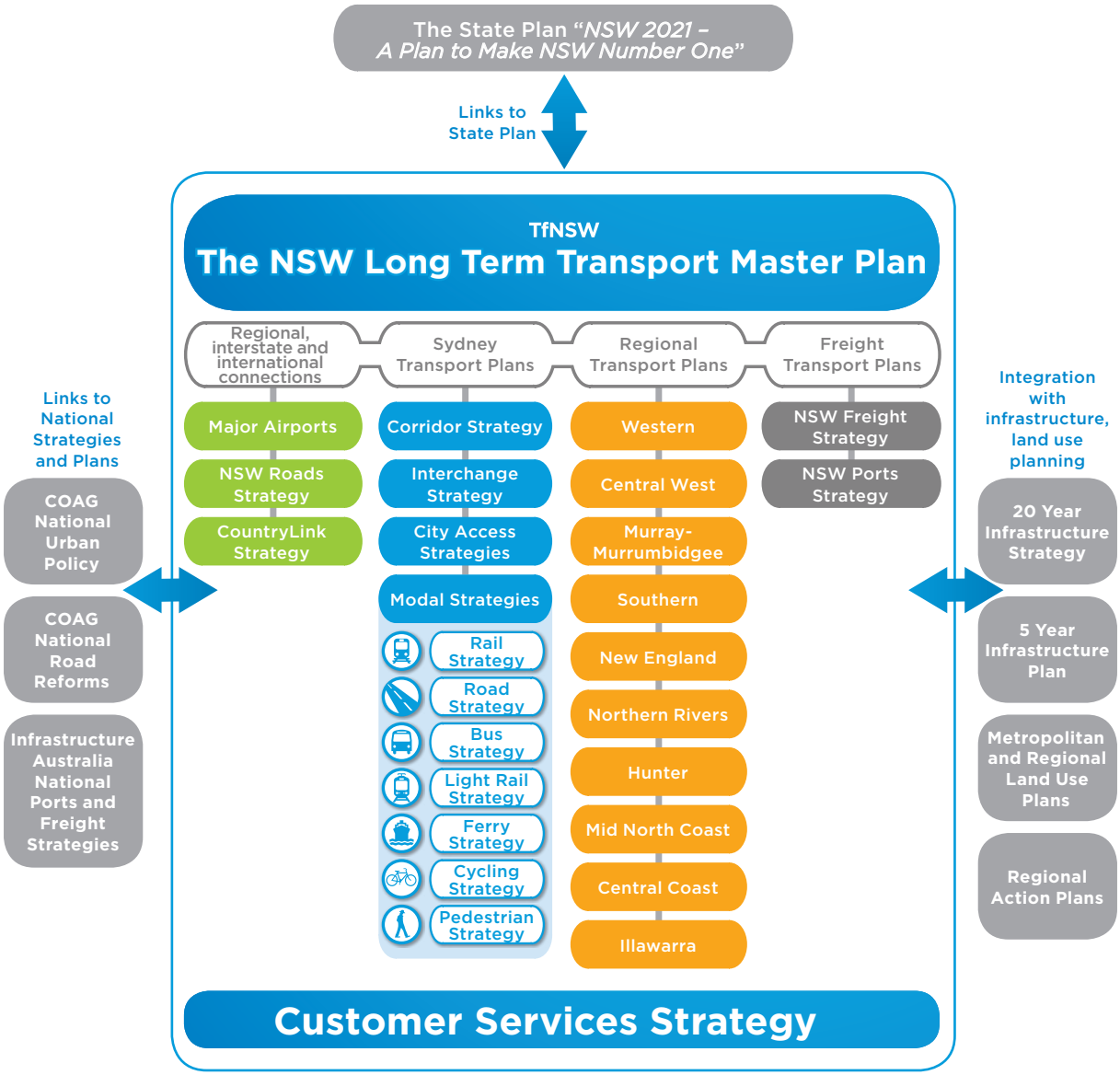


Source: Transport for NSW 2012

The most basic level of integration involves providing comprehensive information services and integrated service delivery. This means ensuring that transport is joined up, service delivery is coordinated and transport information is readily available and is consistent across all modes. More integrated systems could involve common fare structures across public transport modes and coordinated policies for planning land use and transport.

The *NSW Long Term Transport Master Plan* is an important step in bringing together detailed supporting strategies and plans into a coherent long term plan for the development of the entire transport system. It will provide the basis upon which further detailed planning work can be undertaken. The Plan needs to set out the future role of each transport mode in the delivery of an integrated transport system, taking into account population and employment growth relating to where people will live and work. Figure 3 is an overview of the proposed framework for the *NSW Long Term Transport Master Plan* and shows the main supporting strategies that are being developed to align with the Plan. The Plan will guide the next 20 years of transport planning and delivery and will be reviewed and updated periodically.

Figure 3 – The NSW Long Term Transport Master Plan



Source: Transport for NSW 2012

The *NSW Long Term Transport Master Plan* will take account of and link closely with other NSW Government and Australian Government policies and plans. These include a new Metropolitan Strategy for Sydney, Regional Strategies that are currently under review, and new strategic regional land use plans. These are all being developed by the NSW Department of Planning and Infrastructure. As well, the *NSW Long Term Transport Master Plan* will align with the 20 year State Infrastructure Strategy that is being prepared by Infrastructure NSW. The *NSW Long Term Transport Master Plan* will take into account national strategies, such as Infrastructure Australia's National Land Freight Strategy and National Ports Strategy, and the Council of Australian Government's capital cities strategic planning. The *NSW Long Term Transport Master Plan* will set the direction and provide a solid foundation for achieving a fully integrated transport system.

In addition to the *NSW Long Term Transport Master Plan*, there is significant detailed planning that needs to occur. A number of specific planning documents will need to be developed to address the wide range of transport needs of Metropolitan Sydney.

Corridor strategies and an interchange strategy are needed to join up and integrate networks. The corridor strategies should consider how the transport system might evolve in a corridor as passenger numbers grows. Major centre and precinct access plans, such as for Port Botany and Sydney Airport as well as the northern end of the Sydney CBD, will assist with planning transport systems within these centres. They will also identify how all the centres can be more effectively connected to each other.

Modal plans are needed to address the long term development of each of the major transport modes and how they can mutually support an integrated transport system. How to make the best use of existing infrastructure will be an important consideration, as will how services can be better designed to meet emerging needs. Work has already commenced on a number of these plans and public consultation will continue as the plans mature.

1.3 What is the consultation process to help develop the NSW Long Term Transport Master Plan?

The NSW Government is drawing on input from the entire State to create the *NSW Long Term Transport Master Plan*. We are undertaking an extensive range of public consultation activities to gather information and to give the community an opportunity to have their say on the future of transport in NSW. The launch of the *NSW Long Term Transport Master Plan* process on 30 November 2011 began a 12 month program of consultation to support the development of the Plan.

The consultation program includes face-to-face regional forums from February to May 2012 to ensure that the views of people in all parts of Metropolitan Sydney and every region of NSW are understood and considered in the Plan. Advisory Groups have been convened and will continue throughout 2012 to assist in the development of the Plan. These groups include representatives of customers, the community, local government, industry, as well as transport specialists. Freight customers are being consulted in Reference Groups in a parallel initiative.

The consultation process also includes stakeholder meetings, an online survey, an email address, 1800 phone number, and social media. An overview of the consultation program is shown in Figure 4.

Figure 4 – Key dates in the consultation program

Source: Transport for NSW 2012

Consultation to date has helped inform the development of this Discussion Paper. A broad range of feedback has been received so far. Some of the responses are shown below.

Figure 5 – Feedback from the consultation so far

- Create a capable, environmentally friendly, inexpensive and easy to use transport system... prioritise a transport system that is accessible, equitable, environmentally sustainable and affordable — *Erskineville, online survey*
- Equitable distribution of toll roads... All high quality roads should be tolled or none of them — *Gladesville, online survey*
- Improve the ring road around Sydney to keep freight away from residential areas — *Launch event 30 November 2011*
- Ensuring growth in housing developments is supported through accessibility to transport infrastructure — *Lane Cove, online survey*
- Investment in infrastructure that maximises economic performance — *Launch event, 30 November 2011*
- Provision of high quality pedestrian environments in all significant centres to facilitate greater density of living (and therefore less travel demand) at these centres — *Warrawong, online survey*
- The ability for all residents to access all areas of Sydney within a reasonable travel time without the need for a private vehicle — *Springwood, online survey*

- Integrated public transport information between bus, rail, light rail, ferry and road which is immediate. Currently there are significant delays in receiving correct information which will enable changes in travel plans to accommodate the unexpected incidents — *Bardwell Park, online survey*
- Faster, more frequent and more consistent services — *Crows Nest, online survey*
- Improved travel times and rail network in the Sydney metropolitan area — *Glenmore Park, online survey*
- Sydney desperately needs an electronic ticketing system that allows multiple trips regardless of transport means — bus, train, ferry — *The Ponds, online survey*
- True interchanges across all modes of transport, including between different modes — *Campbelltown, online survey*
- Each school to have a network of cycleways radiating into the surrounding area, so children can cycle or walk to school — *Hornsby, online survey*
- Suburbs need streets for eight year olds and 80 year olds, not just people who drive — *Erskineville, online survey*
- Real incentives to encourage people to share their transport—to reduce the single-driver cars and congestion—and to work with business to encourage further decentralisation — *Bell, online survey*
- Mobility and transport management for a rapidly ageing regional population, utilising and expanding already existing Community Transport services — *Coffs Harbour, online survey*
- Refocusing rail from a Sydney-centric model to a major centres model, where rail can link neighbouring towns together with the large centre of the region in a timely fashion — *Dee Why, online survey*
- Need for a single strategy for our three ports — *Launch event 30 November 2011*
- Improve rail freight networks to reduce the reliance on heavy trucks across the State — *Castlereagh, online survey*.

1.4 How can I respond to this Discussion Paper?

The Discussion Paper is seeking views from the community, industry and the transport sector on how the *NSW Long Term Transport Master Plan* should address the issues, challenges and opportunities facing the transport system across NSW and within Sydney and the State's regions.

The Discussion Paper outlines challenges and puts forward some options to stimulate debate. It asks how innovation and carefully integrated planning and investment can achieve the ultimate goal of a world class, customer-focused transport system. 23 strategic questions have been included to help with the preparation of submissions.

Your feedback is valuable. More information on how to make a written or online submission is detailed below.

Your feedback and views will help us to:

- Better understand the needs and preferences of our customers
- Identify the current and future transport needs of the community, industry and the transport sector
- Make better transport infrastructure investment decisions
- Prioritise transport infrastructure development programs and projects
- Design improved long term service strategies.
- Develop a long term plan for transport in NSW.

How to respond to the Discussion Paper

Send a submission by:

- Writing to:
  NSW Long Term Transport Master Plan Team
  Transport for NSW
  GPO Box K659
  Haymarket NSW 1240
- Or emailing:
  masterplan@transport.nsw.gov.au
- For more information visit:
  www.transportmasterplan.nsw.gov.au
  Phone 1800 802 888
  Or follow us on Twitter (@NSWMasterPlan)

The closing date for submissions to the Discussion Paper is 27 April 2012.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2 PROGRESS TO DATE

The NSW Government is getting on with the job of implementing a wide range of immediate priorities aimed at improving the customer experience. These will improve safety and enhance our transport network to make it more efficient. They will support the growing economy and increasing population of Sydney and regional NSW.

Significant progress has already been made on a number of these priorities and planning is well-advanced for others. This includes putting in place much needed safety improvements, as well as improving and extending existing transport networks. The following sections summarise some of these initiatives.

2.1 What is the NSW Government doing to improve public transport in Sydney?

In the short term, the NSW Government is prioritising much needed improvements to the public transport system. These improvements are to invest in new infrastructure and change the way services are delivered. Figure 6 shows the Government's current transport infrastructure priorities for Sydney including planning for transport improvement projects.

The South West Rail Link is under construction and, together with the North West Rail Link, will expand the heavy rail system in Sydney to serve the South West and North West Growth Centres. These new train services will connect people in these areas to jobs, education and other services. Track duplication on the Richmond line is also improving transport in the north-west.

The Southern Sydney Freight line is under construction and will establish a dedicated rail link between Port Botany and Macarthur. This will allow the movement of freight at any time of day. This will provide greater efficiency for both commuter and freight services, supporting the development of Port Botany. The planned Northern Sydney Freight Corridor is a jointly funded initiative, supported by the Australian and NSW Governments. This will improve the capacity and reliability of freight trains on the Main North line between North Strathfield and Newcastle.

The Auburn Stabling project involves the construction of a new train stabling facility to the north-west of Auburn Station commencing later in 2012. The project will enable an increase in train services in Sydney's Inner West and South West Sydney.

New Waratah trains are progressively being delivered. This will improve passenger comfort by enabling the retirement of non-air-conditioned trains. A total re-write of the rail timetable is being developed for 2013 with additional trains and greater service reliability. This will improve services for commuters from the Central Coast, Western Sydney and South West Sydney.

The NSW Government is preparing to commence construction of Wynyard Walk, linking Wynyard Station and Barangaroo. This will provide pedestrians with safe, direct and comfortable access to employment and recreational opportunities on the western side of the Sydney CBD.

Figure 6 – Current NSW Government transport infrastructure priorities in Sydney

Source: Transport for NSW 2012

A $40 million Park and Travel Safety Fund has been established to make trains, stations and car parks safer through the provision of additional CCTV, lighting and help points. Additional funding has also been provided to improve access to stations and trains for customers with a disability, their carers and families, and parents with infants in prams.

The Government has committed an additional $12 million to the Community Transport Program. This will assist those with limited or no access to private transport or who have difficulty in gaining access to conventional transport services.

The light rail system is being extended in Sydney's Inner West from Lilyfield to Dulwich Hill. Work is also well-advanced on the feasibility of light rail extensions in the Sydney CBD, to the University of NSW and to the University of Sydney. Similarly, feasibility investigations are underway into Bus Rapid Transit to serve Sydney's Northern Beaches. Both studies will be important in informing the development of the *NSW Long Term Transport Master Plan*.

A number of additional ferry services have already been introduced to provide better harbour connections for people in Sydney's west and north. The process to franchise Sydney Ferries is well-advanced and this will improve services at a reduced cost to the taxpayer. Ferry wharves are also being upgraded.

New NightRide bus services have been introduced, ensuring more people can travel home cheaply and safely after a night out or working a late shift. The Government funds free loop shuttle buses in some centres. These services provide free travel, increasing local accessibility and supporting local shops and businesses.

Within the Sydney CBD, various initiatives are underway to improve bus operations and manage congestion. Recent changes include altering the traffic signals at York and Druitt Streets and George and Park Streets, and the re-routing of some bus services to improve peak period journey time reliability.

The existing light rail service has been incorporated into the MyZone ticket system and the Government has delivered discounts for MyTrain and MyMulti monthly, quarterly and annual tickets. This will make public transport more affordable. Work is underway to introduce a new electronic ticketing system, Opal, which will make travelling on public transport easier, simpler and more convenient.

An integrated program of works is underway to increase cycling in Sydney. This includes completing the missing links in the Metro Sydney Bike Network. A major cross-regional project now under development is the North Shore Cycleway, connecting Naremburn to the Sydney Harbour Bridge. The concept design for Stage 1 (Naremburn to North Sydney) is being finalised for public exhibition, while feasibility studies are getting underway on options for completing Stage 2 between North Sydney and the Sydney Harbour Bridge.

Recognising the existing complexity of much of our transport system, the Government is committed to improving transport information and signage. The new integrated Customer Information Centre at Circular Quay is an important step to making travelling easier.

2.2 What is the NSW Government doing to improve the road system in Sydney?

Public transport priorities in the Sydney metropolitan area will be complemented by a number of road upgrade priorities. These will support housing and employment growth across Sydney and deliver a safer road network. These initiatives are in addition to the minor enhancements and operational improvements to existing networks to move people and goods more effectively and maximise the efficiency of existing assets. Figure 6 shows the NSW Government's current major priorities for the road system in Sydney.

The M5 West widening will expand the motorway from two to three lanes in each direction between Camden Valley Way and King Georges Road. Construction is expected to commence later in 2012 and will take around two years to complete. This will reduce travel times for motorists using the motorway and surrounding roads and support planned residential and employment growth in South West Sydney.

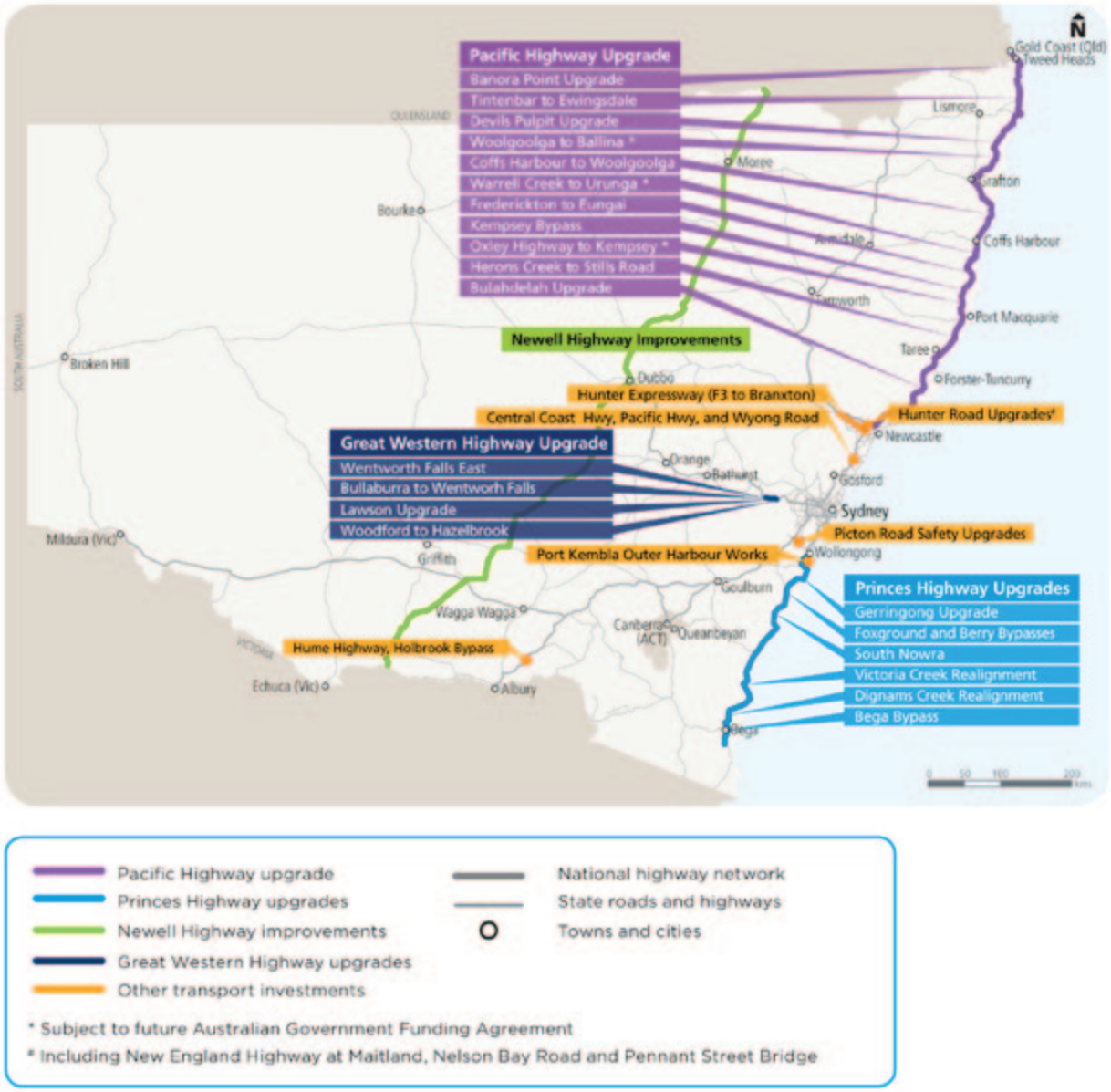
The Government is committed to upgrading Camden Valley Way to a four lane divided road between Narellan and Liverpool by 2016. Tenders for the 4.4 kilometre stage between south of Denham Court Road and south of Raby Road at Catherine Field have been invited and a construction contract is expected to be awarded later this year. Other routes to support growth areas will also be improved, including Richmond and Narellan Roads. The Erskine Park Link Road is under construction and will unlock development potential in the Western Sydney Employment Area.

The M2 motorway is currently being widened and four new ramps are being built to improve access to and from the motorway. Construction work is expected to be complete in the first half of 2013. Work has commenced to identify a priority road connection to link the growing population with locations such as Sydney Airport and Port Botany.

The NSW Government is committed to making the State's roads safer and has increased the capital roads budget by $200 million to fix black spots, relieve congestion and improve road quality. Black spot locations are being progressively identified in both Sydney and in rural and regional areas. The Government has allocated $13 million to fast track the roll-out of school zone flashing lights across NSW, reinforcing speed limits around schools.

Improved training for new drivers is being introduced. Speed zones will be simplified and an interactive safer roads website has been launched. These initiatives aim to improve driving skills, make roads safer and to ensure speed limits are easier to identify. Drivers who have a driving record free of offences for at least five years will be eligible for a 50 per cent reduction in licence renewal fees.

Figure 7 – Current major NSW Government road priorities in regional NSW



Source: Transport for NSW 2012

2.3 What is the NSW Government doing to improve transport in regional NSW?

The delivery of transport infrastructure in rural and regional NSW is focusing on a number of major highway upgrades. This includes upgrades of the Hume, Pacific, Princes, Great Western, and Newell Highways. These will deliver improved safety and travel times for all road users, better freight efficiency and increased amenity for local communities. Figure 7 shows the NSW Government's current road transport priorities for regional NSW.

Construction is well underway on the $1.7 billion Hunter Expressway. This is due to be completed in 2013. The 40 kilometre Hunter Expressway involves the construction of a four lane freeway link between the F3 Freeway near Seahampton, and the New England Highway, west of Branxton. The expressway will provide a new east-west connection between Newcastle and the Lower Hunter.

The Pacific Highway is a high priority for the NSW Government. Upgrade works between Hexham and Port Macquarie are due to be completed in 2012. The Kempsey Bypass will be completed in 2013. The upgrades between Coffs Harbour and Woolgoolga and between Ballina and the Queensland border are due for completion in 2014. Construction of two further major sections between Port Macquarie and Coffs Harbour is expected to begin in 2013 – Frederickton to Eungai and Nambucca Heads to Urunga.

Work is also underway on the Holbrook Bypass. This is due to be completed in 2013. This is the final project required to complete the Hume Highway upgrade to a minimum four lane divided route between Sydney and Melbourne. The Great Western Highway is being upgraded to four lanes between Emu Plains and Katoomba, with completion expected by the end of 2014.

Other road upgrades in progress or at an advanced planning stage include the Central Coast Highway between Erina and Wamberal. Other upgrades are imminent on the Princes Highway at Victoria Creek, South Nowra, Bega and Gerringong.

The Government will continue planning and pre-construction for the remaining two lane sections of the Pacific Highway, making the upgrade of the entire corridor a priority.

Elsewhere planning will continue for additional overtaking lanes on the Newell Highway and upgrades of the Princes Highway between Gerringong and Bomaderry and at Dignams Creek.

Planning for upgrades on Central Coast roads, including the Pacific and Central Coast Highways and Wyong Road, is progressing.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3 THE NSW GOVERNMENT AND TRANSPORT OBJECTIVES

3.1 What should be the objectives of future transport in NSW?

The NSW Government wants to hear and understand the views of the community and transport customers on the objectives that should underpin the *NSW Long Term Transport Master Plan*. As we undertake detailed planning and make policy choices about how the transport system should evolve and adapt to changing customer needs, a set of complex trade-offs will need to be made. As well, the objectives for future transport should reinforce objectives for future land use. It is important for the NSW Government to clearly understand the needs and concerns of the community and take these into account in setting objectives that will underpin its future decisions.

3.1.1 How should better services be delivered for customers?

Achieving the Government's vision to deliver a truly customer-focused integrated transport system requires a strong focus on delivering better services for customers. Customer surveys undertaken by Transport for NSW and a wide range of international studies have shown that, for public transport, reliability, frequency, travel time, cost and ease of use are important factors for customers. Other factors identified include network coverage, safety, clear and simple information that is easy to access, comfort and cleanliness. Effective long term planning must take into account all the factors that matter to customers and develop comprehensive service standards that can be implemented across transport networks.

3.1.2 How should accessibility and social equity be improved?

Transport provides access to jobs and essential services such as health care and education as well supporting social contact. Consequently, transport planning decisions have significant and diverse impacts on equity of opportunity. The quality and availability of transport affects people's social and economic opportunities and their quality of life. Inadequate transport services can lead to dependency on cars and areas of concentrated social disadvantage. An important objective of the NSW Government is to deliver a transport system that is equitable, affordable and accessible to all.

Important considerations are the needs of different groups, such as people with a disability, and how they access and interact with the transport system. Customers with a disability need special consideration to ensure they enjoy the level of mobility others take for granted.

Although the transport network has become more accessible in recent years, work still needs to be done to meet the needs of all customers. The NSW Government is working towards the Australian Government's Accessible Transport Standards with the aim of ensuring all public transport is fully accessible by 2032. These standards will benefit customers with a disability, their families and carers, many older Australians and parents with infants in prams who use public transport services.

3.1.3 How can environmental sustainability be enhanced?

The NSW Government is committed to working with the community to protect the environment. Both new transport infrastructure and the delivery of transport services have impacts on the environment. It is important that these impacts are minimised. Long term issues, such as continued use of fossil fuels, have the potential to affect future generations and require special consideration in planning transport over the long term.

3.1.4 How can road safety be improved?

The NSW Government is committed to making our roads the safest in the country. Road crashes in NSW account for around 400 deaths and 24,000 injuries each year and cost the NSW community approximately $4.8 billion a year. Over two-thirds of fatalities occur in rural areas. The Government has a target to reduce fatalities to 4.3 per 100,000 people by 2016. This is consistent with the National Road Safety Strategy targets and uses an internationally recognised measure of road safety performance. The new NSW Road Safety Strategy that is being developed presents an opportunity to integrate and align plans in close collaboration with key stakeholders. Safety is important for all modes of transport and is an important consideration in the development of the *NSW Long Term Transport Master Plan*.

3.1.5 How can economic growth be fostered?

The transport sector is an important part of the NSW economy, essential for the economic development and productivity of the State. An efficient and reliable transport system will enable better accessibility to markets, employment and new growth opportunities.

The economic importance of the transport industry needs to be considered from a number of perspectives. This includes efficient freight services that deliver supplies and raw materials to industry, goods to stores, and to ports and airports for export. Efficient passenger services are necessary to transport customers to markets and employees to their places of employment. The efficiency by which people and freight move around the State adds to overall productivity.

In order to enhance the productivity of the transport network in NSW, there are a number of issues to address. These include how we determine future routes, particularly connecting goods to markets and people to employment. In addition, the performance of our networks needs to be managed in terms of improvements in cost and time for both passenger and freight movements.

In planning and designing an integrated transport system for the future, it is critical that there is a strong focus on improving the productivity of the State and promoting economic growth.

3.1.6 Are these the right objectives for the transport system of the future?

This Discussion Paper aims to stimulate debate about whether the objectives set out below are appropriate for future planning for transport in NSW. The nine objectives are:

- Putting the customer first — to design the transport system around the needs and expectations of the customer
- Economic development — to enable the transport system to support the economic development of the State, with a focus on freight systems
- Planning and investment — to ensure that good planning informs investment strategies
- Coherence and integration — to promote coherence and integration across all modes and all stages of decision-making
- Performance and delivery
- Efficiency
- Environmental sustainability
- Social benefits — to promote greater inclusiveness, accessibility and quality of life
- Safety — in accordance with the safety and regulatory framework.

Strategic questions

1. Are these objectives appropriate and comprehensive?
2. Do you have any other objectives to suggest for both public transport and roads?
3. Should additional or different objectives be considered for the *NSW Long Term Transport Master Plan*?

3.2 What is the role of the NSW Government in transport?

The NSW Government has a number of roles in supporting the State's transport system:

- Stewardship of the transport sector — for example, licensing and regulation, such as for car drivers, taxis and heavy vehicles, as well as regulating safety
- Delivering services — for example, the planning and delivery of passenger transport services, roads and maritime services, as well as managing contracts with private operators
- Managing demand — for example, land use planning and pricing of infrastructure and services
- Developing infrastructure — for example, planning, developing and procuring new rail, road and maritime infrastructure
- Providing funding — for example, funding core public transport and roads infrastructure and services.

The NSW Government delivers its transport services to the people of NSW through a number of agencies. The main agencies are Roads and Maritime Services, RailCorp, the State Transit Authority of NSW, Sydney Ferries and the Port Corporations. There are a number of private sector transport operators, including bus operators, ferry operators and the Sydney light rail operator.

The new integrated transport authority, Transport for NSW, plays the coordinating, planning and policy setting role that brings the activities of each of these agencies together to meet the breadth of transport needs across the State. The reform of the Roads and Traffic Authority and Maritime Services into a single more streamlined agency called Roads and Maritime Services has been another important step in commencing the process of developing an efficient and integrated transport system.

Consideration is currently being given to how reform can allow RailCorp to deliver improved services and achieve greater efficiency. Transport for NSW is considering the service delivery and operational contracts for the agencies, with a particular focus on how they deliver services to support an integrated transport system. Your views on what is needed will be important in developing the appropriate service arrangements for the future.

Transport for NSW works closely with a wide range of NSW Government agencies such as the Department of Planning and Infrastructure and Infrastructure NSW to ensure transport planning is integrated and reinforces the objectives of land use strategies. By working with

the health, education and tourism departments policies that rely upon transport can also be more effectively designed and implemented.

3.2.1 How does the NSW Long Term Transport Master Plan link with other NSW Government plans?

During 2012, the NSW Government is developing new plans for the long term future of our State, including the *NSW Long Term Transport Master Plan*.

Communities across NSW are being asked to have their say on all of the plans. The plans will be linked to *NSW 2021*, to ensure a coordinated and community driven approach based on local priorities that will deliver the changes that the community expects.

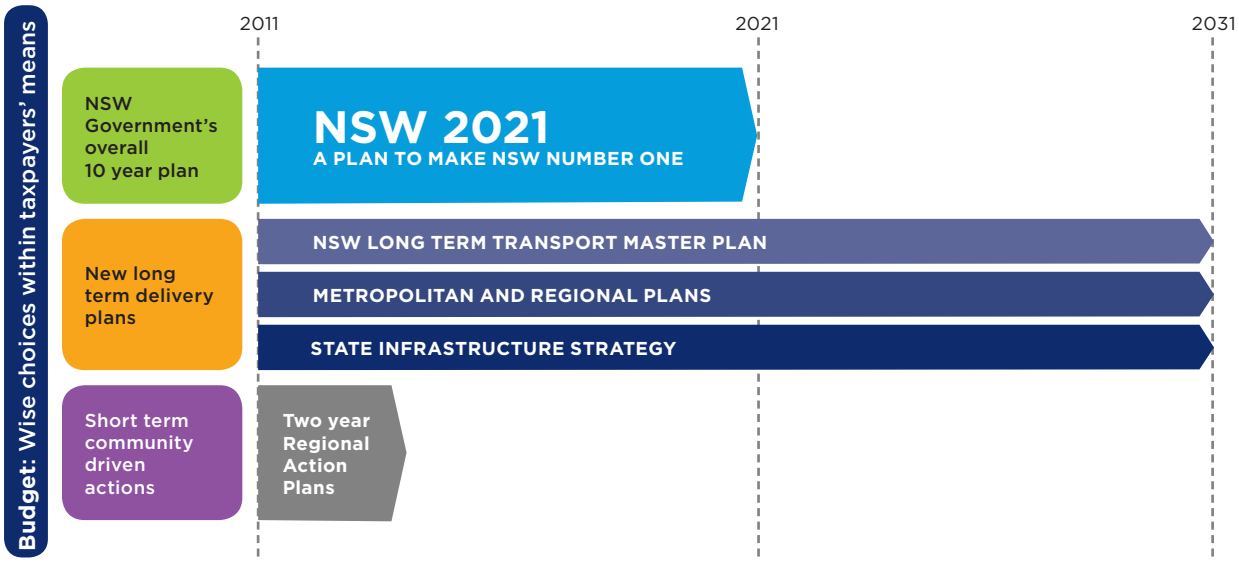
NSW 2021 is the 10 year plan to rebuild the economy, provide quality services, renovate infrastructure, restore Government accountability and strengthen our local environment and communities. During 2012, the Government is giving the community the opportunity to identify immediate actions that will deliver improvements in their local areas across 17 regions.

The *Metropolitan Strategy* is the 20 year plan to build liveable places across Sydney. It will guide future planning and investment decisions covering housing, economic development and jobs, open space and the transport to connect our homes, jobs and recreation facilities. It is being updated during 2012 to link it to *NSW 2021*, the *NSW Long Term Transport Master Plan* and the *State Infrastructure Strategy*. Regional Plans are also being developed across subregions of Sydney and regions in NSW to address local issues.

The *State Infrastructure Strategy* is the 20 year plan to renovate the State's infrastructure which outlines how and where we will invest in critical infrastructure. It will ensure that the right infrastructure is built at the right time and at the right cost.

The plans will inform the Budget priorities so that we can make the right choices within taxpayer' means that provide value for money. To sustain our State's finances and maintain our AAA credit rating we need to determine the community's priorities amongst competing requests for funding.

Figure 8 – NSW Government plans



3.2.2 How can the NSW Government work most effectively with local government?

Local government provides and manages essential transport services and infrastructure, including regional and local roads, bridges, footpaths, cycleways and bus stops. Local government has a major role in identifying, planning and implementing transport solutions at the local level. Councils prepare detailed planning strategies that provide for the future of their communities as well as reflecting the wider interests of the State. They also have a role in facilitating access for freight vehicles within their area.

Local government represents the interests of their areas and plays an important role in facilitating participation in the transport decisions that affect their communities. NSW Government agencies work in partnership with local councils both in the metropolitan areas and in rural and regional NSW to ensure that transport solutions for their communities are appropriate to local needs and are planned and delivered as promised.

Working together to meet the needs of customers and the community will continue to be crucial as we strive to achieve integrated and effective transport networks. How councils, the NSW Government, and local non-government organisations can work more effectively together and consolidate resources to develop integrated transport systems for the regions will be an important consideration in developing the Plan.

3.2.3 How will the NSW Government work with the Australian Government?

A focus on infrastructure, a connected national road network, effective freight networks and the role and performance of Australian cities are key national priorities. The NSW Government works with the Australian Government on national transport policy directions in close cooperation with the Australian Department of Infrastructure and Transport, Infrastructure Australia, and the Council of Australian Governments. Major areas of focus are future infrastructure needs, mechanisms for financing infrastructure investments, policy, pricing and regulation. The NSW Government is working with the Australian Government and Infrastructure Australia to ensure that transport infrastructure projects in NSW that benefit the whole country are funded and properly prioritised.

3.2.4 How will the NSW Government work with the private sector?

While the role of the NSW Government is to provide the transport strategy, framework, plan and services, many transport outcomes are delivered by the private sector. The private sector has a major role to play in providing innovation and efficiency in both delivery and, where appropriate, funding. The NSW Government is working in partnership with the private sector to deliver services and infrastructure that can best harness the finite resources of the State.

The Government is working with the private sector to improve the operation of the transport system. For instance, under the Fixing the Ferries program, the Government is retaining ownership of Sydney Ferries while seeking a private sector partner to operate its services under a franchising arrangement. The successful operator will be selected based on the best package of approaches to customer experience, safety, operations, maintenance, and management of the Sydney Ferries workforce. This includes improving ferry services and at the same time offering commuters and taxpayers value for money.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4 THE 20 YEAR CHALLENGE

Over the next 20 years, the NSW transport system will need to change in response to a number of major challenges. There are four main drivers of these changes. They relate to the changing expectations of our customers, population changes, the need for a strong and vibrant economy, and the impact of energy choices on the cost and the environmental sustainability of the transport system.

4.1 What are the major challenges with changing customer needs and preferences?

Delivering a transport system that meets the needs and preferences of customers is a cornerstone objective of the NSW Government. The *NSW Long Term Transport Master Plan* will be founded on consideration of customer needs, usage patterns and trends, focusing on how and why transport networks are used in Sydney, across the regions of NSW and beyond.

In shaping a transport system that better meets customer needs and preferences, there are a range of factors that will need to be considered including dominant usage patterns, changes in lifestyles, increasing complexity and connectedness as well as meeting the expectations of the community for access, equity and amenity.

Figure 9 shows the types of trips made, both by distance and time, in Metropolitan Sydney. In developing the Plan, a careful examination of the purpose of each journey is required. For example, the daily commute to work is currently only 16 per cent of all trips taken, but represents 28 per cent of all distance travelled and 25 per cent of the time spent travelling on the average weekday. If work-related business and education is included, work-related trips are 47 per cent of total travel time by all customers. A focus on reducing journey time between homes, jobs and schools would help minimise the impacts of both travel time and travel cost for customers. As transport plays a fundamental role in supporting economic productivity by providing efficient connections for the movement of people and goods, this focus also has clear economic benefits.

Figure 9 – Purpose of trips by distance and time in Sydney

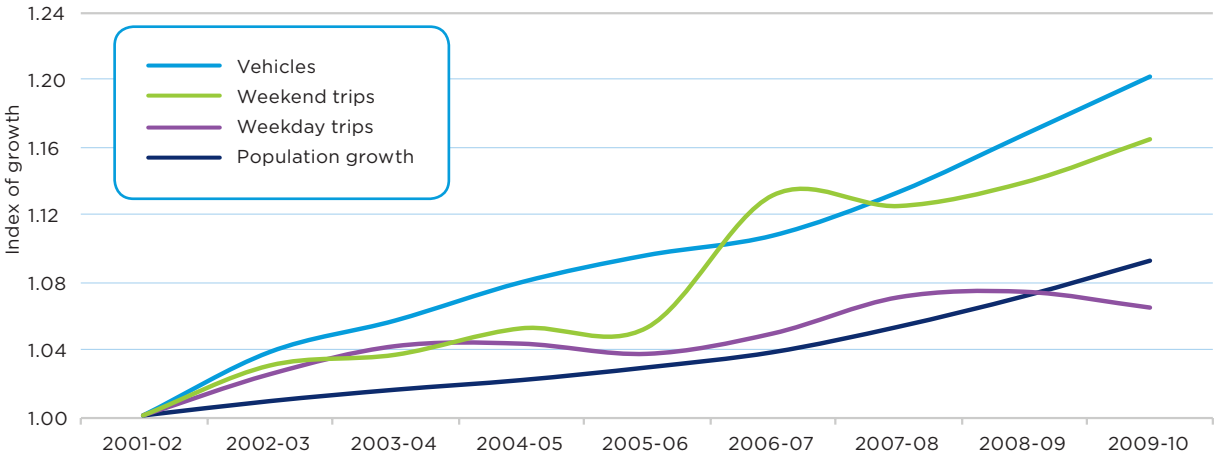
Percentages do not add up to 100 per cent due to rounding.
Source: Bureau of Transport Statistics 2011

Changes in customer lifestyles have an impact on how transport systems are used. This underpins shifts in travel behaviour and patterns that will affect every region of NSW. Transport networks will need to respond to emerging social trends including more flexible working patterns and the growing diversity in recreational and entertainment activities. This may result for example in a broadening of the morning and afternoon peaks and increasing the number of weekend and off-peak services.

Metropolitan planning processes in Sydney will continue to review locations for living, working, shopping, entertainment, education, recreation and other community services. These plans, together with lifestyle trends, will shape how communities, towns and cities evolve. To function effectively, these places will need to be supported by appropriate transport infrastructure. As people's preferences for work, education and recreational pursuits shift, and as the location and mode of delivery of community services evolve, the road network and the public transport system will need to work in concert to meet their needs while having capacity for future adaptation.

Figure 10 shows travel trends compared with changes in the population since 2001 for Metropolitan Sydney. The annual average growth rate of vehicles continues to exceed the population growth rate.

Figure 10 – Travel trends compared with population growth in Sydney



Source: Bureau of Transport Statistics 2011

Household Travel Survey data shows that in terms of how people travel, cars dominate with 67.9 per cent of all trips. Public transport has grown slightly over the past decade. For example, train trips have grown from 4.9 per cent to 5.3 per cent and bus trips from 5.6 per cent to 5.8 per cent. The walk-only share has grown the most from 17.2 per cent to 18.5 per cent.

From these trends, it is clear there is likely to be continued growth of vehicle ownership, which in turn places pressure on road network performance. There need to be carefully planned investments in public transport to make it a more attractive choice and to alleviate the pressure on the road network. This is particularly the case where the public transport network has capacity to accommodate growth or where there is economic benefit in its further expansion. The high rate of growth in bicycle ownership and the trend to walking for the whole journey also need to be supported by investment in relevant infrastructure.

These trends suggest that where public transport best meets the needs of the transport task, particular focus will need to be placed on measures that increase its appeal to make it the first preference for more customers. Transport for NSW is developing a Customer Scorecard that will provide an objective rating system that tells us what is most valued by public transport customers as well as their level of satisfaction with the current service. The Customer Scorecard will ensure we set the right customer service standards to meet the reasonable expectations of customers, an essential element in optimising the effectiveness of public transport.

Figure 11 shows how planning decisions about particular elements influence the overall customer experience. While many decisions about infrastructure are specific to the particular mode of transport, there are several elements that contribute to the overall functioning of public transport networks where an integrated plan is needed. These include transport interchanges, route planning and timetables, journey information and ticketing. Throughout the world, modern cities rely on well functioning and easy to use transport interchanges. Interchanges enable the transport network to be used in a flexible manner by all customers. For passengers, transport interchanges can bring together different kinds of public transport such as buses and heavy rail so that the customer can move quickly from one connection to another. In the freight sector, intermodal terminals play an important role in the supply chain, providing storage and access to large volumes of commodities so that they can be more effectively distributed to a wide range of local centres.

Figure 11 – Opportunities to enhance the customer experience of public transport

Pre-journey

Journey planning

- Good access to journey planning information that is accurate and easy to understand
- Fairly and competitively priced ticket products that match travel patterns
- Convenient access to ticket sales

Ticketing

Access

Pedestrian facilities

- Reasonable distance to access transport
- Clear signposts and transfer facilities (e.g. drop-off, parking)
- Clear pathways and access
- Safe and comfortable waiting areas (weather protection, lighting, cleanliness, and passenger information)
- High frequency services
- Access to retail
- Friendly, helpful staff

Interchange facilities

Service coverage and levels

Travel

In vehicle

- Reliable on time service
- Smooth ride
- Feels safe and secure
- Clean (no litter, no graffiti)
- Comfortable (sufficient seating, air conditioning)
- Clear announcements
- Reasonable travel time

Arrive

Interchange facilities

- Reasonable proximity to destination
- Safe and convenient facilities on alighting
- Good interchange and access to other transport modes (taxi, connecting buses, etc)
- Clear directions and connections to the precinct

Travel to destination

Post-journey

Customer relations

- One point of contact for post-journey support
- Prompt and satisfactory issues resolution (lost property, fare adjustment, feedback)

Source: Transport for NSW 2012

A customer-focused public transport network will use current technology to best effect to enable people to have the real-time information they need to help them on their journey, whether this is about trains, buses or traffic conditions. Internet, GPS and communications technology such as websites and smart phone apps are becoming more widely available with a broader range of application. Real-time information means that customers can be informed not only about the timetable, but also about delays, service interruptions and alternative transport options. Delivering the right real-time information may encourage more customers to consider trips that use a mix of modes and involve interchanging between services. Technology and information can also assist with a more reliable freight task with freight operators receiving real-time information about delays on the transport network.

4.2 What are the major population challenges for the next 20 years?

NSW has the largest population of all Australian states and territories. NSW is currently experiencing the largest population increase of all Australian states and territories and is projected to do so well into the future. In recent years, Sydney and the Richmond-Tweed area of Northern Rivers region have had the fastest population increase in NSW with both growing at an average rate of 1.7 per cent per year. The challenge of population growth is shown in Figure 12.

Figure 12 – Population change in NSW and Sydney 2010–31

Region	Population		Population Change	
	2010	2031	Total Change	Change %
Sydney	4,255,820	5,615,400	1,359,580	32
Rest of NSW	2,976,772	3,490,500	513,728	17
Total NSW	7,232,589	9,105,900	1,873,311	26

Source: 1. Australian Bureau of Statistics 2011
2. Department of Planning and Infrastructure 2010

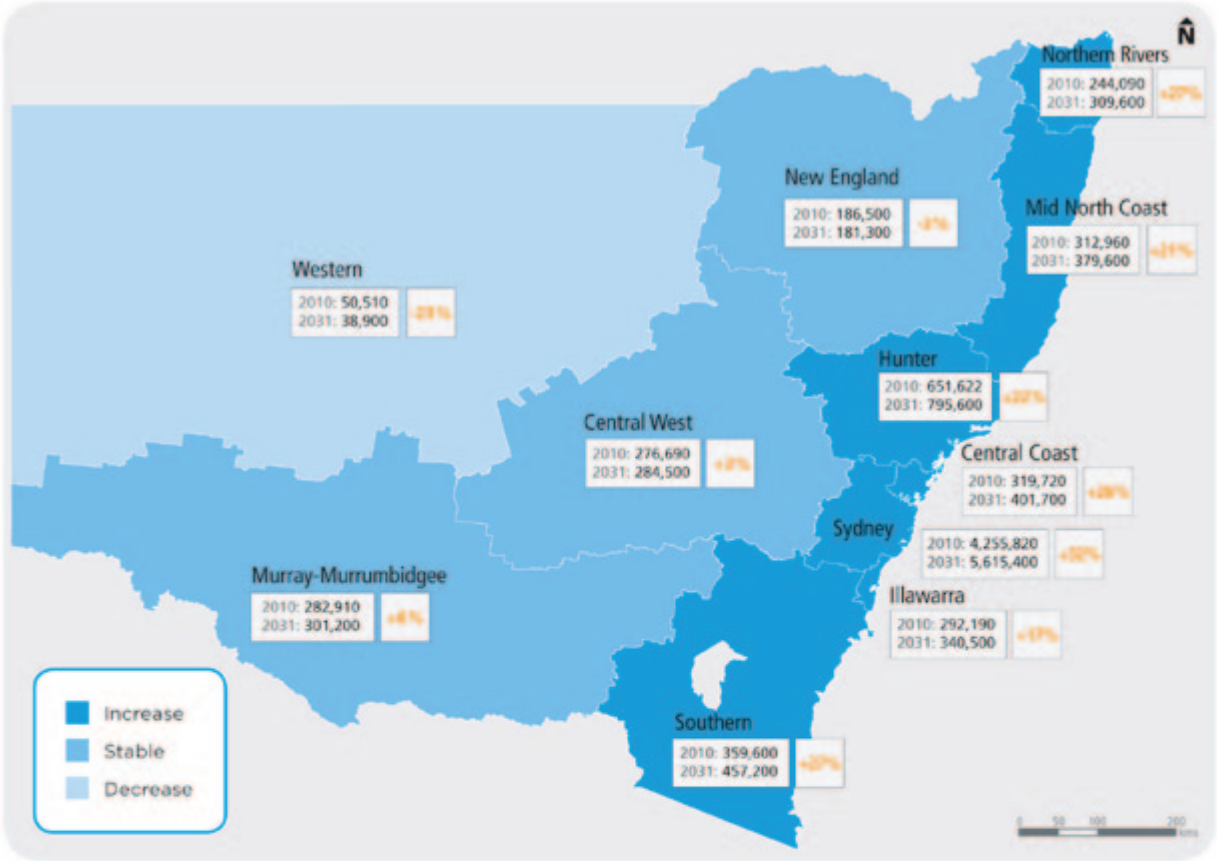
By 2031, NSW will have grown to about nine million people and Sydney to well over five million. Sydney is the nation's largest city and is recognised as a global city. Much of Sydney's growth over the past decade has been absorbed through higher density development in established areas and major centres. In the five years to 2010–11, 84 per cent of new homes were built in existing areas, with only 16 per cent built on greenfield sites in new release areas. In the coming decades, growth will occur both in the established areas of Sydney and in the North West and South West Growth Centres.

The regions of NSW experience different growth patterns and their own unique challenges. For example, the Central Coast, Northern Rivers, Hunter, Mid North Coast and Southern NSW are expected to experience a 21 to 27 per cent increase in population over the next 20 years. While coastal areas are growing, there are other parts of the State where population is decreasing. NSW's projected population changes are shown in Figure 13.

Like the rest of Australia, the population of NSW is ageing. By 2031, 20 per cent of the NSW population will be over 65. In rural and regional NSW, providing access to specialised health and other support services will be an ongoing challenge. Connecting people in the regions to essential health and community services will require a smooth and reliable road network as well as air and rail connections, where this is viable. The growing cost of maintaining existing road infrastructure will need to be weighed up against providing new and improved connections. Priorities will need to be carefully determined with strong community input.

In Metropolitan Sydney, the number of people over 65 will comprise 16 per cent of the population. Further consideration is needed to how we meet the needs of an increasing number of people who will have mobility impairments and therefore will need access to appropriately designed transport options, such as wheelchair accessible taxis, buses, trains and community transport services.

Figure 13 – Projected population change in NSW 2010–31



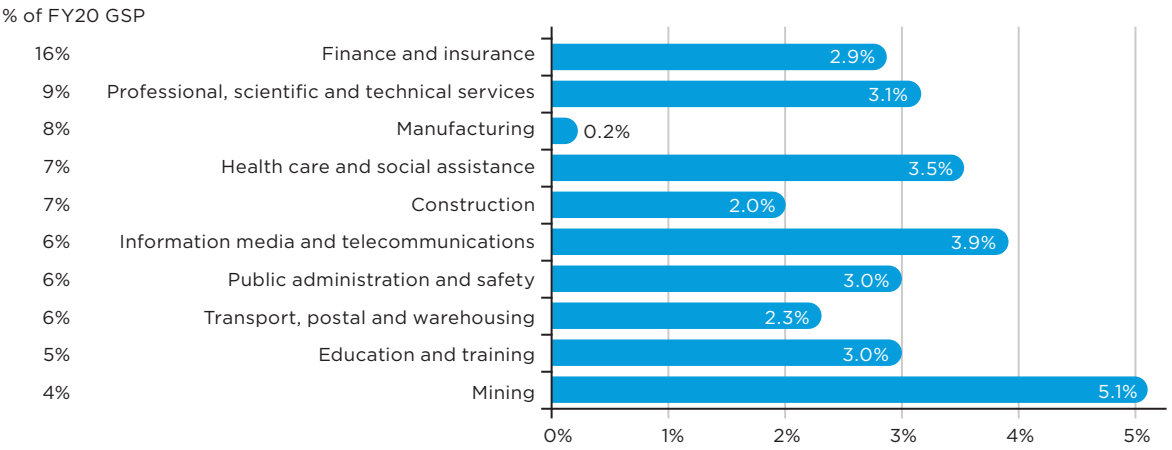
Source: 1. Australian Bureau of Statistics 2011
2. Department of Planning and Infrastructure 2010

4.3 What are the major economic challenges for the next 20 years?

NSW currently has a Gross State Product of $420 billion per year, which represents almost one third of the national total. The NSW economy is forecast to grow by over 30 per cent between 2010 and 2020. All the service sectors together account for three quarters of the State's economy, with the strongest industries being financial services, professional services, health care and social assistance. Almost all of these sectors are expected to grow in the next 20 years.

Tourism is an important industry that contributes more to the NSW economy than the agriculture, forestry and fishing sector. In 2008–09, tourism directly contributed over $11 billion to the Gross State Product. The mining industry in NSW is another important growth industry that has implications for freight transport demand. The contribution of individual sectors to the economic growth of NSW over the next 10 years is shown in Figure 14. Sectors like tourism, the services industry and mining have specific requirements of the transport system that need to be taken into account in developing the Plan.

Figure 14 – Growth rates 2011–20 of largest NSW sectors by FY20 value add



Source: 1. ABS 5220 Australian National Accounts: State Accounts
2. Deloitte Access Economics: Infrastructure NSW Background Paper

The transport task in supporting economic growth needs to consider not only the particular sectors that will need to be supported but also the increase in jobs that will occur to support these sectors and where they will occur. In Sydney alone, 530,000 new jobs are expected by 2031. About half of these new jobs will be in Western Sydney, with Parramatta growing in importance as a services centre. An additional 100,000 more jobs are expected in the Global Economic Corridor that runs from Macquarie Park through the Sydney CBD to Sydney Airport. Getting Sydney to work efficiently is therefore critical to the NSW economy. Greater integration of the transport sector will be critical to continuing to meet demand and deliver growth and prosperity for Sydney and the nation as a whole.

4.4 What are the major energy challenges for the next 20 years?

Like the rest of the world, NSW faces complex challenges relating to the supply and use of energy. 'Peak oil' is defined as the point in time when oil production reaches its maximum annual rate, after which the annual production rate declines each year. The point in time when supplies of conventional oil will peak is a hotly debated topic. However, while this debate occurs and solutions are explored, the demand for oil continues and the cost of oil increases. In Australia, demand for petroleum is projected to increase from more than 750,000 barrels per day to over 1.2 million barrels per day by 2029–30. This is an increase of almost two per cent per year over the period.

In July 2012, the Australian Government's carbon pricing mechanism will commence, with a price that will be fixed for the first three years. There is an ongoing and strong international focus on reducing greenhouse gas emissions. Australia's transport systems, including those of NSW, are heavily dependent on cars and road freight, which are both highly vulnerable to the rising cost of energy. Road transport is responsible for 75 per cent of transport-related oil consumption and aviation another 16 per cent.

There may be some shift to electric vehicles on NSW roads in the next few years as vehicle manufacturers bring more electric models to Australia. This brings other challenges such as the need for infrastructure to enable people to recharge their cars at a wide range of locations. Vehicle manufacturers are also continually improving the design of their vehicles to make them more efficient. Greater use of public transport is likely to provide the most optimal solution to addressing the rising cost of energy and, as discussed throughout this paper, the transport system needs to encourage more people to make the switch from using private vehicles to using public transport.

It is also important to note that the rail network is a large user of electricity, meaning that electricity prices have a direct impact on the cost of operating public transport services. A carbon tax is expected to increase the cost of producing electricity, which will in turn increase the cost of providing transport services. Another emerging issue is that new and more modern infrastructure, such as the air-conditioned Waratah trains or accessible stations with lifts, will mean greater electricity requirements.

4.5 What are the implications of these major challenges for future transport in NSW?

Some of the transport implications of our future challenges are summarised below:

- The population of the regions of NSW will grow at different rates over the next 20 years and a few may decline. Transport services will need to be tailored to both.
- Transport services will need to be appropriately planned for an increasingly ageing population.
- Sydney's population and urban footprint will continue to grow. New transport infrastructure and more integrated services will be required to cater for all parts of the metropolitan area.
- Sydney's growth will mean that road space will be in increasing demand. Public transport services will need to be improved and expanded, as will access for freight vehicles. Some form of road user charging may need to be considered to manage the increase in vehicles on roads.
- All sectors of the NSW economy will grow over the next 20 years. In order to make the State number one, increasing attention will be needed to ensuring efficient and quick freight movements, including improved seaport and airport facilities, as well as encouraging use of rail where appropriate.
- The location of new jobs in Sydney will place increasing demands on the entire transport system. To promote more efficient use of the transport system, these jobs will need to be better distributed across the metropolitan area and in Sydney's emerging regional cities.
- Prices of oil and electricity are likely to remain an unpredictable factor due to the introduction of carbon pricing legislation and uncertainty as to the availability of oil. Relative fuel costs are an important determinant of fuel use. Rail is a major user of electricity and all public transport services will need to accommodate changes in fuel prices, particularly oil.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5 SYDNEY TRANSPORT

5.1 What are the challenges for transport in Sydney?

Sydney is undergoing strong population and employment growth, which will result in a significantly greater number of passenger journeys and freight movements in the future. Increasing housing densities, expansion of the urban area and new employment locations will increase the complexity of travel patterns and present challenges for the transport network. Travel patterns in the Sydney region are already changing as the morning and afternoon peak periods become longer. The transport system is becoming more congested with an increasing number of journeys occurring all through the day for shopping, leisure and recreation. These now account for around 40 per cent of all passenger trips.

5.1.1 What are the challenges for the Sydney city centre?

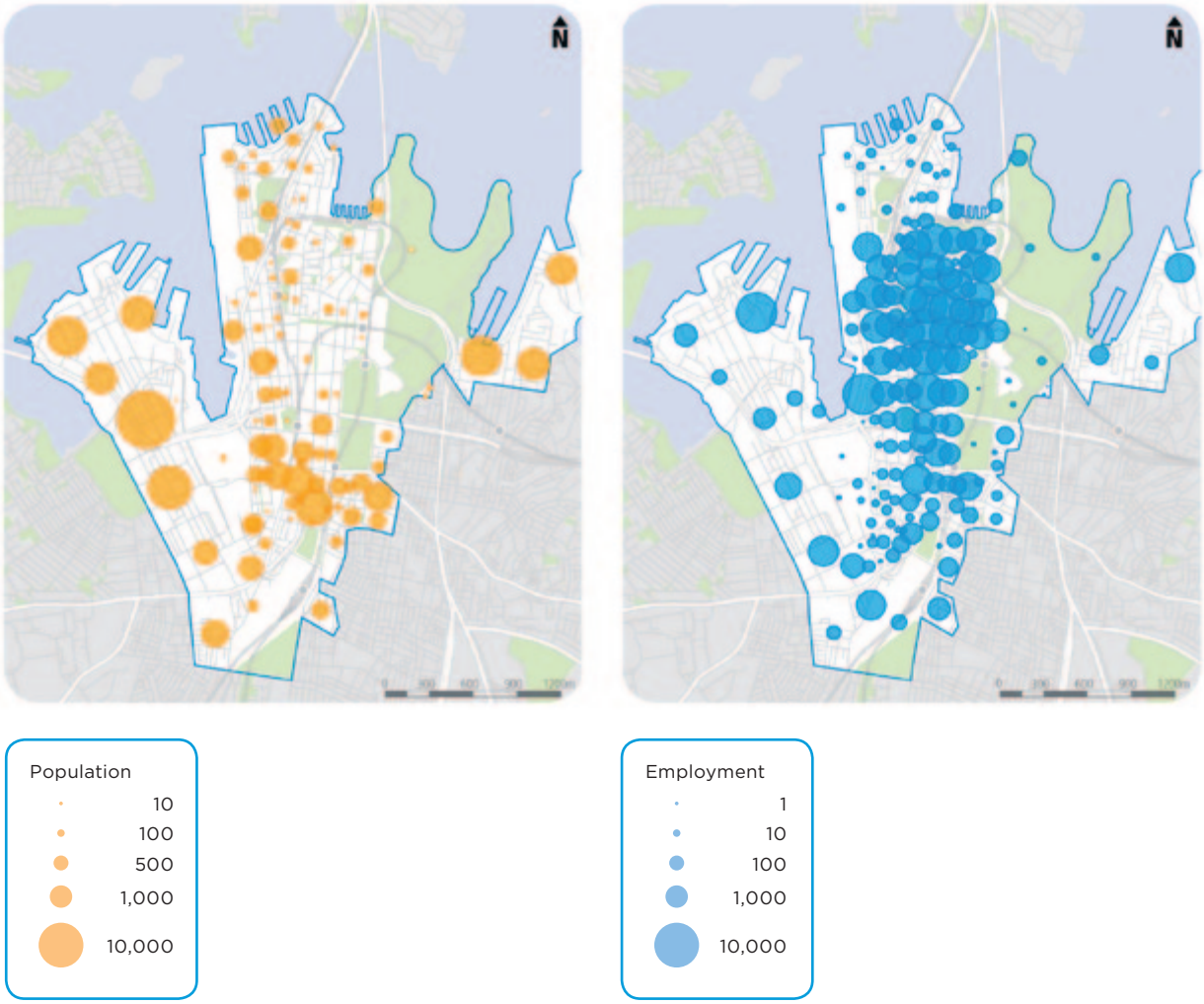
The Sydney CBD is vital to both the State and national economies, generating an estimated $70 billion of annual economic activity. This represents 5.3 per cent of the national economy and 16.7 per cent of the State's economy. More than 300,000 people work in the city centre compared to 47,000 in North Sydney, 43,000 in Parramatta and 39,000 in Macquarie Park.

Within the city centre, there is a high concentration of jobs in the finance, information technology and creative sectors with the highest concentration of jobs being in the northern end of the Sydney CBD. On a typical weekday, the Sydney city centre grows from about 60,000 to half a million people representing the highest concentration of people and trips in the country. This difference between population and employment is shown in Figure 15. More than 500,000 trips are made to the city centre each weekday, including over 200,000 people arriving in the two hour morning peak. Approximately three-quarters of these people use public transport.

The need to move so many people to a single location in a narrow space of time places strain not only on the transport network in the city centre, but on the whole metropolitan system. There is a substantial amount of internal travel with over 1.3 million trips made each day within the city centre. Bus and car congestion in the Sydney CBD is already a problem and CBD access presents a challenge for train services as passenger numbers grow.

Walking dominates travel within the city centre, with 93 per cent or more than 1.2 million pedestrian trips made in the Sydney CBD every day. Making walking and cycling safer, while also managing cars, commercial vehicles and buses, is a considerable challenge. There is an additional challenge with moving goods into and around the Sydney CBD to support both its working population and commercial activity.

Figure 15 – Sydney city centre population and employment 2011



Source: Transport for NSW 2012

5.1.2 What are the challenges for Sydney's regional cities and major centres?

Sydney's largest regional cities are Parramatta, Liverpool and Penrith. Around 40 per cent of employment in Sydney is based in these and other major centres, particularly those located in the eastern part of the metropolitan area. Employment in regional cities and other major centres is forecast to increase by 25 per cent between 2011 and 2031. In some other parts of Sydney, low density residential development and a relatively low proportion of centre based employment combine to create car dependency and associated problems such as social isolation. Connecting residential areas, particularly growth areas, to centres of employment, health and education will be important in increasing community wellbeing and quality of life across Metropolitan Sydney.

5.1.3 What are the challenges for Sydney Airport and Port Botany?

These are two of Australia's most important international gateways. Sydney Airport accounts for around 45 per cent of Australia's international passenger movements and airfreight tonnage. Port Botany is Australia's second largest container port, handling about one-third of all containerised cargo shipped into and out of Australia. Activity at the airport and port is forecast to double over the period to 2036. At current growth rates, the current planning approval maximum throughput of 3.2 million twenty-foot equivalent containers at Port Botany is likely to be reached by around 2017-18. The increase in traffic movements from both the airport and port will place additional pressure on the ground transport networks that feed these gateways. Accommodating movements between Sydney Airport, Port Botany and Western Sydney will be particularly difficult on existing networks, but is essential to support growth in the State's economy.

5.1.4 What are the challenges for the growth centres?

Sydney's growth centres are a focus for new greenfield development in the metropolitan area. Over the next 20 to 30 years, the South West Growth Centre will be home to more than 300,000 people with a further 200,000 living in the North West Growth Centre. The NSW Government is already constructing the South West Rail Link and is committed to building the North West Rail Link, which is in the detailed planning stage. Ensuring these train connections deliver accessible, well-connected and integrated transport are significant challenges for these areas. The NSW Government is also expanding the M2 and M5 motorways to help improve access to the growth areas.

5.1.5 What are Sydney's strategic transport corridors?

In order to better understand Sydney transport challenges, Transport for NSW has developed a system of 46 strategic transport corridors. Each corridor may include a number of different modes of transport, such as road transport, trains, or light rail. The corridors are the primary links between Sydney's major centres. They include a combination of existing routes and also transport corridors that will be important in the future.

Transport for NSW has reviewed the performance of each of these corridors, based on morning peak load factors for the rail network, travel speed and reliability for buses, and the volume and capacity on the road system. At present, five corridors are highly constrained and 11 corridors have medium constraints.

The future performance of these 46 corridors has been modelled using population projections and employment forecasts. Figure 16 shows the corridors facing the greatest pressure in 20 years time under current growth patterns, assuming no additional capacity is provided. The areas of concern are the city connections to the Northern Beaches, Inner West, and Sydney Airport as well as Macquarie Park to the North West Growth Centre and the airport links to the west. These corridors highlight the extent of the challenge to make the transport network perform better in the future and clearly indicate where future investment is needed.

Figure 16 – Demand and capacity on various corridors in Sydney over the next 20 years

Transport Corridors
- Corridors with high constraints
- Corridors with medium constraints
- Other corridors

Urban Centres
- Global Sydney
- Regional cities
- Existing major and specialised centres
- Proposed or planned major and specialised centres

- CityRail Network
- Major metropolitan roads

Source: Transport for NSW 2012

5.2 What are the possible future approaches to transport in Sydney?

Future transport planning must provide viable alternatives to car travel. A number of issues such as the rising cost of energy, road congestion, reducing air pollution, improving health, all indicate the need to reduce the number of journeys taken by car and to promote public transport, walking and cycling.

The first step must be to make better use of Sydney's existing transport infrastructure and services. Investment in new infrastructure should only be considered where solutions that require lower or no capital expenditure are not viable. Extending the transport network will be the right solution in some areas, particularly for Sydney's growth centres.

For other areas, modifying or making small enhancements to existing infrastructure and rectifying pinch points particularly on the State road and CityRail networks can deliver significant benefits. Enhancements may include investing in additional track, extending existing platforms where this can be achieved, giving greater consideration to the role and function of transport interchanges, dedicating road space to rapid transit systems and changing timetables to make them simpler and better reflect customer needs.

Delivering integrated multi-modal public transport networks that reflect the needs of customers will be critical to reducing the dependency on car use and developing a long term sustainable transport system that supports Sydney's position as Australia's global city.

There is no one single approach that can deliver a 'quick fix'. It is more about balancing the different needs and requirements of all transport customers as well as coming to terms with the inevitable trade-offs.

5.2.1 How should train services in Sydney be improved?

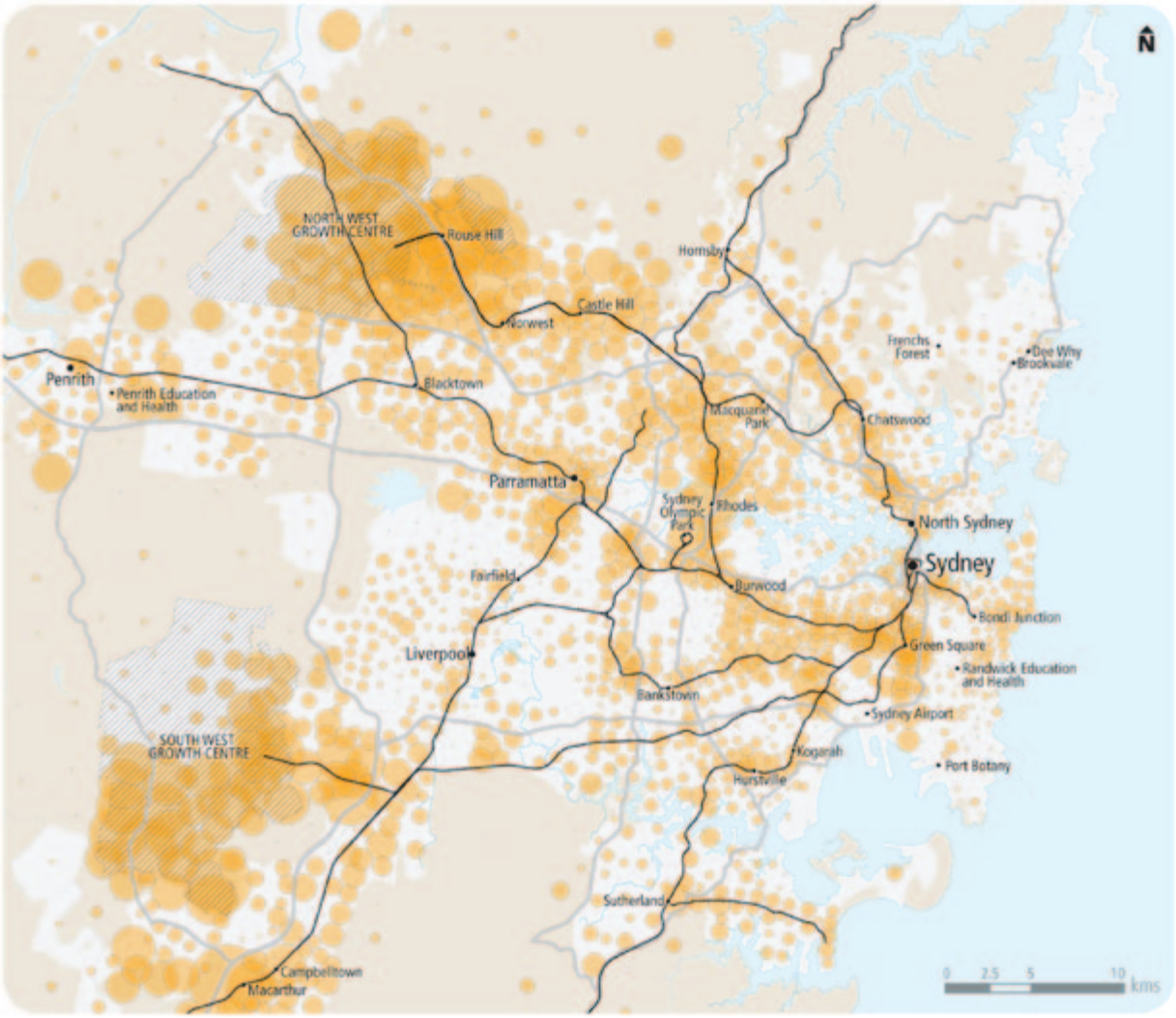
The CityRail network is the backbone of Metropolitan Sydney's public transport system. The rail network forms core public transport corridors that connect major centres and along which there tends to be a higher density of homes and businesses.

Sydney's residents make nearly one million train trips on an average weekday. Nearly 40 per cent of the journeys to work into the Sydney CBD are on CityRail trains. Overall, the number of train trips has increased by an average of 1.7 per cent a year since 2001. Over the next 20 years, train patronage is expected to grow by a similar amount each year, which means that overall patronage could grow by 40 per cent by 2031. The pattern of trips could be different to today, for example more trips over weekends and in the evenings. This will depend on the relative costs and constraints of other transport modes, particularly cars. Figure 17 shows the change in daily train trip demand projected to occur between 2011 and 2031.

To meet Sydney's changing population and land use patterns, our transport systems need to grow and adapt to meet the demand and improve connections across the Sydney metropolitan area.

A clear set of objectives will be required to guide future development of the entire rail network. These should include improving the customer experience, supporting the city's long term development, and delivering a system that is environmentally, operationally and financially sustainable. In many areas of outer Sydney, trains serve a very large catchment and the majority of customers arrive at a station by either car or bus. The lack of car parking at stations has registered the highest level of dissatisfaction with train commuters. Planning for these customers must consider the whole journey and not just the train component. Continued investment is needed in commuter parking, in better bus services to stations, and improved design so that pedestrians and cyclists can access stations more easily.

Figure 17 – Forecast change in daily demand for train services by origin zone 2011–31 (am peak)



Increase in trips
CityRail network with South West Rail Link and North West Rail Link
Major metropolitan roads

Source: Transport for NSW 2011

One way of tailoring services to customer needs is to separate services so that the high frequency all-stop services can operate on different tracks to the express services. This can be achieved through improved timetables linked to the development of new rail infrastructure projects. Timetables need to be customised to the different needs and priorities of customers. Increasing the frequency of trains will reduce crowding and speed up journey times. Increased service frequencies will enable those making short trips within inner Sydney, such as on the Inner West, Illawarra and Bankstown Lines, to 'turn-up-and-go' without needing to consult a timetable.

Sydney has a highly complex rail network. Fifteen outer lines feed into eight inner lines, which in turn feed into six lines converging through the Sydney CBD. This results in constraints where rail lines converge. Further consideration about how to separate major lines is required.

Over the next 10 years, a focus will be on extending the reach of the rail network and making efficiency improvements to the existing network and services where this can be achieved. The South West Rail Link is due for completion in 2016 and major construction will begin in 2014 on the North West Rail Link. Alongside these extensions, it will be necessary to make the existing network operate more efficiently and to address capacity constraints as they emerge. In the longer term, important choices must be made about the development of the CityRail passenger network and services to enable them to fulfil the future needs and expectations of the community.

This would need to occur together with continuous investment in maintaining and supporting the existing rail infrastructure, including track and signalling, new trains, train stations, information systems and technological enhancements.

Automatic Train Protection and Automatic Train Operation systems can be used to automate acceleration and deceleration of trains as well as manage the distance between them. These systems increase safety and can enable increased capacity on each line. Automatic Train Protection is currently being introduced to the rail system and a trial of Automatic Train Operation will be undertaken to test the capacity that could be gained. These systems will support the improvements in timetables to increase frequency and reduce journey times.

In the longer term, a range of options could be considered to transform the CityRail system from a predominantly radial pattern of operation to one focused on the main regional centres across the city, such as Parramatta, Liverpool, and Penrith.

The shift to a metro style system in Sydney is an option that has been debated in recent years. Such a transformation to Sydney's rail network would require a number of major investments. This level of investment needs to be carefully analysed before any decisions are made. Factors that will need to be considered include how any conversion to metro style operations can link with other aspects of an integrated transport system.

Express services would require more capacity in the Sydney CBD and eventually a second train route across Sydney Harbour. The other option is to give first priority to a second Sydney Harbour crossing and additional inner suburban capacity and then expand capacity on the lines serving Western Sydney.

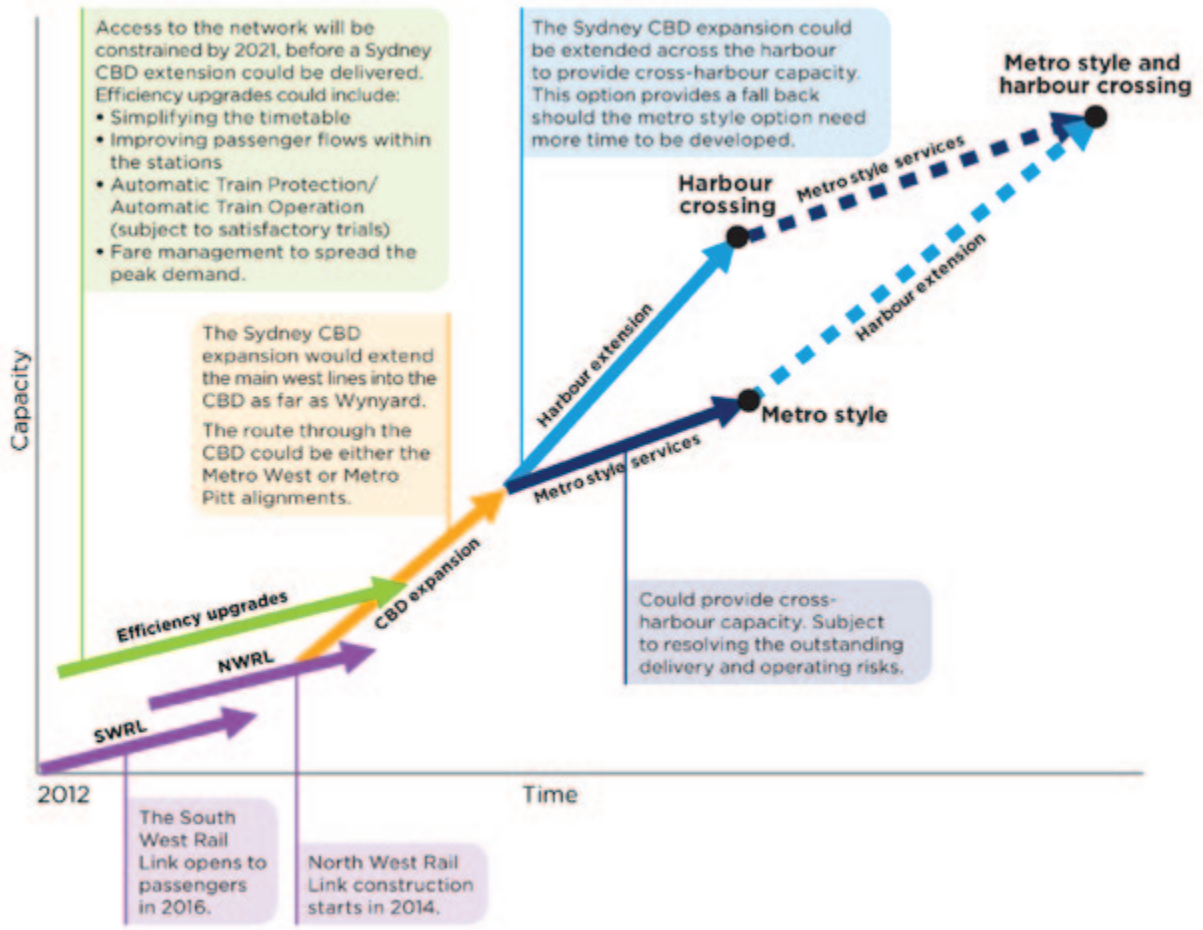
It is important to consider what role buses or light rail can play in meeting similar sorts of needs. Finally, consideration needs to be given as to where this level of investment can bring the greatest benefit and what issues we are seeking to solve.

No single rail enhancement program can meet all customer preferences for travel in every part of Sydney. The best approach may be a planned sequence of investments that progressively strengthen how the system operates. Figure 18 shows options for increasing the capacity of the network over time by making further efficiencies, investing in new infrastructure, including express services.

An important aspect that will influence the decision-making process is consideration of the optimum service delivery model. Market research, supported by international experience, has shown that different customers value different features of train services. Short distance commuters favour frequency of service and fast journey times. The importance of fast journeys increases for long distance travellers who also value trip comfort and better seating. Choices will need to be made about how best to meet the needs of a range of customers.

For example, the core inner metropolitan services would offer high frequency more rapid services that could enable customers to ‘turn-up-and-go’ without needing to consult timetables and to transfer quickly and seamlessly to other services. The medium and longer distance services could incorporate both all-stops and express services similar to the first option, with the whole system configured to deliver improved total travel time for as many customers as possible. Taking this pathway will influence sequencing, focus and choices for investment decisions.

Figure 18 – Sequence of possible future investments in CityRail



Source: Transport for NSW 2012

5.2.2 How can the network of motorways and major roads be better used?

The Sydney road network consists of motorways and freeways, arterial roads and local roads. Arterial roads provide the essential links between local precincts and the motorway network. The established network of major roads includes the 110 kilometre Sydney orbital network. This comprises the M7, M2, the Lane Cove Tunnel, the Sydney Harbour Tunnel, the Eastern Distributor, the M5 East and M5. There are motorway connections to the regional road network formed by the F3 to the north, the M4 to the west, the F5 to the south-west and the F6 to the south. This network connects the major commercial centres running from Port Botany through the Sydney CBD to Macquarie Park with north-west and south-west Sydney. The motorway network is heavily used throughout the day and night by freight vehicles, commercial traffic and commuters.

Sydney's road system and the motorway network are vital to the economic development of Sydney and the State. They provide access to jobs and links to Port Botany and Sydney Airport. They support the major freight task required to service the needs of Sydney and beyond. To do this effectively, the motorway network needs to be well connected to the major traffic generating precincts and it needs to have the capacity to meet the demand for those trips that cannot be made by public transport.

Apart from the Sydney orbital, the current motorway network has a number of vital missing connections. There is currently no motorway connecting the growing employment lands and population along the M4 with the Sydney CBD, Port Botany and Sydney Airport. There is no motorway connection between the Sydney orbital and the F3 in the north and no motorway connection to the F6 in the south.

There is heavy congestion in peak hours on significant sections of the orbital. This indicates that current capacity falls well short of the needs of a growing economy. Widening the existing motorway network and building new connections can provide for faster travel across the city. An extension of the M4 would provide a motorway standard link between the Western Sydney Employment Area, Parramatta, Sydney CBD, Sydney Airport and Port Botany. Duplicating the M5 East would alleviate congestion near Sydney Airport and Port Botany and allow quicker journeys to warehousing and freight distribution locations in South West Sydney. An F3 to M2 link would provide motorway standard travel across Sydney connecting to the Central Coast and Newcastle.

The motorway network can potentially be managed more effectively to get the best possible performance out of the existing infrastructure, by managing the spread and minimising the growth in congestion. Automatic vehicle and incident detection systems, ramp metering, closed circuit television and electronic variable speed limits have the potential to help keep traffic flowing. The road network is currently managed in real-time through monitoring via CCTV cameras and adjusting traffic signal times at the Transport Management Centre. In order to get more out of the existing network, technological innovations might be embedded in roads to allow for automatic crash and breakdown detection to get traffic flowing again as quickly as possible.

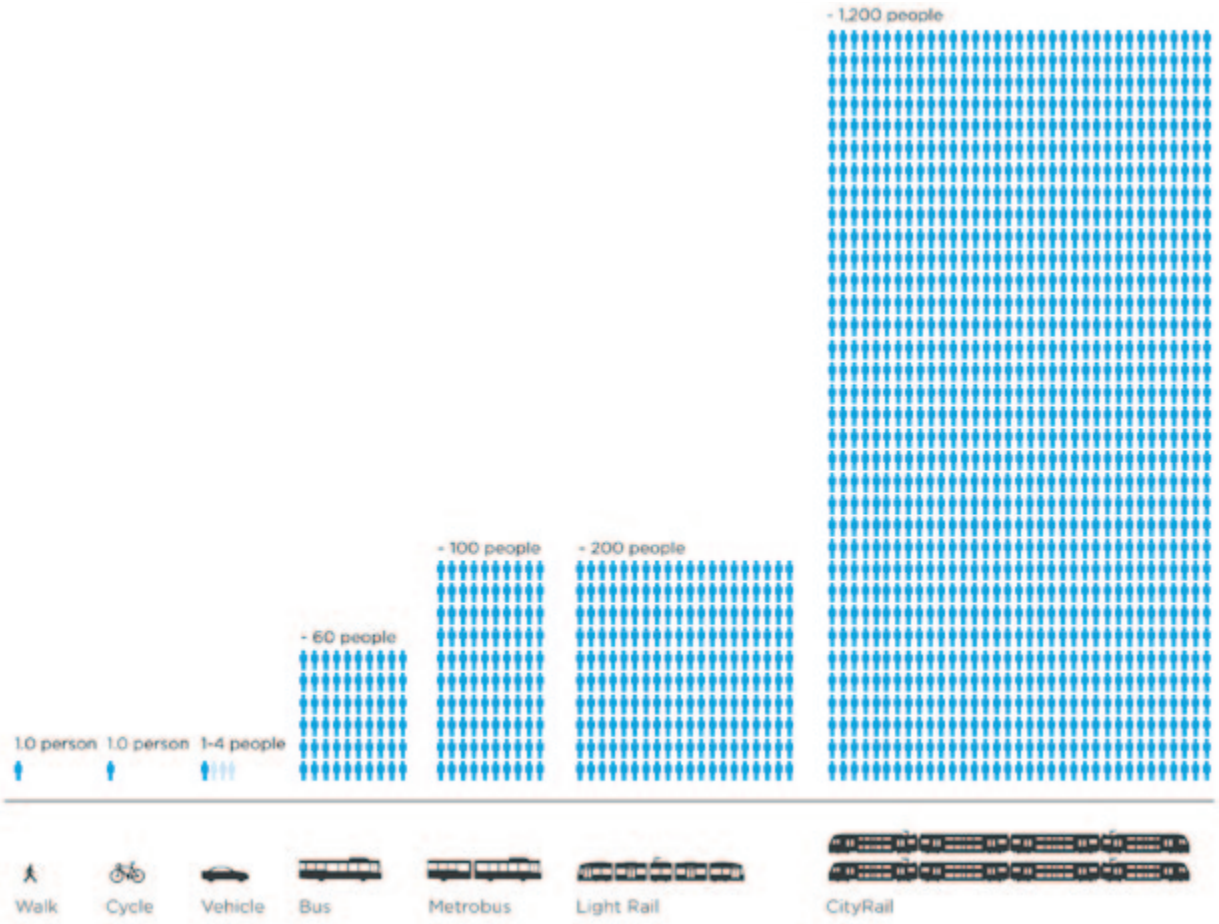
As the traffic on major arterial roads increases, new systems will be needed to manage congestion. Numerous measures could be considered. Clearways on more roads and operating for longer hours and on weekends would facilitate traffic flow. The removal of parking on major arterial roads and priority for freight vehicles on the main freight corridors would also assist traffic flow. Allocating more road space to buses or light rail would increase the number of people passing through the system. Road pricing might discourage car use and increase public transport patronage. Offering priority to vehicles with multiple passengers could increase the efficient use of cars. Building more park and ride opportunities, including at major bus stops, would reduce car trips to major centres. Other measures include connecting the off-road cycling network to major centres and more use of tidal flow schemes, such as on the Princes Highway, where more capacity is given to the heavier traffic direction.

A variety of other schemes can help to reduce the need to use private vehicles. These include supporting flexible working hours, businesses providing employees with information about public transport, carpooling, and facilities for cyclists at the work place. Formal processes could be encouraged, such as Transport Management Associations where a number of businesses work together to encourage more sustainable travel in business parks and centres such as Macquarie Park.

5.2.3 How should bus services in Sydney be improved?

Buses are the most flexible form of public transport. Each bus can carry between 60 and 100 passengers, which means they efficiently use road space and are an effective way of providing public transport services to lower density areas. Light rail has an important role to play and has an ability to deliver greater public transport capacity to service higher density transport corridors. Heavy rail is the most suitable mode for high density corridors.

Figure 19 – Indicative vehicle capacity by mode



Source: Transport for NSW 2012

Figure 19 shows capacity of vehicles for different modes of transport. This indicates where transitioning to a higher capacity mode might make sense. The actual thresholds will vary depending on the specific circumstances of the corridor. Most transport systems around the world rely on buses to extend the reach of public transport services into lower density areas and connect to higher capacity transport networks.

Bus customers look for safety, security, cleanliness, comfort, frequency, reliability, competitive travel times, and ease of use of the bus network. Each weekday around one million bus trips are made in Sydney. This is around 48 per cent of daily public transport trips. Over the next 10 years bus patronage in Sydney is expected to grow by nine per cent, and by 2031 almost a 16 per cent growth in patronage above current levels is predicted.

Bus congestion is a significant problem in the Sydney CBD as many services pass through Wynyard or Circular Quay. In the short term, the number of buses in the Sydney city centre could increase by up to 10 per cent. This may mean bus routes may have to be altered to avoid increased stress on the major north-south streets in the Sydney CBD.

The NSW Government has implemented bus priority measures to improve bus travel times and reliability of services. Forty three strategic bus corridors are now in place across Sydney. The role of these corridors is to support Sydney's regional cities and major centres and thereby reinforcing a strong spatial structure for Sydney. These have been the focus of technological innovations, such as satellite technology to identify late running buses and to give them priority at specially controlled intersections. All government buses are now fitted with this technology and investigations are underway to see if the technology can be used to offer faster travel times as well as more reliable services.

There are now 13 new routes on the Sydney Metrobus network. These provide high frequency, high capacity links between major destinations across Sydney. These buses run every 10 minutes in peak periods and although some routes go through the Sydney CBD, few terminate there. The expansion of the Metrobus network has already provided an additional 8000 services per week, providing space for 640,000 additional passengers. The Metrobuses are part of a program to simplify bus routes and to design the network around a system of major routes linking centres and local services.

Congestion on the road network has a major impact on bus frequency and reliability. Making efficient use of road space by providing priority for buses in the form of bus lanes and bus priority at traffic signals can reduce travel times, improve reliability, allow more frequent services and bring down operators' costs. The results of effective bus priority measures can be seen on the Sydney Harbour Bridge each weekday morning, when the bus lane carries more people to the city than all other city-bound lanes combined.

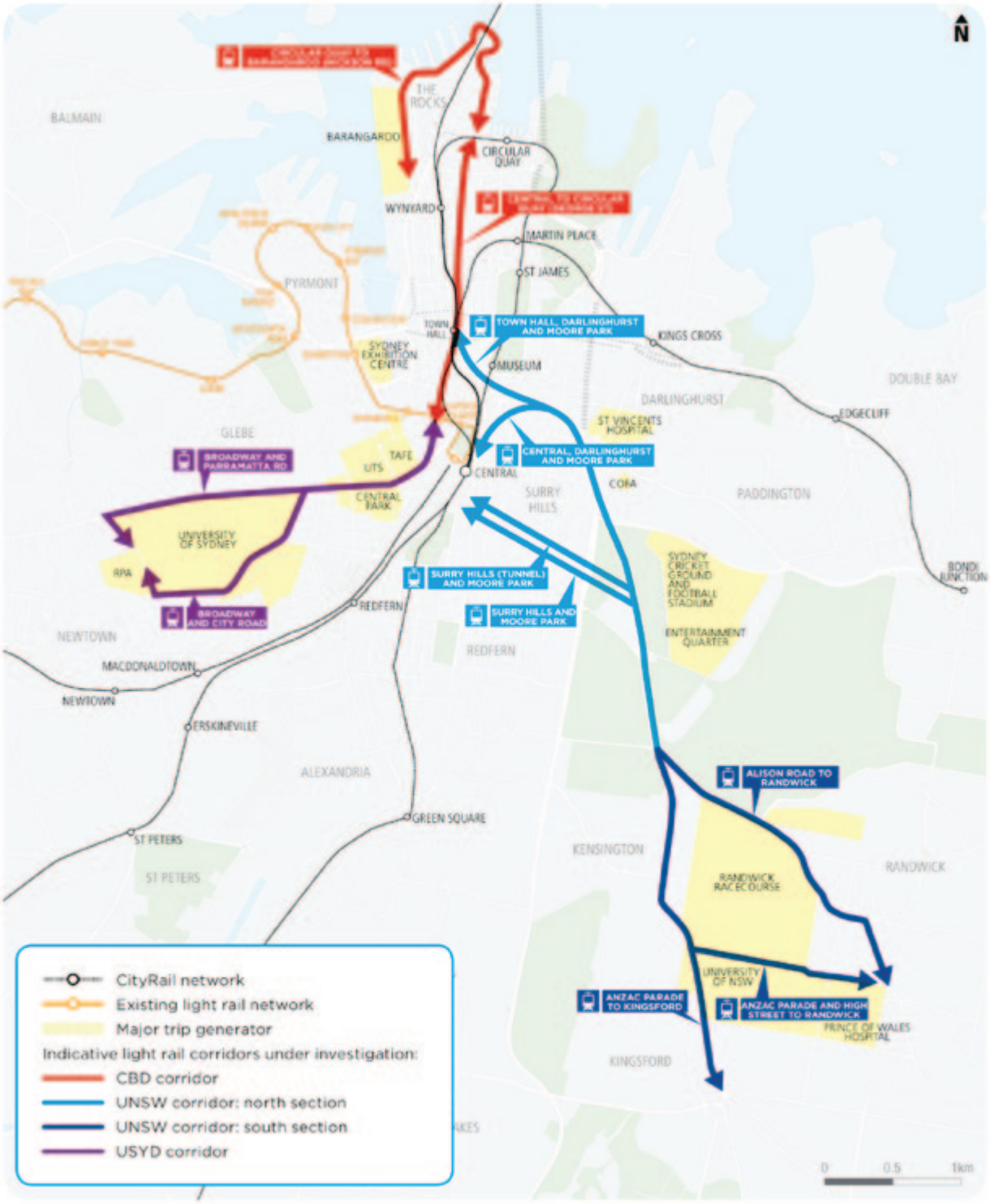
Corridors with high bus patronage need to be considered for high levels of bus priority. The next major bus priority scheme under consideration is the Northern Beaches Bus Rapid Transit. The Mona Vale-Spit Bridge-Military Road corridor is one of Sydney's busiest bus corridors with 54 different bus routes and has heavy traffic congestion. More than 60,000 bus passengers travel on this corridor every weekday. A rapid bus solution may suit this low housing density corridor and better match land use with transport planning.

5.2.4 What role should light rail have?

Light rail is also an important consideration for the future. For many people light rail is a popular alternative to buses. In some cases, light rail may be ideally suited to replace some of the major bus routes into the Sydney CBD. The Sydney Light Rail currently links Central Station and Sydney's Inner West via Haymarket, Pyrmont, Glebe and Rozelle. The network is being extended to Dulwich Hill via Leichhardt and Lewisham. Figure 20 shows current options for new light rail corridors that could connect the existing network to the Sydney CBD, Barangaroo, the University of Sydney, and the University of NSW. An extension to the light rail network could allow the replacement of some of the bus services that terminate in the Sydney CBD. This could reduce congestion and also improve journey times for all road users.

Major network improvements have the potential to transform some of the strategic transport corridors shown in Figure 16. Cross-regional corridors could greatly improve the public transport system. These would focus on Sydney's regional cities. Investing in high capacity high frequency transport infrastructure along major corridors could encourage medium density housing development in appropriate locations. This in turn would increase the efficient use of public transport services.

Figure 20 – Possible light rail corridors in central Sydney and the Inner East



Source: Transport for NSW 2012

5.2.5 How should ferries in Sydney be better used?

Ferries will continue to connect Sydney Harbour peninsulas and places along the Parramatta River to the Sydney CBD. They are an important part of Sydney's transport system, and provide an attractive form of public transport for customers.

New ferry wharf requirements are being identified for the new Barangaroo development to the west of the Sydney CBD. Consideration needs to be given to how any investment in these and any other ferry wharves can enhance access to the northern end of the Sydney CBD, distribute the load of commuters arriving to the northern end of the city centre and thereby encourage people to use ferries as an important part of their overall transport choice.

Ferry services are now provided through a range of mechanisms, including public and private operators. In May 2011, the NSW Government announced its Fixing Sydney Ferries program. This is a plan to restore, improve and expand services, upgrade wharves and develop a strategic plan to guide investment in services and assets. The first step is to commence the franchising process for Sydney Ferries. This is aimed at getting the best operator to deliver ferry services in Sydney. The next step is to identify where additional services can best meet the city's needs and to develop a plan that identifies how ferries can play a greater role in an integrated transport system. Sydney Harbour is fairly uncongested and consideration could be given to better using this resource.

The NSW Government has also committed to facilitating further private sector involvement in the delivery of ferry services. In late 2011, the NSW Government sought Expressions of Interest from private ferry operators seeking to provide additional deregulated commuter ferry services on routes not currently serviced by Sydney Ferries. The first of these new deregulated commuter routes commenced in January 2012. The new routes will operate on an interim basis until the franchising process and network review processes are complete.

5.2.6 How can cycling be encouraged?

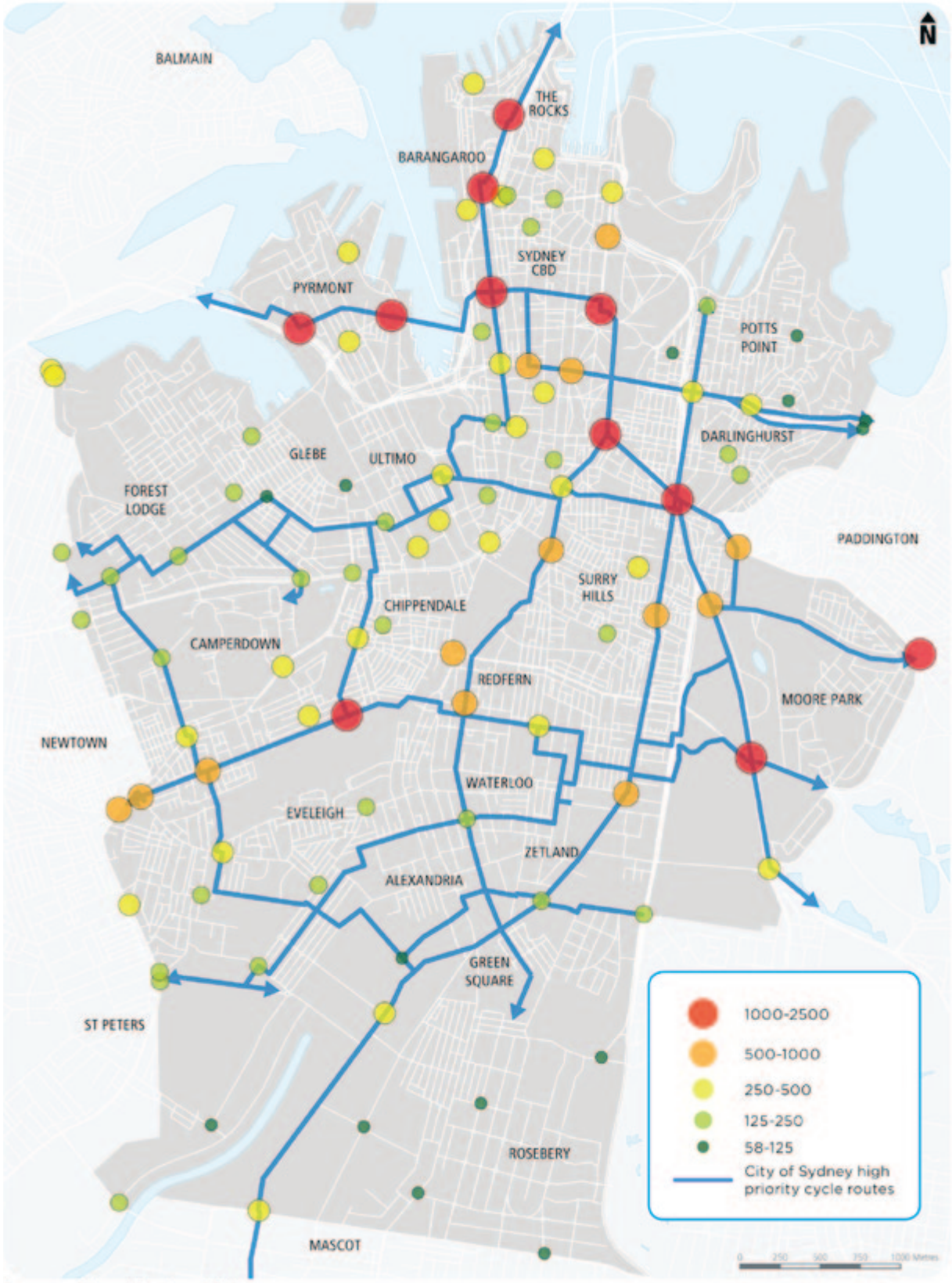
Cycling and walking have become increasingly popular in recent years. There are opportunities to maintain this trend by improving, connecting and expanding cycling and walking networks in local communities, making them easier to use, safer and more accessible. *NSW 2021* has targets to increase walking and cycling to help ease transport congestion and build a healthier, more active community. For cycling, the NSW Government wants to more than double the bicycle mode share of all trips shorter than 10 kilometres made in the Greater Sydney region by 2016.

There are many advantages to cycling, both for individuals and the wider community. In addition to health benefits and it being a relatively affordable transport option, cycling has a much lower impact on the environment than many other forms of travel. While cycling will never suit everyone, more and more people can be encouraged to ride when safe infrastructure is provided, potentially freeing up space on other modes of transport.

Cycling is an important part of the transport network in NSW, particularly for local trips. A 2010 survey indicated that 1.8 per cent of all short trips in Sydney are made by bicycle. In 2011, more than a million adults across NSW cycled each week. In the Sydney city centre, cycling has increased during peak periods.

A number of Sydney councils have developed detailed cycling strategies. These strategies provide an opportunity for Transport for NSW and councils to work together to increase the use of bicycles in the Sydney area. Consideration needs to be given to where cycleways can share the existing road space, where dedicated cycleways are needed, where bicycles are stored, how public transport can more effectively support the cycling commuter who may wish to undertake only part of the trip on their bicycles and where the priority areas for making any necessary changes are. Figure 21 shows the most recent data from daily peak hour cycle counts at major intersections across the City of Sydney.

Figure 21 – Number of cyclists in the morning peak in the City of Sydney (October 2011)



Source: City of Sydney 2011

The Metro Sydney Bike Network is the principal cross-regional cycling system in Sydney. The network connects the city's major centres and is made up of off-road cycleways away from busy traffic and on-road links using quiet streets. Current initiatives to increase cycling in Metropolitan Sydney are focused on the *NSW 2021* commitment to complete missing sections of the Metro Sydney Bike Network. The NSW Government is also working with councils in all parts of NSW to improve local cycle routes to enhance connections to existing cycle networks and to make provision for cycling in growth areas. Other existing programs aim to improve bike riding skills and confidence and increase community awareness of cycling and cyclists. Providing facilities that make it easier for people to ride to and from public transport will also make cycling a more attractive travel choice.

5.2.7 How can walking be promoted?

NSW 2021 aims to increase the mode share of walking for local and district trips made in the Greater Sydney region to 25 per cent by 2016. Walking is increasing for both commuting and recreational trips in NSW. Between 1999-2000 and 2009-10, the mode share of commuting and recreational trips by walking increased to seven per cent and 30 per cent respectively.

Walking can be promoted by ensuring public transport, shops, education, and other destinations are within easy walking distance of each other. It can also be assisted by building dedicated walkways, including underground walkways, and by generally improving the experience of walking. The design of cities, towns and suburbs heavily influences individual decisions to walk or use other transport modes. Pleasant and safe environments and open spaces encourage people to walk for short local journeys and for recreation. Where longer distances preclude walking, it can be encouraged as part of a journey in combination with public transport or private car use.

Walking plays an important part in major centres and in the Sydney CBD. Walking helps to relieve congestion on roads and public transport during peak hours. Efforts are still required to improve the amenity of the Sydney CBD for walking to make it a better place for pedestrians. By 2015 there will be a new walkway connecting Barangaroo to Wynyard. The *NSW Long Term Transport Master Plan* will need to identify priorities for new walking links, especially areas where walking can improve local amenity. The Plan needs to address how walking can be managed safely where there are major traffic routes and within the Sydney CBD.

5.2.8 How can more innovative use be made of taxi services?

Taxi and hire car services are an important component of both Sydney and NSW integrated transport networks. They provide fast, flexible and personalised transport at all hours. Taxis also provide transport to people who may otherwise be isolated, such as people with a disability and people without cars.

The taxi and hire car industry is providing an increasing range of innovative services, including contract services to community transport organisations and local councils, discounted off-peak services and late night pre-booked services from licensed venues. Innovative use of taxis and hire cars to complement community bus services can deliver services better tailored to the specific needs of individuals and groups in our community.

5.2.9 How can community transport be improved?

Community transport plays an important role in providing much needed services for the frail aged, people with a disability and their carers, and for those who do not have access to other forms of transport. While to date, no major concerns have been raised about the safety performance of community transport, there is a view that existing provisions should be strengthened and that drivers should be authorised, as are drivers of other public passenger services.

In response to this, the NSW Government has agreed to strengthen the safety framework for the delivery of community transport services by introducing an appropriate driver authorisation framework, while being mindful of the potential impact authorisation may have on the many hundreds of volunteers who provide these services.

5.2.10 How can changing between transport modes in Sydney be improved and encouraged?

Public transport services cannot always offer a direct route to passengers and they have to change and connect to another service or mode to reach their destination. This has become more necessary as different travel patterns and lifestyles have developed.

Customers now travel further, more often and at different times of day to access services in various locations, such as employment, retail, education, health care and leisure activities. Interchanges should allow customers to seamlessly change to another service or mode. This could be to another bus service, a bus to a train, train to a ferry, bus to light rail, or train to a taxi. Good pedestrian access is essential and facilities for secure storage of bicycles and car parking are desirable in some locations.

Transport interchanges, train stations and commuter car parks are the places where customers arrive or leave the public transport system or change between services. The customers' needs and the benefits for the entire transport system should be paramount when designing and operating these facilities, as they need to support fully integrated services. Figure 22 shows interchange as part of the customer journey.

Figure 22 – Interchange as part of the customer journey

Source: Transport for NSW 2012

A major challenge is to better integrate transport interchanges with public spaces and major service locations, whether this is a shopping centre, a residential area, or an employment location. Improved interchanges will be a critical part of transport infrastructure as populations increase, particularly through infill development in Sydney's established areas as well as in growth centres.

Large mass transit systems in international cities rely on efficient and speedy interchanges. These cities have well designed stations that allow quick movement from one service to another. In busy stations, platform space can be streamlined by removing obstacles. In underground locations, good lighting, escalators and lifts are important in providing good access and moving people along quickly. This makes interchanging more convenient, especially for those with mobility impairments. Supporting policies are also necessary, such as ensuring the quality and frequency of services at interchanges, the coordination of timetables, and fare integration. Some of the best examples of interchanges have site committees, such as in Paris, or dedicated customer care assistants on concourses, such as in London.

Multi-modal interchanges must be well designed to meet the needs of all customers, including mobility and sensory impaired passengers. Signage is critical. Poorly signposted interchanges will discourage customers. Improvements to the physical aspects of interchanges must go hand in hand with fare structures that do not penalise customers who switch modes. Good customer and journey information is an essential part of any modern interchange.

5.2.11 How can access to Sydney Airport be improved?

Sydney Airport is the nation's busiest airport with 46 per cent of international air passengers, 23 per cent of domestic air passengers and 50 per cent of Australia's international airfreight. In NSW, demand for aviation has generally grown faster than both economic and population growth. The passenger volumes are forecast to more than double in the next 20 years. By 2029 Sydney Airport is projected to handle 78.9 million passengers, around 402,000 passenger aircraft movements and just over one million tonnes of freight per year. Improved road, rail and bus access are needed to support this important passenger and freight task.

Sydney Airport is approaching capacity constraints, both in airspace and airport configuration. The main road and rail connections that serve it are congested. The corridors that serve it and connect it to the Sydney CBD will experience increased demand due to residential and employment growth elsewhere. The NSW Government is committed to maximising the capacity of Sydney Airport, and has submitted a proposal for funding to Infrastructure Australia to undertake more detailed planning around this vital airport and seaport precinct.

In the longer term, the options for addressing the ongoing demand for long distance travel are all challenging. These may include more radical options to increase use of the existing facilities at Sydney Airport or the introduction of high speed rail between Melbourne, Canberra, Sydney and Brisbane.

5.2.12 Should some form of road pricing be considered?

By 2031, travel demand is likely to increase by 24 per cent in line with the projected growth in Sydney's population. In order to manage this increase in demand, some form of road pricing may need to be considered. Already parking fees in the Sydney CBD discourage car use to some extent. However, a more comprehensive demand management scheme may be necessary to encourage a shift in travel patterns. Proper demand management will allow more effective use of existing infrastructure and avoid, or delay, the need for additional costly infrastructure.

Road pricing is also likely to increase patronage on public transport. For road pricing reforms to be successful it is essential to ensure that sufficient public transport capacity is available to cope with increased demand as customers change modes. Road pricing reforms and a redistribution of road space in favour of public transport means encouraging the use of public transport over car use in congested corridors. Another means of reducing demand for road usage is the integrated planning of land use, roads and public transport. Road pricing is further discussed in section 8 under funding.

5.2.13 How can the pricing and supply of parking influence demand for private car travel?

The availability of parking is important for commerce and industry. Many small businesses, particularly in the hospitality and retail sectors, are heavily reliant on easy car access by their customers. The ease of access to centres, by both public transport and parking, can promote the development of new centres or divert activity to other locations.

The supply, cost, type and location of parking in centres all influence how people choose to travel. Parking policy has the potential to improve accessibility to centres for all travel purposes and modes, reduce traffic congestion on access roads to a centre, improve the amenity, air quality, noise and physical environment of a centre and improve the efficiency, effectiveness and viability of public transport to centres. Parking strategies can be very effective travel demand management measures when they have the effect of discouraging the single occupancy of cars.

5.2.14 How can land use and transport be better integrated?

Sydney has grown from a city with a transport system focused on the Sydney CBD to a large metropolis with many centres and multiple connections. This transport system has, to a large extent, defined Sydney's growth and the shape of the metropolitan area. Sydney has a far greater proportion of its residents living in densities that can support public transport than any other city in Australia. About half of Sydney's population lives within two kilometres of a CityRail station and around half of all jobs are within one kilometre of a station. These characteristics have contributed to Sydney having one of the highest rates of public transport use of all Australian capital cities.

The way land is used leads to requirements for transport both within local communities and between areas and regions. The connection between transport and land use is a fundamental consideration in transport planning. Every change in land use has implications for transport. Transport infrastructure helps to shape land use by improving accessibility and mobility. Integrating land use and transport means creating places that are more liveable and that work simply and efficiently. This means reducing dependency on cars and reducing the need to travel, allowing people to travel shorter distances and make fewer trips.

At the metropolitan and regional level, the integration of transport and land use planning means choosing the right locations for land release and urban renewal, and providing new or improved roads, trains and bus corridors at the right time. For suburbs, it requires the right location for shops, housing and businesses, and good road layouts that facilitate walking, cycling, road and bus connections.

The population density and type of land use determine the quality and choices of transport that an area can support. Areas with high population density or high economic activity are able to generate travel demand that can support more transport choices. Population growth in Sydney needs to be planned for places that encourage walking and cycling and that provide opportunities to use public transport, especially for commuter trips. The location and density of new housing is a valuable opportunity to address issues of congestion, access to shops and services, as well as providing better transport links for new housing.

This means focusing growth in existing centres and providing new growth centres with good public transport connections. The NSW Government wishes to encourage more job growth close to where people live. A more compact city will benefit both people and the economy by creating a more liveable city with more accessible jobs and a transport system that moves people and goods efficiently. This makes a coordinated approach to land use and transport planning all the more important.

High rise and medium density housing can all support some level of public transport provision. Choices and trade-offs will have to be made. Medium and higher density homes in centres or close to transport corridors will have better access than low density areas. Medium and high density neighbourhoods have easier access to jobs and services. The idea is to reduce travel time and distance travelled, providing easy and safe access to all daily needs, thereby improving local amenity and quality of life.

Protecting transport corridors is an important planning mechanism to ensure the availability of land for future transport projects. As Sydney grows and changes, new transport projects will be identified, although funding may not become available for many years. Preserving corridors enables urban development to progressively occur across the city in a way that does not preclude transport options in the future. In the Sydney metropolitan area, there are a number of such corridors that are currently not yet used for transport purposes.

Corridor protection provides an important safeguard to ensure the corridor is not built out. Examples of protected rail corridors where transport projects are currently not committed include the Parramatta to Epping Rail Link and the CBD Rail Link. Examples of protected road corridors include the Castlereagh Freeway and the F6 Freeway. The *NSW Long Term Transport Master Plan* process provides the opportunity to further consider the protection of corridors including whether to extend, reduce or modify the protection.

Strategic questions

4. In solving the transport problems in Sydney, what transport mode should be the first priority for new investment, bearing in mind the need for a socially equitable and environmentally sustainable transport sector?
5. What do you consider to be the main priorities for investment in Sydney's transport infrastructure?
6. How can the road network be better utilised and enhanced?
7. What are your priorities for public transport services in terms of frequency, reliability, cleanliness and safety?
8. What criteria should determine whether light rail or bus transport should be preferred?
9. How can walking and cycling best be encouraged?
10. What are the current barriers to using multiple transport modes to complete a journey? How can the barriers be addressed?
11. How can the transport requirements of Sydney Airport and Port Botany be best addressed?
12. If there are to be more greenfield land release areas in Sydney, should there be a focus on developing public transport options as part of strategic land use planning for Metropolitan Sydney? How should this policy be given effect?

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6 REGIONAL TRANSPORT

6.1 What are the transport requirements for regional NSW?

An effective transport system is essential for the economic and social viability of communities in rural and regional NSW, enabling access to and the distribution of necessary goods and services. Regionally based businesses such as those that support the agricultural and mining sectors are significant contributors to the State's economy and these sectors rely on effective transport connections to get their goods to market. Transport is critical in connecting people with vital education and health services and it also plays an important role in social and recreational activities. In NSW, links between Sydney and major regional centres rely on a well maintained and efficient network of rail, road and air services. Each of these plays an important role in meeting the accessibility needs of both people and goods.

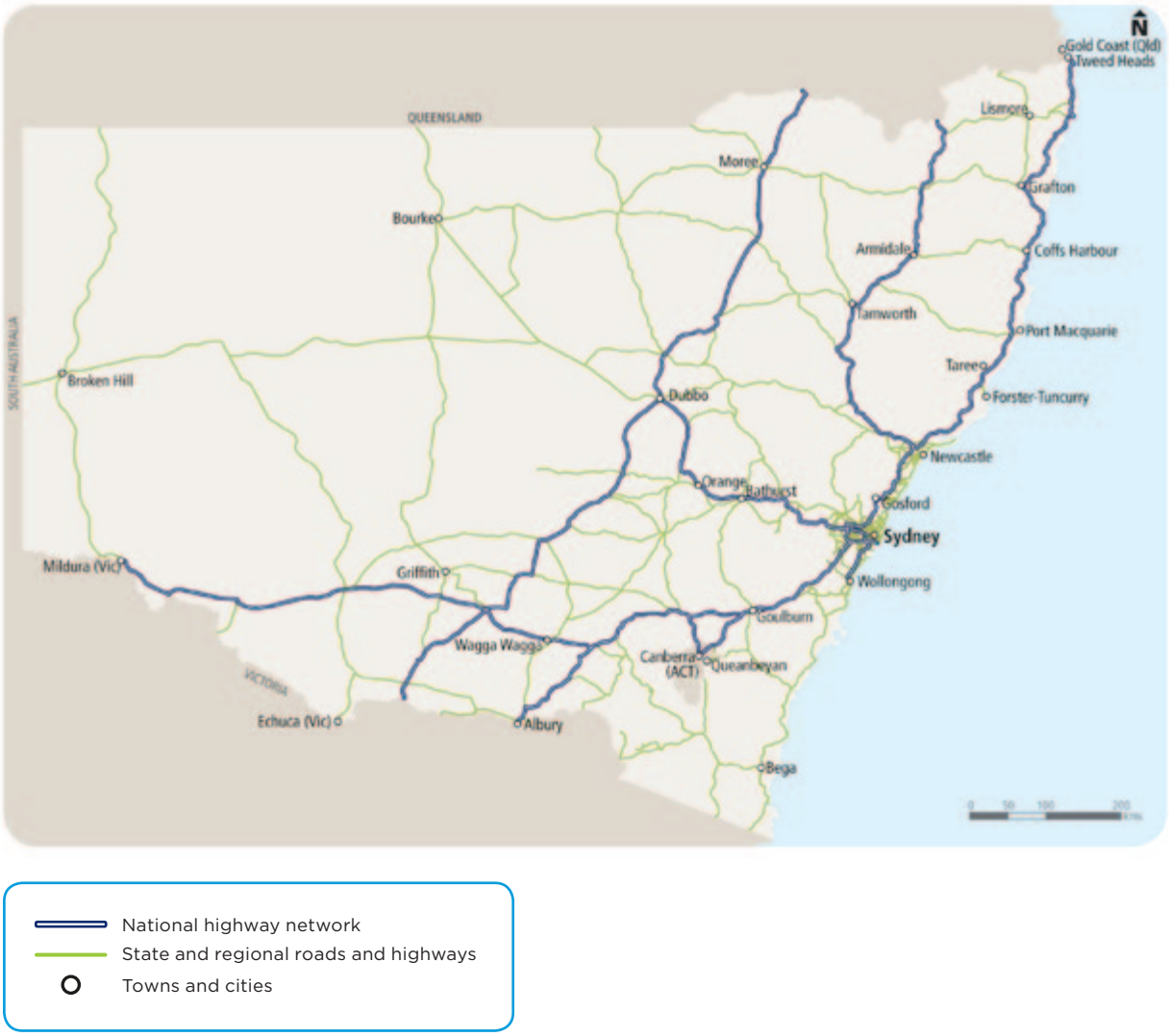
6.2 What are the challenges and future approaches for the NSW highway network?

NSW has an extensive road network that connects localities to regional centres, as well as to the main metropolitan areas and transport hubs of Sydney. The road network links cities and major population centres across NSW and is of critical importance to national and regional economic development and social connectivity. In addition, a number of regional centres act as major service centres for local communities as well as distribution and warehousing hubs for interstate and intrastate freight movement.

The National Land Transport Network is a single integrated network of land transport linkages of strategic national importance. The network comprises road and rail corridors and links state capitals and major centres of commercial activity. The roads component of the National Land Transport Network in NSW is 4323 kilometres of major highways and some arterial roads.

In total, NSW has 18,028 kilometres of State roads, as well as 2970 kilometres of regional and local roads. There are 5130 bridges that are the responsibility of the State. There is also a range of other road transport assets such as traffic signals and tunnels. These State roads are linked to 18,231 kilometres of council-managed regional roads that receive State financial support. There is a further 145,565 kilometres of council-managed local access roads. The entire network is of critical importance to both national and regional economic development and social connectivity. The network of major roads in NSW is shown in Figure 23.

Figure 23 – The network of major roads in NSW



Source: Transport for NSW 2012

One-third of the nation's road freight is moved through NSW, including half of all interstate freight. While the immediate national priority is to complete the duplication of the Hume and Pacific Highways to support the efficient movement of freight between Melbourne, Sydney and Brisbane, thought needs to be given to the investment that is needed for those additional connections that will help to link the regions more effectively with the ports and major distribution centres in Sydney, Newcastle and the Illawarra over the next 20 years.

Ensuring that the road system as a whole is in sound condition, and ensuring that rural and regional businesses have access to a modern and efficient road system, is fundamental to the State's productivity and economic growth. Road connections need to be safe and serviceable, providing reliable access in all but the most exceptional weather events. Maintaining the road network is a constantly challenging task. As traffic volumes grow, the wear and tear on the NSW road assets increases. Roads wear out and require rehabilitation and resurfacing. An important planning and budgetary issue is achieving the appropriate balance between the maintenance or upgrading of existing assets and the construction of new roads.

6.3 What are the challenges and future approaches for rail and coach networks?

Local and regional transport is met by a variety of providers, including private bus and coach operators as well as CountryLink. Private coach companies play an increasingly important role in delivering services between major regional centres. People in rural and regional NSW require a range of services from interregional connections, travel to centres in their region, and local journeys.

CountryLink's rail and coach network reaches over 365 destinations in NSW, the ACT, Queensland and Victoria and provides around two million trips per year. This compares with 300 million trips per year on CityRail services. CountryLink train services, originating in Sydney, operate a limited number of routes in NSW with an extensive network of connecting coaches. CountryLink operates to Melbourne and Brisbane, serving regional centres as well. Many CountryLink train journey times are uncompetitive compared with road-based transport and air services are significantly quicker. In contrast to rail, there is greater competition among long distance coach services. There are also significant cost subsidies involved with maintaining CountryLink services. CountryLink's rail and coach networks are shown in Figure 24.

One of the major challenges for the rail network and its role in connecting the regions to major centres is that the passenger and freight rail infrastructure is a shared network. Realignment of regional rail lines would be required for substantially decreased journey times. Freight is now the major user of rail outside Metropolitan Sydney and the primary focus of many new rail investments will be how they can satisfy future freight demand. This means that consideration needs to be given to how CountryLink can remain a competitive means of passenger transport while it operates on infrastructure that is primarily managed for freight operations.

There are around 3000 kilometres of non-operational rail lines across NSW where trains have ceased operating. This land represents a valuable resource for the community of NSW. In some cases, such as the Casino to Murwillumbah line, investigations are occurring into the viability of reintroducing services. In many other areas, it will be clear that rail will not be a viable use for the future and consideration should be given as to how best to use this corridor.

The *NSW Long Term Transport Master Plan* process provides residents and stakeholders with the opportunity to identify those non-operational corridors where consideration could be given to a better use of the corridor. Any future investment needs to be assessed based on the contribution it can make to the regional network as well as local benefits. The benefits and costs of reinstating train services must be compared with alternative approaches, such as improvements to local and regional bus services, and also be considered in light of requirements for freight movement.

Figure 24 – CountryLink rail and coach services

Source: Transport for NSW 2012

6.4 What are the challenges for local bus services and school buses?

The manner in which bus services in rural and regional NSW are delivered differs significantly from Sydney. Two contract types govern the delivery of bus services in rural and regional NSW. Contract A is primarily for school transport along a specified route. Contract B is for regular passenger services within towns and centres. Approximately 3000 buses operate across rural and regional NSW. Around 1800 buses operate under Contract A and the remainder under Contract B.

Additional bus services are introduced into rural and regional networks on the basis of need. Population changes are the main factor in determining service levels. There may be some potential to create links or conversions of school bus services to provide additional passenger services to facilitate important connections in rural and regional NSW.

6.5 What are the challenges and future approaches associated with high speed rail?

Over the last decade there has been significant development of high speed rail services overseas. High speed rail now plays an important role in the overall transport task in some countries, connecting regions, cities and nations. In comparison to other forms of travel, high speed rail can provide greater speed, reliability and comfort and improved access to city centres. Rail also brings environmental and sustainability benefits compared with aviation and road-based transport. However, the cost of high speed rail would be significant and must be weighed against the anticipated benefits.

The Australian Government is conducting a strategic study on the implementation of high speed rail on the east coast of Australia. This is likely to be separate to the existing rail network. Potential passenger connections could be Brisbane to Newcastle, Newcastle to Sydney, Sydney to Canberra, and Canberra to Melbourne. A final report is due in late 2012 that will identify future high speed rail corridors, options for staging development of high speed rail and an assessment of potential patronage and the economic and financial viability of alternative options. The NSW Government is actively participating in this study.

Any high speed rail option for NSW would require significant financial contributions. Therefore, careful consideration will have to be given to the role high speed rail could play in the future transport system of NSW and the economic, environmental and social merits of high speed rail development relative to alternatives. Whether or not high speed options are viable in the short term, it is prudent to maintain options for high speed rail development in the long term. This will extend not only to identifying and protecting potential high speed rail corridors, but also giving consideration to how high speed rail might provide greater economic opportunities for regions along the eastern sea board and connect into future transport networks.

6.6 What are the challenges and future approaches for regional aviation?

Regional airlines deliver important transport links to rural and regional centres across NSW. Freight and passenger air services are available from many cities and towns throughout regional NSW. Currently there are 26 serviced routes providing links between regional centres and Sydney Airport, connecting more than two million intrastate air passengers annually. The NSW Government regulates these routes and licenses them on a one-route one-licence basis. This protects small local operators from competition so that there is greater service stability and encouragement for route development. These services do not receive any public subsidy. Key connections are shown in Figure 25.

Figure 25 – Regional air services in NSW

Airport serving less than 50,000 passengers (2011)
Airport serving more than 50,000 passengers (2011)
Regional commercial air route

Source: Transport for NSW 2012

Challenges facing the regional aviation industry include rising costs associated with passenger and checked baggage screening requirements, potentially higher fuel costs, and maintaining regional airline access to Sydney Airport during peak times. As the population changes across the regions, consideration needs to be given to how aviation most effectively supports the task of connecting the regions to Sydney, what air connections should be given greatest priority and how air travel can most effectively support longer distance travel where patronage is likely to be relatively low.

6.7 What are the specific transport challenges for your region?

The following section presents some of the challenges that Transport for NSW has identified for each region and seeks your feedback on any other challenges, the priorities for the region, and how these might be addressed. The regions are delineated to most effectively consider how the NSW Government can consider the transport challenges of the future. Figure 26 identifies the 10 regions that have been identified for the *NSW Long Term Transport Master Plan* process. Transport for NSW is interested in hearing from the communities in these regions on how they believe these challenges could be more effectively addressed over the next 20 years.

Figure 26 – NSW Long Term Transport Master Plan regions

Towns and cities
Region boundaries

Source: Transport for NSW 2012

6.7.1 What are the transport challenges for the Western region?

The Western region is vast. It occupies about 39 per cent of NSW or over 300,000 square kilometres. It has a population of around 51,000. This is less than one per cent of the NSW population. It is characterised by very long distances between settlements and a sparse population. More than half of the population in the Western region lives in remote areas, which presents unique transport challenges. The mining centre of Broken Hill in the far west and the centres of Cobar, Lightning Ridge, Coonamble, Bourke and Walgett are the main centres in this region. Total employment is around 17,600. Agriculture and forestry is a major industry sector for the region at 18 per cent of total employment in the region. Health and social assistance, retail, education and public administration sectors have 12 per cent, 11 per cent, nine per cent and nine per cent of the regional employment respectively.

The transport network in the Western region comprises over 3000 kilometres of State roads. The major roads are the Silver City Highway, Mitchell Highway, The Kidman Way, Kamilaroi Highway, Castlereagh Highway, Gwydir Highway, Barrier Highway, Cobb Highway, Lachlan Valley Way, and Oxley Highway. The main rail lines are the Main Orange to Broken Hill line (freight and passenger), the Cobar to Dubbo line (freight), Coonamble to Dubbo line (freight), and the Narrabri to Walgett and Merrywinebone line (freight).

It is essential that a safe and adequate road network is maintained over long distances between settlements and regional centres. Eighty per cent of journeys to work are made by car. Sufficient overtaking opportunities are required on highways, particularly where heavy vehicles form a large proportion of the traffic flow. Expanding access for high productivity freight vehicles is important to support the freight task in this region, as are seasonal permits for agricultural freight. A particular issue is access over unsealed roads and the need to progressively seal more roads. Heavy rain can have considerable impact on access to regional centres, and adversely affect tourism, freight movements and horticultural industries. The transport challenge is most acute during and after severe weather events as communities can be isolated for lengthy periods. This means that maintaining the existing road network is very important.

6.7.2 What are the transport challenges for the Central West?

The Central West is a major agricultural, industrial and commercial region, spanning the Central Tablelands and plains. It includes the centres of Orange, Dubbo, Bathurst, Lithgow, Parkes, Forbes and Cowra. It has a population of around 277,000. Total employment is around 99,300. Based on employment, retail at 12 per cent, agriculture and forestry at 12 per cent and health and social assistance also at 12 per cent are the main industry sectors for the Central West. Education and manufacturing sectors both make up nine per cent of employment in the region.

The major roads are the Golden Highway, Newell Highway, Mid Western Highway, Great Western and Mitchell Highways, Lachlan Valley Way, and Castlereagh Highway. The main rail lines are the Main West line (freight and passenger), the Main Orange to Broken Hill line (freight and passenger), the Coonamble to Dubbo line (freight), the Cobar to Dubbo line (freight), and sections of the ARTC's leased network such as Dubbo to Werris Creek (freight).

There are a number of major challenges for the region including meeting the transport needs of the growing urban centres, as well as providing transport services for an ageing population to assist with access to health and aged care services. This will become more important and potentially increase reliance on community transport. Other concerns include the frequency of CountryLink services to Sydney and rail lines for transporting grain from the region.

There are a number of considerations for the road network in this region. The region has major interstate corridors that need to be maintained, including Sydney-Adelaide-Perth (road and rail) and Melbourne-Brisbane (Newell Highway). There is also the cost of maintaining an ageing road asset as well as improving access for high productivity vehicles.

Access to and across the Blue Mountains is an ongoing priority but, due to the topography, upgrades are costly. Making sure the roads are safe for these local communities, particularly where roads may be expanded and enhanced, needs to be considered. Within the local centres there are transport demands from tourism with major attractions such as Western Plains Zoo, the Bathurst touring car event, the Parkes radio telescope and the food centres of Orange, Mudgee and Cowra.

Consideration also needs to be given to rail and coach services between Wellington and Dubbo that are timetabled to facilitate commuting and business activity. There have been proposals for intermodal freight hubs, such as in Parkes, and for north-south freight rail. One of the important issues for the Central West is access for larger freight vehicles to Sydney and Newcastle.

6.7.3 What are the transport challenges for the Murray-Murrumbidgee?

The Murray-Murrumbidgee region adjoins the border with Victoria. It includes the centres of Wagga Wagga, Albury, Griffith and Young. The region has a population of around 283,000 and has a strong focus on agriculture and farming. Total employment is around 98,500. Agriculture is the highest employment sector for the region at 15 per cent. Retail, manufacturing and health and social assistance contribute 12 per cent, 10 per cent and 10 per cent of jobs in the region respectively. Education has eight per cent of total employment.

The major roads are the Silver City Highway, Sturt Highway, Cobb Highway, Mid Western Highway, Newell Highway, Olympic Highway, Hume Highway, The Kidman Way, Burley Griffin Way, and Riverina Highway. The main rail lines are the Main South line (freight and passenger), the Stockinbingal to Parkes line (freight), the Junee to Griffith line (freight and passenger) and also a number of grain freight lines.

With the population in this region remaining relatively stable over the next 20 years, the main transport challenge will be the upgrading and maintenance of 3500 kilometres of State roads to provide for safe, smooth car and truck journeys and to reduce transport disadvantage in isolated areas.

The Murray-Murrumbidgee region has high car use for travel to work. Providing for public transport in areas with low population density and considerable distances between settlements and regional centres will continue to be a challenge and require innovative thinking. The access rural towns and villages have to the major regional centres is also important. These are centres for employment, health, commerce and education services. Better access for high productivity vehicles will lead to efficiency gains for road freight. Rail freight access and the provision of intermodal terminals to facilitate port access are important for agriculture in the region.

6.7.4 What are the transport challenges for the Southern region?

The Southern region covers the areas south of Mittagong and surrounds the national capital, Canberra. It includes the centres of Queanbeyan, Nowra-Bomaderry, Mittagong-Bowral-Moss Vale, and Goulburn and is growing strongly. Currently, the population is around 360,000. Total employment is around 100,000. The main industries for the region are retail, health and social assistance, accommodation and food services, manufacturing, and education at 14 per cent, 11 per cent, 10 per cent, nine per cent and eight per cent of regional employment respectively.

This region has been experiencing an in-migration of retirees, and an out-migration of young people, resulting in an ageing population. The population aged over 65 years is expected to increase from 19 per cent to 28 per cent by 2031. This means that access to health and aged care services will become more important, and community transport will have a major role. Growth rates across the region are uneven, with places like Goulburn declining slightly. In some areas of the region, the population fluctuates seasonally, particularly along the coast and in the Snowy Mountains, requiring servicing by quality road and good public transport connections. A number of locations along the coast are isolated and not serviced by a major regional centre.

The major roads are the Barton Highway, Federal Highway, Hume Highway, Princes Highway, Monaro Highway, Kings Highway, Snowy Mountains Highway, Main Road 92, Alpine Way, and Imlay Road. The rail lines are the Main South line (freight and passenger), the Goulburn to Canberra line (freight and passenger), and the Moss Vale to Unanderra (freight).

The region also includes the busiest freight corridor in Australia, Sydney-Melbourne, meaning it has significant economic opportunities around logistics management. With the Hume Highway duplication now almost complete, the most important focus for the region is the ongoing upgrade of the Princes Highway. This involves progress towards four lanes as far as Jervis Bay, and safety improvements and overtaking lanes south to the Victorian border. Key links to the coast such as the Kings Highway need attention. The future growth potential of the Port of Eden will need to be considered. Canberra Airport may have a growing significance for Sydney.

6.7.5 What are the transport challenges for New England?

The New England region includes the centres of Tamworth, Armidale, Inverell, Moree, Narrabri and Tenterfield. It has a population of around 187,000 people. While population growth is planned for Tamworth, the population of the region overall is not expected to grow. A continuing issue will be that the remote communities, including Aboriginal communities, experience local access problems. Total employment is around 65,700. Agriculture, forestry and fishing is the highest employment sector at 17 per cent of regional employment. Retail, health and social assistance, education, and manufacturing contribute 12 per cent, 11 per cent, 10 per cent and seven per cent respectively.

The major roads are the Newell Highway, Gwydir Highway, New England Highway, Oxley Highway, Thunderbolts Way, Bruxner Highway, Fossickers Way and Kamilaroi Highway. The main rail lines are the Main North line (freight and passenger), the Narrabri to Walgett and Merrywinebone line (freight), the Werris Creek to Moree line (freight and passenger), the Binnaway to Werris Creek line (freight), and the Camurra to Weemelah line (freight).

There is a large demand for freight transport from the agricultural industries. However, this is impacted by seasonal fluctuations in traffic volumes depending on the success of crops. There is also a large demand for freight transport from the mining sector with increasing volumes of coal movements, particularly at Gunnedah, to export facilities at the Port of Newcastle. There will be increased freight demands at Inverell from the future mining of bauxite. A major consideration will be an increase in the volume of heavy vehicles, which will result in amenity and safety concerns.

The NSW Government has established the strategic regional land use planning process to find the best balance between mining and agriculture in the region. The large volume of heavy vehicles may require further bypassing of major towns. East-west connections and roads linking towns in the region need improvement.

6.7.6 What are the transport challenges for the Northern Rivers?

The Northern Rivers region includes the centres of Tweed Heads, Lismore, Ballina, Casino and Byron Bay. It has a population of around 244,000. The region has both high employment and population growth, supported by migration from Sydney, regional NSW and South East Queensland. The high population and employment growth in South East Queensland attracts Northern Rivers residents across the border as commuters. The growth of the Gold Coast-Tweed major city will also create strong demand for transport connections. The concentration of employment in service industries in Tweed and Lismore is increasing local congestion.

Total employment for the region is around 69,300. The regional economy is strongly focused on the services sector including retail at 15 per cent, health and social assistance at 14 per cent, education at 10 per cent, and accommodation and food services at nine per cent. These service sectors make up 48 per cent of regional employment. The manufacturing sector makes up eight per cent of employment in the region.

The major roads are the Bruxner Highway, Pacific Highway and Summerland Way. The main rail line is the North Coast line (freight and passenger). The Casino to Murwillumbah line is currently disused.

Like a number of other regions, this region has an ageing population that needs to access health and aged care services in regional centres. Transport supports the strong tourism sector especially around Byron Bay and there is a marked seasonal impact on road use and local transport services.

Sustained growth will place increasing demands on the transport system. The Pacific Highway Upgrade is proceeding in the region. There is a need to address east-west access for high productivity vehicles. There may be a need for upgrades such as widening or new overtaking lanes on east-west road links in the future, such as the Bruxner Highway. Investigations are being conducted into the resumption of the Casino-Murwillumbah rail service and extensions to South East Queensland.

6.7.7 What are the transport challenges for the Hunter?

The Hunter is centred on Newcastle, NSW's second largest city, and has a population of around 652,000. Other major centres are Maitland, Cessnock, Muswellbrook, Forster-Tuncurry, and Singleton. More than half of the Hunter's population live along the coast and in Newcastle and Maitland.

The coal industry, with its supporting infrastructure requirements, and wineries and tourism are the main drivers of the regional economy. Total employment is around 219,100. Other important employment sectors are retail, health and social assistance, and manufacturing. These have 13 per cent, 13 per cent and 11 per cent of regional employment respectively. The region is experiencing strong growth in mining, particularly coal for export. This will increase demand for rail freight. Local manufacturing also has strong freight distribution needs. Effective transport services to and from this region provide an opportunity to significantly grow the tourism opportunities provided by the wineries and the region's close proximity to Sydney.

The region is linked by an extensive road network and public transport, which plays an important part in connecting people to centres. The major roads are the Golden Highway, F3 Freeway, Pacific Highway, Lakes Way, New England Highway, Bucketts Way and Hunter Expressway, which is currently under construction. The main rail lines are the Main North line (freight and passenger), the North Coast line (freight and passenger), and the Hunter Valley Coal Chain (freight).

Providing faster and more frequent public transport connections between Newcastle and Sydney could benefit the economy of the Hunter and NSW. The Port of Newcastle is expected to double in capacity over the next 10 years, requiring associated infrastructure upgrades. Balancing the demands of freight and passenger transport across the road and rail networks will be a significant challenge.

The Hunter Expressway project will greatly improve road connections for the growing populations and economies of Maitland and Cessnock. The NSW Government has announced a $350 million Hunter Infrastructure and Investment Fund with a mandate to invest in infrastructure projects that will support the economic growth of the region.

6.7.8 What are the transport challenges for the Mid North Coast?

The Mid North Coast region includes the centres of Port Macquarie, Coffs Harbour, Grafton and Taree. The current population is around 313,000 people. This region has one of the fastest ageing populations in NSW, with the number of people over 65 expected to double in the next 25 years. They will require much greater access to health and aged care services in regional centres.

Total employment for the region is around 91,100. The main industry sectors are retail, health and social assistance, and accommodation and food services. These have 16 per cent, 14 per cent and 10 per cent of total employment respectively. Education and manufacturing are also major industries with nine per cent and eight per cent of total employment respectively. The major roads are the Pacific Highway, Oxley Highway, Waterfall Way, Summerland Way and Gwydir Highway. The main rail line is the North Coast line (freight and passenger).

The Mid North Coast is a very attractive place to live. Its continued growth over the next 20 years will demand a range of transport responses. For example, transport planning will be essential in any new low density suburban development. There is increased demand on road use and local transport services in the tourism peaks. Consideration of how bus services can be adapted to match the changing requirements of the region's people is one area that requires further consideration.

In parallel to the forecast in population growth there is a growing freight task. Major projects such as the Kempsey Bypass and upgrades to the section south of Woolgoolga are underway on the Pacific Highway to improve road safety and support increased movements of freight. These upgrades will require good Pacific Highway access for high productivity vehicles. The NSW Government has prepared a submission to Infrastructure Australia to accelerate the Pacific Highway Upgrade Program to complete the full length of the highway between Hexham and the Queensland border by the end of 2016. Consideration also needs to be given to any increased use of the Port of Yamba for freight.

6.7.9 What are the challenges for the Central Coast?

The Central Coast includes the centres of Gosford and Wyong and has a population of around 320,000. Total employment is around 85,900. The region has outstanding environmental amenity and a diverse industry base with a strongly growing population, particularly in the north around Wyong, which requires good access to local centres and to Sydney. Major employment sectors are retail, health and social assistance, and manufacturing. These have 17 per cent, 15 per cent, and 11 per cent of employment in the region respectively. The major roads are the Central Coast Highway, F3 Freeway and Pacific Highway. The main rail line is the Newcastle and Central Coast line (freight and passenger).

Over the next 20 years the Central Coast will experience strong growth. The higher than State average share of people over 65 will need to be addressed by the transport choices offered. Car dependency in the Central Coast is very high. Only four per cent of the Central Coast population use public transport for the commute to work, of which train trips to Sydney are the major component. Over 25 per cent of the workforce travels outside the region to work.

The road and rail links to Sydney are critical to the area for access to employment, services and social activities. There is a need to ensure the region develops a transport network that matches its growth in population. The links to Newcastle and Sydney will need improvement. This may necessitate F3 widening and a connection to the M2. The capacity of the Central Coast Highway and Old Pacific Highway may need to be increased. Improvements to buses and trains should include more extensive park and ride facilities.

6.7.10 What are the challenges for the Illawarra?

The Illawarra region includes the major centres of Wollongong, Shellharbour and Kiama and has a population of around 292,000 people. Over 90 percent of the population in this region lives in the major centres. Total employment is around 87,000. There are logistics and port-related industries at Port Kembla. Significant employment sectors are manufacturing, retail, and health and social assistance. These have 13 per cent of regional employment each. The education sector has a further 11 per cent of employment. The major roads are the Illawarra Highway, Picton Road, Princes Highway and F6 Freeway. The main rail lines are the South Coast line (freight and passenger) and the Moss Vale to Unanderra line (freight).

The Illawarra will experience population growth and demographic change. The transport system needs to evolve to meet the requirements of both new residential areas and new employment. Good links between Sydney and the region are required to support population growth and tourism. Currently almost 16 per cent of the Illawarra's workforce commutes to Sydney, but considering the close proximity to Sydney, train travel times are not competitive with driving times.

While more needs to be done to promote public transport, walking and cycling to reduce dependency on car use, the car will remain the principal means of transport between the main centres in the Illawarra. The continuation of upgrades to the Princes Highway, particularly widening the highway to four lanes between Waterfall and Jervis Bay, will alleviate congestion between Sydney and Wollongong.

Options to increase the proportion of freight movement into and out of Port Kembla by rail should be investigated. The safety of east-west road links will need attention, and road connections should be improved across the Illawarra escarpment linking Wollongong and Port Kembla to Western Sydney employment areas and freight distribution locations. As well, the tourism industry should be supported by providing more frequent public transport services on weekends and during holiday peaks and providing smooth roads with adequate capacity. Expansion and growth at Port Kembla will have impacts on the region. It requires improvements to freight rail access. The Maldon-Dombarton freight rail link could be a possible improvement.

6.8 Will each region have its own Regional Transport Plan?

The *NSW Long Term Transport Master Plan* will focus on how to better connect and service the transport needs of all regions. It will provide a basis for the further development of individual Regional Transport Plans, which will then be developed for each of the main regions. While a number of the challenges are the same, particularly how the regions connect to Sydney and other major centres, each Regional Transport Plan will be developed in consultation with local communities to ensure that the unique requirements of each region are carefully considered so that transport planning can be individually tailored and prioritised for the region.

Strategic questions

13. What are the key transport objectives for your region?
14. How can different levels of government and the non-government sector work more effectively together to improve the transport outcomes for the regions?
15. In what form can CountryLink best serve the needs of the regions over the long term?
16. How should regional connections be improved to meet future freight and passenger demands?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7 FREIGHT TRANSPORT

7.1 What are the challenges for freight transport?

Freight is an important part of the overall transport task. Approximately 220,000 tonnes of freight are transported across NSW daily, using the State's 200,000 kilometres of road and 12,000 kilometres of rail track. Freight travels to every town in NSW and to every suburb in Sydney. As the NSW population increases, so does the demand for goods and services within NSW. Some estimates show Australia's total freight task trebling by 2050. The growth in the freight task will also result in more freight movements, which means more trains and trucks on the State's transport networks. The NSW 2021 goal is to double the proportion of container freight movement by rail through NSW ports by 2020.

Sydney will play an important role as a major international gateway for freight. Port Kembla and Port Botany receive 38 per cent of Australia's imports and NSW accounts for approximately 15 per cent of Australia's exports. The Port of Newcastle is the largest coal export port in the world. Regional port gateways, such as Port Kembla, are also vital to the economy.

The importance of freight transport to the NSW economy is significant. In 2010-11, the freight and logistics industry's share of NSW's $420 billion Gross State Product was around 12.1 per cent, or $51 billion. The freight logistics industry within NSW accounts for around a quarter of the national freight and logistics industry. Ensuring that goods move efficiently supports the economic growth of the State and can result in cheaper goods for consumers.

7.1.1 What are the challenges for import and export freight?

Port Botany accounts for almost all import-export containerised freight in NSW. Analysis of import data shows that 85 per cent of containers are destined for delivery within 40 kilometres of Port Botany. The major growth in Port Botany throughput in recent years is expected to continue as the population and economy of Sydney continue to grow. The historical growth rate of port throughput has averaged seven per cent per year over the past 15 years. At current growth rates, the current planning approval maximum throughput of 3.2 million containers, measured in twenty-foot equivalent units or TEU, is likely to be reached by around 2017–18. The recent $1 billion investment in the third terminal at Port Botany means that the port can handle significantly higher volumes of throughput. Sydney Ports Corporation estimates that the most likely scenario would be for an annual throughput of 7.3 million twenty-foot equivalent units by 2030-31.

The expected growth in throughput at Port Botany will place pressure on land side connections to the port. Similarly, the expected significant growth in air freight throughput at Sydney Airport, increasing from 595,000 tonnes in 2009 to 1,100,000 tonnes in 2029, will add to transport capacity and congestion pressures in the Port Botany–Sydney Airport precinct. Sydney's international gateways, Sydney Airport and Port Botany, require fast and convenient connections for people and goods to support business and to ensure economic growth is sustained.

7.1.2 What are the challenges for rail freight?

Rail operates in a number of markets, including bulk export goods being hauled to port, inter-capital freight, and container movements to and from the State's ports. Coal is the State's largest export. In 2009–10, $8.5 billion in coal, coke and briquettes were exported from NSW. The Port of Newcastle is the largest exporting coal port in the world. Almost all coal that is exported through Newcastle moves from the mine to the port by rail.

Rail provides a significant proportion of freight movements between the east coast and west coast. Rail also services the eastern seaboard, but rail's share of interstate east coast freight between Sydney, Melbourne and Brisbane is low when compared to roads. Freight demand could double by 2031 but most of this increase is likely to be transported by road. Rail freight movement in NSW shares infrastructure, to varying degrees, with passenger operations. This will exacerbate capacity constraints as demand for freight capacity grows.

Freight trains travel at different speeds, are longer and have longer braking distances than passenger trains. Where freight and passenger trains share the same track, the capacity of both the freight and passenger services is reduced. In some cases, this issue is managed by having restrictions on freight movements to prioritise passenger trains during peak periods, but this is a major constraint to growing the freight market.

The Metropolitan Freight Network is an extensive and dedicated freight network that serves Port Botany and the Enfield-Chullora area. Further to the west, south and north, tracks must be shared with CityRail passenger services. Following the opening of the Southern Sydney Freight Line, which is currently under construction, dedicated freight tracks will stretch south to Macarthur. A major pinch point is the rail corridor through Northern Sydney. The NSW and Australian Governments have recently agreed on a series of works to alleviate these issues. When complete in 2016, the Northern Sydney Freight Corridor will enable better coordination of freight and passenger services and will increase the corridor's freight capacity by 50 per cent.

Increasing the share of the general freight task hauled by rail, including the distribution of import-export freight, remains a significant challenge. The competitiveness of rail is hindered by the need to interact with the passenger rail system, with access in peak passenger periods particularly compromised. In the longer term, a dedicated freight network is required in order to deliver an efficient and competitive rail freight transport system. In the shorter term, incremental improvements to the system may be required to increase capacity and efficiency across the rail based supply chain.

7.1.3 What are the challenges for grain line operations?

The NSW Government provides base funding for the upkeep of the Country Regional Network and the grain line operation. This funding is indexed each year with $159 million provided for 2011–12. The level of operation is agreed in consultation with industry through processes such as the recent review of the NSW grain freight network. The Government is continuing its investment program for grain lines with installation of steel sleepers and replacement of timber bridges. These works will be completed by 2021.

Work on the grain lines in recent years has included the re-railing and upgrading of the track from Gilgandra to Armatree on the Coonamble line to Class 3 standard. Class 3 track allows the operation of larger, heavier trains at higher speeds. The section from Armatree to Coonamble will be re-railed and upgraded to Class 3 standard by 2014. The line from Narrabri to Wee Waa has been upgraded and is operating at these higher levels. Work on the Wee Waa to Walgett section will be completed by June 2013 to bring this section to Class 3. These upgrades form part of the asset management plan for the Country Regional Network.

These stabilisation and upgrade works are being complemented by other initiatives. These include the procurement process for grain-specific rolling stock and contractually secured train operations to service the grain lines. This agreement involved the transfer of eighteen 48 Class locomotives and 180 wagons to GrainCorp. These are to be used for consolidation of grain from silos on the branch lines into the Werris Creek, Parkes, Temora and Junee sub-terminals, which is then transferred to main line trains that operate to the Port of Newcastle and Port Kembla terminals. Under these arrangements, GrainCorp is also obliged to service silos from other grain handlers. The agreement guarantees a minimum level of service for the grain lines. The provision of rail freight services beyond this level requires careful consideration taking into account overall freight priorities, the role of rail versus road and commercial matters.

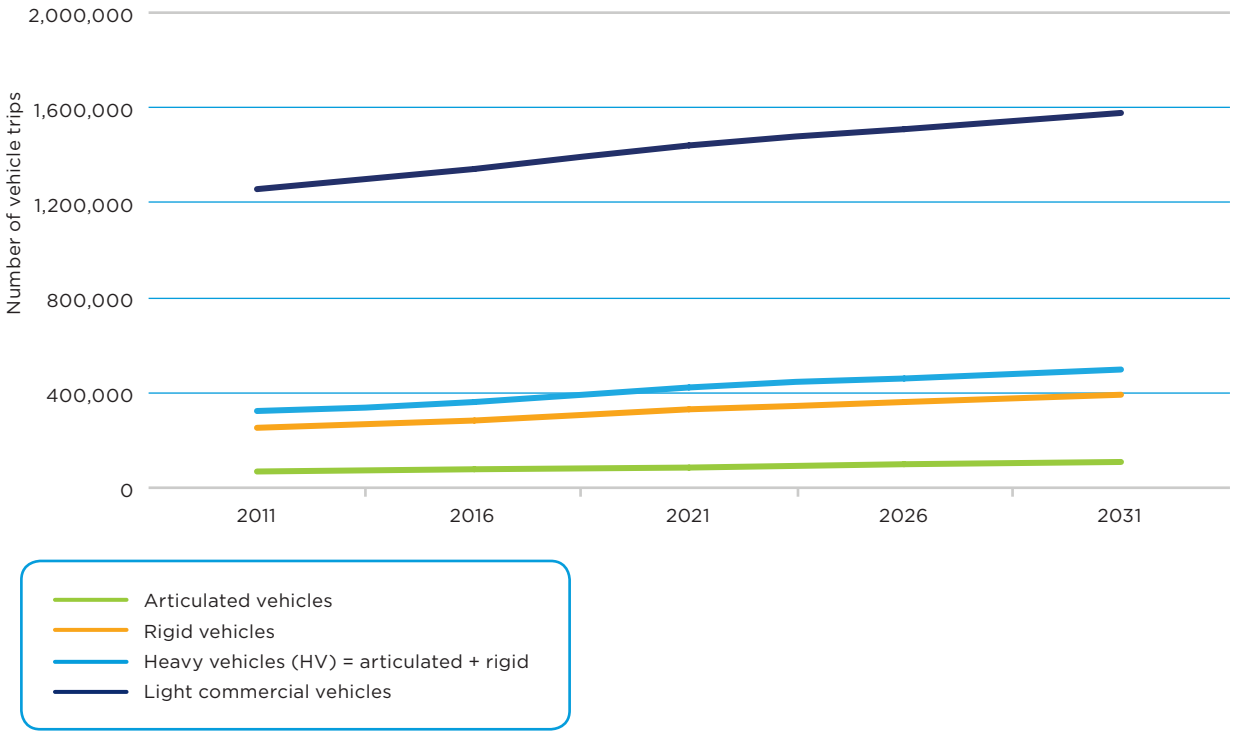
IPART is currently undertaking a review of rail access pricing on the NSW grain network. The purpose of the review is to investigate future options to improve the sustainability of the grain line network.

In undertaking this review, IPART has been asked to have particular regard for the impact of any pricing recommendations on the regional road network, the ability and willingness of industry to pay, the time over which any increase should be phased in, as well as developments in the road pricing reform area. IPART's final report to government is anticipated in April 2012.

7.1.4 What are the challenges for road freight?

Major industries such as manufacturing, construction and agriculture are important contributors to Gross State Product and are dependent on the efficient movement of freight throughout NSW. The vast majority of freight movements in NSW are road-based. NSW roads carry about 67 billion tonne-kilometres of freight each year, which is a third of the nation's road freight task. About half of all national interstate road freight travels from, to or through NSW. Figure 27 shows the projected growth in road freight trips for Greater Metropolitan Sydney for an average weekday to 2031. This region includes Sydney, Newcastle and the Illawarra.

Figure 27 – Average weekday road freight trips in Greater Metropolitan Sydney 2011–31



Source: Bureau of Transport Statistics 2010

Road transport represents a vital link in various logistics chains, providing access to ports and terminals, and urban freight distribution between warehouses, retail outlets and end consumers. It is the dominant mode for moving freight short distances but also has a significant share of the long haul freight market.

Accommodating future growth in the road freight task, increasing productivity and addressing environment and sustainability challenges will be a major focus of the planning process. Road upgrades on major freight routes will reduce travel times and improve safety, particularly if they improve access to major freight generators such as ports and airports. Appropriate road design and a Higher Mass Limits (HML) network with upgraded bridges and road pavements supports higher productivity transport.

The NSW Government has the responsibility to ensure that there is a balanced legislative and regulatory framework that supports productivity while balancing safety, asset management and community concerns. However there is also an important role for industry and local government to play in delivering improved freight transport outcomes for regional communities. How we work together and develop a freight system that supports the whole supply chain and integrates effectively with passenger travel will require detailed and careful thinking.

7.2 What are the possible future approaches for freight transport in NSW?

The vital economic role of freight transport led to the establishment of the Freight and Regional Development Division of Transport for NSW, which will be the central point of contact between the NSW Government and the freight and logistics industry. The Freight and Regional Development Division is focused on listening and responding to its customers.

Planning for the efficient movement of freight is a challenge. Meeting this challenge requires strong knowledge of the supply chains delivering the freight task together with close cooperative working relationships with industry and local government.

The emerging freight planning framework is based on the understanding that different freight transport and passenger transport modes are complementary. Each has an important role to play in delivering economic development. The planning framework will recognise that the needs of public transport customers and freight users may conflict and that careful consideration of the impacts on both freight customers and on public transport and private road users is required.

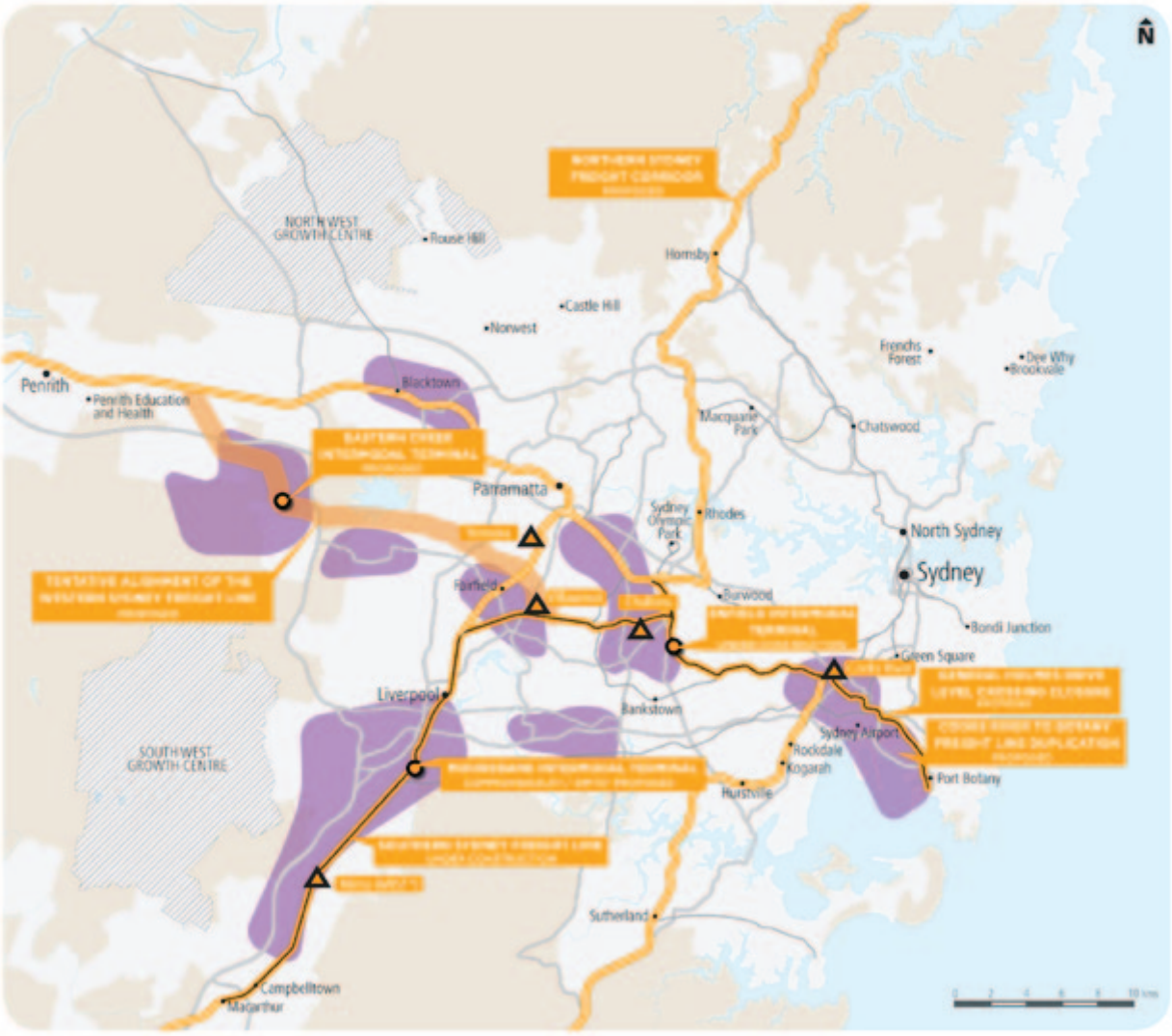
7.2.1 How can more effective planning support the future freight task?

Defining, protecting and enhancing the freight network are priorities for the NSW Government. This includes protecting lands and corridors for future development by effective long term planning. Figure 28 shows the freight activity precincts in Sydney. Major freight generators, or freight activity precincts, such as the three largest ports, Sydney Airport, major warehousing and distribution precincts and intermodal terminals (current and proposed) need to be identified and protected to ensure they are buffered from residential zones.

Effective land use planning and protection of the freight activity zones will help facilitate ongoing improvements in efficiency, such as potential future extended hours of operations and access for higher productivity vehicles. This will become increasingly challenging as Sydney continues to grow, but will be essential to the long term efficient movement and distribution of freight.

Sydney's current freight network is also shown in Figure 28. This also shows some options for the future development of the freight network in Sydney. Enhancements to the rail network will be important to encourage mode shift to rail. However, even if significant mode shift is achieved, the road network will still carry an increasing freight task. More will need to be done to alleviate the constraints that will emerge on the road network.

Figure 28 – Sydney's freight precincts and freight network



- Dedicated freight rail
- Shared freight rail
- CityRail network
- Major freight road
- Proposed intermodal terminal
- Existing intermodal terminal
- Freight activity precincts
- *MIST Minto Intermodal Shipping Terminal
- *SIMTA Sydney Intermodal Terminal Alliance

Source: Transport for NSW 2012

The challenges are also present in regional NSW, where identifying and protecting suitable locations for terminals and other freight facilities needs to be considered in future planning. Understanding the existing and future freight network is essential to planning for the future of the network. More work needs to be done to identify the priority freight networks in regional NSW, options for network enhancement and mechanisms to manage and fund those enhancements. The current rail freight network in NSW is shown in Figure 29. The State's network of major roads is shown in Figure 23.

Figure 29 – NSW's rail freight network

- Australian Rail Track Corporation Network (ARTC)
- Country Rail Network (CRN) – operational
- RailCorp Network
- National and State roads and highways
- Freight centres
- Major freight terminals

Source: Transport for NSW 2012

7.2.2 How should freight efficiency and local amenity be balanced?

A core responsibility of the NSW Government is balancing the need for an efficient freight system with the community's desires for safety, good environmental outcomes and neighbourhood amenity. A further consideration is that freight transport typically operates 24 hours a day across state and national borders.

To balance these objectives, the NSW Government is working hard to deliver an improved system of road freight regulation for transport that will not impose undue economic or red tape burdens on freight operators, while meeting the community's desire for enhanced safety and amenity. The NSW Government is mindful that the regulatory framework in NSW should not act as a barrier to NSW businesses effectively competing with their counterparts in other states.

Many freight businesses already have procedures and systems in place that will ensure compliance with regulatory standards. In the future, technological improvements, industry intelligence, and auditing regimes will complement a base level of on-road enforcement. Freight transport businesses form part of a wider supply chain, and effective regulation of the freight industry will see better use of chain of responsibility provisions to target non-compliance across the supply chain.

7.2.3 How should port capacity be expanded to support export and import growth?

Sydney's ports handle around $74 billion worth of trade each year. Sydney's ports currently employ more than 17,000 people directly and indirectly, which is 0.6 per cent of total NSW employment. Sydney's ports are a vital contribution to the NSW economy.

To ensure NSW ports have the capacity to accommodate the anticipated increase in international trade, a number of port infrastructure projects are both planned and underway. At Port Botany, the container terminal is being expanded and a second Port Botany Bulk Liquids Terminal is being developed.

At Port Jackson, a permanent domestic cruise passenger terminal is being developed at White Bay to replace the temporary facility at Barangaroo. A master plan is being formulated for the Overseas Passenger Terminal to identify the capital works requirements to increase the terminal's ability to berth very large ships and improve its operating efficiency.

The Minister for Planning and Infrastructure has established the Bays Precinct Taskforce to recommend a strategic framework for the Bays Precinct for the next 25 years and beyond. The taskforce will advise on appropriate land uses having regard to strategic transport, port, maritime and waterfront precinct priorities for adjacent local areas and communities, metropolitan Sydney and NSW.

At the Port of Newcastle, various infrastructure projects to increase the port's coal export capacity are underway and a concept plan is currently being considered to develop the former BHP site at Mayfield to support a range of cargo handling infrastructure for trades such as general cargo, bulk materials, bulk liquids and containers. Port Kembla is also undergoing a major port expansion with the Outer Harbour Development, which will allow the port to attract new trades, as well as increase the volume of existing cargoes.

Just as important in accommodating the forecast trade growth is improving the productivity and efficiency of the ports and the landside supply chains that support them. The Port Botany Landside Improvement Strategy and Hunter Valley Coal Chain Coordinator are examples of such improvements. The planning system aims to accommodate and preserve port-related activity, facilitate growth to meet demand and ensure that environmental and community impacts from port activity are minimised.

The NSW Ports Strategy is being developed to provide clear direction on port planning and investment for the NSW Government, industry and the community. The NSW Ports Strategy will ensure capacity exists at the ports to accommodate forecast trade growth as well as improving the competitiveness, efficiency and sustainability of NSW ports to enable them to respond to emerging challenges. Transport infrastructure planning should ensure efficient freight connections that facilitate rapid dispersal of import freight via intermodal networks, and reliable access to ports by regional exporters.

7.2.4 How can productivity be improved on the road network?

Improving the efficiency and productivity of road freight vehicles is an ongoing priority. The provision of more intermodal terminals around Metropolitan Sydney would more efficiently disperse freight vehicles than concentrating them in high density locations such as Port Botany. Access restrictions for higher productivity vehicles, particularly on local council roads in both metropolitan and rural areas, would need to be removed, requiring strengthening works for roads and bridges and targeted improvements to intersections so that goods could be delivered directly to their end point.

Access to the NSW roads network by higher productivity vehicles is often constrained by the strength of bridges and pavements. High clearances under bridges and through tunnels are required to accommodate higher loads, including containers. Funding is limited for maintenance and renewal and needs to be strategically targeted to locations that will provide the greatest productivity and connectivity benefits. Strategically positioned heavy vehicle rest areas, as well as facilities for driver change-overs and decoupling of multi-combination vehicles, are also important. Modern heavy vehicles with green, efficient technology and engineering need to increase as a proportion of the total heavy vehicle fleet. GPS tracking technology could be used to provide safety and assurance to the community that the right heavy vehicles are on the right roads.

In regional areas, the road system plays a central role in the distribution of freight. Community concerns about increasing freight volumes on local roads need to be addressed as part of a strategic approach to developing regional freight networks which ensures all available funding is deployed in a manner which balances the needs of the freight industry and local communities.

A new National Heavy Vehicle Regulator is due to commence in January 2013. The national regulator aims to improve safety and reduce costs and the regulatory burden for the Australian transport industry. NSW is committed to the creation of a national regulator.

7.2.5 How can the use of rail be increased as the freight task grows?

Increasing the use of rail for interstate freight needs to be a focus. This is particularly the case on the east coast corridor as well as for regional movements. Rail should be preferred where it is the right mode for the task. Rail generally has a comparative advantage over road in longer haul movements and for bulk freight but focus may be needed on strengthening the competitiveness of rail, improving access to high capacity terminals and, in the longer term, removing the constraints on rail freight services that come from operating on the same tracks as passenger services. Improving the use and attractiveness of rail will require consideration of regulatory reform, improved operational performance, better network access for freight trains, better market responsiveness and additional infrastructure.

Improving terminal infrastructure and access is also important to improving rail operations. Without effective, efficient, well-located terminals at both origin and destination, the current challenges for rail competitiveness may not be overcome. There are many projects that can deliver improvements to freight. Consideration of these project proposals on their merits and as part of a full system assessment are an essential component of future planning.

7.2.6 How can the freight customer be better served?

Developing effective long term freight plans relies on developing strong links with freight customers, understanding what their priorities are, and understanding their businesses. To improve this understanding and ties with the freight customer, Transport for NSW is conducting an intensive customer consultation program during 2012. This program includes meetings with Reference Groups that include producers, retailers, transporters and asset owners for supply chains in key commodity groups.

7.2.7 What will the Freight Transport Plan do?

The NSW Freight Strategy and the NSW Ports Strategy are the two key planning documents that comprise the NSW Freight Transport Plan. These strategies will align with national strategies for freight and ports and integrate with land use plans and State infrastructure strategies. The goals of the NSW Freight Strategy are shown in Figure 30. The NSW Freight Strategy and NSW Ports Strategy are being developed during 2012. They will focus on delivering a freight transport system that supports the prosperity of NSW through efficient transport connections.

Figure 30 – Goals of the NSW Freight Strategy

Network Capacity

- Maximising use of existing assets
- Developing new strategic freight infrastructure

End-to-end supply chain efficiency

- Support optimised operations
- Effective policy and regulation

Sustainability

- Minimise adverse impact on communities
- Complement urban growth strategies
- Minimum impact on amenity.

Strategic questions

17. What investments are needed across NSW to improve the efficiency of freight movement?
18. How can the NSW Government best support an efficient freight system as well as meeting community expectations for safety and amenity in residential areas?
19. What are the impediments to greater use of high productivity vehicles and how can these be overcome?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8 FUNDING

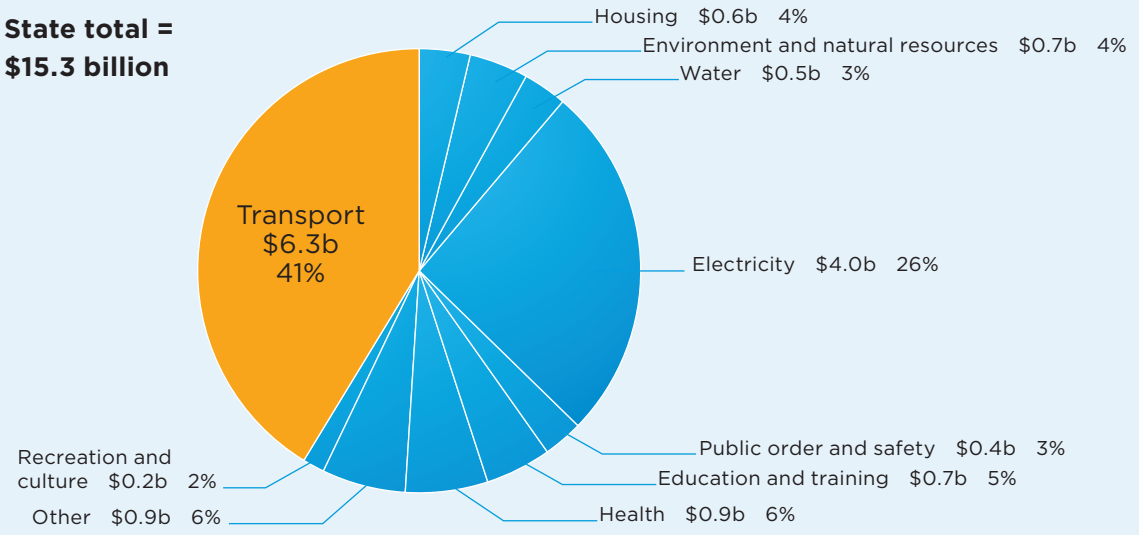
8.1 What are the challenges for transport funding?

In the 2011–12 State Budget, $6.3 billion was allocated for transport infrastructure spending in NSW. This is a 9.5 per cent increase on the 2010-11 Budget. Transport is the State's largest infrastructure investment sector. The total NSW Government expenditure on infrastructure for 2011–12 is shown in Figure 31 Transport makes up around 40 per cent of the total investment in infrastructure.

About 40 per cent of investment in transport infrastructure is used to maintain and upgrade the State's road network. This includes maintaining road assets, improving road safety, the provision of road-based public transport, relieving congestion, delivering road-based freight transport, and increasing major highway capacity.

A total of $2.4 billion was allocated to improve the State's heavy rail infrastructure and services for 2011–12. The remainder of the investment in transport is budgeted for the ongoing replacement and growth of the bus fleet, capital improvements to ferry services in Sydney, the new Inner West light rail extension and further investigations into light rail extensions, investment in port infrastructure, and improvement of customer services, such as the implementation of the Opal electronic ticketing system.

Figure 31 – Total NSW Government investment in infrastructure 2011–12 ($ billion)



Source: NSW Government 2011

Transport investment needs to be balanced with other policy areas, such as health and education. NSW has to compete with other Australian states and territories for the allocation of funds from the Australian Government. Funding is also needed to finance smaller local projects, such as eliminating black spots on local roads and providing more rest areas.

In 2011, recognising the importance of NSW-based infrastructure to the Australian national economy, the NSW Government submitted three funding proposals to Infrastructure Australia. These are the Pacific Highway Upgrade (proposed $7.7 billion in Australian Government funding), the North West Rail Link (proposed reallocation of $2.1 billion in Australian Government funding), and the Port Botany and Sydney Airport Transport Improvement Plan (proposed $28 million in Australian Government funding).

Acquiring Australian Government funding for major transport infrastructure projects that will enhance the State and the nation's economy will continue to be an important part of the overall funding equation for the State. NSW needs to be clear about its long term priorities, what they will achieve and where the benefits can be maximised. The *NSW Long Term Transport Master Plan* will play an important role in identifying the priorities for joint NSW and Australian Government funding into the future.

8.2 What are the potential future approaches to transport funding?

NSW 2021 recognises that the right infrastructure in the right places is essential to achieving economic growth. The NSW Government is investing in strategic and coordinated infrastructure to improve business efficiency and help NSW reach its full potential, create more job opportunities and choice, and provide a better quality of life for its citizens. The high level targets relate to increasing investment in regional infrastructure, increasing the share of Australian Government funding for NSW infrastructure and ensuring that major strategic infrastructure is delivered as promised.

In order to provide the level of investment needed for long term improvements in the State's transport network, additional sources of funding will be required. Given that the funds currently available are finite, it is not possible to deliver all the potential transport investments. The most important investments must be identified and priorities chosen where they will deliver the greatest impact. Consequently, to deliver a higher level of transport infrastructure investment, new sources of funding must be investigated. New ways of funding transport that have been introduced successfully in other countries should be given careful consideration.

8.2.1 Should greater use of Public-Private Partnerships be considered?

The NSW Government has delivered around $7.5 billion in motorways through Public-Private Partnerships since the early 1990s. These arrangements enable private sector funds to be accessed that are additional to government sources. Public-Private Partnerships enable timely delivery of important transport infrastructure without wholly relying on limited public funds. There may be other innovative ways to increase private sector involvement in the delivery, maintenance and financing of transport infrastructure in NSW.

8.2.2 Should some form of road pricing be adopted?

Road pricing schemes are used in a number of countries. The most familiar to customers in NSW are tolls on the motorway network. Currently, around two-thirds of the motorway network is tolled but there is inconsistency in pricing.

As well as a source of funding for investment, road pricing can also be used as a demand management tool for road use. Although tolling has been used in Sydney to fund motorway construction, its role in addressing and managing congestion has not been widely discussed. There are nine toll roads in NSW. They are the M2, M5, and M7, the Eastern Distributor, the Sydney Harbour Tunnel and Bridge, the Cross City Tunnel, the Lane Cove Tunnel and the Falcon Street Gateway. These all act in some measure to limit the demand for private car use. Similar tolls on currently un-tolled sections of the motorway network could be considered for demand management and to fund future investment.

Road pricing schemes can be distance based or can apply different rates for peak and off-peak travel on the road network. Some schemes price by vehicle weight. Road pricing schemes vary from the current road user charges used in NSW through to GPS based distance, mass, and location charging. A number of different pricing scheme designs are used internationally. The main types are:

- Conventional road user charges, such as fuel taxes, vehicle registration, license fees
- Point based charges, for instance Sydney Harbour Bridge toll, time of day toll, motorway toll
- High occupancy vehicle lanes, such as US highways where low occupancy vehicles can pay a toll to use high occupancy lanes
- Area or zone charging or licensing, such as in Singapore and London
- Distance or time based pricing, for example heavy vehicle charging in New Zealand, Switzerland, Austria and Germany
- Parking space levies are already used in Metropolitan Sydney, for instance in Sydney CBD, Parramatta CBD, North Sydney, Chatswood and Bondi Junction.

In the Sydney metropolitan area, congestion has been estimated to cost users of the road network approximately $6 billion per year. Research indicates that road pricing can be used to reduce congestion through a user pays system as well as provide funding for improved transport systems. A road pricing mechanism has been applied in other cities such as London and Singapore. Tolling to provide funding for improved transport systems has been used extensively globally including Japan and France.

Road pricing schemes internationally have different objectives. In considering what pricing mechanisms should be used or whether they are appropriate the road pricing debate needs to centre on the objectives that we are seeking to achieve, the extent to which they will achieve the priorities identified for the future and the impact on the customer who is paying for the service being delivered, including the quality of the service that is provided. Governments and communities around the world are all grappling with the issue of road pricing and what role it plays in supporting a more sustainable transport system.

8.2.3 What role should fares play?

The Independent Pricing and Regulatory Tribunal (IPART) determines the maximum fares that can be charged for transport by many of the trains, buses and ferries in NSW. These include most services provided by CityRail and Sydney Buses. IPART also regulates what businesses pay to use rail infrastructure in NSW. Currently, IPART estimates cost recovery from fares is around 22 per cent for CityRail and 32 per cent for buses in Sydney. This is the proportion of total operating costs covered by fare revenue.

One of the challenges for NSW is the extent to which a customer is prepared to pay for a better quality service.

8.2.4 What are the implications for the customer?

Road users are increasingly expressing concern about road congestion and to some extent they will need to make a choice. The ability of the State to keep expanding the road system is limited. Some improvements such as more clearways, intersection improvements, diversion of traffic from known bottlenecks and greater use of technology will make a difference.

Ultimately, both customers and the Government will be faced with having to make some difficult choices. This includes whether to move to a predominantly public transport based system to maximise investment. A pricing system that better reflects the real cost of using the road network may need to be considered. Currently, a national heavy vehicle road pricing policy is being explored as a mechanism to fund repairs to roads that are damaged by freight vehicles, including those that travel interstate.

In terms of how the public transport system meets future needs, a different set of choices emerges and the impact on public transport customers depends on the policy chosen.

All systems of pricing are centred on the customer's willingness to pay for the service delivered. Different pricing systems lead to changes in customer choices. In achieving an integrated transport system where the customer is able to select the right kind of transport for their journey, pricing of transport needs to be considered as a whole, so that the price of using roads is taken into account when setting public transport fares.

An individual customer's decision about whether to use a certain form of transport is not simple. There needs to be good community consultation, clarification about the benefits to the customer, a focus on ensuring that social equity is considered and that any increases in costs do not add to an increase in social exclusion. Environmental sustainability needs to be taken into account as well.

Strategic questions

20. How much would people be prepared to pay for further investment in the transport system and what would be the expectation flowing from these investments?
21. Given the limitations on funds available for future transport investment, what mechanisms should be employed to manage demand?
22. Should new revenues or charges be explored to deliver the transport infrastructure needs within a realistic timeframe?
23. If further road user pricing were to be introduced, how should this operate? For example, by distance travelled? By vehicle type? Or should it be area based?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GLOSSARY

Arterial roads
Main roads that link centres that carry high volumes and generally form the main freight routes.

CBD
Shortened form for central business district, which is the area of a town or city where major offices and businesses are located.

Centre
A place where varying concentrations and combinations of retail, commercial, civic, cultural and residential uses are focused around transport facilities.

CityRail
The passenger train service covering suburban Sydney and extending to the Hunter, Central Coast, Blue Mountains, Southern Highlands and South Coast regions. CityRail operates under Rail Corporation New South Wales (RailCorp).

COAG
This is the peak intergovernmental forum in Australia, comprising the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association.

Community transport
Programs that provide transport to disadvantaged groups with access to services and social contact where conventional public transport systems are not generally viable or appropriate.

Corridor
A broad geographic area or band connecting major sources of trips (e.g. urban centres, flow of people, goods and services).

CountryLink
Passenger rail and some coach services outside the CityRail network in regional NSW. CountryLink operates under Rail Corporation New South Wales (RailCorp).

Global Economic Corridor
The part of Sydney stretching from Sydney Airport and Port Botany through Sydney City, North Sydney and Chatswood to Macquarie Park, which has jobs of global significance.

Greater metropolitan region
See Greater Metropolitan Sydney.

Greater Metropolitan Sydney
A region containing the 51 local government areas of: Ashfield, Auburn, Bankstown, Baulkham Hills, Blacktown, Blue Mountains, Botany, Burwood, Canada Bay, Camden, Campbelltown, Canterbury, Cessnock, Fairfield, Gosford, Hawkesbury, Holroyd, Hornsby, Hunters Hill, Hurstville, Kiama, Kogarah, Ku-ring-gai, Lake Macquarie, Lane Cove, Leichhardt, Liverpool, Maitland, Manly, Marrickville, Mosman, Newcastle, North Sydney, Parramatta, Penrith, Pittwater, Port Stephens, Randwick, Rockdale, Ryde, Shellharbour, Strathfield, Sutherland, Sydney, Warringah, Waverley, Willoughby, Wollondilly, Wollongong, Woollahra, and Wyong, as declared in NSW Government Gazette No.142 in October 1991.

Greater Sydney
See Greater Metropolitan Sydney.

Gross State Product
This is a measure of the economic output of a state or territory. It is the sum of all value added created by industries within the state and serves as a counterpart to the national measure called Gross Domestic Product or GDP.

Growth centres
The North West and South West Growth Centres are areas in Sydney that will accommodate over 180,000 new homes and land for employment over the next 30 to 40 years.

Heavy rail
A rail system which is built for large suburban trains with braking, acceleration and maximum speed characteristics, well suited to moving large loads and reaching relatively high speeds. Sydney's CityRail network is a heavy rail system.

High productivity vehicle
A vehicle that carries a total mass exceeding traditional road mass limits. When carrying a higher mass these vehicles are limited to specific roads capable of supporting heavier vehicles.

Higher Mass Limits (HML)
A nationally agreed scheme that permits approved heavy vehicles to operate with additional mass on certain types of axle groups, on a restricted road network and subject to specified conditions.

Household Travel Survey
The largest and most comprehensive source of personal travel data for residents of the Greater Metropolitan Sydney.

Independent Pricing and Regulatory Tribunal (IPART)
This is the independent regulator that determines the maximum prices that can be charged for certain retail energy, water and transport services in New South Wales. It also determines local government rates.

Integrated fares
A fare structure that considers a person's complete journey and allows for travel across a number of public transport modes.

Integrated ticketing
A ticketing system that allows a person to make a journey on any public transport mode, or between multiple modes, with a single ticket that is valid for the complete journey.

Interchange
A facility to transfer from one mode of transport to another.

International gateway
Key entry and exit points for goods and/or passengers to/from overseas. These include international ports and airports.

Metropolitan Sydney
The 41 local government areas of Ashfield, Auburn, Bankstown, Baulkham Hills, Blacktown, Blue Mountains, Botany, Burwood, Canada Bay, Camden, Campbelltown, Canterbury, Fairfield, Hawkesbury, Holroyd, Hornsby, Hunters Hill, Hurstville, Kogarah, Ku-ring-gai, Lane Cove, Leichhardt, Liverpool, Manly, Marrickville, Mosman, North Sydney, Parramatta, Penrith, Pittwater, Randwick, Rockdale, Ryde, Strathfield, Sutherland, Sydney, Warringah, Waverley, Willoughby, Wollondilly and Woollahra.

Mode
The type of vehicle or method used for a trip (e.g. train, bus, cycle, ferry, walking, car).

Mode share
The proportion of use of each main travel mode.

Motorway
A divided highway for through traffic with no access for traffic between interchanges and with grade separation at some interchanges.

NSW 2021
This is the NSW Government's 10 year plan to rebuild the economy, return quality services, renovate infrastructure, strengthen the local environment and communities and restore accountability to Government.

Orbital motorway network
Sydney's circumferential network of linked tolled and untolled freeways made up of the Sydney Harbour Tunnel, Eastern Distributor, M5, Westlink M7, M2, Lane Cove Tunnel and the Warringah Freeway.

Peak travel
Refers to travel taken during the periods of 6am-9am or 3pm-6pm on weekdays excluding public holidays.

Road pricing
The cost that motorists pay for using the roads. It can take many forms including tolls, fuel tax, licence fees, area charges or per kilometre charges.

Strategic bus corridor
Strategic bus corridors are designed to connect major centres across Sydney, linking to important transport, health and educational facilities and other community facilities.

Sydney metropolitan area
See Metropolitan Sydney.

Transport hub
In terms of passenger transport, a transport hub is typically a public transport interchange, major bus stop or major train station. In terms of freight, a transport hub is typically a freight rail yard, intermodal terminal, seaport or truck terminal. Major airports are also considered transport hubs.

Western Sydney Employment Area
An area at the intersection of the M4 and M7 Motorways that will provide more than 2,200 hectares of employment land and will support around 40,000 jobs.


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NSW GOVERNMENT PRIORITIES FOR IMPROVING TRANSPORT

Customer experience

- Opal electronic ticketing system
- Improve train carriages
- New buses and improved services
- Timetable improvements
- Improving signage and wayfinding
- Additional train services across the CityRail network
- Public transport interchange and car park upgrades
- Train station upgrades, including easy access
- Wynyard Walk
- Pedestrian facilities, including bridges
- Franchising of Sydney Ferries
- Improved ferry services and routes
- Commuter wharf upgrades
- Improved transport information
- Community Transport funding
- Live travel times on motorways
- Live traffic app

Safety improvements

- Road black spot and other safety treatments
- Park and Travel Safety program
- Safer Drivers course for learners
- Simpler speed zones
- Speed enforcement measures
- School zone flashing lights
- Roadside rest areas

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Getting more out of urban networks

- Inner West light rail extension
- Investigate light rail in the Sydney CBD and to the University of Sydney and the University of NSW
- Investigate Bus Rapid Transit for the Northern Beaches
- Rail clearways works
- Traffic and transport congestion treatments
- Train carriage and rail operating systems improvements
- Improvements to strategic bus routes
- Motorway Priority Breakdown Response Team
- Managed motorways initiatives
- Enhanced cycleway links

Supporting the economy and regions

- Pacific Highway upgrade
- Hunter Expressway
- Hume Highway, complete duplication between Sydney and Melbourne
- Princes Highway improvements
- Great Western Highway, four lanes east of Katoomba
- M2 and M5 West motorway widening
- Commence enhancements to support Port Botany and Sydney Airport
- Commence work on Sydney's next motorway (to be identified by Infrastructure NSW)
- Enfield Intermodal Logistics Centre and improved freight rail to Port Botany
- Southern and Northern Sydney rail freight corridors
- Improve access for high productivity freight vehicles including upgrading or replacing key bridges and road links
- Newell Highway overtaking lanes and other safety improvements
- Maintain transport assets across the State

Servicing growth areas

- South West Rail Link
- North West Rail Link
- Erskine Park Link Road
- Camden Valley Way widening
- Richmond Road improvements
- Narellan Road improvements
- Central Coast road upgrades, including Central Coast Highway, Pacific Highway, Wyong Road
- New buses and bus routes

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How to respond to the Discussion Paper

Send a submission by:

- Writing to:
  NSW Long Term Transport Master Plan Team
  Transport for NSW
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The closing date for submissions to the Discussion Paper is 27 April 2012.