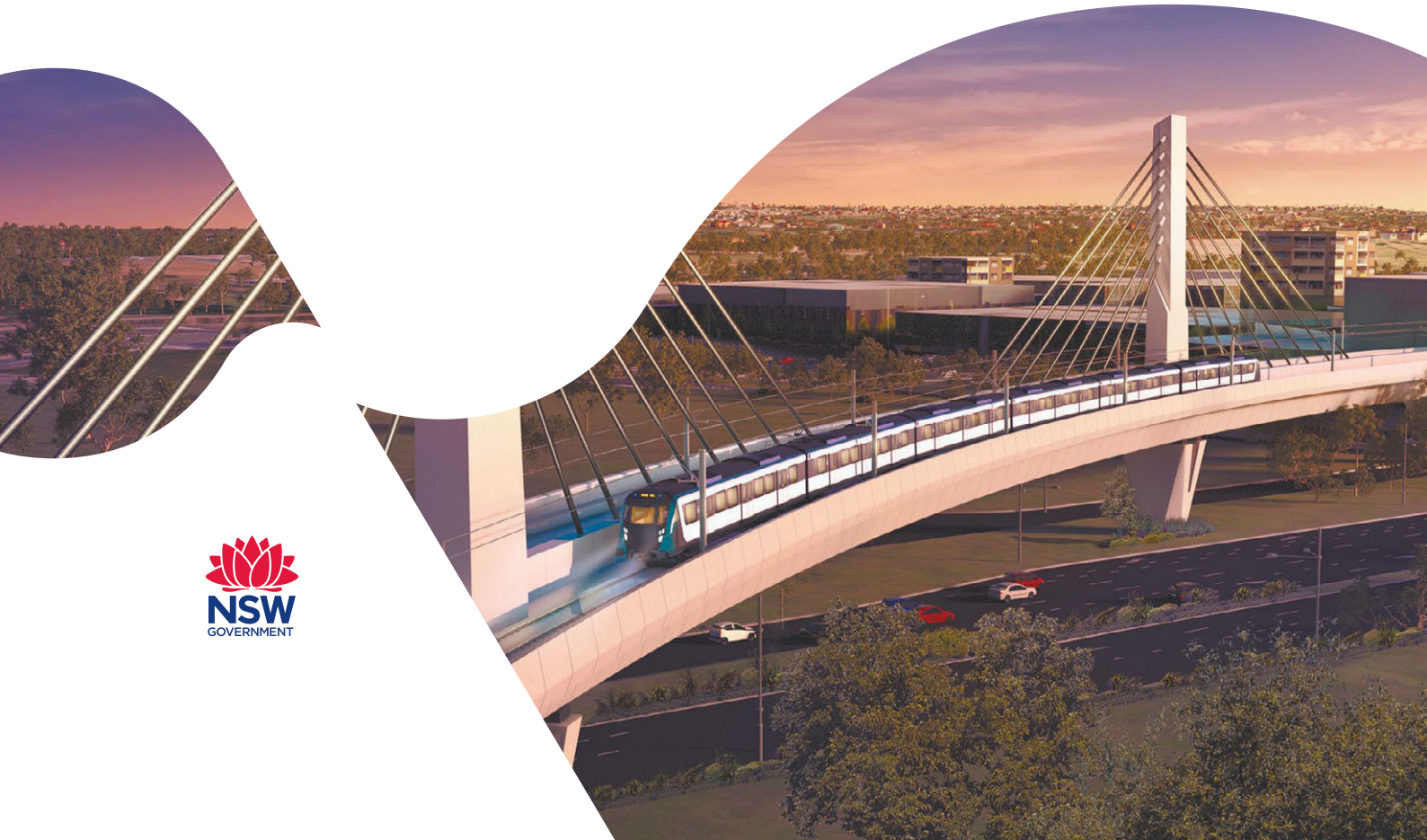
future transport 2056

GREATER SYDNEY SERVICES AND INFRASTRUCTURE PLAN



NSW GOVERNMENT

Contents

Executive Summary

Over the next 40 years, Greater Sydney is forecast to grow from a city of 5 million to 8 million people. At the same time, technology advancements will reshape how people and goods move around our city.

To address the opportunities and challenges facing Sydney and to sustain our global competitiveness, the Greater Sydney Commission (GSC) has established a vision for Sydney as a metropolis of three cities where people have access to jobs and services within 30 minutes by public transport. It is a vision for a city that is liveable, productive and sustainable.

The Greater Sydney Services and Infrastructure Plan is our 40-year plan for transport in Sydney. It is designed to support the land use vision for Sydney. Building on the state-wide transport outcomes identified in the Future Transport Strategy 2056, the Plan establishes the specific outcomes transport customers in Greater Sydney can expect and identifies the policy, service and infrastructure initiatives to achieve these.

Our focus is enabling people and goods to move safely, efficiently and reliably around Greater Sydney, including having access to their nearest centre within 30 minutes by public transport, 7 days a week. The transport system will also support the liveability, productivity and sustainability of places on our transport networks.

Achieving this will require more efficient modes of transport – public transport, shared transport and walking and cycling – to play a greater role. To support this, the NSW Government will invest in new transport links, better use existing capacity, prioritise road space for more efficient vehicles and ensure the transport network balances the efficient movement of people and goods and sustains the liveability and sustainability of centres it passes through.

Introduction

About the Greater Sydney Services and Infrastructure Plan

The Greater Sydney Services and Infrastructure Plan forms part of Future Transport 2056. The Future Transport Strategy 2056 sets the strategic direction for transport in NSW over the next 40 years. Both the Regional NSW and Greater Sydney Services and Infrastructure Plans build on the state-wide transport outcomes identified in the Strategy, establishing specific outcomes that customers can expect and identifying the policy, service and infrastructure initiatives to achieve these.

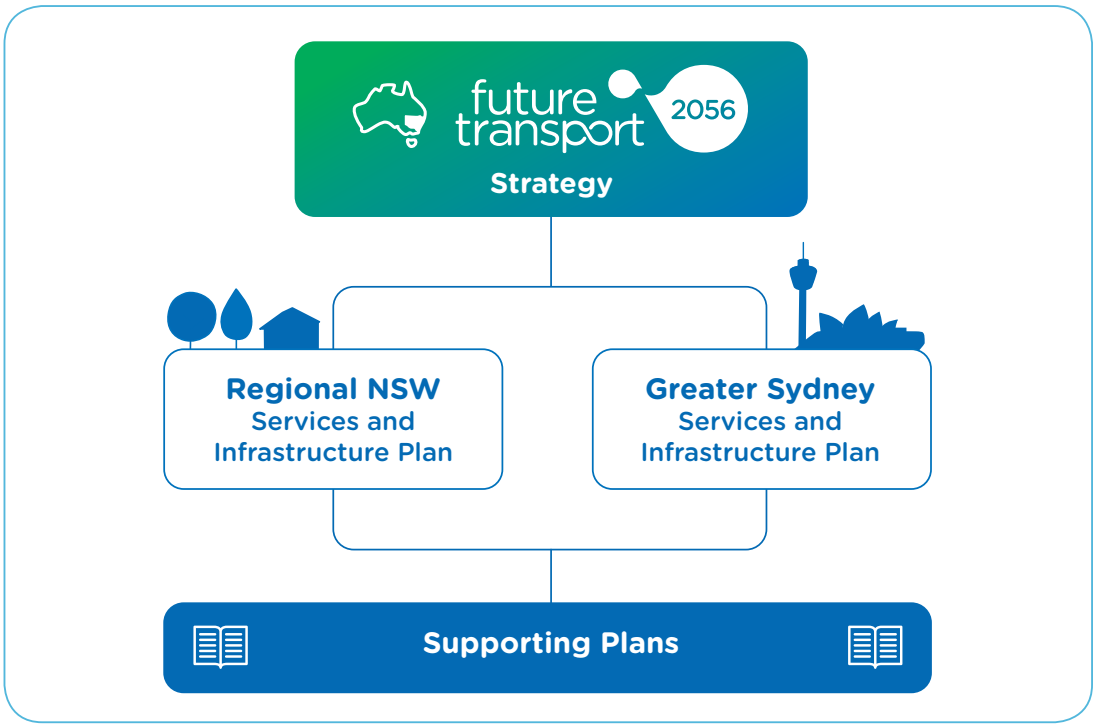


Figure 1: Overview of Future Transport 2056

Defining Greater Sydney

The scope of this Plan is the Greater Sydney region, as defined by the Greater Sydney Commission. This includes the 33 local government areas and five districts of Greater Sydney – North, South, Central City, Eastern City and Western City Districts.

This Plan also addresses connections between Greater Sydney and Regional NSW. This content is also included in the Regional NSW Services and Infrastructure Plan.

A Plan that puts the customer at the centre

The customer is at the centre of everything we do. That is why input from our customers, the community and industry is fundamental to Future Transport 2056, including the Greater Sydney Services and Infrastructure Plan.

A multi-channel, three-phase engagement campaign means we have engaged closely with customers and the community over a period of more than a year. This has included a community roadshow, industry roundtables and Q&A sessions and online engagement.

Since receiving feedback on the draft Greater Sydney Services and Infrastructure Plan between October and December 2017, we have reviewed all comments and submissions, summarised key comments, consulted across the NSW Government, and where feasible, refined our plans so the final Greater Sydney Services and Infrastructure Plan truly reflects what our customers want.

We will continue to seek community feedback both as part of our regular engagement processes and as we continue to develop more specific plans that build on the work of Future Transport.

Land use and transport vision for 2056

The transport vision for Greater Sydney has been developed to support the GSC's vision for Greater Sydney as a metropolis of three cities, where people have access to jobs and services within 30 minutes by public transport. It also responds to the opportunities and challenges that will reshape the city and the way people and goods move over the next 40 years.

Opportunities and challenges for transport

Supporting the growth of our city

Greater Sydney is undergoing significant change, which is creating opportunities and challenges for our transport system. These include the need to support the growth of the region, sustaining and enhancing our role as a global city and harnessing new technology for the benefit of our customers.

Sustaining and enhancing our role as a global city

Greater Sydney is Australia's leading global city. It is more connected with the world than ever before, however, we face growing competition from established and emerging cities to attract people and jobs, and maintain liveability, productivity and sustainability. This includes:

- encouraging greater use of more efficient modes of transport. To remain globally competitive as Sydney grows, it will require expanding public transport and ensuring more efficient modes of transport are prioritised on the road network where they are able to move more people more efficiently.
- balancing movement and place needs on the transport network. Enabling people and goods to move efficiently around the city while recognising the importance of the places through which transport services pass is necessary for sustaining and enhancing the liveability of our city.

Harnessing technology for the benefit of customers

Changes in technology are reshaping the way people and goods move and creating new opportunities to improve the experience of our customers. Continuing to harness these changes for the benefit of our customers is a key opportunity over the coming decades.

Whether it be new ridesharing services, real-time transport apps or paperless ticketing, customers are already experiencing the benefits of new technology. As detailed in the Future Transport Strategy, advanced automation and new digital platforms are set to extend these benefits.

A metropolis of three cities

The vision for Greater Sydney as a metropolis of three cities is designed to support the growth of Sydney by enabling people to have more convenient access to jobs and services across the region. The three cities include:

- **Eastern Harbour City –** stretching from the Northern Beaches to Sutherland Shire
- **Central River City –** extending outward from Greater Parramatta to Blacktown, Norwest, Epping, Rhodes and towards Bankstown
- **Western Parkland City –** focused around the Western Sydney Airport-Badgerys Creek Aerotropolis and extending north to Greater Penrith, east to Liverpool and south to Campbelltown-Macarthur

Each of the three cities is anchored by a metropolitan centre – the Harbour CBD in the east, Greater Parramatta in the centre and a cluster of centres in the west, including Western Sydney Airport-Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown-Macarthur. Strategic centres and trade gateways are also dispersed across the region and play a key role in the vision for Greater Sydney.

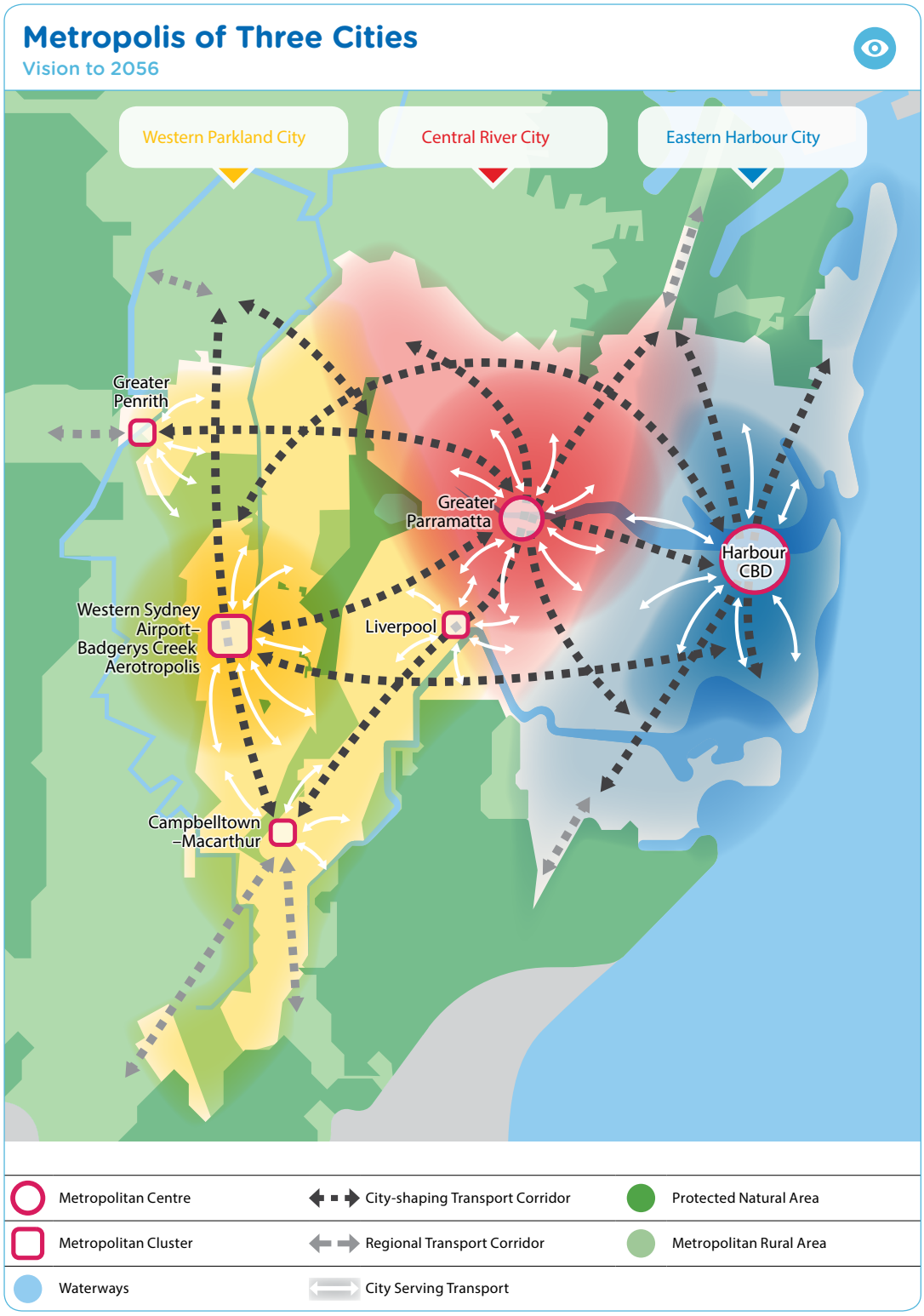


Figure 2: Vision for Greater Sydney as a metropolis of three cities

A 30 minute city

The vision for Greater Sydney is one where people can access jobs and services in their nearest metropolitan city and strategic centre within 30 minutes by public transport, 7 days a week.

There are two components to the 30 minute city:

- Connecting people in each of the three cities to their nearest metropolitan centre. These are the largest employment and service centres in each of the three cities.
- Connecting residents in each of the five districts to their nearest strategic centre by public transport, walking and cycling, giving people 30-minute access to local jobs, goods and services.

Corridors for moving people and goods

To support the land use vision for Greater Sydney, the NSW Government developed a vision for the transport system that will enable people and goods to move conveniently around the city. It will enable people within each city to access their nearest metropolitan and strategic centre within 30 minutes by public transport, 7 days a week using:

- **City-shaping corridors –** major trunk road and rail public transport corridors providing higher speed and volume linkages between our cities and centres that shape locational decisions of residents and businesses.
- **City-serving corridors –** higher density corridors concentrated within ~10km of metropolitan centres providing high frequency access to metropolitan cities/centres with more frequent stopping patterns
- **Centre-serving corridors –** local corridors that support buses, walking and cycling, to connect people with their nearest centre and transport node

The road and rail network, including dedicated and shared freight corridors and connections to regional NSW are fundamental parts of this future transport system. Technology is changing how we travel – and how we deliver transport, yet we expect most trips will continue to be provided on the road and rail network.

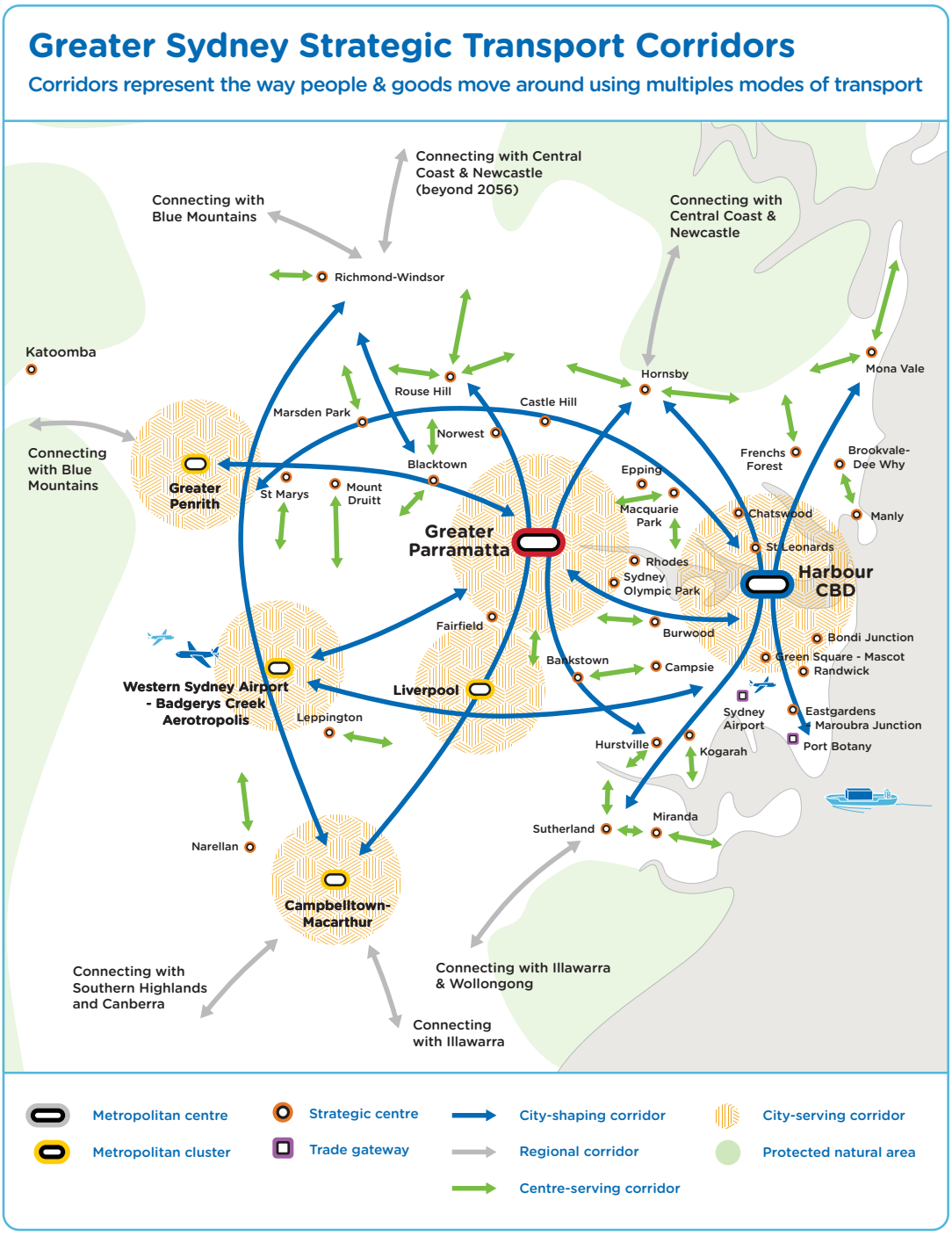


Figure 3: Greater Sydney strategic transport corridors

The land use and transport vision for 2056 is detailed in chapter 2.

To support the liveability, productivity and sustainability of places on our transport network, we have developed a Movement and Place Framework. The Framework acknowledges that transport networks have different functions and roles, and serve as both a destination and as a means to move people and goods. The Movement and Place Framework will enable us to plan, design and operate the transport network to meet these different needs by providing greater transparency, supporting collaboration between those responsible for land use, transport and roads while also encouraging input from the community. Through the Framework we will be able to design a future network that is better used and supports the safe, efficient and reliable movement of people and goods and the need to create and renew great places along it.

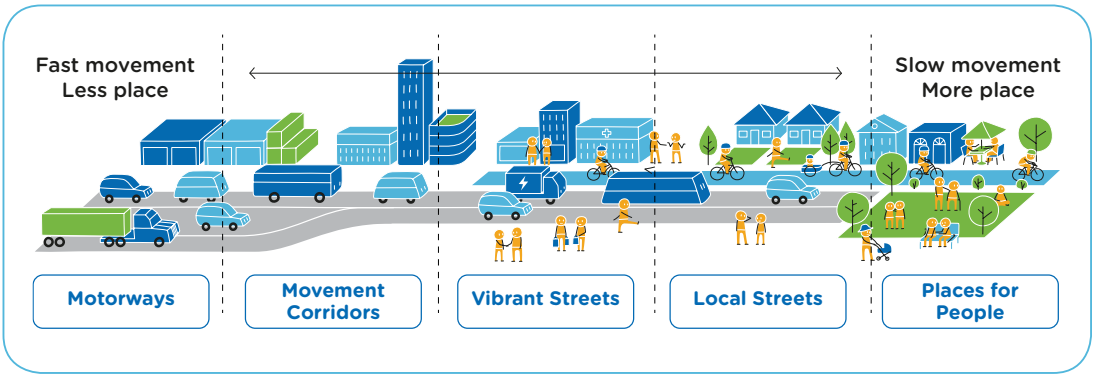


Figure 4: Different Street Environments under the Movement and Place Framework

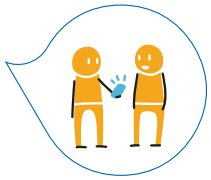
Underpinning the Movement and Place Framework are a set of principles that provide a common platform for planning the transport network and the basis for efficient use of the network, allocation of road space while acknowledging the needs and expectations of both transport customers and of the community. These include:

- Streets as **Places for People** are the heart of communities and require better prioritisation of public transport, pedestrians, cycle and freight access whilst limiting through traffic that is not destined for the centre.
- **Local Streets** should be supported by lower vehicle speeds that better align with the need to prioritise walking and cycling within local communities.
- **Vibrant Streets** are some of the most active areas in our cities and need to balance high urban density and pedestrian activity generated by commercial, tourism, leisure and entertainment venues, with the need to move high volumes of people and goods.
- **Movement Corridors** and **Motorways** are highly important for the movement of people and goods, with a key role to provide efficient movement across the road network where there is little interaction with adjacent land use. Where Movement Corridors pass through centres there is a need to acknowledge the value of places, providing some priority for pedestrians and access to sustain and support centres and the liveability of local communities.

Customer outcomes for Greater Sydney

The Future Transport Strategy establishes six state-wide transport outcomes for NSW. These outcomes will guide policy reform and service provision and provide a framework to network planning and investment aimed at harnessing rapid change and innovation to support a modern, innovative transport system that serves the community and economy well into the 21st century.

To support these state-wide transport outcomes, we have established specific outcomes that transport customers in Greater Sydney can expect over the life of this Plan. The customer outcomes are detailed in chapter 3.

Future Transport Statewide Outcomes	Greater Sydney transport customer outcomes
Customer Focused 	**Convenient and responsive to customer needs** **1.** New technology is harnessed to provide an integrated, end-to-end journey experience for customers **2.** Future forms of mobility are made available to customers and integrated with other modes of transport
Successful Places 	**Sustaining and enhancing the liveability of our places** **3.** Walking or cycling is the most convenient option for short trips around centres and local areas, supported by a safe road environment and suitable pathways **4.** Vibrant centres supported by streets that balance the need for convenient access while enhancing the attractiveness of our places
A Strong Economy 	**Connecting people and places in the growing city** **5.** 30 minute access for cutomers to their nearest metropolitan centre and strategic centre by public transport seven days a week **6.** Fast and convenient interchanging, with walking times of no longer than five minutes between services

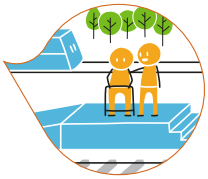
Future Transport Statewide Outcomes	Greater Sydney transport customer outcomes
Safety and Performance 	**Safely, efficiently and reliably moving people and goods** **7.** Efficient, reliable and easy-to-understand journeys for customers, enabled by a simple hierarchy of services **8.** Efficient and reliable freight journeys supported by 24/7 rail access between key freight precincts with convenient access to centres **9.** A safe transport system for every customer with the aim for zero deaths or serious injuries on the network by 2056
Accessible Services 	**Accessible for all customers** **10.** Fully accessible transport for all customers
Sustainability 	**Makes the best use of available resources and assets** **11.** Transport services and infrastructure are delivered, operated and maintained in a way that is affordable for customers and the community **12.** A resilient transport system that contributes to the NSW Government's objective of net-zero emissions by 2050

Figure 5: Future Transport 2056 state-wide and Greater Sydney transport outcomes

Future networks

Transport networks form the backbone of our city. Transport services and the infrastructure they use not only support the movement of people and goods but also attract activity around them and shape the geography of our city. Consistent with the land use and transport vision, the NSW Government proposes to expand the transport networks to support the growth of Greater Sydney and improve access to jobs and services. Investigation will continue into how to harness new technology to better use existing capacity and enable services to be more responsive to demand. The future networks are summarised below and detailed in chapter 4.

City-shaping network

The city-shaping network includes higher speed and volume linkages between our cities and centres. The function of this network is to enable people living in any of the three cities to access their nearest metropolitan centre within 30 minutes and to be able to travel efficiently between these metropolitan centres.

As Greater Sydney transitions to a metropolis of three cities, the city-shaping network will need to expand to provide improved access to and between each metropolitan city/centre, particularly Greater Parramatta and centres in the Metropolitan cluster in the Western Parkland City.

NSW Government proposes to expand the transport networks to support the growth of Greater Sydney and improve access to jobs and services.

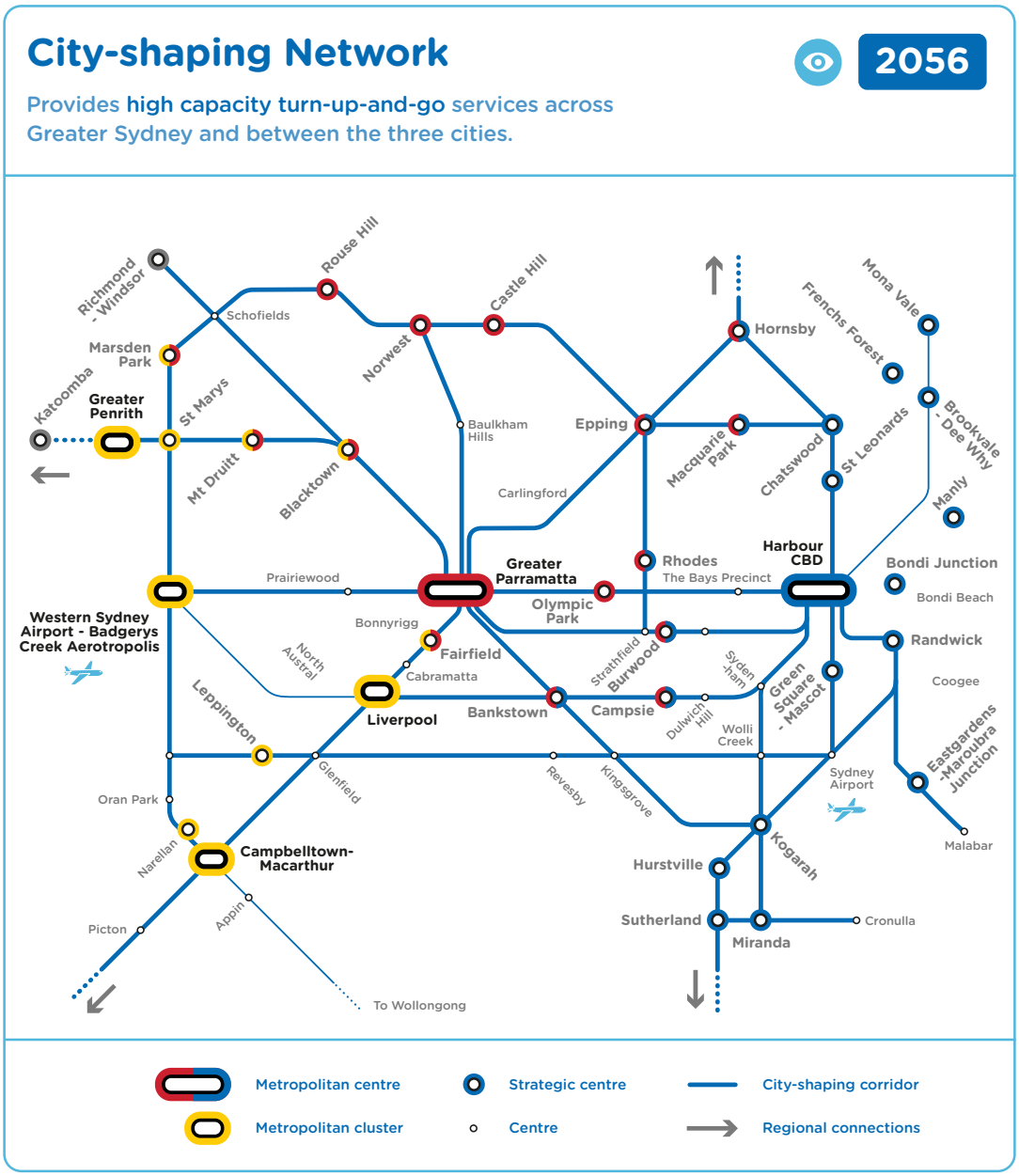


Figure 6: 2056 Greater Sydney city-shaping transport network vision

City-serving network

The city-serving network will provide high-frequency services within a ~10km radii of the three metropolitan cities/centres. This will support access within some of the densest land use in Greater Sydney where demand for travel is most concentrated. As these inner urban areas in each of the three cities develop and become more dense, the Government will investigate the prioritisation of on-street public transport services and invest in higher frequency services.

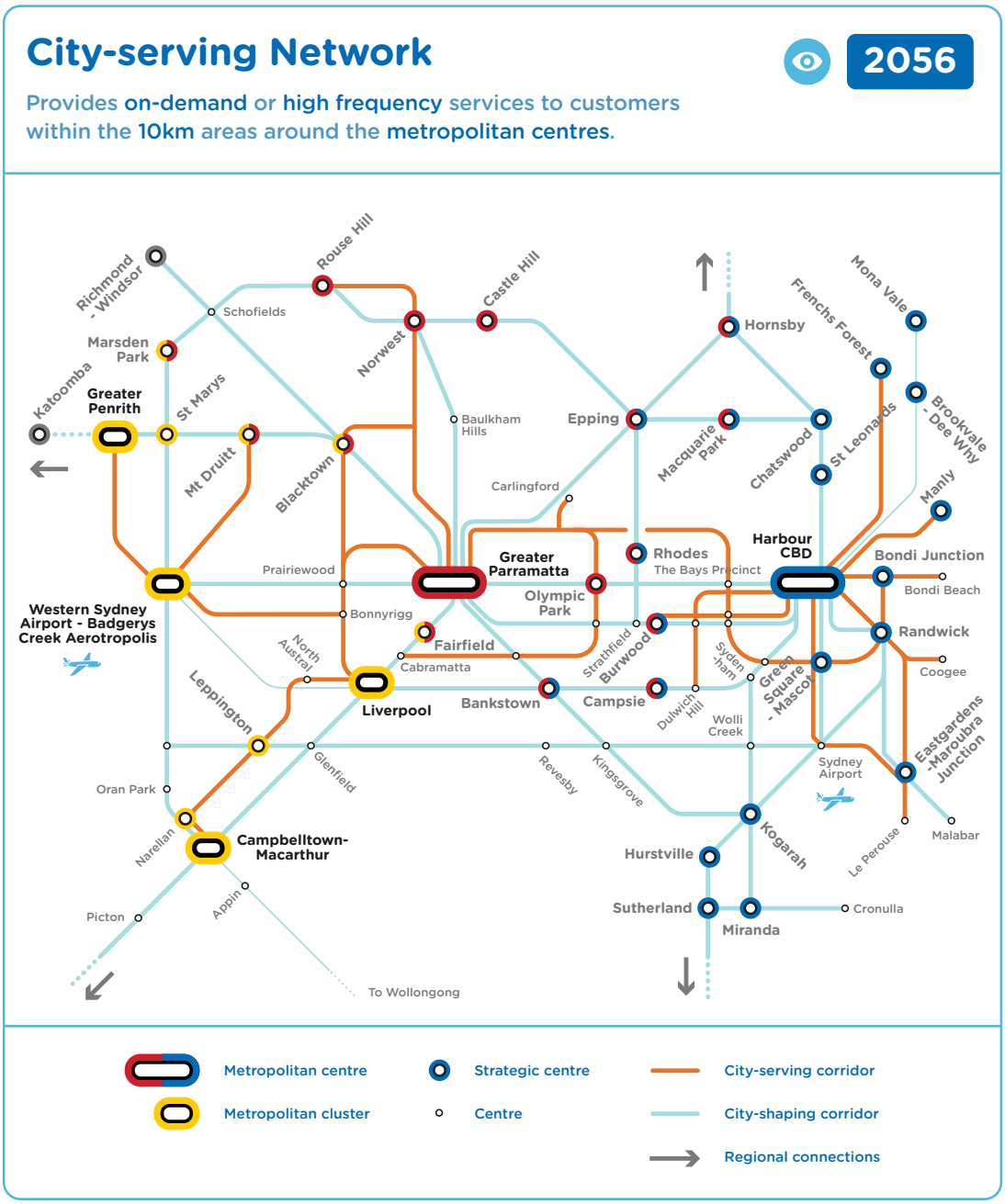


Figure 7: 2056 Greater Sydney city serving transport network vision

Centre-serving network

The centre-serving network connects local areas with their nearest centre. It enables customers living in typically lower density areas across Greater Sydney to access jobs, education and services in strategic centres and to access city-shaping corridors, such as train, metro and high frequency bus services, which pass through these centres. Consistent with customer outcomes 1–3, on-demand transport, walking and cycling will play a greater role in the future centre-serving network to improve convenience, harness innovation and promote healthy lifestyles.

Freight network

The strategic freight network includes the road and rail network that support the movement of goods. This includes corridors connecting trade gateways, freight precincts and centres across Greater Sydney as well as corridors that connect the region with outer metropolitan areas and regional NSW. Supporting the safe, efficient and reliable movement of goods around Greater Sydney will require a high capacity network for moving goods between trade gateways and freight precincts, such as from port to warehouse, and providing convenient access to service our centres. The future network will support this through the strategic road network and improved freight rail connections, particularly between ports, employment land and intermodal terminals.

Services and infrastructure initiatives

The NSW Government has identified policy, service and infrastructure initiatives to support the customer outcomes and deliver the future networks. Initiatives have been prioritised on the basis of delivering on existing commitments, addressing network constraints and supporting growth. The initiatives include those that have been committed to for delivery in the next 10 years as well as additional initiatives that have been identified for investigation (both of which will be subject to business cases and funding). These include:

- **Committed initiatives (0–10yrs) –** initiatives that either have committed funding, are for immediate detailed planning, or are part of key maintenance, urban renewal, local amenity or safety programs. Some projects included in this category are committed subject to business case and funding decision.
- **Initiatives for investigation (0–10, 10–20yrs) –** intended to be investigated for potential commitment or implementation within the next 10 or 20 years. Those listed in the 0–10 horizon will be prioritised for more detailed investigation to determine if they are required in the next decade.
- **Visionary initiatives (20+ years) –** longer term initiatives that may be investigated within the next 10 years, but are unlikely to require implementation within 20 years.

Key initiatives are summarised below with all initiatives detailed in chapter 5.

Greater Sydney key initiatives

POLICY AND PLANNING		
●	Transport Access Program (Improve access to train stations and ferry wharves)	**COMMITTED 0-10 YEARS**
●	Expansion of Travel Choices Program to encourage customers to change travel behaviours to support better use of transport capacity	**COMMITTED 0-10 YEARS**
●	Implementation of the Movement and Place Framework to balance the efficient movement of people and goods while supporting the liveability of places	**FOR INVESTIGATION 0-10 YEARS**
●	Policy and regulation for Connected and Automated Vehicles	**FOR INVESTIGATION 0-10 YEARS**
SERVICE		
●	Sydney Growth Trains (part of More Trains, More Services program)	**COMMITTED 0-10 YEARS**
●	Trial of on-demand bus services on selected local bus routes	**COMMITTED 0-10 YEARS**
●	Introduction of higher frequency transport services across Greater Sydney	**FOR INVESTIGATION 0-10, 10-20, 20+ YEARS**
●	Implementation of Mobility as a Service model in collaboration with industry	**FOR INVESTIGATION 0-10, 10-20, 20+ YEARS**
INFRASTRUCTURE		
●	Sydney Metro West	**COMMITTED, 0-10 YEARS SUBJECT TO FINAL BUSINESS CASE AND FUNDING**
●	Parramatta Light Rail Stage 1	**COMMITTED 0-10 YEARS**
●	Parramatta Light Rail Stage 2	**COMMITTED, 0-10 YEARS SUBJECT TO FINAL BUSINESS CASE AND FUNDING**
●	Western Harbour Tunnel and Beaches Link	**COMMITTED, 0-10 YEARS SUBJECT TO FINAL BUSINESS CASE AND FUNDING**
●	F6 Extension Stage 1 – WestConnex to Presidents Avenue, Kogarah	**COMMITTED, 0-10 YEARS SUBJECT TO FINAL BUSINESS CASE AND FUNDING**
●	North-south rail link in Western Parkland City	
	• North-south rail link – St Marys – WSA Badgerys Creek Aerotropolis	**COMMITTED, 0-10 YEARS SUBJECT TO FINAL BUSINESS CASE AND FUNDING**
	• North-south rail link – Cudgegong – St Marys	**FOR INVESTIGATION 0-10 YEARS**
	• North-south rail link – WSA Badgerys Creek Aerotropolis – Campbelltown-Macarthur	**FOR INVESTIGATION 0-10 YEARS**
●	Parramatta to Epping mass transit link	**FOR INVESTIGATION 10-20 YEARS**
●	Parramatta to Kogarah mass transit link	**FOR INVESTIGATION 10-20 YEARS**

Next steps

There has already been significant progress in implementing a number of initiatives included in the Greater Sydney Services and Infrastructure Plan, with nearly 40 major initiatives being delivered or committed to by the NSW Government. Building on this, we will progress detailed planning for new initiatives (which will be subject to business cases and funding), continuing to engage closely with our customers and the community as we do so. We will also measure our progress against key customer outcomes, to make Greater Sydney a liveable, productive and sustainable city.

CHAPTER

1

Introduction

About the Greater Sydney Services and Infrastructure Plan

The Greater Sydney Services and Infrastructure Plan is the NSW Government's blueprint for transport in Greater Sydney for the next 40 years. It builds on the state-wide transport outcomes set-out in the Future Transport Strategy 2056 by identifying the outcomes that transport customers in Greater Sydney can expect and detailing the future networks and initiatives to achieve these outcomes.

The Plan sets the strategic vision for transport in Greater Sydney, forming the foundation for further planning of specific corridors and initiatives. It is designed to be flexible as changes in technology and land use impact on the city and the way people and goods move over the next 40 years.

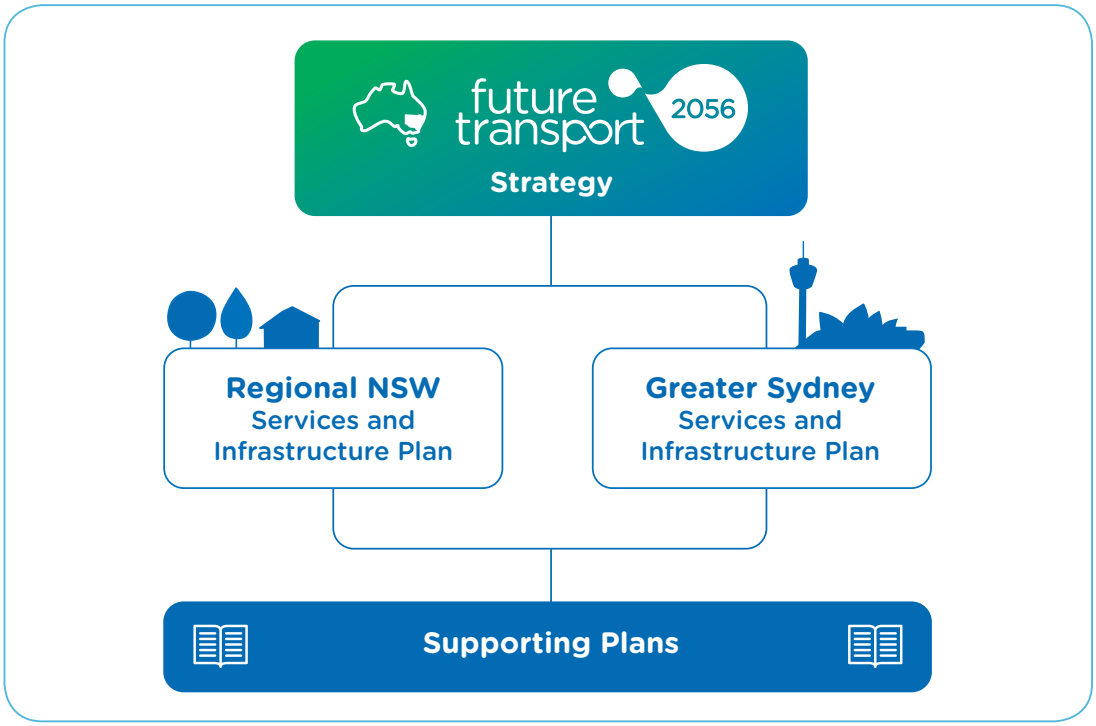


Figure 8: Overview of Future Transport 2056

Defining Greater Sydney

Greater Sydney is defined as the 33 local government areas of Bayside, Blacktown, Blue Mountains, Burwood, Camden, Campbelltown, Canada Bay, Canterbury-Bankstown, Cumberland, Fairfield, Georges River, Hawkesbury, Hornsby, Hunters Hill, Inner West, Ku-ring-gai, Lane Cove, Liverpool, Mosman, Northern Beaches, North Sydney, Parramatta, Penrith, Randwick, Ryde, Strathfield, Sutherland, The City of Sydney, The Hills, Waverley, Willoughby, Wollondilly and Woollahra.

The geographic boundary is consistent with the Greater Sydney Commission's five districts of Greater Sydney – North, South, Eastern City, Central City and Western City Districts.

This Plan addresses connections between Greater Sydney and regional NSW, particularly in the Outer-Metropolitan areas. This content is also included in the Regional NSW Services and Infrastructure Plan.

A Plan that puts the customer at the centre

The customer is at the centre of everything we do. That is why input from our customers, the community and industry is fundamental to Future Transport 2056, including the Greater Sydney Services and Infrastructure Plan.

The suite of Future Transport 2056 documents was developed using a process called co-design, meaning early involvement and ongoing collaboration with all stakeholders – customers, our people, wider government, industry and the community – in the design process so the end result best meets their needs. A multi-channel, three-phase engagement campaign means we have engaged closely with customers and the community over a period of more than a year.

Figure 9: Future Transport community engagement process

Phase 1 commenced in November 2016 with the announcement that the NSW Government were developing a 40-year transport strategy. The website was launched introducing Future Transport 2056, displaying information on the intended priorities in developing the plans and obtaining feedback via the website and digital channels. Communications and engagement also facilitated early collaboration with the Greater Sydney Commission (GSC), Infrastructure NSW (INSW) and other NSW Government departments and agencies.

Phase 2 during May to June in 2017 aimed to raise awareness of the transport challenges that Future Transport will seek to address and to gain feedback on new approaches to integrated land use and transport planning. Communications channels included digital, social media and face to face sessions. During this time, 34 engagements were held in 16 locations across NSW, including four locations in Greater Sydney. These included community forums and industry roundtables. Engagement outcomes included:

- 43,000+ people engaged digitally and face to face
- 5,315 online surveys completed
- 35,299 comments, likes, and shares on Facebook
- 40,263 views of animations and videos
- 730,053 people reached through Facebook advertisements
- 85,844 occasions where people engaged with the material via Facebook

Feedback from stakeholders from Phase 2 activities informed the development and design of the draft Future Transport 2056 strategy and plans.

Phase 3 during October to December 2017 launched the draft Future Transport 2056 strategy and plans and included a significant consultation campaign to seek feedback on these. A community roadshow was held in 34 communities across NSW, over 68 briefings and Q&A sessions with industry and local government were undertaken and online submissions were sought.

Customer insights are critical to transport planning and have been included throughout the development of the Greater Sydney Services and Infrastructure Plan. Between November 2016 and December 2017, customers were invited to provide input and feedback on the draft plan. We received submissions from local councils, industry bodies, community groups, other government agencies, and members of the public. Overall, our engagement campaign for the draft plan resulted in over 500 formal feedback submissions being received, over 2,000 comments on the Future Transport website and we engaged face to face with over 3,300 people.

Since receiving feedback on the draft Greater Sydney Services and Infrastructure Plan between October and December 2017, we have reviewed all comments and submissions, summarised key comments, consulted across the NSW Government, and where feasible, refined our plans so the final Greater Sydney Services and Infrastructure Plan truly reflects what our customers want. For example, we have heard that more needs to be done to explain the benefits of our proposed initiatives, so a comprehensive list of initiatives and their proposed benefits is now included. We have also heard that more cycling and walking infrastructure needs to be delivered sooner, so we have changed our plans to reflect that.

The suite of Future Transport 2056 documents was developed using a process called co-design, meaning early involvement and ongoing collaboration with all stakeholders.

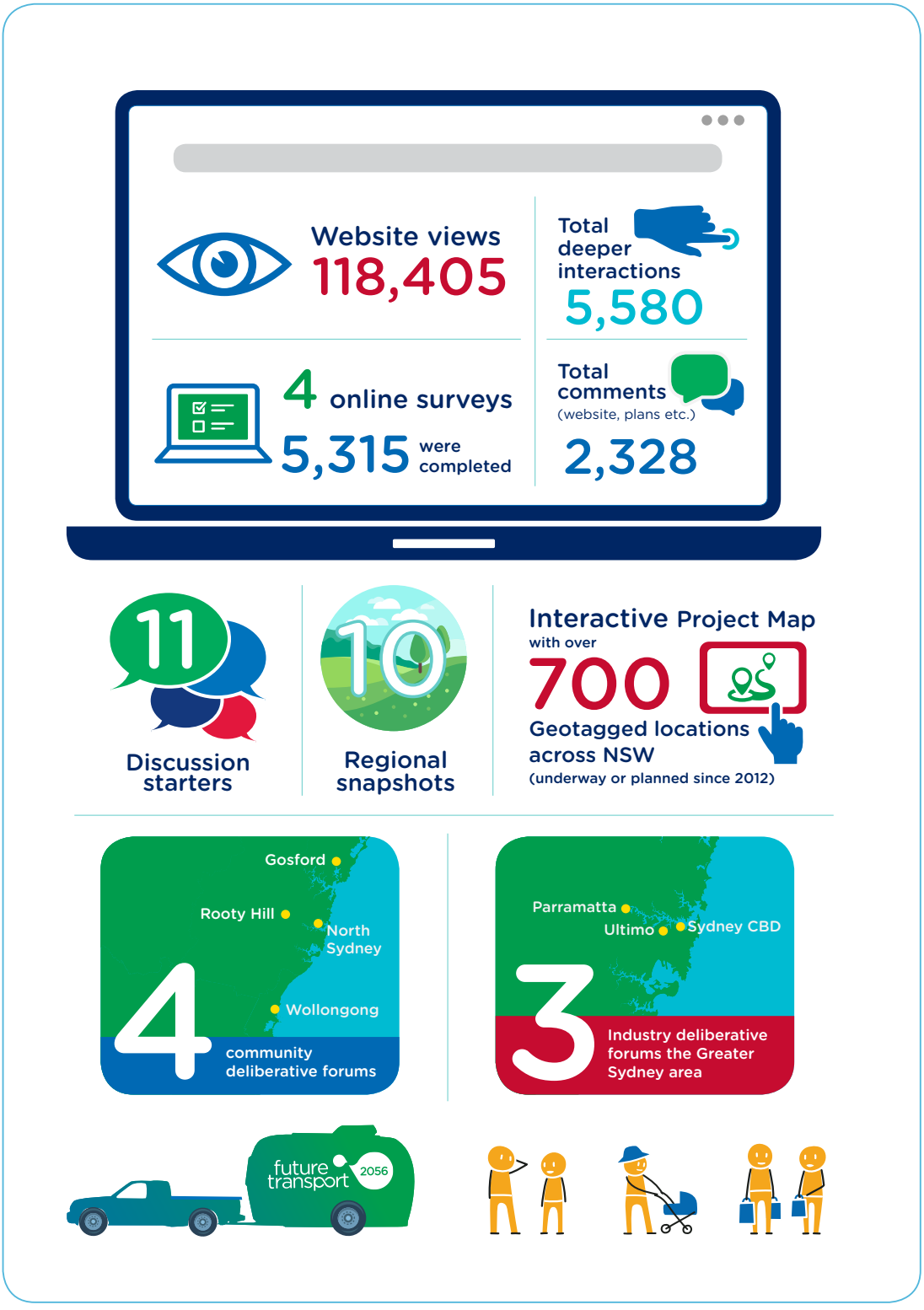


Figure 10: Summary of feedback received from November 2016 to December 2017

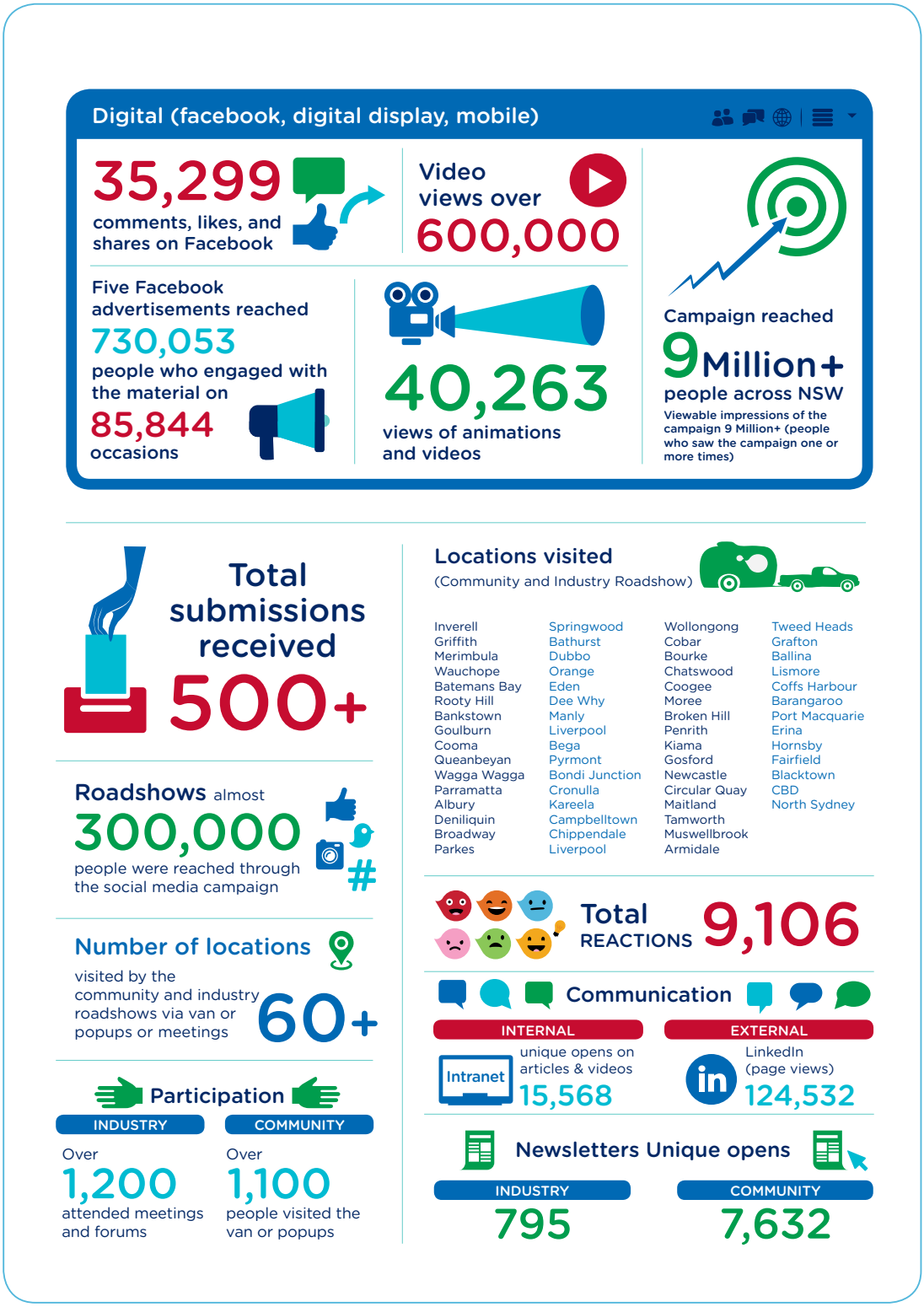


Figure 10: Summary of feedback received from November 2016 to December 2017

CHAPTER

2

Land use and transport vision for 2056

The transport vision for Greater Sydney has been developed to support the Greater Sydney Commission's (GSC's) vision for Greater Sydney as a metropolis of three cities, where people have access to jobs and services within 30 minutes. It also responds to the opportunities and challenges that will reshape the city and the way people and goods move over the next 40 years.

Opportunities and challenges for transport

Supporting the growth of our city

Greater Sydney is undergoing significant change, which is creating opportunities and challenges for our transport system. These include the need to support the growth of the region, sustaining and enhancing our role as a global city and harnessing new technology for the benefit of our customers.

Sydney is one of the top 10 fastest growing cities in the developed world. By 2056, 8 million people will call our city home. This creates an opportunity for us to shape growth of the city but will require changes to how people and goods move to address the travel challenges that come with a growing city.

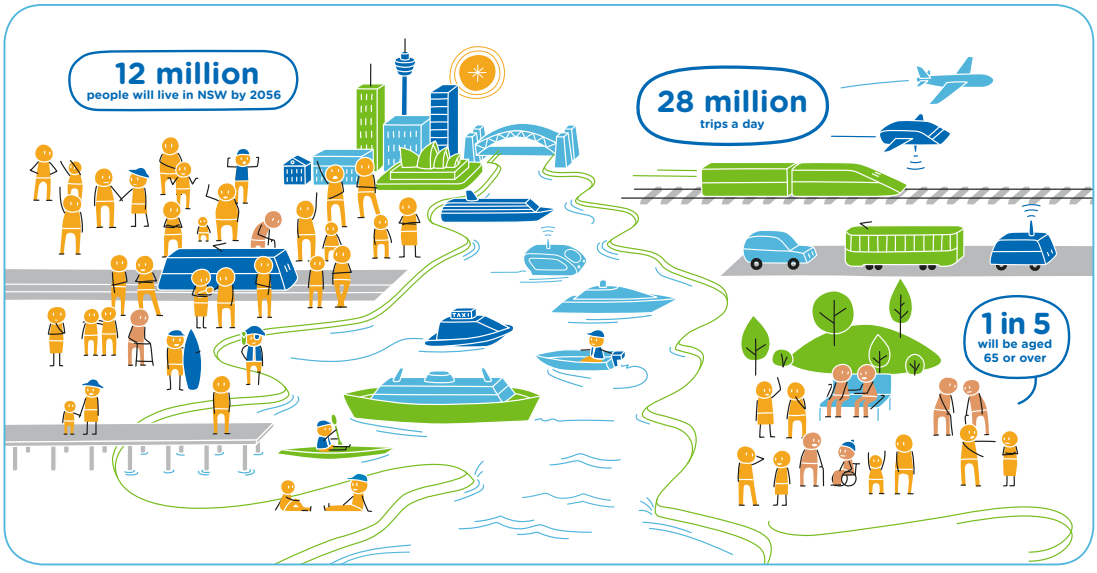


Figure 11: Population growth in NSW by 2056

By 2056, Greater Sydney's population will be equivalent to the current population of Greater London and New York City, and approaching the scale of a small mega-city.

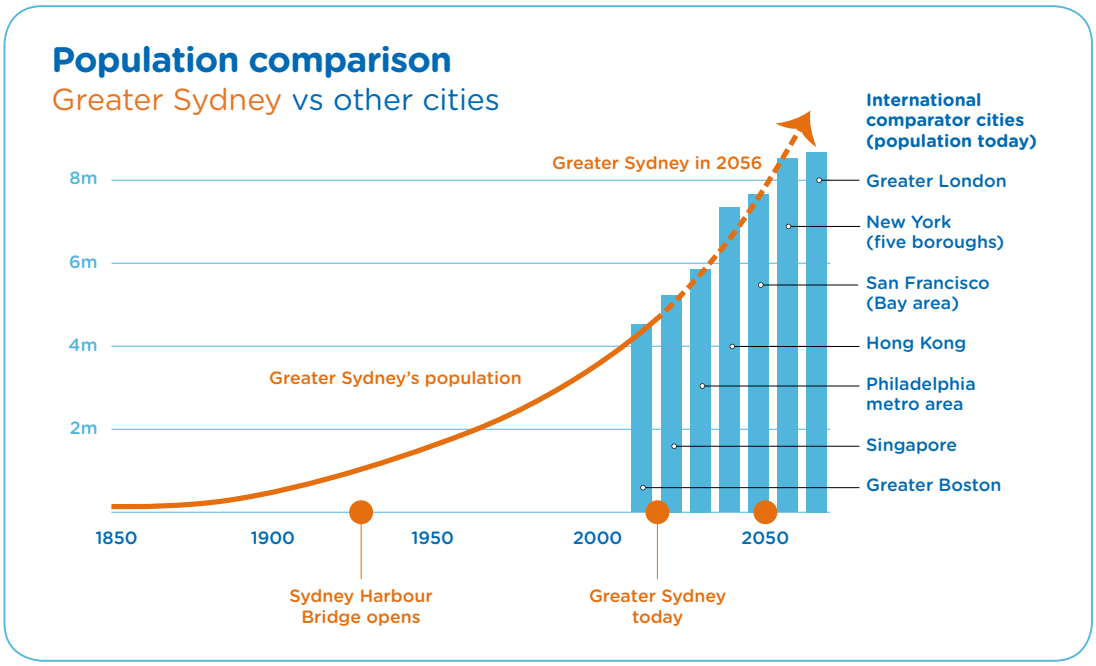


Figure 12: Comparison of population between Sydney and other cities

Sydney is one of the top 10 fastest growing cities in the developed world. By 2056, 8 million people will call our city home.

The density of population and employment is also expected to increase over time, with differences in density across the metropolitan area. While the population density of Greater Sydney is expected to remain relatively low, within the Eastern Harbour City population density is expected to reach what Singapore is today, and Parramatta will be equivalent to Greater London today. To support this population and density increase the transport network needs to be planned accordingly.

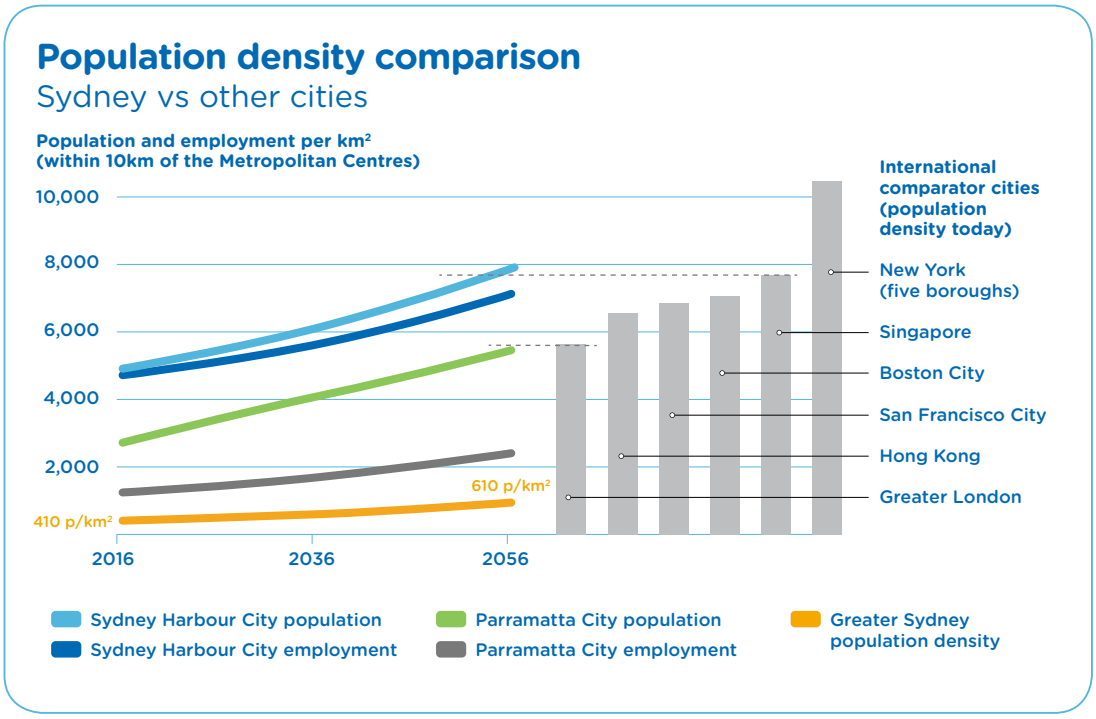


Figure 13: Comparison of population density between Sydney and other cities

The growth of Greater Sydney provides an opportunity to reconsider what the city will look like now and in the future. This includes the need to provide jobs and services close to where people live, to sustain and enhance the liveability of our places and to support the sustainability of the city. Transport plays a critical role in achieving these aims by improving accessibility to jobs, services and other amenities.

A larger city with higher density centres will change the transport task. It will mean:

- an increase in the number of people and goods moving within Greater Sydney. The number of daily trips in Greater Sydney by all modes is forecast to increase from 11 million in 2016 to 15 million in 2036.
- greater diversity in travel patterns
- increased challenges in travelling across the city; and
- more trips to and from areas where there is currently limited activity.

This will require significant changes to the size and structure of our transport network and greater use of more efficient modes of transport, such as public transport and walking and cycling. It will also require us to better use existing capacity, particularly through prioritising more efficient vehicles on the road network.

Sustaining and enhancing our role as a global city

Greater Sydney is Australia's leading global city. It is more connected with the world than ever before, with over 250 languages spoken and growing trade connections. However, we face growing competition from established and emerging cities to attract jobs, skilled workers and visitors as people, businesses and investment become more mobile.

Maintaining our competitiveness and enhancing our status as a global city requires us to focus on attracting people and jobs – liveability, productivity and sustainability. This includes:

- encouraging greater use of more efficient modes of transport. By global standards, a high proportion of trips in Greater Sydney are by private car (see Figure 14). This is a contributing factor to increasing congestion, which costs the city $6.1 billion a year and is forecast to rise to $12.6 billion by 2030 (BITRE 2015). Global cities have well-connected, integrated public transport networks. To remain globally competitive as Sydney grows, it will require expanding public transport and ensuring more efficient modes of transport are prioritised on the road network where they are able to move more people more efficiently.
- balancing movement and place needs on the transport network. Transport corridors are where people and goods move. However, they also comprise places that are destinations themselves, including commercial precincts and centres. Enabling people and goods to move efficiently around the city while recognising the importance of the places through which transport services pass is necessary for sustaining and enhancing the liveability of our city.

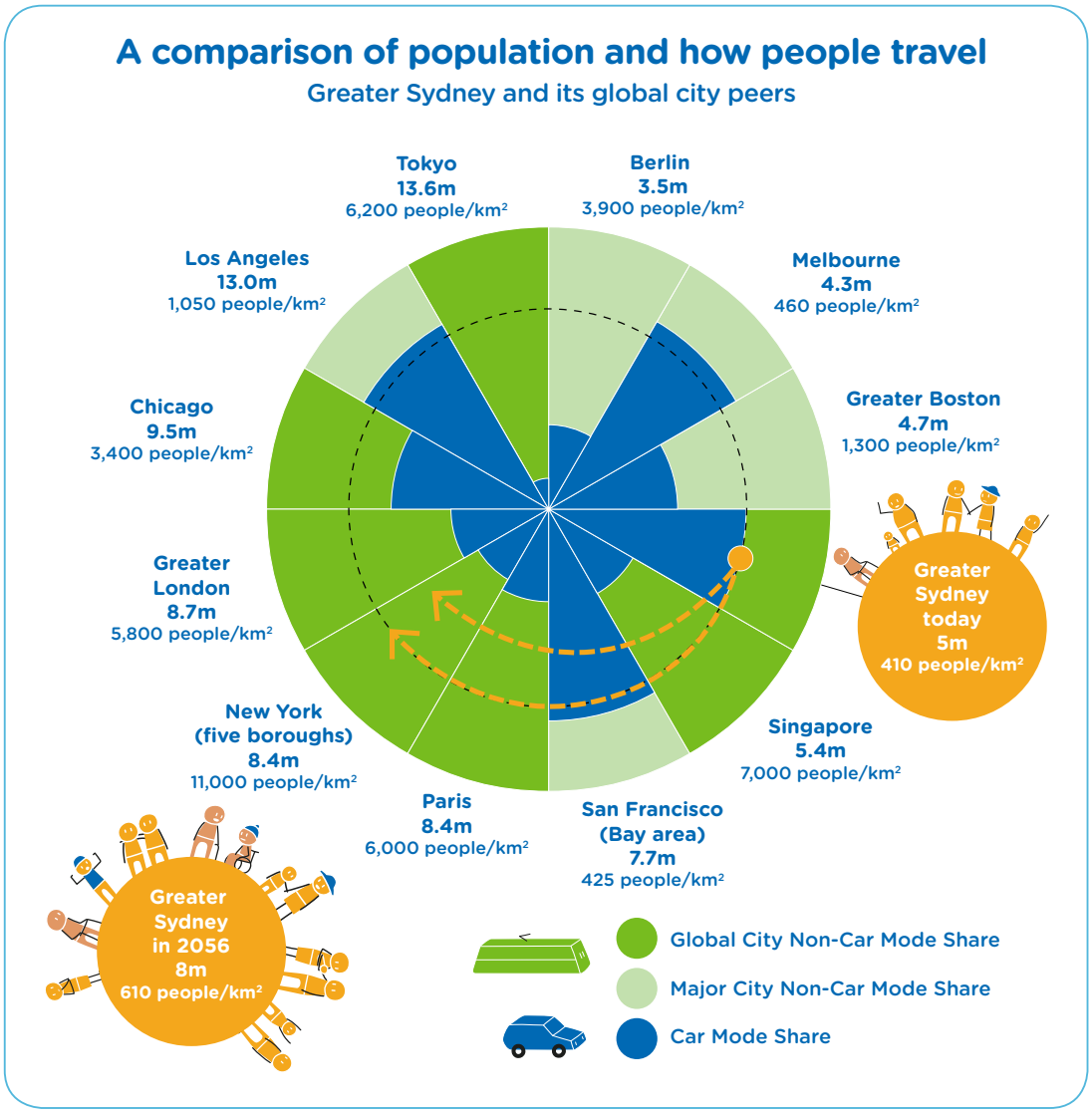


Figure 14: Greater Sydney and its global city peers: a comparison of population and how people travel

Harnessing technology for the benefit of customers

Changes in technology are reshaping the way people and goods move and creating new opportunities to improve the experience of our customers. NSW is at the forefront of this change, introducing and piloting innovative solutions for our customers. Continuing to harness these changes for the benefit of our customers is a key opportunity over the coming decades.

Whether it be new ridesharing services, real-time transport apps or paperless ticketing, customers are already experiencing the benefits of new technology. As detailed in the Future Transport 2056 Strategy, advanced automation and new digital platforms are set to extend these benefits.

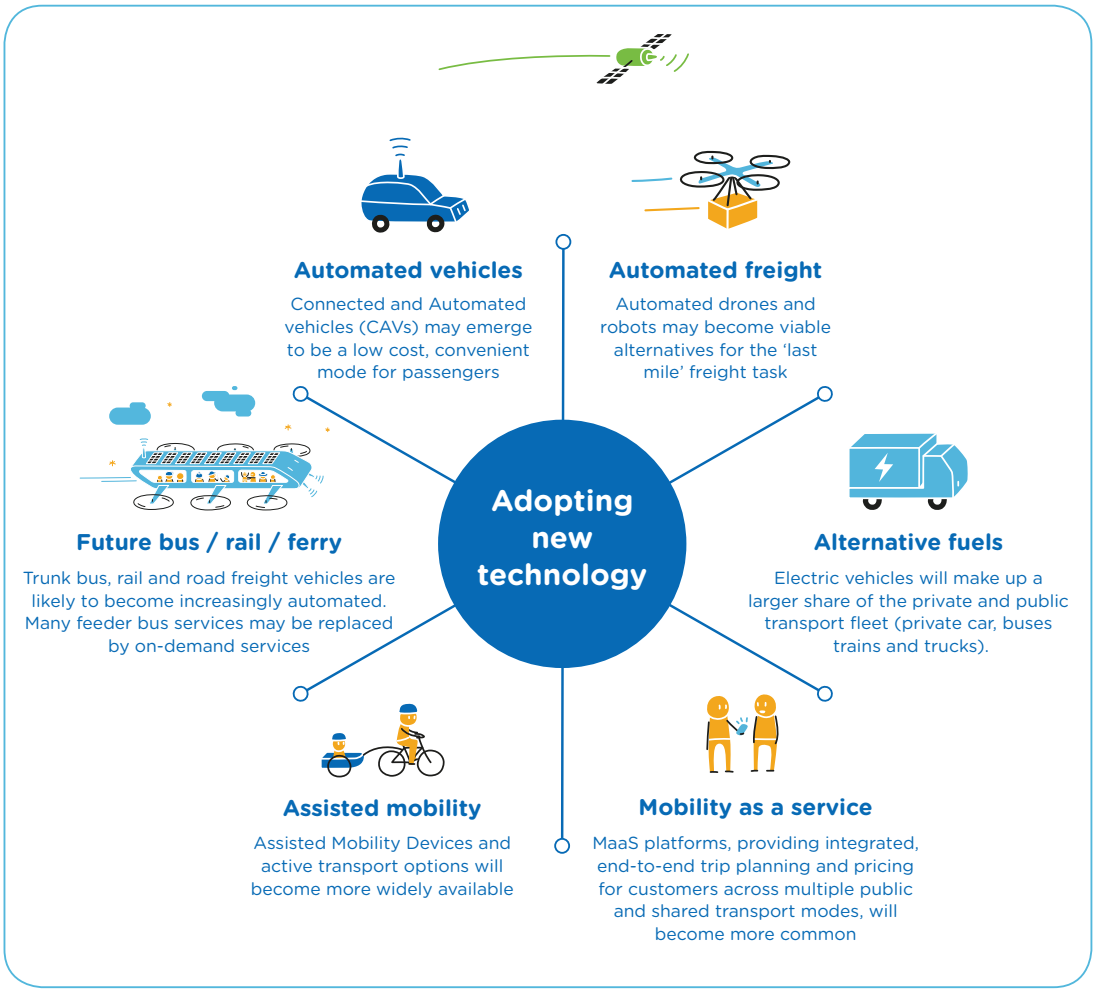


Figure 15: Different ways in which technology is influencing how we travel

The range of applications for technology-enabled solutions is broad – from optimising available capacity and making more efficient use of it; to better network flows and resilience; to improvements in the safety, reliability and efficiency of networks, assets and services. By embracing technology and innovation, we can open up an exciting future of personalised transport for customers and fully unlock the value of investments in the network. For example, greater automation of mass transit services can improve the efficiency of the network. While not here yet, automated rideshare for first- and last-mile transport may deliver greater choice and convenience for customers.

New forms of mobility also require us to consider how we support their integration into the transport system to align with the wider priorities for Greater Sydney. For example, Connected and Automated Vehicles (CAVs) have the potential to revolutionise road travel. However, considered planning – and potentially regulatory intervention – will be needed to ensure our roads continue to function efficiently and our centres remain places where walking and shared transport are prioritised.

Planning for the next 40 years gives us the opportunity to help shape how technology is used for the benefit of our customers. However, the uncertainties arising from the fast pace of technology-driven change mean we must be flexible in our planning.

Vision for 2056

A metropolis of three cities

The GSC has established a vision for the region as a metropolis of three cities, where people can access the jobs, education and services they need within a travel time of 30 minutes by public transport. This underpins our strategic vision for transport in Greater Sydney, which is based around providing access to metropolitan centres and strategic centres.

In response to forecast growth and to help shape it, the GSC has developed a strategic land use plan for the city. It sets out a vision for shifting Greater Sydney from being dependant on a single central business district to being a metropolis of three cities. The three cities, as identified in the GSC's Greater Sydney Region Plan include:

- **Eastern Harbour City –** the currently established Harbour CBD and economic corridors to its north to Macquarie Park and south through Sydney Kingsford Smith Airport and Port Botany to Kogarah. It is an economic engine – especially in the financial, business and professional services and innovation start-up sectors – with a beautiful harbour, sought-after suburbs and a large proportion of knowledge-intensive jobs. It includes the North, South and Eastern City Districts.
- **Central River City –** anchored by Greater Parramatta and the Olympic Peninsula (GPOP) and the strategic centres of Blacktown (also associated with Western Parkland City), Norwest, Macquarie Park (also associated with the Eastern Harbour City), Rouse Hill, Castle Hill, Epping, Mount Druitt and Marsden Park. It is anticipated to experience the most significant urban transformation over the next 10 to 15 years. The boundaries of the Central River City align with the Central City District.
- **Western Parkland City –** focused around the metropolitan city cluster of Western Sydney Airport-Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown-Macarthur, the Western Parkland City is Greater Sydney's emerging city. It includes significant residential areas and employment lands, with employment particularly concentrated around the new aerotropolis. The boundaries of the Western Parkland City generally align with the Western City District urban areas.

This vision for Greater Sydney influences the places the transport system will need to serve, the location of transport corridors and the level of service required on these.

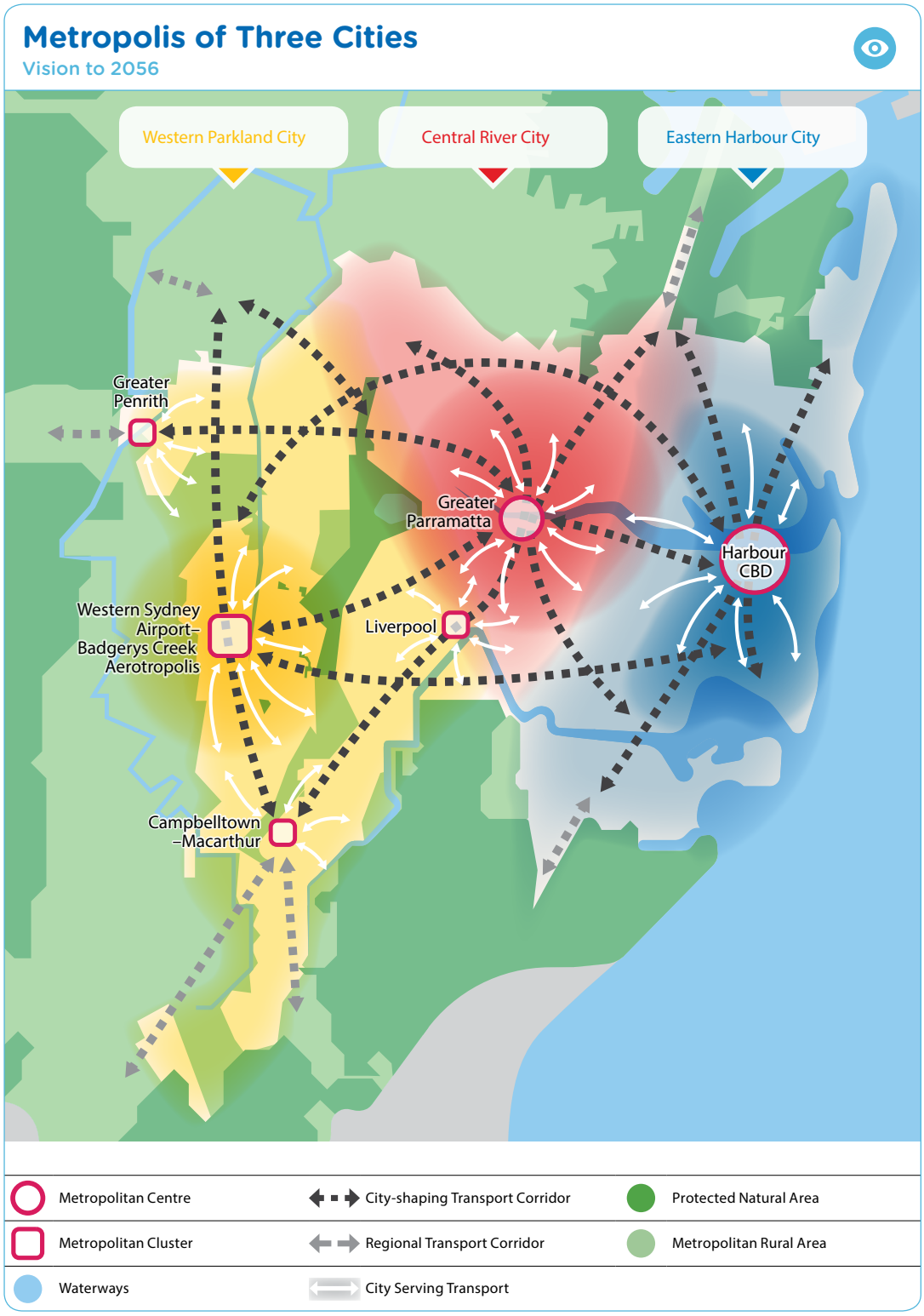


Figure 16: Vision for Greater Sydney as a metropolis of three cities

A 30 minute city

The vision for Greater Sydney is one where people can access jobs and services in their nearest metropolitan city and strategic centre within 30 minutes by public transport, 7 days a week. It is based on a guiding principle based on established research that indicates that if people are required to travel more than 60 minutes a day, it impacts on quality of life and the liveability of a city.

Figure 17: 30 minute city principle

There are two components to the 30 minute city:

- Connecting people in each of the three cities to their nearest metropolitan centre. These are the largest employment and service centres in each of the three cities – the Harbour CBD in the Eastern Harbour City, Greater Parramatta in the Central River City and WSA-Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown in the Western Parkland City.
- Connecting residents in each of the five districts to one of their strategic centres by public and active transport, giving people 30-minute access to local jobs, goods and services. Strategic centres are major centres such as Chatswood, Norwest and Fairfield with jobs and services, supported by a public transport and walking and cycling network.

As Sydney transitions to a metropolis of three cities, convenient and reliable access for customers by public transport to their nearest centre is increasingly important for:

- **Productivity –** reducing the time people spend travelling particularly for their commute to work, increasing people's access to jobs and business' access to workers
- **Liveability –** improving the quality of life in Greater Sydney by reducing the need for long commutes and helping to manage congestion by better spreading transport demand
- **Sustainability –** increasing the proportion of trips by public and active transport and reducing average journey lengths, thereby reducing emissions and improving air quality

The 30 minute city will require more efficient modes of transport – public transport, shared transport and walking and cycling – to play a greater role. Without this, our roads will become more congested and journey times and reliability will continue to deteriorate. As the Western Parkland City develops, the public transport corridors that serve this city will facilitate economic growth by enabling 30 minute access for the surrounding population to these centres. This will support the development of employment and service clusters which benefit from improved access.

Our future networks and initiatives to support these are designed to support this outcome by expanding and improving public transport and ensuring more efficient forms of transport are prioritised.

In focus: Why a 30 minute city?

Established research reveals that, on average, people are willing to travel up to 60 minutes each day to access jobs and services. If travel times exceed this, people will begin changing their behaviour – choosing other employment, limiting social activities or choosing to move homes. Known as Marchetti's constant, this concept forms the basis of a 30 minute city.

Prioritising public transport investment in infrastructure and services where it will create the greatest impact will provide 30 minute access for more people. This will help to manage congestion on the road network as our city continues to grow by providing a more efficient alternative for customers. Improving 30 minute access to our centres will help sustain and enhance the liveability, productivity and sustainability of Greater Sydney and provide our customers with more time for activities and community.

Corridors for moving people and goods

To support the land use vision for Greater Sydney, the NSW Government has developed a vision for the transport system and its corridors that is designed to support people and goods to move safely, efficiently and reliably around the region. This includes people being able to access their nearest centre within 30 minutes by public transport.

Transport corridors support the movement of people and goods around the city. They are broad, linear geographic areas between places rather than specific links. Our vision for the future transport system is focused on three types of corridors that have been developed to align with the GSC's land use vision and to guide future service levels (e.g. capacity, function and service frequencies) and infrastructure investment. The hierarchy of corridors in Greater Sydney includes:

- **City-shaping corridors –** major trunk road and rail public transport corridors providing higher speed and volume linkages between our cities and centres that shape locational decisions of residents and businesses.
- **City-serving corridors –** higher density corridors concentrated within ~10km of metropolitan centres providing high frequency access to metropolitan cities/centres with more frequent stopping patterns.
- **Centre-serving corridors –** corridors that support local trips, buses, walking and cycling, to connect people with their nearest centre and transport node.

Dedicated and shared freight corridors and connections to regional NSW also form part of the future transport system. The corridors are shown in the figure below.

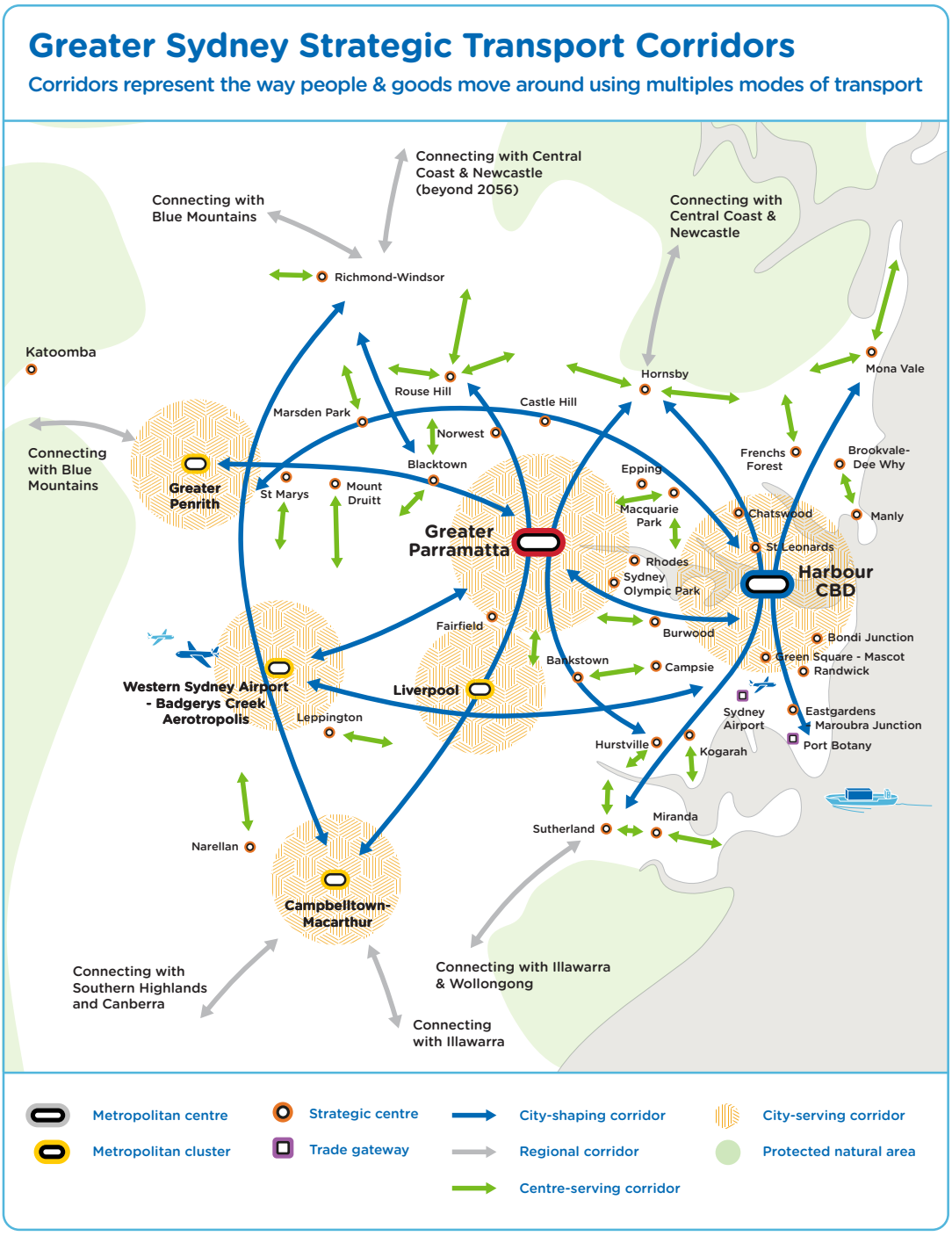


Figure 18: Greater Sydney strategic transport corridors

In focus: Connecting Greater Sydney and regional NSW

Corridors connecting Greater Sydney with outer metropolitan areas and regional NSW are vital for the city and communities across NSW. They enable customers, particularly in outer metropolitan areas, to access jobs and services in Greater Sydney and are vital for the movement of freight between urban and regional areas.

The vision for the future Greater Sydney transport system identifies corridors to the Central Coast and Newcastle, Southern Highlands, Illawarra and Blue Mountains and beyond. These corridors will connect the satellite cities of Gosford and Wollongong – major centres within close proximity to Greater Sydney – enabling customers to have safe, efficient and reliable access to and from Greater Sydney. They will also support passenger and freight journeys to and from coastal, inland and remote regional areas beyond.

Some key corridors that connect Sydney with regional NSW include:

- Hume Highway, Princes Highway, Main South Rail Line and Canberra Branch Rail Line to Southern NSW, Canberra and Melbourne
- Pacific Highway, North Coast Rail Line and Main North Rail Line to Northern NSW and Brisbane
- Great Western Highway, Bells Line of Road and Main Western Rail Line to Western NSW

A range of initiatives have been identified to improve services and infrastructure on the road and rail corridors. These are identified in chapter 5.

See map overleaf

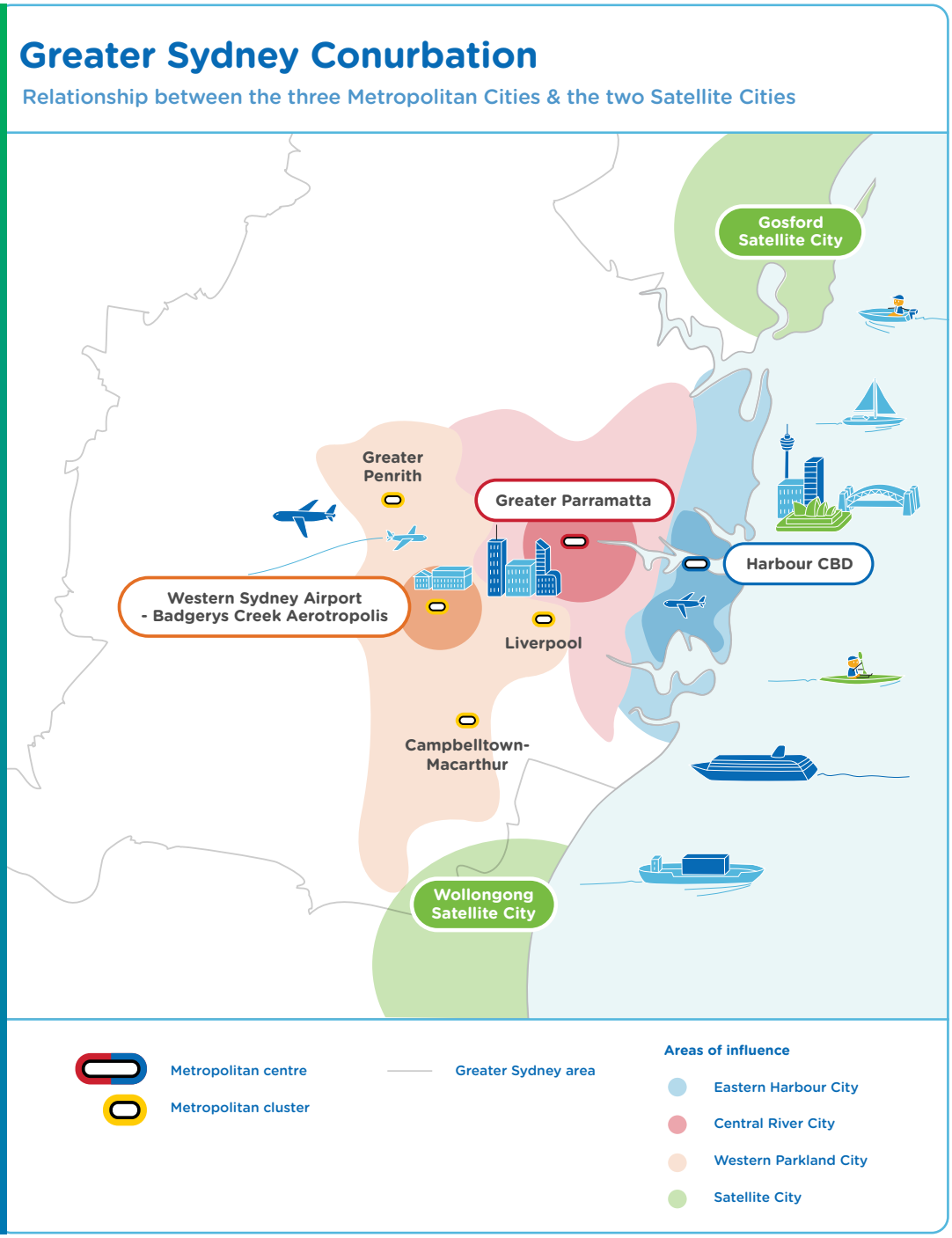


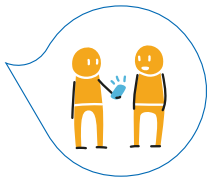
Figure 19: Greater Sydney and satellite cities

CHAPTER

3

Customer outcomes for Greater Sydney

The customer is at the centre of everything we do. That is why our plans for the future of transport in Greater Sydney are underpinned by the outcomes our customers can expect. The customer outcomes have been developed to align with the state-wide outcomes outlined in the Future Transport 2056 Strategy to ensure that we address what is most important to our customers. The outcomes are summarised below.

Future Transport Statewide Outcomes	Greater Sydney transport customer outcomes
Customer Focused 	**Convenient and responsive to customer needs** **1.** New technology is harnessed to provide an integrated, end-to-end journey experience for customers **2.** Future forms of mobility are made available to customers and integrated with other modes of transport
Successful Places 	**Sustaining and enhancing the liveability of our places** **3.** Walking or cycling is the most convenient option for short trips around centres and local areas, supported by a safe road environment and suitable pathways **4.** Vibrant centres supported by streets that balance the need for convenient access while enhancing the attractiveness of our places
A Strong Economy 	**Connecting people and places in the growing city** **5.** 30 minute access for cutomers to their nearest metropolitan centre and strategic centre by public transport seven days a week **6.** Fast and convenient interchanging, with walking times of no longer than five minutes between services

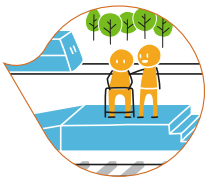
Future Transport Outcomes	Greater Sydney transport customer outcomes
Safety and Performance 	**Safely, efficiently and reliably moving people and goods** **7.** Efficient, reliable and easy-to-understand journeys for customers, enabled by a simple hierarchy of services **8.** Efficient and reliable freight journeys supported by 24/7 rail access between key freight precincts with convenient access to centres **9.** A safe transport system for every customer with the aim for zero deaths or serious injuries on the network by 2056
Accessible Services 	**Accessible for all customers** **10.** Fully accessible transport for all customers
Sustainability 	**Makes the best use of available resources and assets** **11.** Transport services and infrastructure are delivered, operated and maintained in a way that is affordable for customers and the community **12.** A resilient transport system that contributes to the NSW Government's objective of net-zero emissions by 2050

Figure 20: Future Transport 2056 state-wide and Greater Sydney transport outcomes

Customer Outcome 1: New technology is harnessed to provide an integrated, end-to-end journey experience for customers

Figure 21: Mobile apps are transforming the way our customers use and access transport

Customers tell us that they value transport that is simple to use and easy to understand. Individual elements of the end-to-end journey should be as integrated as possible, including information, payment and transfers between different modes.

Advances in technology present new opportunities for us to improve the customer experience, providing a more integrated journey experience and reducing 'friction' when transferring between modes. One of the most important developments is the emergence of Mobility as a Service (MaaS). MaaS is a business model that harnesses technology to enable customers to use a single account and booking interface to plan and purchase their end-to-end journeys across different transport modes – whether public or private transport. For example, customers can use their phone to plan a journey from their home to destination and make a single purchase covering all modes of travel. The MaaS provider may sell seamless multimodal journeys, offer convenient payment methods such as subscription services, and communicate directly with customers.

The NSW Government is already trialling an early form of this technology on the Northern Beaches where carparks at some B-Line bus stops are activated by Opal cards. These types of initiatives will improve the customer experience and deliver far greater levels of responsiveness, safety, and congestion management.

MaaS is one important way that we will harness new technology for the benefit of our customers. We will also use technology to improve our understanding of travel behaviours and patterns. This data will allow us to better understand what customers want and to improve our responsiveness to changes in customer preferences.

Through the Future Transport roadmap strategies, the NSW Government has mapped a way forward for the delivery of integrated, reliable services, this includes:

- Personalising customer interactions
- Fostering shared, demand-responsive services
- Creating an intelligent transport network, managed with data

Customer Outcome 2: Future forms of mobility are available to customers and integrated with other modes of transport

Figure 22: Connected and automated vehicles will change our transport experience

Advances in technology appear set to transform the way we travel over the next 40 years. The Future Transport Technology Roadmap and Future Transport Strategy identify new forms of mobility that are already emerging, including Connected and Automated Vehicles (CAVs), personal mobility devices and alternatively fuelled vehicles.

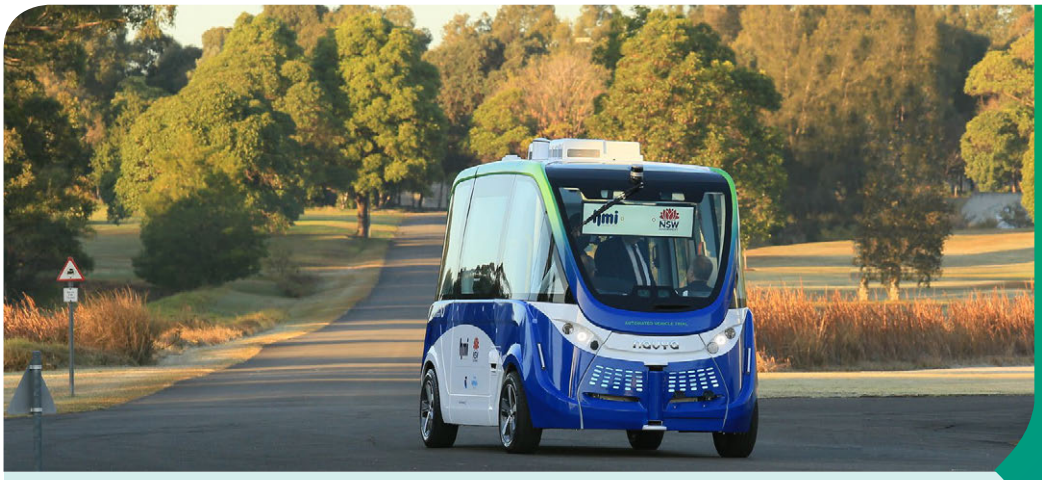
Ensuring customers in Greater Sydney can benefit from these new forms of mobility and that our city is liveable, productive and sustainable means effectively integrating these into the wider transport system. Simply, this means understanding how and where these new forms of mobility will be most effective and ensuring the transport system supports this.

The NSW Government is already partnering with industry to pilot new forms of mobility in Greater Sydney (see In focus box) to ensure our customers experience the benefits, that our transport system is as efficient as possible and that these new forms of mobility can work safely and effectively in Greater Sydney.

The Government will continue working with industry, local councils and other stakeholders to ensure regulatory settings, transport services and infrastructure are in place to:

- Enable new forms of mobility to be used safely. For example, changes to road regulation and infrastructure may be required to support the introduction of CAVs
- Prioritise different forms of mobility in different places based on the function they perform. For example, in our busiest centres, public transport and walking will be prioritised to ensure our places remain vibrant and that congestion is managed
- Enable new service providers to access public infrastructure, where appropriate. For example, shared CAV providers may require access to public drop-off areas.

Advances in technology appear set to transform the way we travel over the next 40 years.



In focus: CAV's legislation and Sydney Olympic Park automated shuttle bus trial

The NSW Government has passed legislation to enable the Minister for Roads, Maritime and Freight to approve trials of automated vehicles, so as to properly assess their ability to meet our policy outcomes of improving safety, boosting service frequencies and reducing congestion. The legislation allows Government to partner with industry, researchers and universities to make NSW a premium testing ground for automated vehicles.

The NSW Government is already partnering with HMI Technologies, NRMA, IAG and Sydney Olympic Park Authority to trial an automated shuttle bus in Sydney Olympic Park.

The pilot, which commenced in August 2017, is the first precinct-based trial of an automated shuttle in Australia and is the first trial of vehicle automation to take place in NSW. With a focus on testing automated vehicle technology, the trial presents a unique opportunity to develop a research platform that improves customer mobility.

The trial aims to understand what supporting technology and infrastructure is needed to operate an automated shuttle in this environment, how it interacts with other precinct users (pedestrians, cyclists, etc.) and how it integrates with the broader transport network. We will also better understand passengers' responses to this type of vehicle and the services it can enable, like on-demand transport in off-peak times.

In focus: On-demand public transport trial

The NSW Government is already trialling new, creative and better ways for customers to use public transport to travel to their desired destination safely, efficiently and reliably when it suits them. On-demand public transport allows customers to book transport from or near their home to a local transport hub or landmark online, by phone or via an app.

By the end of April 2018, there will be eight on-demand public transport trials underway in Greater Sydney (Bankstown, Sutherland, Manly and Eastern Suburbs, Northern Beaches, Wetherill Park / Greystanes, Macquarie Park, Edmonston Park and Epping North). We will use data from the trials to plan future public transport improvements across all areas of Greater Sydney.

Customer Outcome 3: Walking or cycling is the most convenient option for short trips around centres and local areas, supported by a safe road environment and suitable pathways

Every weekday, customers in Greater Sydney make around 8 million journeys that are shorter than two kilometres and 15 million trips less than 10 kilometres. Our aim is to make walking or cycling the most desirable transport choice for these short trips – those that are less than two kilometres – and grow the share of cycling for trips up to 10 kilometres.

Walking and cycling provides an efficient and reliable way to access centres, supports healthy lifestyles and is good for the environment.

To make walking and cycling the most convenient option for short trips, we will work with stakeholders to:

- Provide attractive spaces for people to walk or cycle and to sit and take a break
- Enable efficient and reliable journey times by prioritising infrastructure that supports pedestrian or cycling movement on certain corridors, consistent with the Movement and Place Framework, providing strategic links such as Wynyard Walk and working with local government to ensure the design and function of local areas supports walking and cycling
- Keep pedestrians and cyclists safe by implementing critical safety measures and ensuring speed limits are aligned to the road environment (e.g. lower in centres where there is high pedestrian activity) consistent with the Movement and Place Framework
- Through the Council Partnership Program, the NSW Government will invest in the Principal Bicycle Network and improve cycling access within ten kilometres of metropolitan centres or clusters and five kilometres of strategic centres.

Our aim is to make walking or cycling the most desirable transport choice for short trips.

In focus: Making our places easier for walking and cycling

Walkable places are designed, built and managed to encourage people of all ages and abilities to walk or cycle for leisure, transport or exercise. Walkable neighbourhoods improve people's access to activity centres, provide opportunity for recreation and encourage active and healthy lifestyles.

Leading a healthy and active life means substituting walking and cycling for short car journeys.

The GSC has established principles for making our places easier for walking and cycling, including:

- **Accessibility –** footpaths need to be suitable for use by people of all ages and abilities
- **Connectivity –** direct routes to local destinations and services are required along streets that allocate sufficient road space to safe walking and cycling. A permeable and well-connected urban form is also essential
- **Amenity –** safe, direct and comfortable pedestrian pathways for all people are essential. This includes commonly designed footpaths, pedestrian crossings and wayfinding, appropriate lighting, shading, pram ramps, rest points and surveillance.

Customer Outcome 4: Vibrant centres supported by streets that balance the need for convenient access while enhancing the attractiveness of our places

Our centres are critical economic and community assets. They are places where the majority of jobs and services are located and also where key attractions are, including shops, restaurants and parks. Balancing the needs of our customers and goods to move easily around centres while ensuring they are attractive places for people is therefore an important outcome. This is particularly relevant to how our roads are planned, designed and operated. Within centres, customers rely on roads for travelling by car or public transport, parking, walking, cycling and relaxing – whether that be shopping, dining or sitting.

The NSW Government will balance these needs by working with stakeholders, including local councils, to apply the Movement and Place Framework within centres. Movement and Place is our framework for planning, designing and operating the road network (see below). This means that in some streets, pedestrian activity will be prioritised while other streets will be important corridors for public transport and vehicles. Parking will also be provided in a way that is consistent with the level of access by alternative modes of transport. As centres become busier and are more accessible by public transport, parking space may be used for other purposes, such as for wider footpaths, public transport or loading zones to create better street environments.

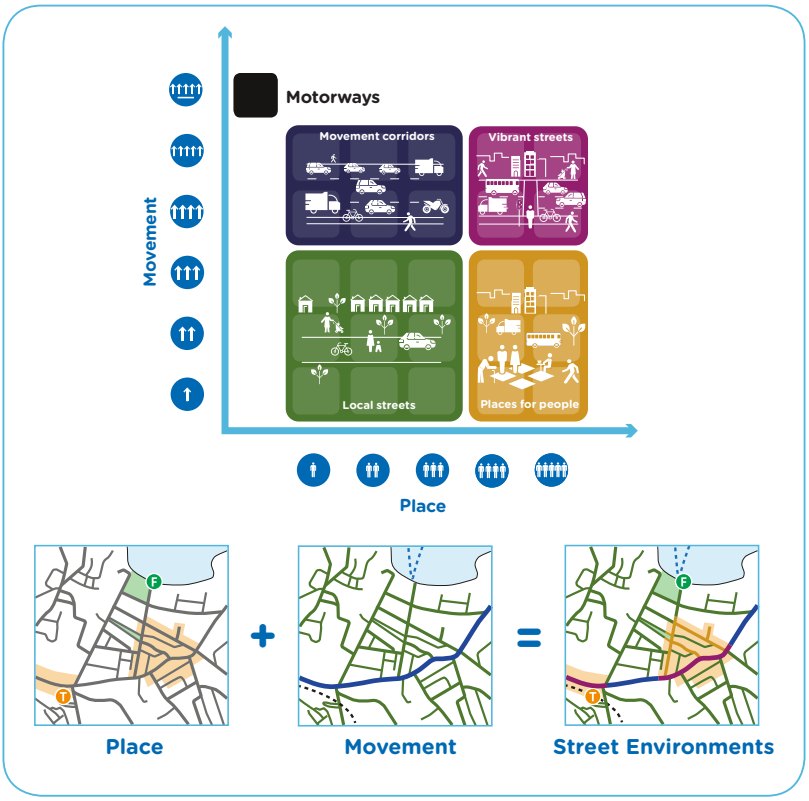


Figure 23: Street Environments, agreed between land use and road authorities, determines the desirable outcomes for all customers

In focus: Implementing the Movement and Place Framework

Our road network performs a dual function – it moves people and goods and is home to places where people meet, shop and eat. Across our road network, different roads vary in the function they perform. For example, our motorways perform an exclusive movement function, whereas pedestrianised streets, such as Martin Place, are typically places for people.

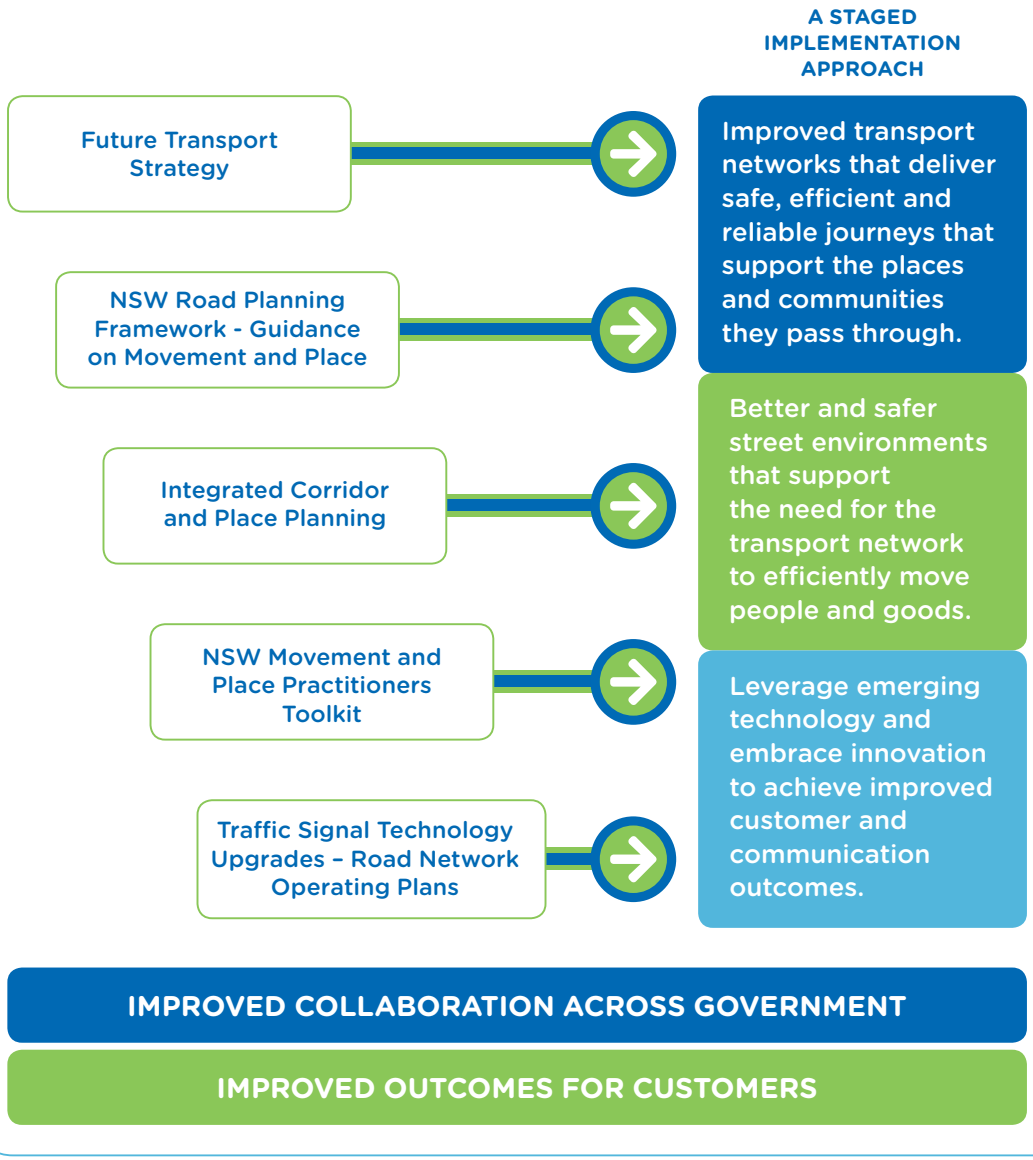
The emphasis on movement or place may change by time of day, with some roads attracting more people in the evenings or outside peak periods.

Movement and Place is our framework for planning, designing and operating the road network to account for these different uses. It will enable us to manage the road network in a way that supports both functions, ensuring that the road network continues to support safe, efficient and reliable journeys while supporting the liveability of places along it. This will contribute to achieving the vision of Greater Sydney as liveable, productive and sustainable.

The Framework will guide the specific corridor and place plans, which will be developed following the release of the Future Transport plans. As part of this, a Movement and Place Practitioners Toolkit will be developed to provide specific guidance to stakeholders involved in planning, designing and operating the road network.

See next steps overleaf

Movement and place – next steps



Images: Crown Street 1970s (left) and Crown Street today (right)

In focus: Movement and Place and a more attractive Harbour CBD

The Eastern Distributor in Sydney's east offers a case study on how changes to the road network can enable us to improve the liveability and amenity of places in our city. Opened in 1999, the motorway between the Harbour CBD and the south-east reduced traffic on streets around the east of the Harbour CBD, particularly on Crown and Bourke Street in Surry Hills, which had previously been major traffic thoroughfares.

This enabled a number of amenity improvements to be made to streets in Surry Hills to support the local streets as places in the community, including:

- Traffic calming measures and landscaping
- Cycleways for local residents
- Lower traffic speeds, for safer and better street environments
- Creation of pedestrian spaces at Taylor Square
- Conversion of former one-way through streets to two-way, local streets with parking

This has been fundamental to the revitalisation of Surry Hills, where local restaurants, pubs and shops have thrived. The area is now a key attraction for residents and visitors alike, contributing to the liveability, productivity and sustainability of our city.

Customer Outcome 5: 30 minute access for customers to their nearest metropolitan centre and strategic centre by public transport, seven days a week

The 30 minute city is an important concept for guiding the improvement and maintenance of access to centres across Greater Sydney. It is about providing customers with convenient access to jobs and services in their nearest centres.

The GSC's Greater Sydney Region Plan establishes the vision for Greater Sydney as a 30 minute city. As the region transitions to a metropolis of three cities, convenient and reliable access for customers by public transport to their nearest centre will be essential for the productivity, sustainability and liveability of the city. An integrated approach to land use, transport and infrastructure is essential to this outcome.

As part of this integrated approach, we will investigate and deliver services and infrastructure that enable 30 minute access by public transport, 7 days a week to:

- The nearest metropolitan centre for customers in each city – the Harbour CBD, Greater Parramatta or in the Western City cluster, WSA-Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown-Macarthur. This will enable customers to access the large share of jobs and services located in these centres, supporting productivity by connecting people and jobs.
- The nearest strategic centre for customers in each of the five districts. This is important for the liveability of Greater Sydney, enabling people to conveniently access local jobs, goods and services in these centres without having to travel to one of the metropolitan centres.

An integrated approach to land use, transport and infrastructure is essential to this outcome.

In focus: Improving 30 minute access in Greater Sydney

Currently, 39% of residents in Greater Sydney can access their nearest metropolitan centre within 30 minutes by public transport. This includes the Harbour CBD, Greater Parramatta, the future WSA-Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown-Macarthur. Access is most influenced by how close people live to these centres but also proximity to a train line or high frequency bus routes that provides efficient and reliable access to these centres.

To deliver on the outcome of customers being able to access their nearest centre within 30 minutes, we will expand the city-shaping and city-serving public transport network across each of the three cities. We will improve access to this network from surrounding areas and increase service frequencies and provide more on-demand services. Improvements to the city-shaping network would result in 70% of residents in Greater Sydney being able to access their nearest metropolitan centre within 30 minutes by public transport in 2056– a significant increase on access levels today (see map overleaf). The types of initiatives that will have the greatest impact on increasing this 30 minute catchment include new mass transit/train links to connect metropolitan centres, and expanding the existing network.

In addition, all customers will be able to access their nearest strategic centre within 30 minutes by public transport.

Using an evidence base, there will be annual monitoring on how we are performing in delivering on this important outcome.

See map overleaf

30 minute access to the metropolitan centres

Public transport catchment areas

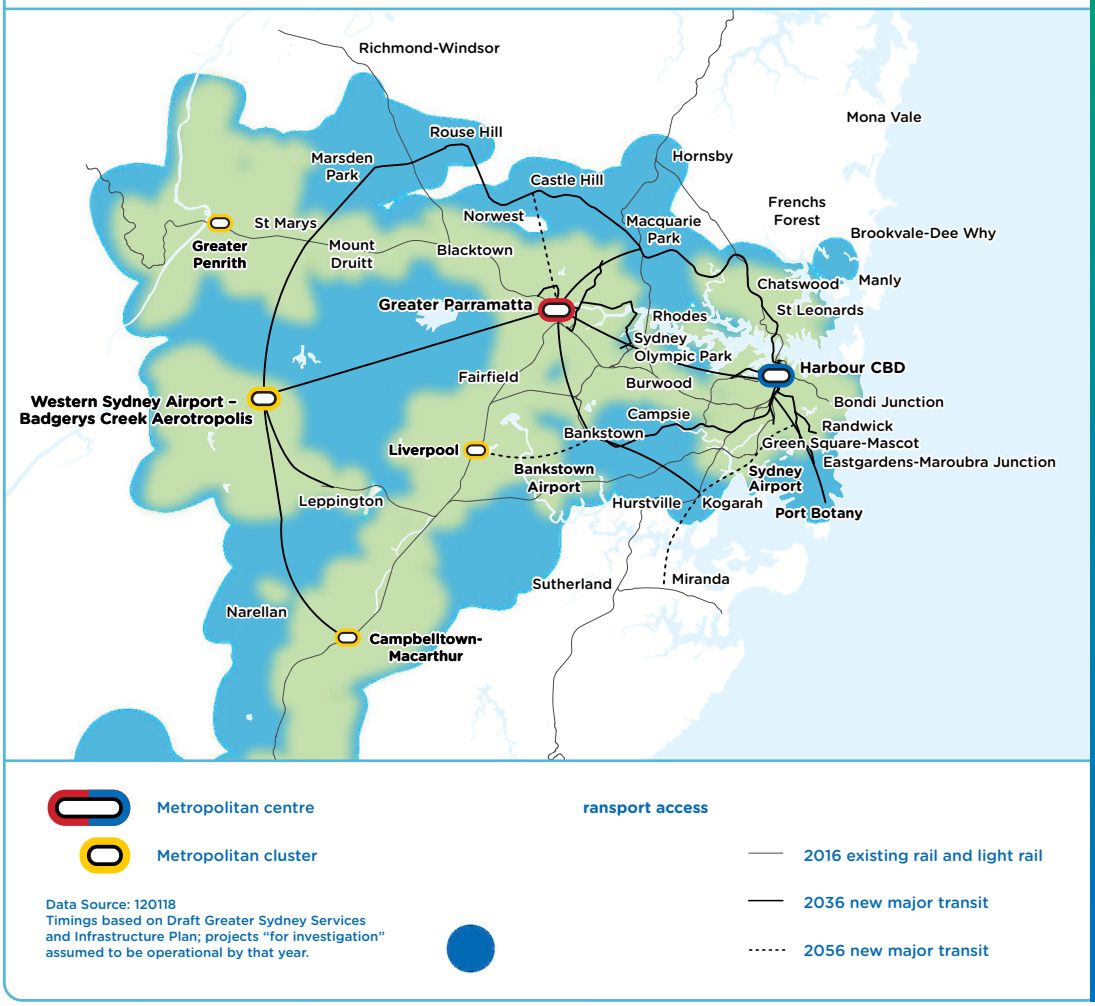


Figure 24: Areas accessible within 30 minutes by public transport in Greater Sydney – 2016, 2036 and 2056

Public transport is the focus of the 30 minute city as it is the only way large numbers of people can access major centres efficiently and reliably, particularly as the number of trips on the network increases. To achieve the delivery of a 30 minute city, public transport will need to take a greater role in moving people around Sydney. We will achieve this through investment in mass transit, improving service frequencies, prioritising public transport around centres (see Figure 25) and improving walking and road base connections to public transport and centres.

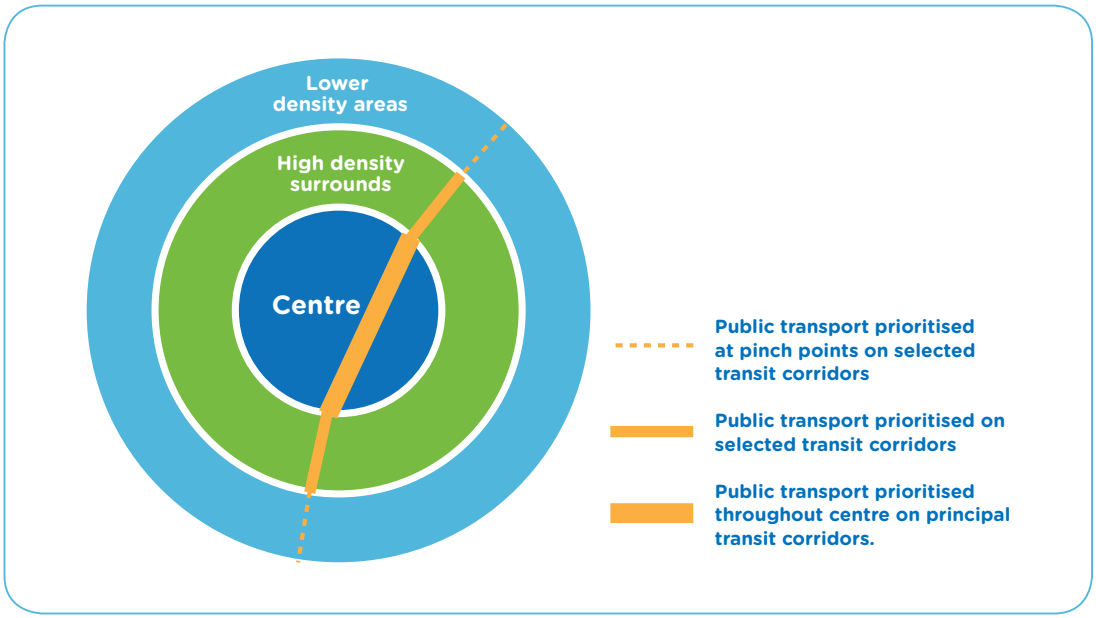


Figure 25: Improved prioritisation of on-road public transport around centres to support access to centres within 30 minutes

Customer Outcome 6: Fast and convenient interchanging, with walking times of no longer than five minutes between services

Figure 26: Convenient and comfortable interchange, artist impression

Interchanges are places where customers access the public transport network and where transport services come together. Interchanges provide opportunities for customers to reach more destinations by transferring between different services and also form focal points around which many of our centres grow. In doing so, they support access to jobs and services for customers.

To enable customers to transfer easily and safely between different services, we need to improve the convenience of interchanging. This means that from the time customers alight a service, it should take no longer than five minutes to reach the point where their next service departs from.

A range of measures will be investigated to deliver this customer outcome, including:

- Providing open spaces to provide more direct paths between services
- Options for barrier-less ticketing to reduce congestion, particularly in peak periods
- Enabling digital technology to disseminate personalised information to customers at interchanges
- Improving walking and cycling access around interchanges.

In focus: Reimagining Central Station

Central Station is a key transport hub in the NSW transport network. Over the next decade, it will have an even greater role with CBD and South East Light Rail and Sydney Metro connecting with existing suburban and intercity trains, buses and the Inner West Light Rail.

The NSW Government is developing a vision and plan for the Central Station precinct, focusing on improving the interchange experience for our customers and better integrating Central with surrounding recreational, business, residential and educational areas.

In 2018, construction will start on Central Walk, a 19-metre wide tunnel from Chalmers Street, linking the new metro platforms under Central. This is the start of Central's renewal, bringing new entrances and simpler interchanges that will make life easier for customers.

Completion of the Central Walk and Central Station metro upgrade is expected in 2022, with Central Walk open to customers. An important step is ensuring our customers have convenient access to the new Sydney Metro platforms.

Further development ideas are being considered as part of the strategic framework for the wider Central Precinct. This framework will investigate opportunities and constraints following consultation with our customers and the community in 2017. In addition to providing a high quality interchange experience, our focus will be on creating quality urban design, providing new retail and other commercial services, respecting heritage and making Central a great place at the heart of the southern Harbour CBD.

Customer Outcome 7: Efficient, reliable and easy-to-understand journeys for customers, enabled by a simple hierarchy of services

We will provide efficient, reliable and easy-to-understand journeys for customers across all modes of transport, enabled by a simple hierarchy of transport services and roads.

Consistent with the transport vision outlined in chapter 2, our public transport system will comprise four types of services, providing customers with efficient, reliable and easy-to-understand journeys:

- **City-shaping services –** mass transit public transport services providing higher frequency, speed and volume linkages between our cities and centres that shape locational decisions of residents and businesses
- **City-serving services –** high to medium capacity, high frequency services, with more frequent stopping patterns
- **Centre-serving services –** medium to low capacity, high frequency or on-demand services that provide customers with access to their nearest centres and transport node
- **Outer metro and regional services –** connecting Greater Sydney with outer metropolitan areas and regional NSW

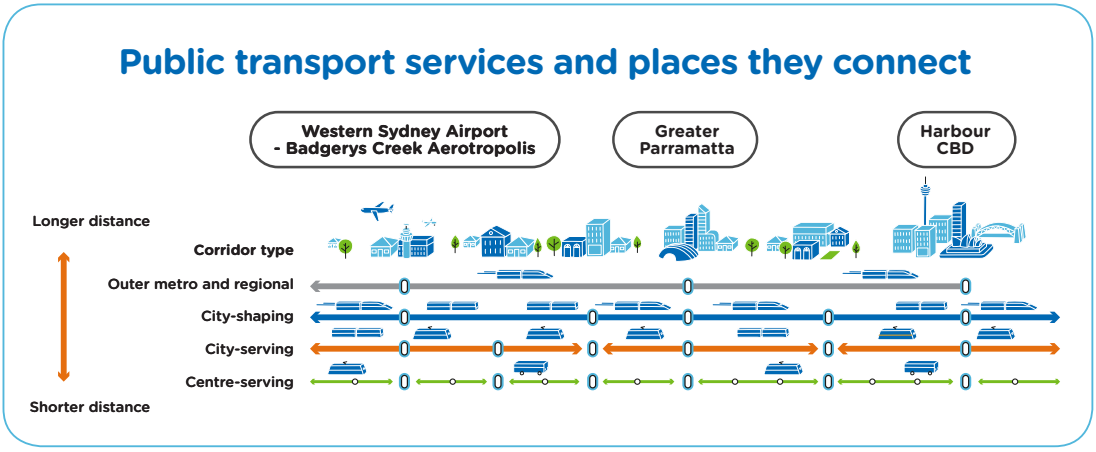


Figure 27: Public transport services and the places they will connect

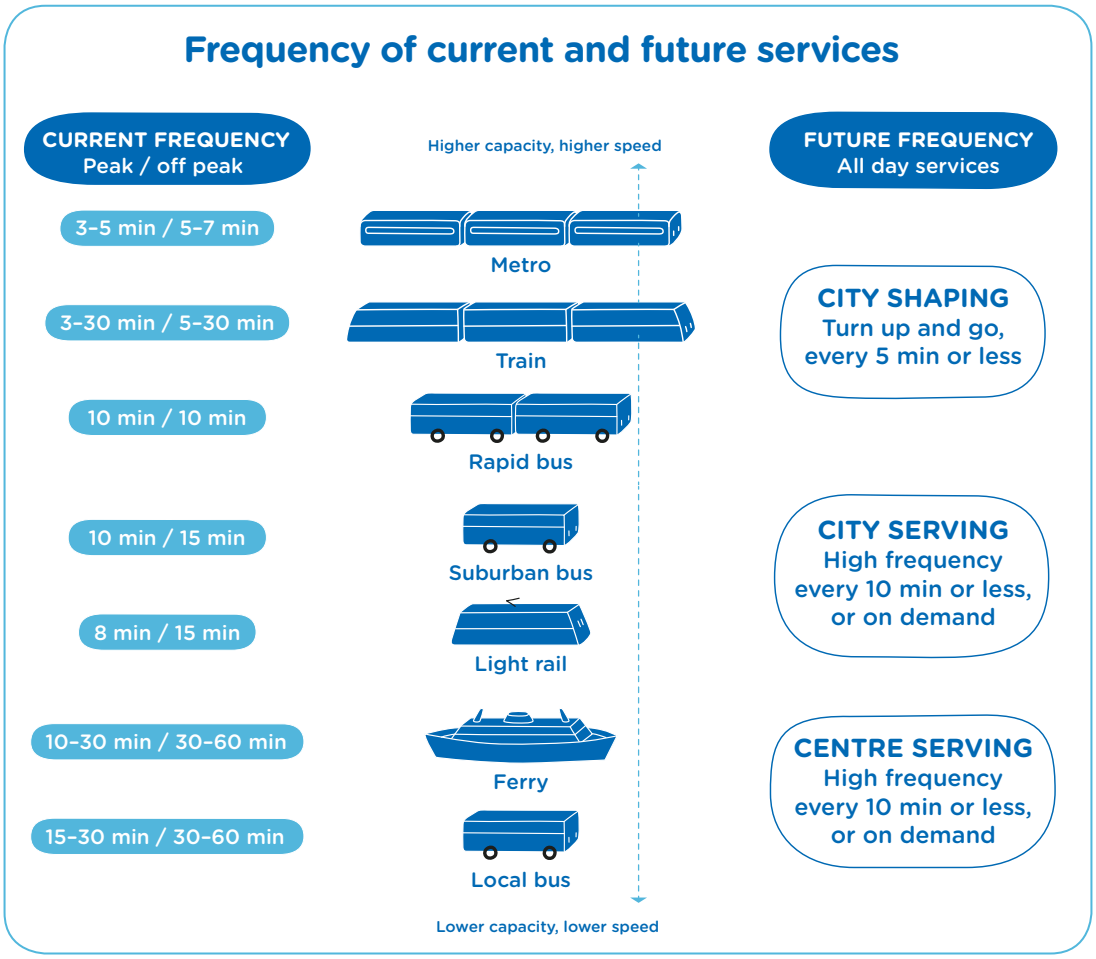


Figure 28: Indicative current and future service frequencies to support the 30 minute city

In focus: Sydney Metro

Sydney Metro is a new rail product that will transform Sydney by cutting travel times and reducing congestion. It will have an ultimate capacity of a new metro train every two minutes in each direction, and a target capacity of about 40,000 customers per hour in each direction.

Sydney Metro will make customer journeys easy with level access between platforms and trains, multi-purpose areas in the carriages for prams, luggage and bicycles, as well as real time travel information. All Sydney Metro stations will include platform screen doors. These safety barriers allow trains to get in and out of stations much faster.

Sydney Metro will deliver economic benefits by enhancing connectivity between businesses and people. It will provide a major boost to the city's productivity by allowing business to access a wider range of workers and allowing people to get to jobs faster and more reliably.

Sydney Metro is made up of the following components:

- Sydney Metro Northwest – 36-kilometres in length with services due to start in 2019, with a metro train every four minutes in the peak.
- Sydney Metro City & Southwest – 30-kilometres to extend the metro from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and south west to Bankstown. Tunnelling begins in 2018, with services to start in 2024.
- Sydney Metro West – due to deliver a direct connection between the CBDs of Parramatta and Sydney, linking communities along the way that have not been previously serviced by rail, and unlocking housing supply and employment growth between the two major CBDs. Planning is underway to deliver Sydney Metro West in the late 2020s subject to a Final Business Case.

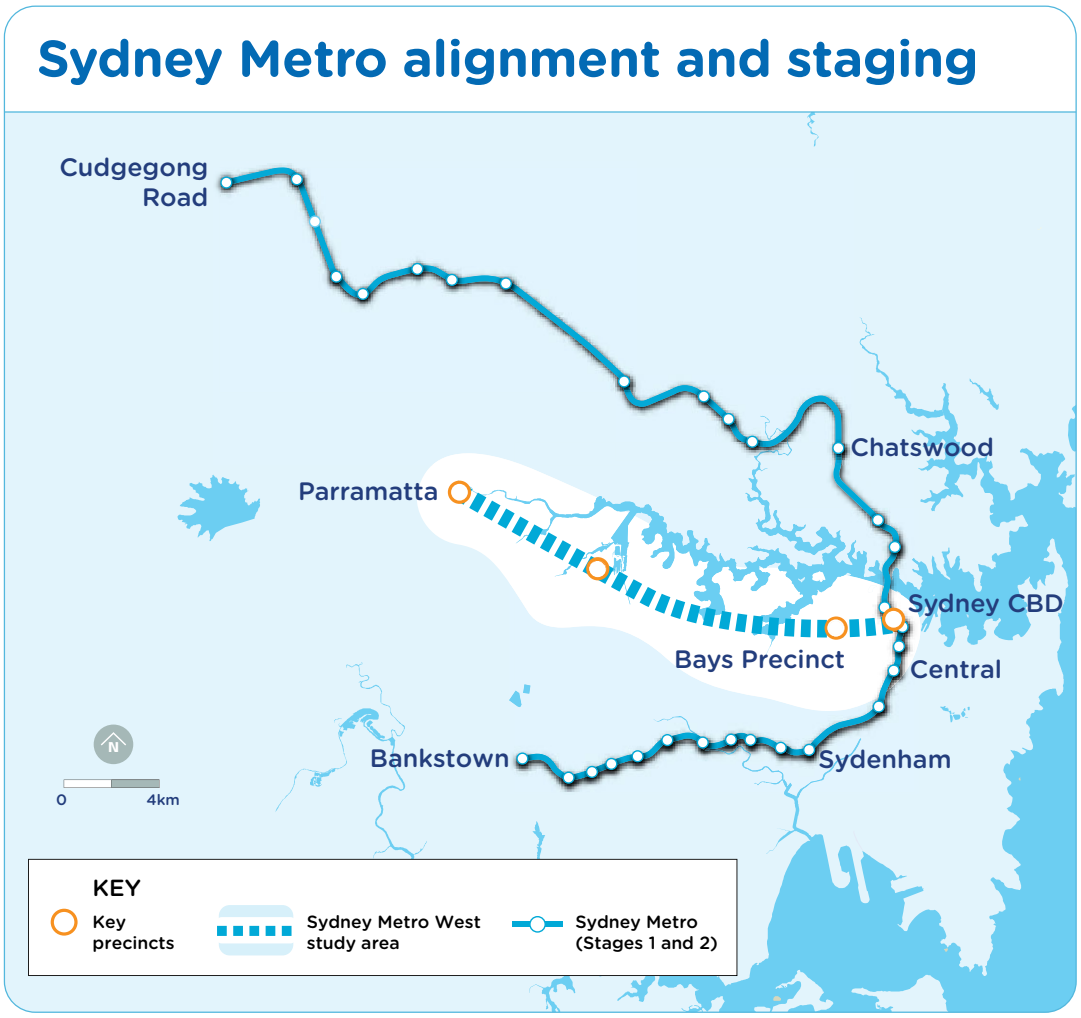


Figure 29: Sydney Metro alignment and staging

For all types of transport – public and private – roads will continue to perform an important function in transporting people and goods within Greater Sydney. Efficient, reliable and easy-to-understand journeys will be enabled through a clear road hierarchy that better separates different types of trips.

The road hierarchy will be based on our Movement and Place Framework, which acknowledges that our road network performs a dual function – it moves people and goods and features destinations (or places) in their own right. The framework guides the prioritisation of the right roads for use by public transport or shared vehicles. Planning, designing and operating our road network in a way that acknowledges the different functions will help to provide better journeys for all road users – whether it be private vehicle users, public transport customers or pedestrians and cyclists – and ensure the network is legible, intuitive and easy-to-understand.

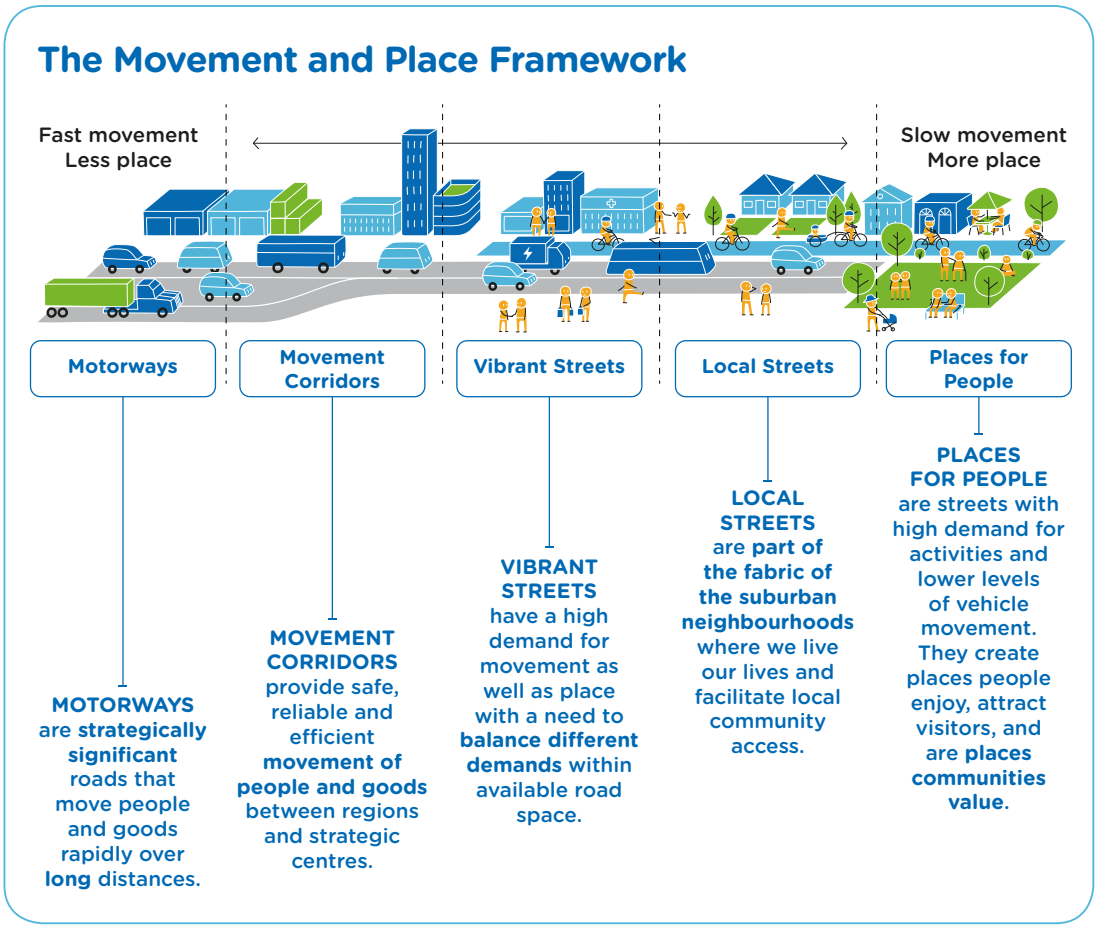


Figure 30: Movement and Place Framework

Along with the development of the Movement and Place Framework, to support the transport network being used more efficiently, road space may be allocated to the most appropriate use depending on function and road user. There may be some roads at some times of day where certain high productivity vehicles such as buses or freight vehicles are prioritised over other vehicles.

In focus: Road space allocation

As Sydney grows, we will need to make better use of existing road space to move more people safely, reliably and efficiently. This will mean that on key or principal corridors, particularly around our centres, more efficient vehicles such as buses will be prioritised so they can perform more efficiently, while in other less congested areas, there will be less focus on re-allocating road space and more focus on providing for future growth.

In consultation with stakeholders, we will develop and implement a Road Space Allocation Policy to establish clear principles for allocating road space. The policy will guide how we better use existing capacity while ensuring the road network is meeting the needs of all our customers using our roads and streets.

In focus: Bus services

Buses are a key enabler of an integrated multimodal public transport system and currently make up approximately 44 per cent of all public transport trips in Sydney.

Buses are a versatile mode that can meet a range of customer needs when provided with the right infrastructure and services. At the local scale, buses provide public transport services to communities using general traffic lanes and standard size or even smaller buses. Buses can however also serve an efficient mass transit function, where demand is greater and reliability is important. To perform this function, larger buses and dedicated fleet and infrastructure; such as double-decker buses, bus-only lanes and bus-only bridges are used to allow for high capacity, frequent, and reliable bus journeys.

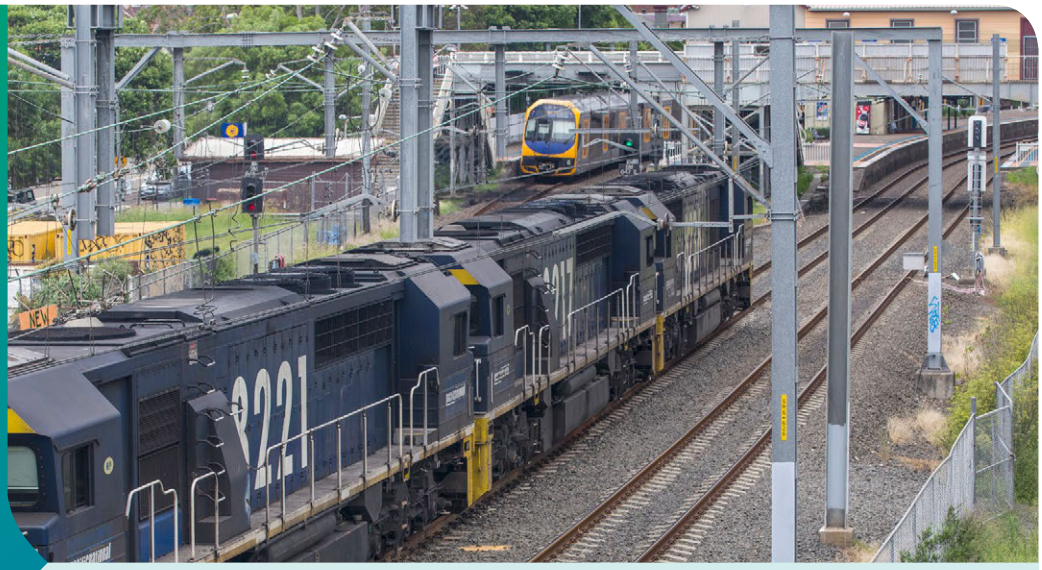
Achieving the 30-minute city vision of Future Transport requires a variety of public transport modes and services working in unison to provide a high level of service to meet the diverse needs of our customers.

Customer Outcome 8: Efficient and reliable freight journeys supported by 24/7 rail access between key freight precincts with convenient access to centres

With around 15Mt of container goods alone moved per annum in Greater Sydney, freight makes up a significant share of journeys on the transport network. The productivity of the metropolitan area and many regional NSW communities depends on these goods being moved safely, efficiently and reliably within Greater Sydney. With the largest container port in Australia, major consolidation and distribution facilities and the most concentrated consumer market in NSW, the efficiency of freight movements in Sydney has a significant impact on the wider freight industry and economy.

Consistent with the draft NSW Freight and Ports Plan, we will enable the efficient and reliable movement of freight journeys by providing freight customers with 24/7 rail access on our busiest freight corridors in Greater Sydney – between ports and intermodal terminals. This will support more efficient and reliable movement of container freight by better separating major freight movements and passenger trains and providing an alternative to increasingly busy roads. It will support NSW Ports' target of 3 million TEUs of container movements to and from Port Botany being by rail by 2045.

We will also improve last mile freight access to all centres through a range of measures that support the place function of centres while enabling goods to be safely, reliably and efficiently delivered to customers. Initiatives for investigation outlined in the draft NSW Freight and Ports Plan include working with local councils to resolve last mile freight constraints on selected roads and exploring alternative last mile solutions.



In focus: Improved separation of freight and passenger trains

Better separation of freight and passenger trains is a key area of investigation within our plans for the future freight network. One of the limitations on more freight being carried by train both within Greater Sydney and on the corridors connecting it to other regions is that freight trains mainly rely on tracks that are shared with passenger trains.

As passenger trains are prioritised, this means moving freight by rail is often less reliable and efficient than other forms of transport. The NSW Government will address this by investing in more dedicated freight rail lines and providing dedicated links between Port Botany and intermodal terminals in Greater Sydney and regional NSW. This includes upgrading the Port Botany rail line to increase capacity and investigating delivery of the Western Sydney Freight Line to provide 24/7 dedicated freight rail access between the port and intermodal terminals.

To improve the reliability of connections between Greater Sydney and regional NSW, we will also investigate capacity improvements to the Northern Sydney Freight Corridor and Southern Sydney Freight Line and protection of a Lower Hunter Freight Corridor. Further information can be found in the NSW Freight and Ports Plan.

In focus: Improving last mile transport in the Harbour CBD

The 'last mile' refers to the final stage of delivering freight to a customer. In an urban environment, the last mile typically is where delivery vehicles use local streets to access our centres. This can be a key constraint on the efficient movement of goods as these urban environments are often more congested corridors where trucks are required to share road and kerb space with other road users including pedestrians. Traditional delivery methods that are ideal for moving goods efficiently through the network are often less suitable for last mile deliveries in busy urban centres.

Since January 2016, a trial has been underway to improve the Harbour CBD's last mile freight network by providing courier companies with a hub to transfer goods from vans to bicycles and other modes. Transport for NSW has been using space within the Goulburn Street car park provided by the City of Sydney, as a distribution and collection point on the fringe of the CBD for couriers and businesses. Eight courier companies have been testing the hub by transferring parcels from vans to couriers on foot and bicycles that then make deliveries to customers throughout the CBD. On average, the couriers are using the hub 60 times a day and therefore reducing transport congestion impacts in the CBD. When operating at full capacity it is estimated that the hub could help ease congestion by saving 26,000 kilometres travelled by van in the CBD and reducing loading zone usage by around 4,600 hours each year.

Customer Outcome 9: A safe transport system for every customer with the aim of zero deaths or serious injuries on the network by 2056

The safety of our customers is our highest priority, which means doing everything we can to ensure that every customer reaches their destination safely.

By 2056, our target is that NSW will have a network with zero trauma, saving some 350 lives and more than 12,000 serious injuries each year and cutting the cost of trauma to the community by over $7 billion a year.

We will work towards achieving this service outcome through a Safe System approach, where we plan services and design infrastructure to integrate with human behaviour to prevent trauma. It involves all elements of the system (infrastructure, vehicles, speeds and user behaviour) working together to ensure safety and in a way that accounts for human error.

To ensure safe mobility for all customer and freight travel, safety outcomes will be built into our future new and upgraded infrastructure and services. Principles to guide this include:

- Ensure the majority of road travel occurs on 4–5 star roads, including by designing all new roads with proven road safety treatments specified in standards
- Incorporate safety measures at the design and construction stages of all new and repurposed transport assets and infrastructure
- Prioritise separation of different transport users to improve safety, freight efficiency and promotion of active travel, including median barrier separation on all key road corridors with high traffic volumes
- Ensure safety features are better matched to road function and account for the different road users in each environment, including the 'movement and place' approach to match road function with user groups and create and renew places and communities
- Encourage uptake of 5-star vehicles and faster adoption of critical driver assist and other safety technologies, such as auto emergency braking and lane assistance, including by leading the way through the Government's fleet purchasing policy
- Encourage modal shift away from private vehicle usage and toward public transport modes
- Encourage the uptake of new vehicle technologies, such as connected and automated vehicles with highly automated and fully automated systems, that provide safer end to end journeys
- Ensure road infrastructure supports fully automated vehicles on high volume and dedicated freight and mass transit corridors

TOWARDS ZERO

In focus: Road Safety Plan 2021

The Road Safety Plan 2021 is aimed at reducing death and serious injury on NSW roads, including our metropolitan areas

The Road Safety Plan 2021 aligns the Towards Zero vision with Future Transport 2056, which aims to have a NSW transport network with zero trauma by 2056. To realise this vision we have developed a detailed Road Safety Plan 2021 as a supporting plan to Future Transport 2056.

The Road Safety Plan 2021 features targeted and proven initiatives that will help us progress towards our transport safety goals, addressing key trends, trauma risks and the types of crashes occurring on NSW roads. Key initiatives with specific relevance to Greater Sydney include:

- Increase safety for pedestrians through providing pedestrian crossings, refuges and traffic calming devices as well as expand 40km/h zones in high pedestrian and local areas.
- Partner with local government to expand 40km/h in high pedestrian activity and local areas to reduce crashes and protect pedestrians.
- Develop a new NSW Police enforcement strategy that will maximise the benefit of enforcement, reduce serious injuries in urban areas, and ensure safe heavy vehicle movements.
- Expand the heavy vehicle average speed camera program to metropolitan areas to address risks associated with greater truck movements.
- Maximise safety integration in bicycle network programs to facilitate safer movement, provide separation from other traffic, where appropriate, and manage vehicle speeds.

- Implement legislative changes to allow camera based technology to enforce mobile phone use offences and further analyse the role of distraction in the road toll.
- Tackle drink and drug driving behaviour by strengthening penalties and enhancing enforcement, including
  - Increased penalties for driving under the influence
  - Swift, strong and certain penalties for lower range drink driving and drug presence first offenders
  - Alcohol interlocks for mid-range offenders
  - Doubling mobile drug testing to 200,000 tests by 2020 and adding cocaine testing to the regime.
- Explore options to accelerate safety upgrades at intersections through the Safer Roads Program.
- Work with the heavy vehicle industry to develop a heavy vehicle strategy to improve operational safety and increase the uptake of safety technology.
- Enhance the NSW Government vehicle fleet policy with lifesaving technologies, including autonomous emergency braking and other driver assist technologies.
- We will continue to deliver:
  - The Safer Roads Program,
  - Road safety education campaigns,
  - NSW Police Enhanced Enforcement Program,
  - Local Government Road Safety Program,
  - Implementation of the Speed Camera Strategy,
  - Promotion of safer cars as a member of the Australasian New Car Assessment Program,
  - High quality enhanced fatal and serious injury crash data and analysis as well as implement a robust research program.
  - Road safety education in schools as part of the mandatory curriculum based roads safety education program.
  - Continued development of the young drivers Graduated Licensing Scheme.

The plan was released on 6 February 2018.
The plan should be read as a detailed supplementary plan and can be accessed here www.towardszero.nsw.gov.au/roadsafetyplan

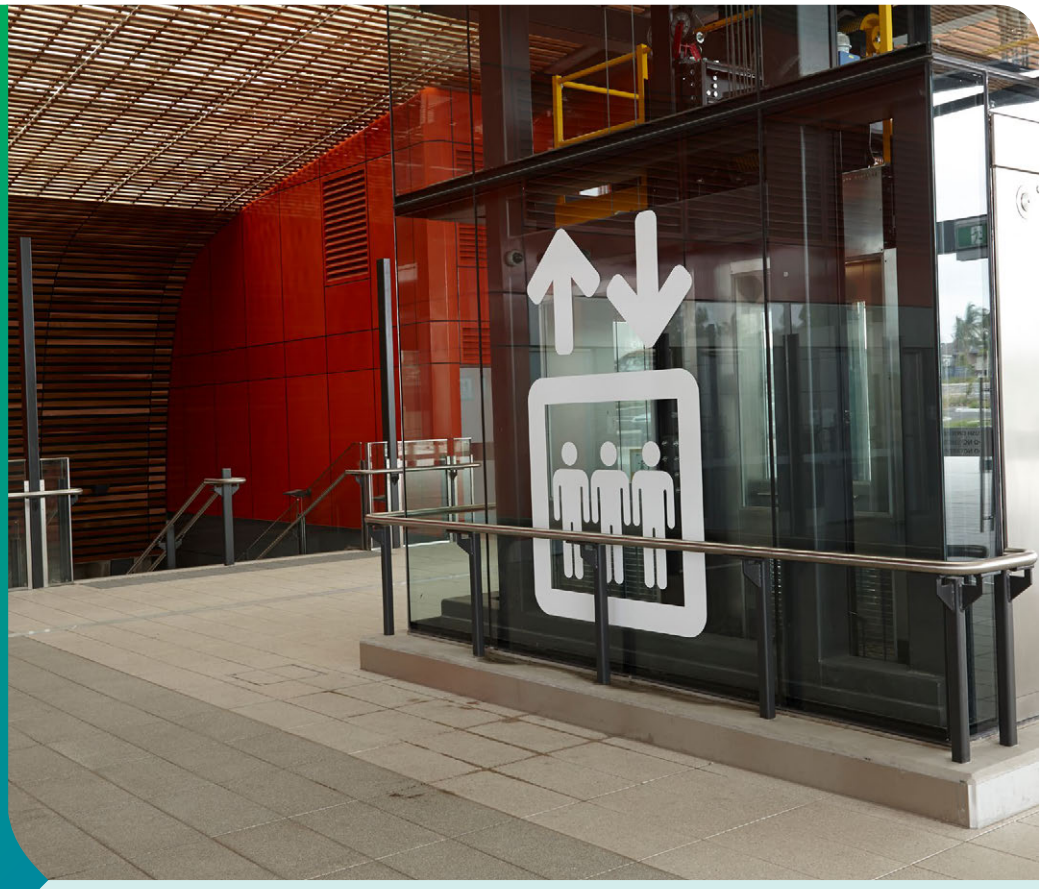
Customer Outcome 10: Fully accessible transport for all customers

Figure 31: Accessible bus

Transport connects people and communities, and provides access to jobs, social activities, family, and essential services. That is why we are committed to making transport accessible for everyone including customers with a disability, those that use a wheelchair or mobility device, customers who are elderly, who are travelling with a pram or luggage, and those with socioeconomic disadvantage.

Putting the customer at the centre of everything we do underpins our approach to accessibility. We will continue to engage with customers with a disability, elderly customers and those that travel with a pram or luggage to understand their needs and ensure we plan our services and infrastructure to be accessible to them. This includes:

- Planning services to ensure customers have equitable and safe access to transport, including where on-demand services may be implemented
- Improving access to on-demand services, with on-demand trials already operational in Sutherland and Brookvale, providing access to shopping centres, medical centres and transport hubs
- Continuing to invest in transport vehicles/fleet as well as stations, stops and wharves across Greater Sydney to ensure all customers can access these (see below)



In focus: Transport Access Program

We are already improving access to transport services through the Transport Access Program. This initiative provides a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

The program provides better accessibility to those with disabilities, limited mobility and parents with prams by upgrading lifts and ramps. It is also modernising facilities at major interchanges to provide seamless integration with other services and other modes.

Customer Outcome 11: Transport services and infrastructure are delivered, operated and maintained in a way that is affordable for customers and the community

The financial sustainability of the transport system is essential for customers and the community alike. It enables a high-quality customer experience, ensures fares are affordable and enables us to keep investing in the transport system.

We will ensure the transport system is financially sustainable through informed decision-making and services and infrastructure being delivered, operated and maintained in a way that is affordable over the long-term. This includes sound whole-of-life management of roads, railways, wharves and transport vehicles.

Where appropriate, we will partner with industry to achieve this outcome – whether this be enabling new services and infrastructure to be developed by industry or continuing to engage the private sector to deliver, operate and maintain services and infrastructure. This will be undertaken in a way that ensures the transport system is safe, reliable and available to provide the desired operational performance, be sustainable and be presentable for customers.

Figure 32: Travel demand management

In focus: Travel Demand Management

Travel Demand Management (TDM) is a term used to capture a wide range of actions to redistribute travel demand for various reasons including congestion, safety, environment, social and health which generates wider community benefits. TDM encourages customers to rethink their travel options through a program of travel behaviour change initiatives.

The aim of TDM is to reshape customer travel demand to fit existing and planned future transport systems, thus reducing the need for significant additional investment in transport system capacity.

It aims to redistribute customer behaviour to rebalance travel demand on the transport network through:

- **Reducing:** consolidation of journeys using technology and planning ahead,
- **Remoding:** transferring to other modes that are more sustainable including walking, cycling and public transport,
- **Retiming:** avoiding travelling in the peak periods, and
- **Rerouting:** avoiding driving in the congested metropolitan areas or using the preferred driving routes that take you around the city centres.

The NSW Government already has a number of programs designed to manage demand and congestion on the transport network. They include:

- **Travel Choices Program –** a tool to help people avoid delays when navigating the network by choosing the most efficient transport modes, routes and travel times
- **The Intelligent Congestion Management Program –** a program that integrates business processes and systems that support data gathering, analysis, decision support and information exchange around congestion management
- **Easing Sydney's Congestion Program –** a program that incorporates several initiatives relating to bus priority, pinch-points, 'smart' motorways and clearways.

Customer Outcome 12: A resilient transport system that contributes to the NSW Government's objective of net-zero emissions by 2050

Climate change and resilience are critical challenges facing the Greater Sydney transport system. We will transition towards a system that contributes towards the NSW Government's objective of net zero emissions by 2050 by improving the attractiveness of more sustainable modes of transport and harnessing new technologies to improve the efficiency of the transport system. This network will also be resilient against climate uncertainties. Various measures will be adopted to support this outcome, including:

- Planning services and infrastructure for a '30 minute city' to help reduce emissions associated with transport
- Planning services and infrastructure to improve the attractiveness of more sustainable modes of transport, including public transport, walking and cycling
- Use of more efficient, sustainable energy sources
- Designing infrastructure that is sustainable and resilient, using resilient design principles and new technologies.

In focus: The Cross Dependency Initiative Sydney Pilot Project

Transport for NSW, Roads & Maritime Services and Sydney Trains are jointly working with the Office of Environment and Heritage on a project that will assist to deliver a resilient transport system.

Known as Cross Dependency Initiative Sydney (XDI Sydney) the pilot project will identify and address the impact of potential future extreme weather events on our collective assets. The project also captures a wider range of infrastructure (water, electricity, telecommunications and the built environment) so that inter-dependencies between different infrastructure types can be identified and provide opportunities for collaborative adaptation.

XDI Sydney will assist Transport for NSW to deliver a resilient transport system by informing schedule asset management maintenance and upgrades, and asses the climate change risk of state significant infrastructure during the planning process. XDI will provide public benefit through improved planning outcomes and investment decisions made by NSW infrastructure owners and operators.

CHAPTER

4

Future networks

The future transport system is designed to support the vision for Greater Sydney as a metropolis of three cities where people can access jobs and services within 30 minutes and where customer outcomes are achieved.

The vision for the transport system includes city-shaping, city-serving, centre-serving and strategic freight networks. Each of these networks is designed to perform complementary functions, collectively forming an integrated transport system for Greater Sydney that supports the vision outlined in chapter 2.

Each network is based on initiatives detailed in chapter 5. Initiatives beyond those that are committed by the NSW Government are subject to further investigation and funding.

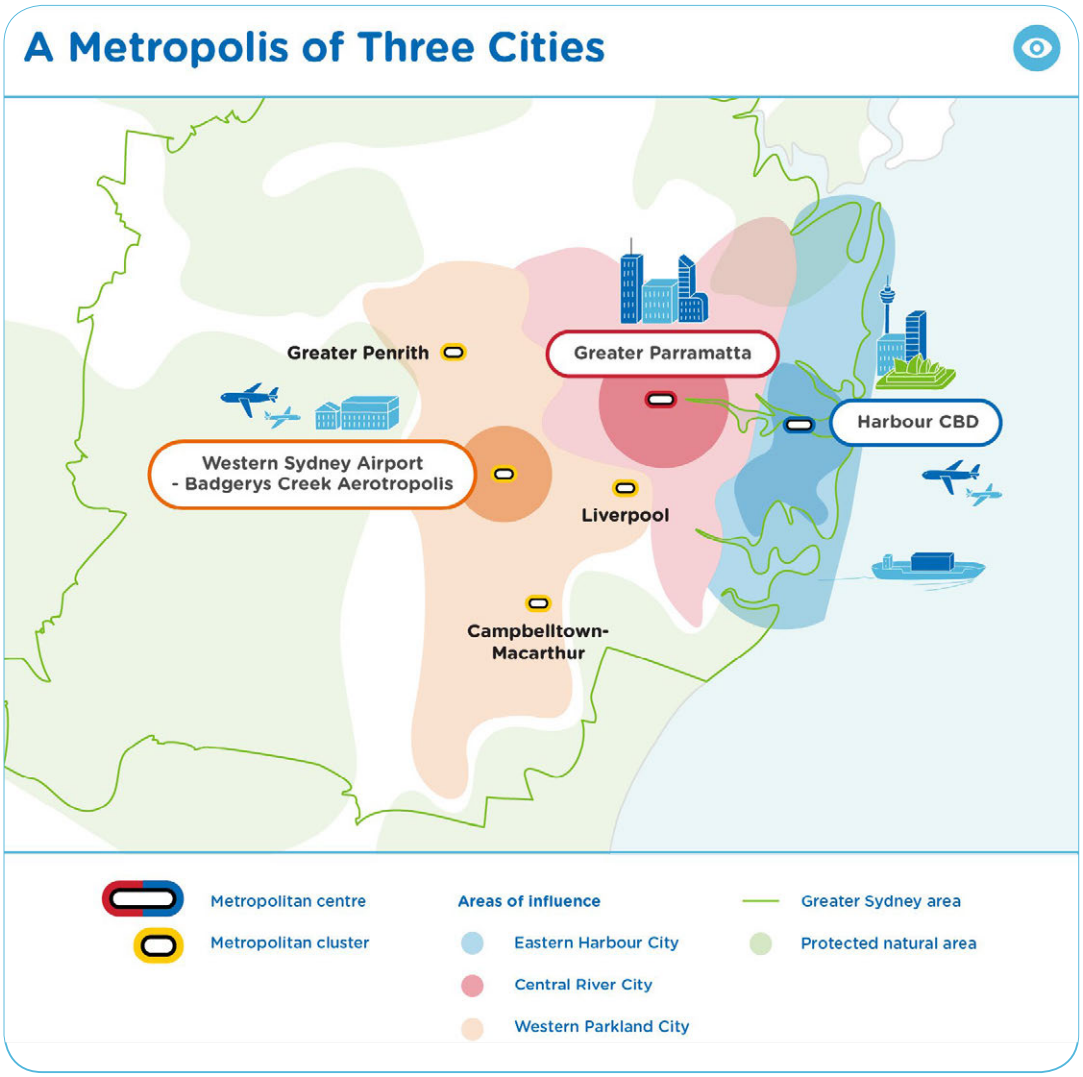


Figure 33: Three cities of Greater Sydney

Figure 34: Greater Sydney strategic transport corridors

The strategic transport network

Almost all transport trips, regardless of mode and for both passenger and freight, are carried by the road or rail network. The exception to this is the ferry and maritime network. The road and rail networks perform a range of functions, and different services are included in each of the city-shaping, city-serving, and centre-serving corridors. More detail on the role of the strategic road and rail networks is outlined below.

Strategic rail network – overview of potential future rail corridors

Trains form the backbone of Greater Sydney's public transport system, enabling large numbers of customers to access centres reliably and efficiently. The future vision for our train system is to build on this role, supporting 30 minute access for customers to their nearest Metropolitan City Centre and providing high capacity transport between these centres.

A range of potential train/mass transit links across Greater Sydney have been considered as part of the development of Future Transport 2056. These links have been identified based on their ability to support a number of key outcomes such as:

- Improved accessibility to one of the three cities or strategic centres
- Customer benefits such as reduction in travel times between key destinations and improved accessibility, frequency and reliability
- Productivity drivers such as supporting existing and future growth areas, contribution to economic development and opportunity to facilitate employment growth
- Support for urban renewal, future housing needs and the creation and renewal of great places with a focus on safety
- Transport service and infrastructure improvements to provide train crowding relief, improve sustainable travel choices and increase network efficiency
- The progressive separation of freight and passenger rail movements across the metropolitan train network

The potential train/mass transit links have been assessed against the customer outcomes of Future Transport 2056, as well as land use and city-shaping objectives within the Greater Sydney Region Plan (A Metropolis of Three Cities).

Potential timing for these links also aligns with broader outcomes such as the establishment of the WSA-Badgerys Creek Aerotropolis and improved accessibility through the Central River City.

Key trade-offs have been considered as part of developing the future train/mass transit network. This takes into account the long lead times of large scale rail projects, the benefits in terms of travel time savings and city-shaping opportunities, the cost of delivering and operating both the existing and new train/mass transit links.

For these reasons the focus of the train/mass transit network is on city-shaping and city-serving corridors.

Current/committed network

The first Sydney Metro lines will deliver a step-change in service levels for customers in the north-west, east and south-west of Greater Sydney. Customers in the north-west will have faster, more reliable access to the Harbour CBD and strategic centres from Norwest to Epping and to Chatswood. Sydney Metro City and Southwest will extend direct metro services to the Harbour CBD and Bankstown, relieving pressure on some of the city's busiest train lines and providing more frequent services for customers.

A new metro line between Greater Parramatta and the Harbour CBD will deliver turn-up-and-go services on one of Sydney's busiest transport corridors. This will reduce journey times between the Central River City and Eastern Harbour City, support growth on the corridor, particularly in the Bays Precinct as well as Greater Parramatta and the Olympic Peninsula, and help to manage crowding on the T1 Western Line.

The North-South Rail Link through the Western Parkland City (St Marys to WSA-Badgerys Creek Aerotropolis) will enable more customers in the west to access jobs and services within 30 minutes, and will help shape the sustainable growth of the area. Upgrades to transport corridors such as the Blue Mountains Line will improve capacity and reliability.

2026 network with initiatives for investigation

The extension of the existing rail line from Leppington to WSA-Badgerys Creek Aerotropolis will connect the WSA to the existing train network and provide additional public transport capacity in south west Sydney.

The WSA-Parramatta train link will reduce journey times between these centres and mean each of the three cities are connected by turn-up-and-go train services. This will enable customers across Greater Sydney to have convenient access to efficient, reliable and high capacity transport between the three metropolitan centres, and will enable more customers in the Central River City and the Western Parkland City to access jobs and services within 30 minutes.

Train improvements on T8 Airport Line, T4 Illawarra Line (including South Coast Line) and T1 Western Line are part of the More Trains, More Services program, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning). Suburban passenger train services extended south of Macarthur will support population and jobs growth in the Western Parkland City through providing higher capacity public transport.

2036 network with initiatives for investigation

Investment in higher capacity public transport links particularly in the South East of the Eastern Harbour City will support urban renewal initiatives, and support 30 minute access by providing additional public transport services in the south east corridor.

New north-south mass transit/train links to Greater Parramatta will increase the number of people that can access the Central River City within 30 minutes. This will support jobs growth in Parramatta and help to manage pressure on transport links in the east by spreading demand across the city.

2056 network with visionary initiatives

The long-term network vision provides for a connected network within each of the three cities and addresses long-term capacity constraints. In the east, extension of a new south east mass transit/ train link to Kogarah and Miranda will provide longer-term capacity relief on the T4 Illawarra Line and support urban renewal. The Miranda link is a potential connection from the CBD with one spur going to the South East (Malabar) and the second going to Miranda (Sutherland) to facilitate higher frequencies expected on the mass transit/ train network between the Central River City and the Eastern Harbour City.

The Parramatta-Norwest mass transit/train link will support longer-term population growth on this corridor, currently served by bus services. This will help to maintain 30 minute access to Parramatta from Norwest.

The extension of the metro line from Bankstown to Liverpool will provide higher capacity transport connections between strategic centres to support population and jobs growth, and provide additional public transport capacity in south west Sydney.

The potential Macquarie Park to Hurstville via Rhodes mass transit/ train link will provide important cross city connectivity from Macquarie Park on the Sydney Metro to the T1 connection at Rhodes and then continuing on to Hurstville.

Strategic road network – overview of potential future road corridors

Roads have a critical role in the transport network, carrying most trips, and supporting efficient and reliable connectivity across the metropolitan area. Roads support multiple transport modes, including on-road public transport, on-demand services, private vehicles, walking, cycling and freight.

The strategic road network facilitates the movement of public transport, freight and private vehicles. High-capacity bus services are currently the most efficient form of on-road public transport, with the existing city-shaping network including the B-Line, which operates from the Northern Beaches to the Harbour CBD.

Emerging forms of mobility will rely on the strategic road network, with roads remaining fundamental infrastructure for the movement of people and goods. Together with our investigation into better allocation of road space, we will investigate equipping the strategic road network with smart technology to allow roads to be used by CAVs and to assist traffic and demand management.

A vision for the strategic road network over the next 40 years is based on initiatives that are committed and that we propose to investigate. The evolution of the network is consistent with the city-shaping network outlined in this chapter, designed to support high demand across the metropolitan area. While some city-shaping public transport services use the road network, the strategic road network also has an important function in carrying through traffic, and keeping it out of centres.

Current/committed network

The current network is formed by a motorway ring that includes the M1, M2, M7 and M5. It provides motorway access from across Greater Sydney to Parramatta, the Harbour CBD and centres across Greater Sydney.

The NSW Government has committed to new motorway links in the Eastern Harbour City, including (subject to Final Business Cases and funding) Western Harbour Tunnel and Beaches Link and F6 Extension Stage 1, to manage congestion and support better places on the established road network. In the Central River City, NorthConnex will link the M1 Pacific Motorway with the Sydney motorway network to improve access to Sydney from regions to the north. In the Western Parkland City, we propose to build a new M12 motorway, as part of the Western Sydney Infrastructure Plan.

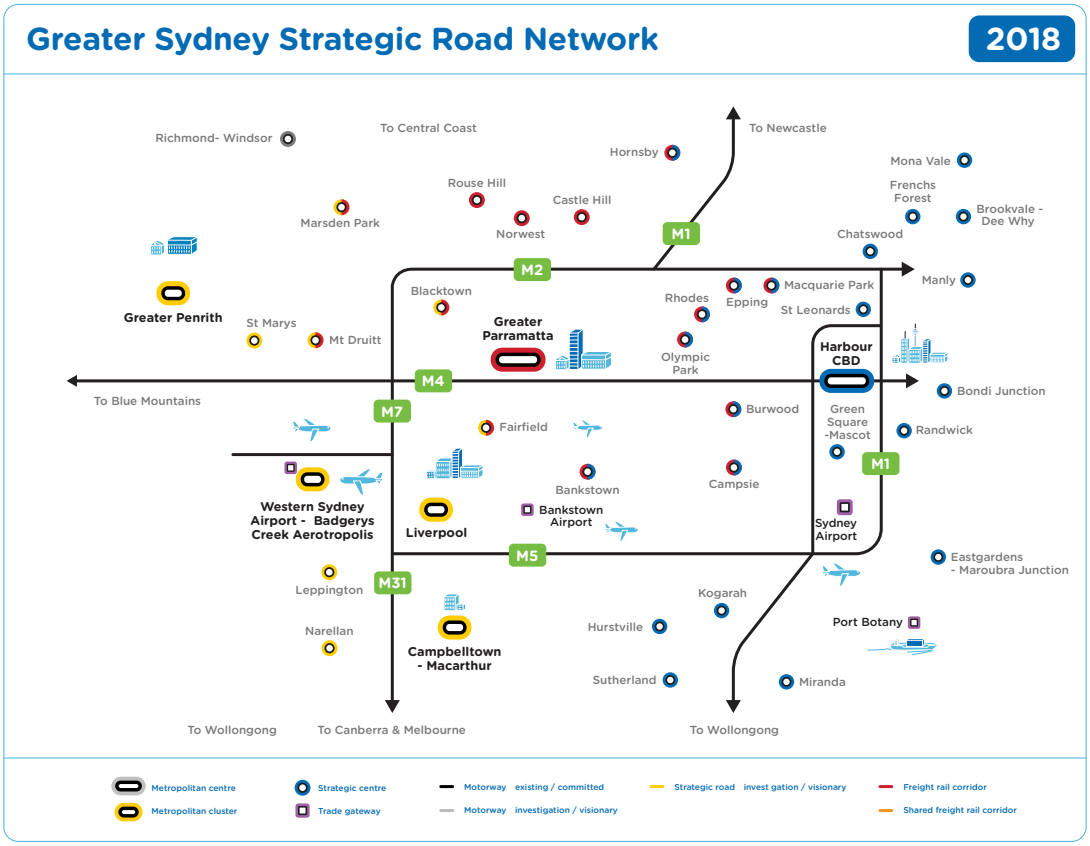


Figure 35: Current/committed Greater Sydney strategic road network

2026 network with initiatives for investigation

Over the next 10 years we will investigate improvements to the strategic road network, particularly connectivity to the south, with detailed planning of further stages of the F6 Extension, capacity upgrades on the movement corridors that surround Greater Parramatta and early investigation into road upgrades to support priority growth precincts around Wilton and Greater Macarthur.

2036 network with initiatives for investigation

The priority investment to be investigated in the next 10-20 years is the Outer Sydney Orbital motorway. This will boost capacity to WSA-Badgerys Creek Aerotropolis from the north and form the first stage of an outer Sydney bypass. We will also investigate the Parramatta Outer Ring Road, to reduce pressure on roads within the centre, enabling them to support local journeys and be places for people.

2056 network with visionary initiatives

The longer-term initiatives will address remaining missing links in the motorway network, providing a network of high-capacity movement corridors across the three cities. The Outer Sydney Orbital will ultimately provide an outer bypass of Greater Sydney, connecting the Central Coast, Western Parkland City and Illawarra.

Investment in a north-south strategic road corridor east of Parramatta will improve access and support better places by enabling local roads to support local journeys.

Long-term capacity constraints at Port Botany and the South East will be addressed through upgraded road links.

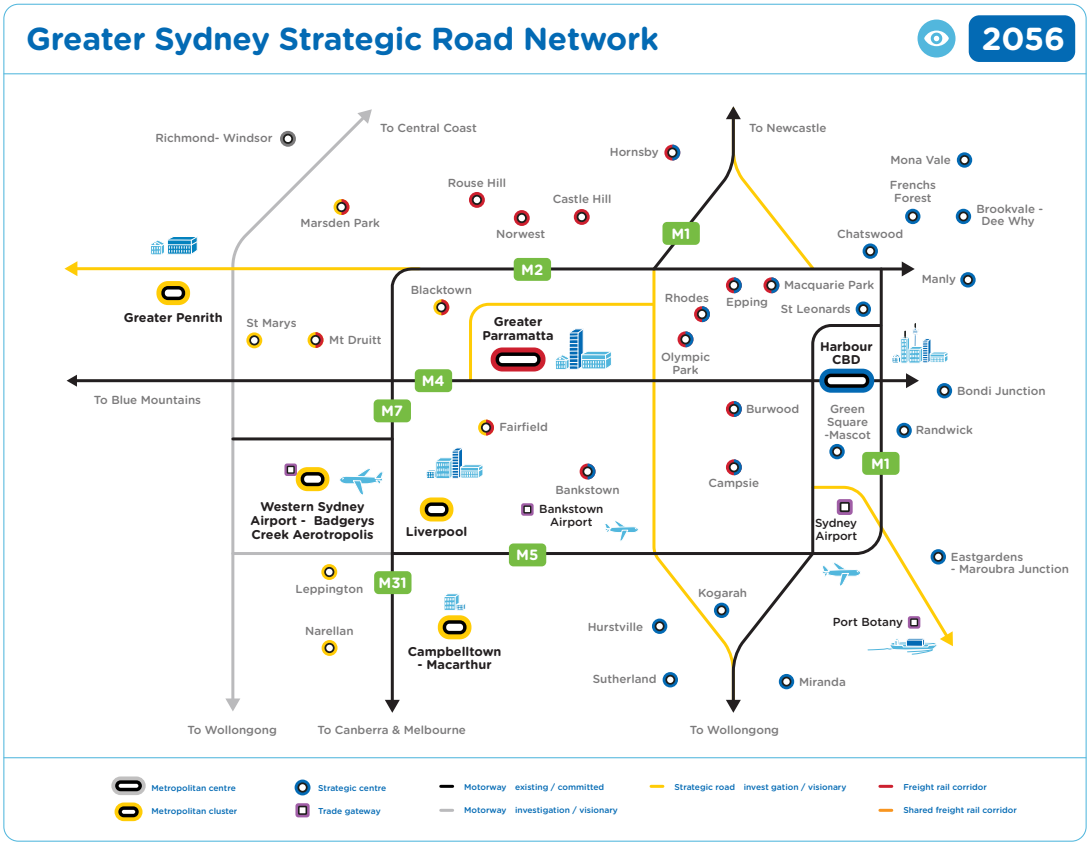


Figure 36: 2056 Greater Sydney strategic road network vision

City-shaping network

The city-shaping network includes the major road and rail public transport corridors that provide access to Greater Sydney's largest centres and link these centres together. These corridors form the backbone of the transport system as they typically provide higher speeds, carry the largest number of customers and provide vital connections to and between major activity centres.

City-shaping corridors are defined by higher speed and volume services connecting:

- Metropolitan centres with other metropolitan centres – e.g. Harbour CBD to Greater Parramatta
- Metropolitan centres with strategic centres and other local centres along busy corridors – e.g. Greater Parramatta to Blacktown

The function of this network is to enable people living in any of the three cities to access their nearest metropolitan centre within 30 minutes and to be able to travel efficiently between these metropolitan centres. Typically, these corridors are served by either train, metro or high capacity buses as these modes provide the highest capacity.

As our city transitions to a metropolis of 8 million people by 2056, more customers will need access to jobs and services, meaning more people accessing the Harbour CBD, Greater Parramatta and – in the future – the WSA-Badgerys Creek Aerotropolis and surrounding area of the Western Parkland City. This requires customers to have convenient access to efficient, reliable and high capacity transport to each of these centres.

These corridors form the backbone of the transport system.

The characteristics of the city-shaping network are summarised below.

Characteristic	Description
Capacity	High capacity city-shaping corridors provide access to, and between each of the metropolitan centres. These are the busiest activity centres, which means the corridors serving them are the highest capacity corridors.
Frequency	High frequency, high speed services, where customers using public transport on city-shaping corridors may have access to regular services (< 5 min frequencies) across the day.
Typical mode	Mass transit modes such as train, metro or high capacity bus, will typically serve city-shaping corridors. These are higher capacity modes to meet the level of demand on these corridors, with limited stops to support faster travel times. The city-shaping network is supported by the rail and strategic road network.
Land use impact	City-shaping corridors have a high impact on land use. High capacity and high frequency services typically support more activity where access is provided by the corridor. Higher density land uses within centres concentrates activity and supports multimodal interchange to and from the city-shaping corridors.

Network development

Over the next 40 years, we propose to expand the city-shaping network to support the growth of the three metropolitan cities. The evolution of the city-shaping network will the match the Governments land-use and precinct plans, which provide for, and respond to, areas of high growth. Over time, this may require a step-change in the capacity of city-shaping corridors.

City-shaping network with current network and committed initiatives

The NSW Government is investing significantly in the city-shaping network over the next decade to build on the existing network. Initiatives such as Sydney Metro Northwest, Sydney Metro City and Southwest, Sydney Metro West (subject to Final Business Case and funding) and Northern Beaches B-Line are being delivered to address major capacity constraints particularly in the denser Eastern Harbour City and Central River City. They will also support 30 minute access to the Harbour CBD and improve journey times and reliability on the busy Harbour CBD – Greater Parramatta corridor.

New passenger rail in Western Sydney will play a major role in connecting to the airport and shaping the future growth and development of the Western Parkland City. The Australian and NSW governments have jointly committed to delivering the first stage of the North South Rail Link from St Marys to Badgerys Creek Aerotropolis via Western Sydney Airport.

City-shaping network in 10 years with initiatives for investigation

Over the next decade, we will also investigate initiatives that will expand the network of city-shaping corridors to support the vision for Greater Sydney as a metropolis of three cities. Our focus will be improving connections to Greater Parramatta as it continues to grow and to Western Sydney Airport-Badgerys Creek Aerotropolis as the new airport becomes operational in 2026. These city-shaping corridors will support economic development by facilitating 30 minute access to WSA and other centres within the Western Parkland City. These transport corridors will be more influential in the shape of the Western Parkland City if they are considered before the development, not after it.

To support the growth of the Western Parkland City, we will investigate additional city-shaping corridors linking the Aerotropolis to other major centres in the west, including Greater Penrith, Liverpool and Campbelltown-Macarthur. This will be to support access to jobs in these centres, access to the airport and economic development along these corridors, including the Western Economic Corridor between the WSA and St Marys. A city-shaping connection between the Aerotropolis and Leppington would also link WSA to Sydney's Kingsford Smith Airport, improving business to business connections and enabling transfers for customers.

We will also investigate improved north-south connections to Greater Parramatta, with an initial focus on higher capacity bus services to improve 30 minute access to jobs and services in the Central River City.

Across the three cities, we will investigate upgrades to existing city-shaping corridors to support growth. This will include capacity and reliability upgrades to the existing train network.

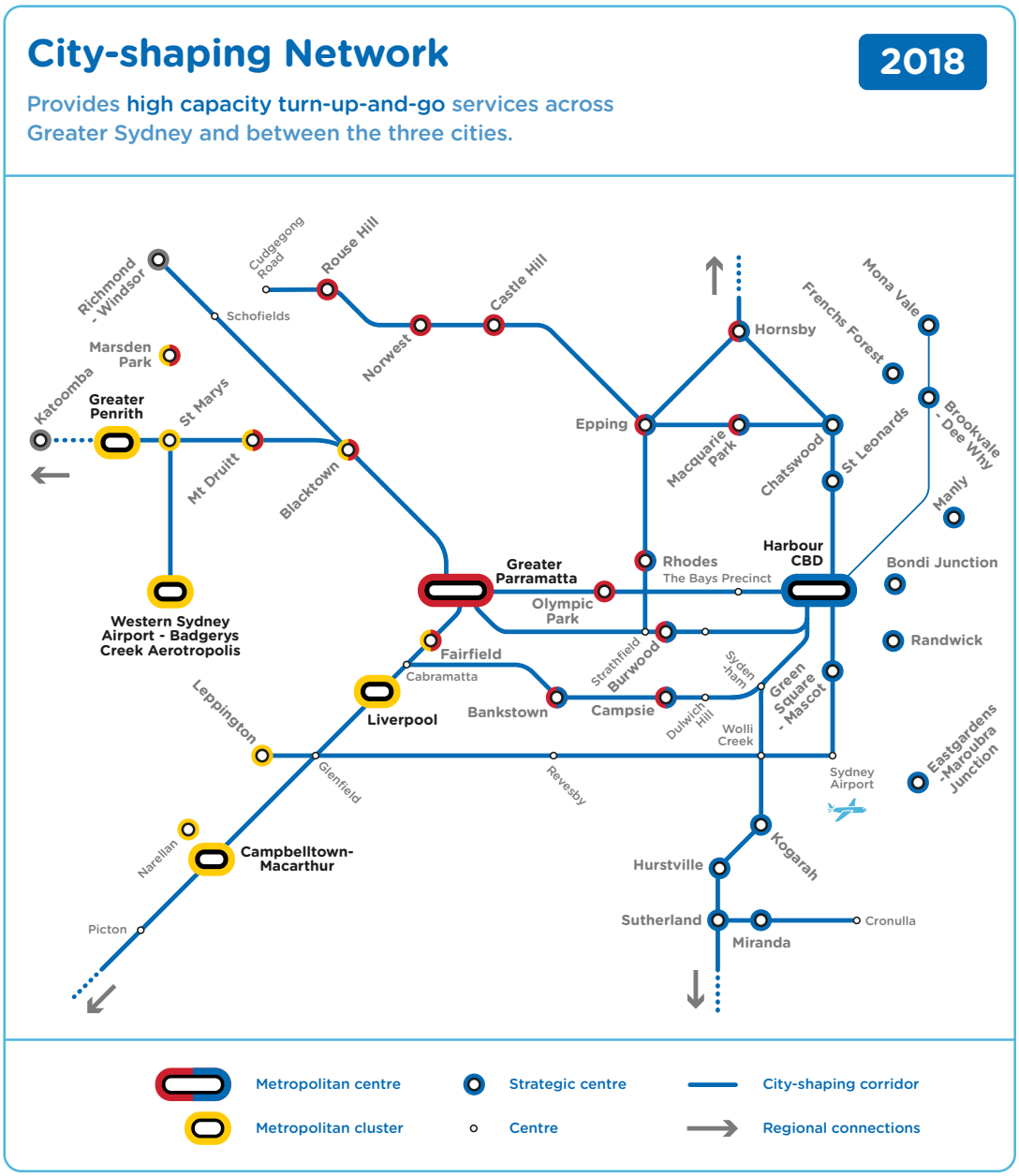


Figure 37: Current/committed Greater Sydney city-shaping network

City-shaping network in 20 years with initiatives for investigation

Our vision for 2036 is an expanded city-shaping network across Greater Sydney. We will investigate higher capacity connections to Greater Parramatta, particularly from the north and south to provide 30 minute access for more customers in the Central River City as the city grows. This will also help to relieve congestion by dispersing passengers across the network by enabling more people to access jobs and services away from the Eastern Harbour City. We will also support potential urban growth by expanding the network in the south east of the Eastern Harbour City. Across the network, we will investigate the use of new technology to increase the capacity and frequency of existing services. Specifically, we will support population and jobs growth by investigating the provision of more turn-up-and-go services across the city-shaping network.

City-shaping network in 40 years with visionary initiatives

Our vision for the 2056 city-shaping network is a turn-up-and-go, high capacity network that provides 30 minute access to metropolitan centres in each of the three cities. The long-term network vision provides for a connected network across each of the three cities and addresses long-term capacity constraints. To achieve this, we will investigate city-shaping connections on corridors where capacity will most be needed, including in the south of the Eastern City and to the north of Greater Parramatta. The Parramatta-Norwest city-shaping corridor will support longer-term population growth on this corridor, currently served by bus services.

We will investigate upgrades to existing city-shaping corridors across the three cities to support growth.

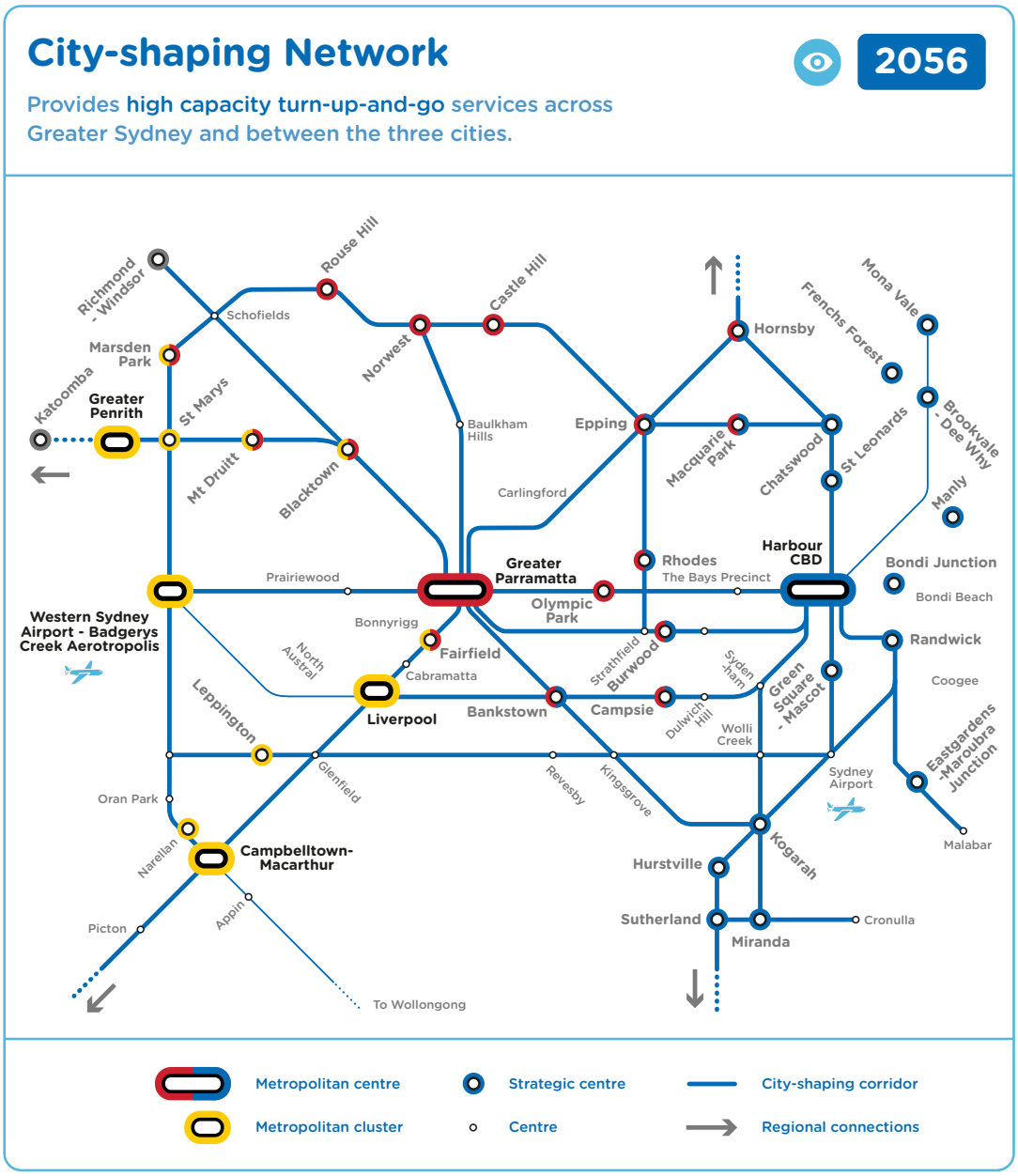


Figure 38: 2056 Greater Sydney city-shaping network vision

City-serving network

The city-serving network provides on-demand or high frequency services to customers within the ~10km areas around the metropolitan centres. These typically higher density areas accommodate residential areas, jobs, services and many major attractions, such as sporting facilities. Providing a dense network of transport services within these areas is important for servicing these areas and providing access to nearby metropolitan centres. The city-serving network enables greater density within this area by maintaining convenient and reliable connectivity.

The characteristics of the city-serving network are summarised below.

Characteristic	Description
Capacity	High-medium capacity – the city-serving network provides access to higher density areas.
Frequency	High frequency – customers using public transport will have access to high frequency services across the day with ongoing investigation into delivering turn-up-and-go services.
Typical mode	Bus, ferry, light-rail, train, walking and cycling – the city-serving network is made up of varying modes of transport. These modes have medium to high capacity to meet demand with frequent stops along the corridor.
Land use impact	City-serving corridors have a medium to high impact on land use. High frequency and high capacity services have the ability to support higher density land use.

City-serving network with current network and committed initiatives

The current city-serving network is characterised by scheduled ferry, bus, light rail and train services as well as denser walking and cycling networks. These provide access across the Eastern Harbour City and Greater Parramatta.

Over the next 10 years we have committed to increasing the capacity of the city-serving network. The CBD and South East Light Rail will connect Randwick and Kingsford with the Harbour CBD, providing an efficient, frequent and reliable service for customers in the south east. It will also improve the amenity of the Harbour CBD. We will boost capacity and support urban renewal around Greater Parramatta with Parramatta Light Rail Stage 1 and Stage 2 (subject to Final Business Case and funding).

To support the growth of Greater Parramatta, we will investigate bus improvements on Victoria Road. This will help improve 30 minute access and boost capacity, and we are investing in the Ferry Fleet Replacement Program, including upgraded services on Parramatta River ferries.

We have also committed to increasing the role of public transport through greater prioritisation of bus services along city-serving corridors to improve 30 minute access, and are investing in priority walking and cycling networks around the centres.

Over the next 10 years we have committed to increasing the capacity of the city-serving network.

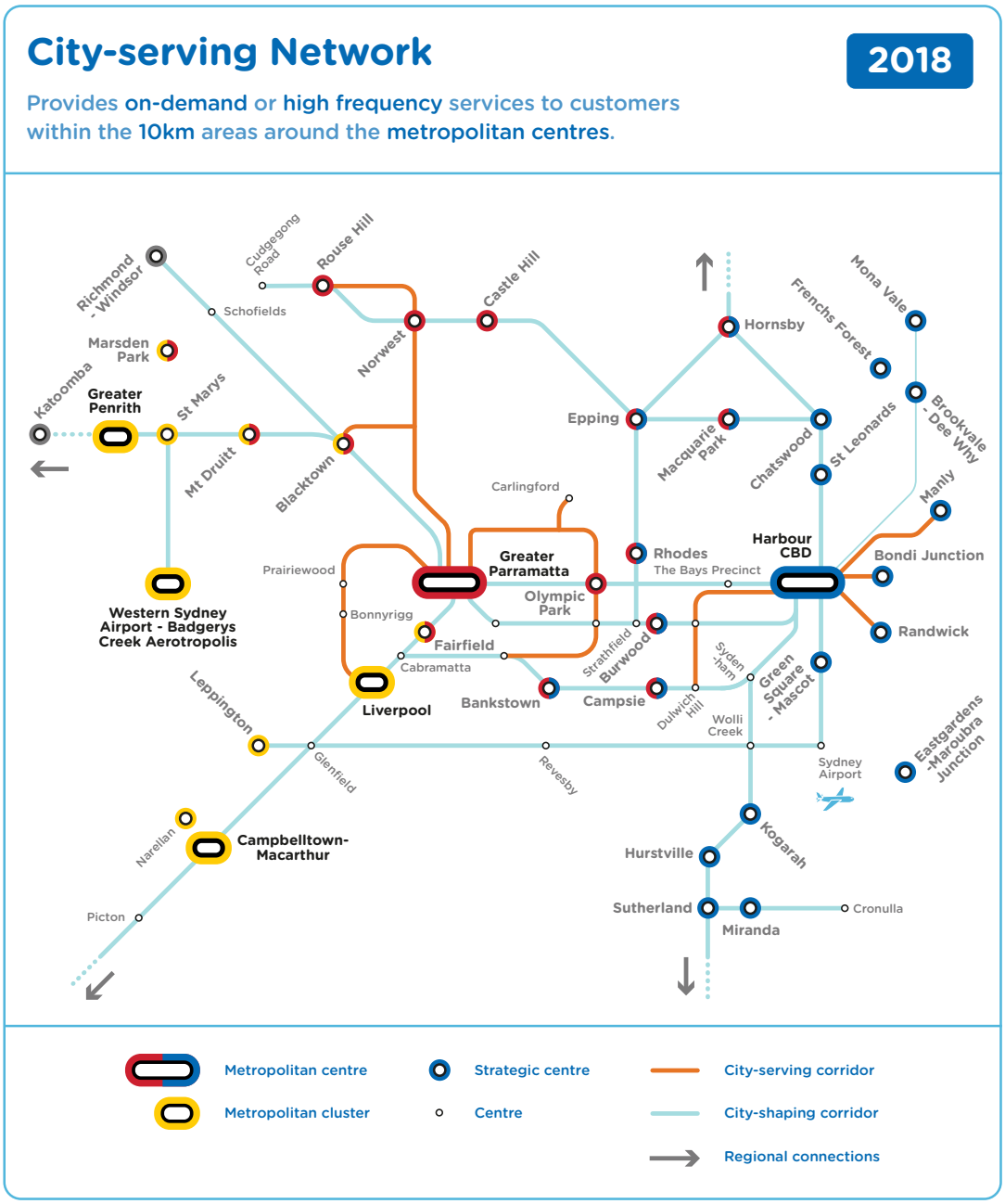


Figure 39: Current/committed Greater Sydney city-serving network

City-serving network in 10 years with initiatives for investigation

Over the next 10 years we will investigate a number of further initiatives to respond to growth around our metropolitan centres.

In the Western Parkland City, we will investigate infrastructure to support bus connections around WSA Badgerys Creek Aerotropolis, Liverpool, Greater Penrith and Campbelltown-Macarthur.

We will also investigate improvements to service frequency, including more demand responsive services, and capacity across all city-serving modes to improve 30 minute access and support growth.

Consistent with customer outcome 3, a focus will be working with local government to investigate improvements to walking and cycling connections so that these are the most convenient modes for short trips around metropolitan centres. Specific initiatives are identified in chapter 5.

City-serving network in 20 years with initiatives for investigation

By 2036, the WSA Badgerys Creek Aerotropolis will have a greater urban density. Customers within this area will require reliable, fast and frequent services to connect to jobs and services. We will investigate the best means to deliver these services, including through more on-demand services.

Greater Parramatta and the surrounding high density urban areas will be supported by a network of city-serving transport services. We will investigate the need to further expand the Parramatta Light Rail to service new high growth areas.

To support urban renewal in around the Eastern Harbour City we will investigate light rail extensions to Maroubra Junction (CBD and South East Light Rail) and the Bays Precinct (Inner West Light Rail).

We will continue to improve walking and cycling connections, with a focus on metropolitan centres in the Western Parkland City as these continue to grow.

City-serving network in 40 years with visionary initiatives

By 2056, the city-serving network will form part of an integrated transport system that provides seamless, convenient and reliable travel to customers across of all of Greater Sydney. As the region grows, each metropolitan centre will have a dense network of high frequency services in the ~10km areas surrounding them. Walking and cycling will be the most convenient option for short trips around centres. As technology advances and to improve efficiency, we envisage more city-serving corridors having flexible, demand responsive services.

City-serving Network

2056

Provides **on-demand** or **high frequency** services to customers within the **10km** areas around the **metropolitan centres**.

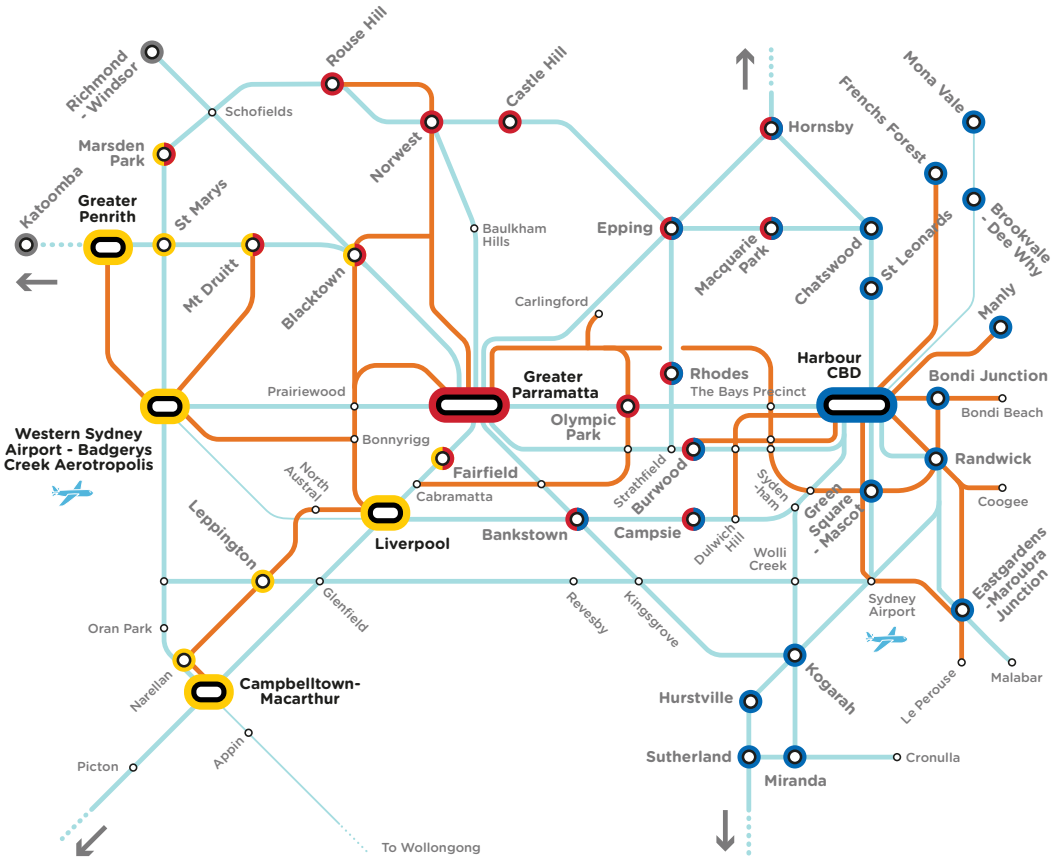


Figure 40: 2056 Greater Sydney city-serving network vision

In focus: City-shaping and city-serving networks in the Eastern Harbour City

Our vision for the future network is one where different links form part of an integrated network across the Greater Sydney region and each of the three cities. As outlined in this chapter, centre-serving corridors will support and complement city-shaping corridors by providing access for people that live away from major city-shaping transport links, such as train lines.

As part of our vision, city-serving links will also complement city-shaping links. Within the ~10km area around metropolitan centres, city-serving corridors will be able to support higher frequency, reliable on-street transport as key, city-shaping motorways will divert major traffic away from centres. This is our vision for the integrated network around the Harbour CBD where the network of new motorways, including WestConnex and Western Harbour Tunnel, will enable busy surface roads, such as Parramatta Road, Victoria Road and Military Road, to support more on-street public transport.

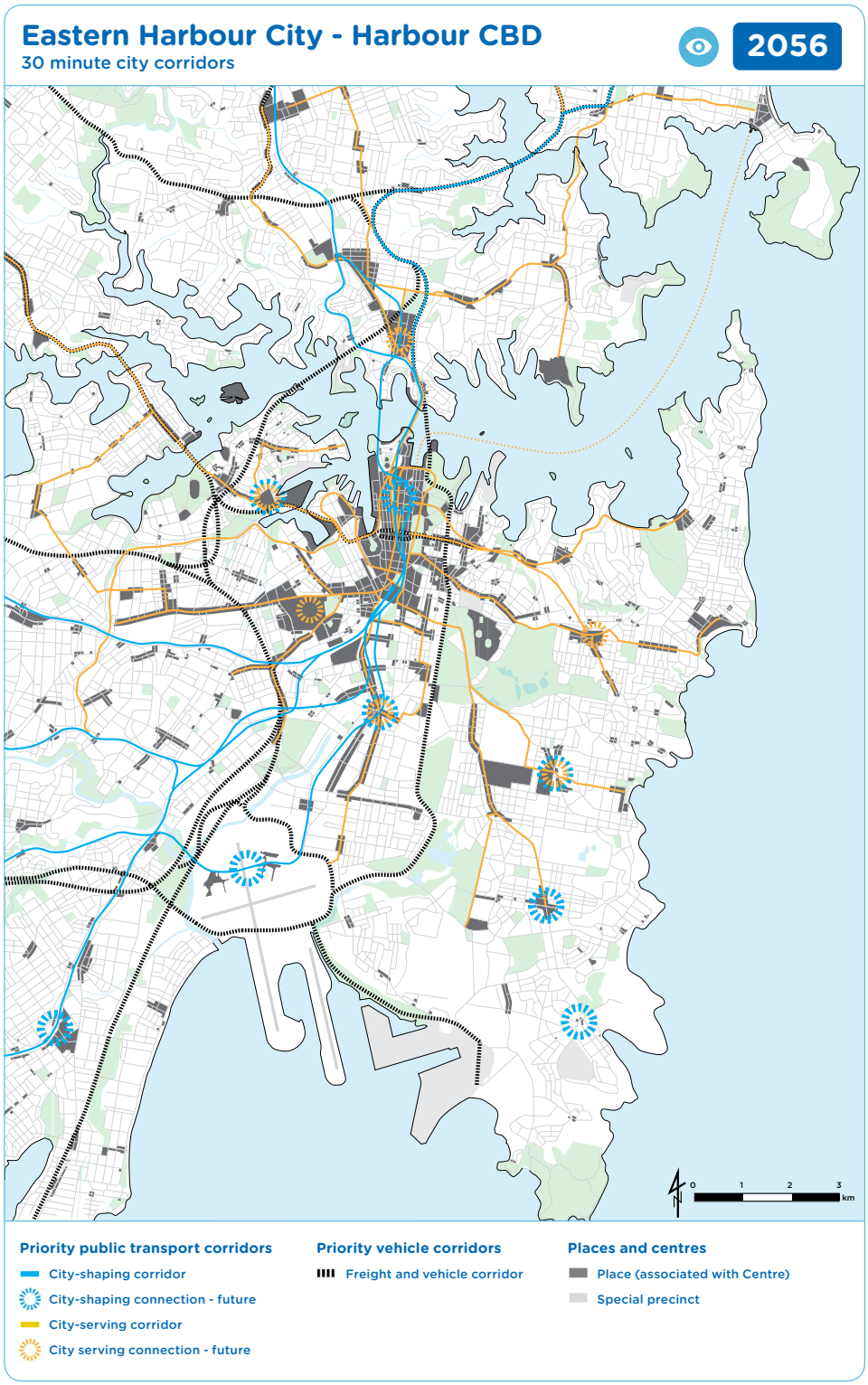


Figure 41: 2056 Vision for city serving and city shaping corridors in the Eastern Harbour City

Centre-serving network

The centre-serving network connects local areas to their nearest centres. It enables customers living in typically lower density areas across Greater Sydney to access jobs, education and services in centres and to access city-shaping corridors, serviced by train, metro and express bus, that pass through these centres.

The centre-serving network is particularly important in a city like Greater Sydney with many lower density communities away from city-shaping transport corridors. By providing on-demand transport in these areas (or, where required, high frequency services), customers across Greater Sydney can access not just their nearby centre but also the wider transport network in an efficient, reliable and easy-to-understand way.

The centre-serving network also has an important role in the resilience of the transport system, by providing alternative routes to redistribute trips in the event of an incident on the network (traffic incident, or natural hazard such as flood or bush fire).

The characteristics of the centre-serving network are summarised in the table below.

Characteristic	Description
Capacity	Medium-low capacity centre-serving transport typically serves lower density areas, feeding customers in these suburbs to higher density activity centres across the city where they can access jobs and services or connect to transport nodes on city-shaping corridors. Corridors and the services they use are typically lower in capacity except in some areas (particularly closer to some centres) where services may have higher capacity.
Frequency	High frequency or on-demand – where there is sufficient demand, centre-serving transport services will operate at a high frequency. Otherwise, as new technology is harnessed, on-demand services will be available, enabling service frequencies to be responsive to customer demand. This will improve the efficiency of centre-serving transport in lower density areas.
Typical mode	Consistent with being lower demand corridors, centre-serving transport includes bus, point-to-point transport, private car, walking and cycling. Increasingly, a range of alternative forms of transport may be used, including new personalised devices (e.g., e-bikes).
Land use impact	As centre-serving transport is serving typically lower density areas and is therefore lower capacity, its impact on immediate surrounding land use is limited.

Walking and cycling will have an important role in the future centre-serving network for shorter trips. More than 11 million weekday car trips in Greater Sydney are less than 10km. Two in five bus trips are less than 5km in length. These short trips contribute to congestion on the already constrained parts of the transport network typically in centres. Lack of access to safe cycling paths is a barrier for the 70 per cent of customers who tell us they would like to cycle more for short trips and would do so if they felt safer and more confident.

Connected cycling networks within 5kms of strategic centres will improve the access to cycling for short trips. Many of these connections will also form part of the Principal Bicycle Network (see conclusion of this section), allowing cycling customers to travel between centres across Greater Sydney. The Principal Bicycle Network will also be designed to integrate with the Green Grid, connecting parklands including the Western Parklands in the Western City.

In focus: Cycling connections and the Green Grid

The Government Architect's Office and the Department of Planning and Environment established the concept of a Green Grid for Greater Sydney. It is a long-term vision for a network of high quality green areas – from regional parks to local parks and playgrounds – connecting centres, public transport and public spaces to green infrastructure and landscape features. It is designed to keep the region cool, encourage healthy lifestyles and support ecological resilience.

The expansion of the Principal Bicycle Network will be integrated with the Green Grid with Transport for NSW working with the GSC, local councils and other stakeholders to ensure – where feasible – the bicycle network forms part of the Green Grid for Greater Sydney. This will help advance the vision while providing safe and attractive paths for cyclists.

Centre-serving network with current network and committed initiatives

The current centre-serving network is characterised by scheduled public transport services, particularly buses, private vehicle use, some point-to-point travel and walking and cycling. Committed improvements to the network over the next 10 years are focused on harnessing new technology to enable more on-demand services and investing in the walking and cycling network. This is designed to improve the efficiency of transport services and manage congestion by encouraging more use of public transport and walking and cycling.

On-demand transport services, such as buses, enable us to improve convenience for customers and enhance the efficiency of services by ensuring they are more responsive to demand. The NSW Government is partnering with service operators to pilot on-demand services, particularly around selected strategic centres. Trials are already underway on the Northern Beaches and further pilots are proposed in 2018 for selected corridors serving the strategic centres of Bankstown, Macquarie Park and Bondi Junction.

Investing in the walking and cycling network will enable us to improve safety, provide more healthy transport options for customers and manage congestion around centres. That is why a focus over the next 10 years is delivering committed Priority Cycleway projects that will connect the growing number of people cycling around the busiest centres in the Eastern, Central and Western Cities. Council partnership programs are delivering local bicycle infrastructure. Bicycle parking is also being rolled out at transport interchanges which is improving options and extending the reach of public transport.

Centre-serving network in 10 years with initiatives for investigation

Over the next 10 years we will investigate additional initiatives to improve centre-serving connections, with a focus on maintaining efficient and reliable access to strategic centres and expanding walking and cycling connections. With the population of Greater Sydney forecast to grow by 850,000 over the next 10 years, strategic centres will attract more activity.

To address this, our focus will be on initiatives that can better use existing capacity, including implementation of a Road Space Allocation Policy to improve priority for higher productivity vehicles and improving the frequency of public transport services.

Consistent with customer outcome 3, we will also investigate expansion of the walking and cycling network around strategic centres, with a focus on working with local councils to improve cycling connections within 5km around strategic centres in the Eastern and Central Cities. Many centres in these cities have well-developed walking and cycling connections, which can be built upon over the next decade.

Centre-serving network in 20 years with initiatives for investigation

By 2036, we are proposing that more centre-serving services operate more frequently or on-demand, higher capacity connections are in place for the fastest growing strategic centres, and that key walking and cycling connections are complete.

Over the next 20 years, the population of Greater Sydney is forecast to reach nearly 6 million. The total number of trips on the transport network will increase from 11 million to 15 million. Public transport will need to play a growing role to ensure customers have access to their nearest centres within 30 minutes and that journeys are efficient and reliable. That is why public transport services on the 2036 centre-serving network will be high frequency or on-demand across much of Greater Sydney. This will mean services are not only easy to understand and therefore more accessible but are also attractive for customers to use.

By 2036, we also propose that all centres have connected walking and cycling networks, including centres across the Western Parkland City.

Centre-serving network in 40 years with initiatives for investigation

The vision for the 2056 centre-serving network is that all customer outcomes are being met, with centre-serving corridors offering high frequency or on-demand services that provide 30 minute access to centres, future forms of mobility being available and integrated with other modes of transport, and walking or cycling being the most convenient option for short trips.

By 2056, Greater Sydney is forecast to have a population of 8 million people. A greater share of trips by public and active transport will be essential to ensure people and goods can move efficiently around the city. That is why, building on our 2036 network, all centre-serving corridors will have high frequency or on-demand services.

Further investment in connections to strategic centres and in the Principal Bicycle Network will support walking or cycling being the most convenient option for short trips, improving health outcomes, safety and convenience for customers as well as boosting the productivity, liveability and sustainability of Greater Sydney.

Greater Sydney Bicycle Network

Cycling serves the increasing number of short trips that people make around centres and local areas. These trips access shops, services, schools, entertainment and connect to train, bus, ferry or light rail. Increasing cycling has a health payback by preventing chronic disease through increasing activity and improved personal wellbeing. Cycling also helps to create places, lower carbon emissions, improve access to public transport services and reduce the cost of travel for customers and the community.

The Principal Bicycle Network is the network of major bike corridors across Greater Sydney. In addition to supporting longer distance cycling journeys, the individual components have an important role in supporting shorter distance city-serving and centre-serving journeys. We will work with local councils and other stakeholders to investigate improvements to the network as part of the Future Transport vision.

Current/committed network

Building on the existing network, our immediate focus is working with local councils to deliver committed Priority Cycleway projects to address key missing links around the Harbour CBD, Greater Parramatta, Greater Penrith, Blacktown and Liverpool, such as the Nepean River Green Bridge and Inner West Greenway. Council partnership programs are delivering local bicycle infrastructure. Bicycle parking is also being rolled out at interchanges.

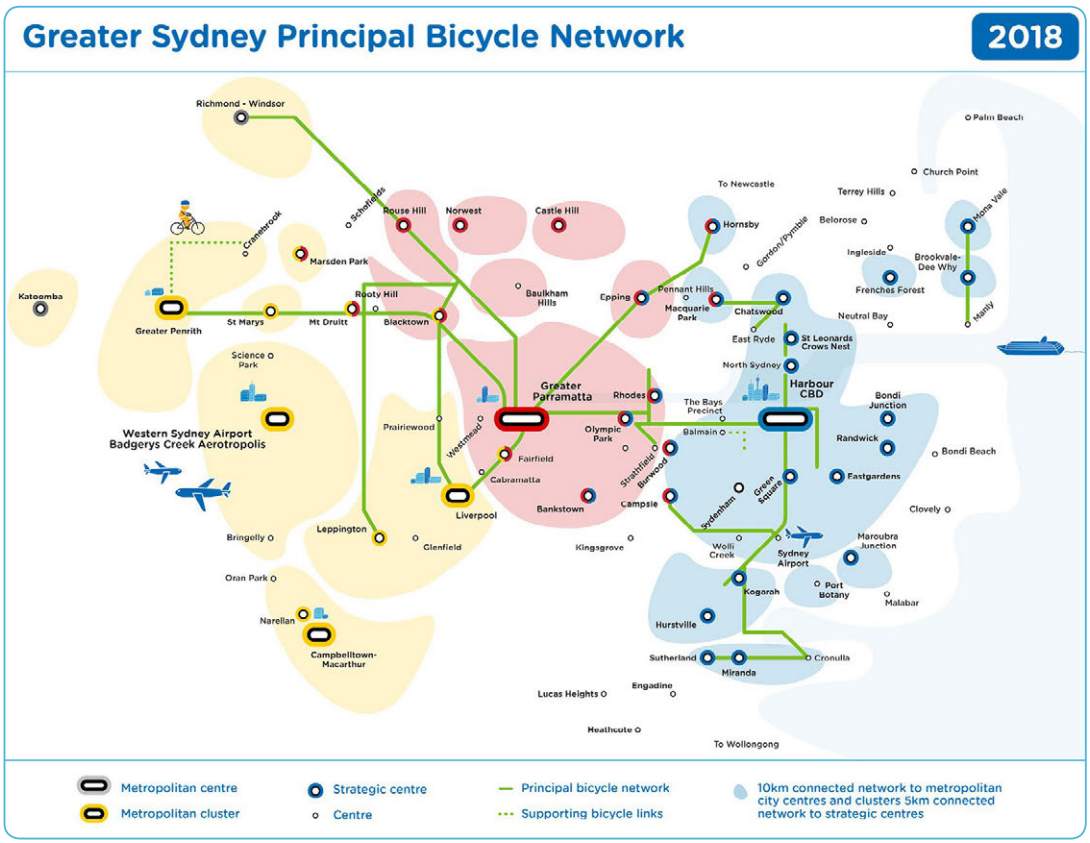


Figure 42: Current/committed Greater Sydney Principal Bicycle Network

2026 network with initiatives for investigation

Our vision for 2026 is a connected cycle network to the Harbour CBD and Greater Parramatta, offering improved safety and convenience of cycling around these centres and increasing liveability by supporting place-based planning and delivery of great places. Walking and cycling network coverage will be improved by using state held corridors for public transport, pipelines, waterways, crown land and service easements for bicycle network infrastructure.

2036 network with initiatives for investigation

By 2036, we also propose that all strategic centres have connected walking and cycling networks, including strategic centres across the Western Parkland City. This will provide our customers with more healthy transport choices and support access to public transport links across the three cities.

2056 network with visionary initiatives

Further investment in connections to strategic centres and in the Principal Bicycle Network will support walking or cycling being the most convenient option for short trips, improving health outcomes, safety and convenience for customers as well as boosting the productivity, liveability and sustainability of Greater Sydney.

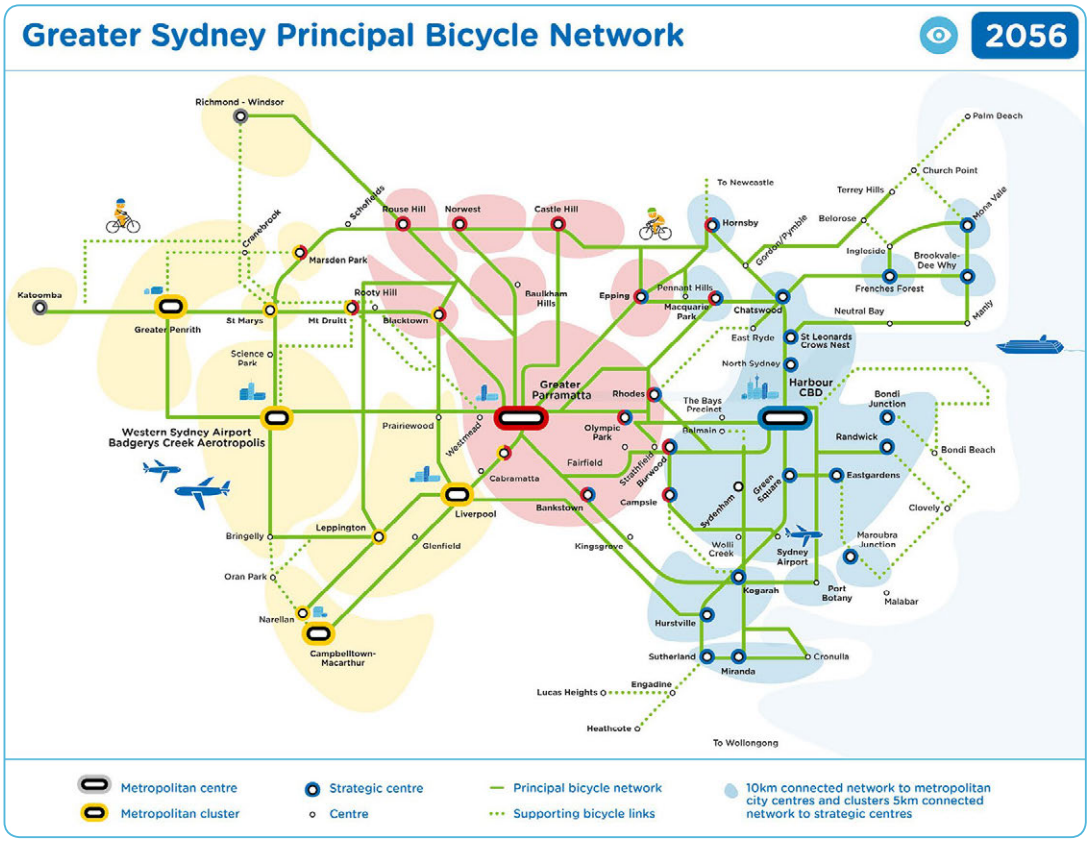


Figure 43: 2056 Greater Sydney Principal Bicycle Network vision

Strategic freight network

The strategic freight network includes the most significant corridors that support the movement of goods. This includes corridors connecting trade gateways, freight precincts and centres across Greater Sydney as well as corridors that connect the region with outer metropolitan areas and regional NSW.

The total freight task in Greater Sydney is expected to nearly double over the next 40 years as a growing population, higher living standards and online consumerism drive higher volumes. The container freight task alone is projected to triple by 2056 to 39Mt per annum.

Supporting the safe, efficient and reliable movement of goods around Greater Sydney will require a high capacity network for moving goods between trade gateways and freight precincts, such as from port to warehouse, and providing convenient access to centres. The future network will support this through the strategic road network and improved rail connections, particularly between ports and warehouses.

The characteristics of the strategic freight network are summarised below.

Characteristic	Description
Capacity	High capacity – strategic freight corridors support the highest volumes of goods that are generated by freight precincts and metropolitan and strategic centres.
Typical mode	Train and on-road – as demand grows, more goods will need to be moved by train where appropriate. This is particularly the case between Port Botany and intermodal terminals in the Western Parkland City, where demand is highest. The strategic road network will also be important for major freight movements, particularly motorways and roads that provide access to centres.
Land use impact	High impact – in conjunction with land use zoning, the strategic freight network has a significant influence on where consolidation and distribution facilities are located. Convenient access to the freight network is important for freight customers, meaning facilities are often clustered around these corridors.

A key task for the freight network over the next 40 years will be to support growing demand between ports in the east, particularly Port Botany, and consolidation and distribution facilities in the west of Greater Sydney. Consistent with customer outcome 8, a dedicated 24/7 freight rail network will be essential to this by enabling greater separation of freight from other road users and the passenger train network. The network maps below highlight how we propose to improve the freight rail corridor between Port Botany and Western Parkland City industrial and employment lands and intermodal terminals, as well as between Greater Sydney and regional areas. Access to the trade gateways of Newcastle port and Port Kembla from inland NSW will continue to be important for the next 40 years.

Should Port Botany reach its container handling capacity and Port Kembla be required to cater for NSW's future container volumes, new transport/ infrastructure links will be investigated to enable goods to be moved safely, efficiently and reliably between Port Kembla and Sydney.

Convenient freight access to centres will also be investigated through a range of 'first and last mile' initiatives. Complementing this will be other initiatives, such as new freight consolidation hubs near centres and initiatives to encourage more off-peak freight deliveries.

The evolution of the strategic freight network is summarised below based on the initiatives identified in chapter 5. The NSW Freight and Ports Strategy provides further information on these initiatives.

The total freight task in Greater Sydney is expected to nearly double over the next 40 years.

Strategic freight network with current network and committed initiatives

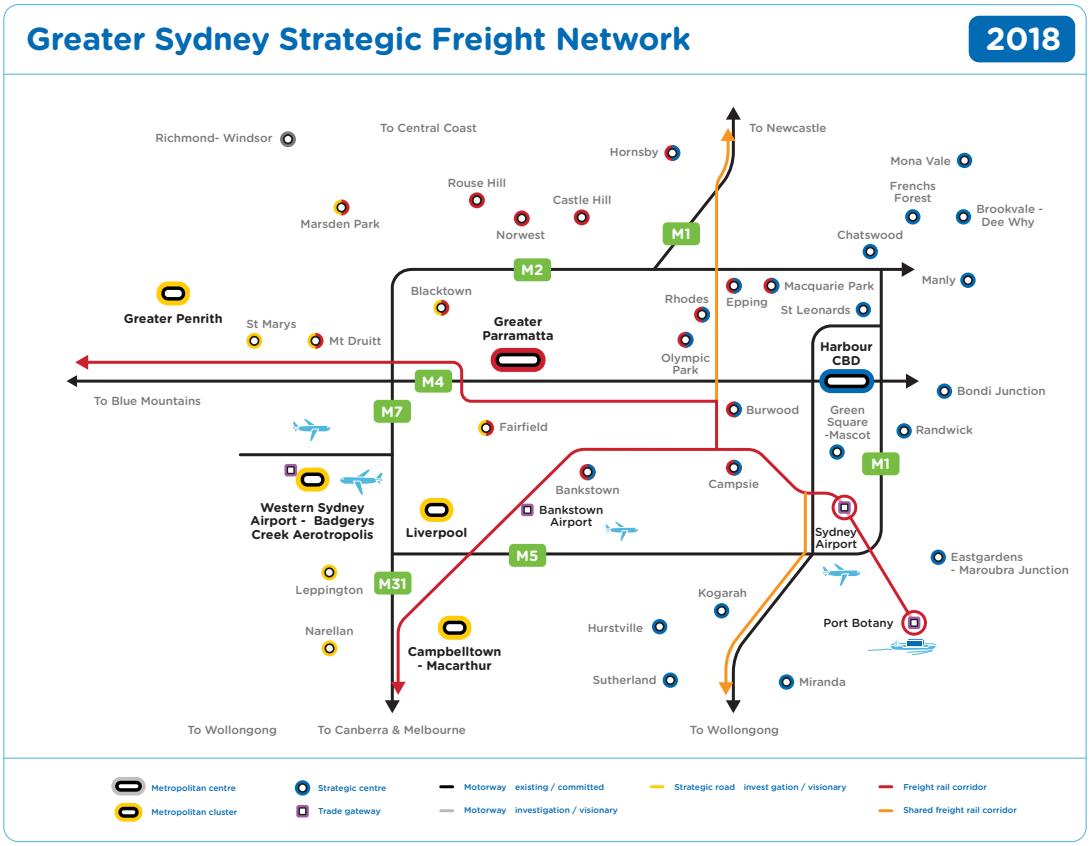


Figure 44: Current/committed Greater Sydney strategic freight network

The current strategic freight network is formed by the strategic road network, which supports freight movements to centres across Greater Sydney, between Port Botany and western Sydney and to regional NSW.

East-west road corridors form a key part of the freight network, with the M2, M4 and M5 linking the Eastern Harbour City and freight precincts in the west. A small share of containerised goods is moved by rail via the Port Botany rail line.

North-south connections are supported by the M1 in the Eastern Harbour City, A3 in the Central River City and M7 in the Western Parkland City, however the M1 is subject to access constraints for heavy vehicles.

The NSW Government is investing in or has committed to a number of initiatives to expand the freight network. WestConnex and Sydney Gateway will effectively extend the M4 corridor to Port Botany and boost capacity on the M5 corridor, better connecting Port Botany and freight precincts in western Sydney.

North-south connections in the most congested parts of the Eastern Harbour City will be improved by Western Harbour Tunnel, Beaches Link and the F6 Extension. This will enable freight movements to bypass centres and busy arterial and local roads, benefiting freight customers, passengers and local residents.

Strategic freight network in 10 years with initiatives for investigation

The 2026 network, with initiatives for investigation in place, will provide improved access to trade gateways in the emerging western city, additional rail capacity and protection of future corridors.

With Western Sydney Airport due to open in 2026, the NSW Government is investigating access to the airport with the Commonwealth Government, in addition to delivering the Western Sydney Infrastructure Plan. Future corridors, particularly in the Western Parkland City, are also proposed to be reserved by 2026 to ensure future links can be delivered and that land use is aligned with the long-term vision for the network.

By 2026, additional freight rail capacity is also proposed to support growth in containerised movements. Additional investment is proposed between Port Botany and Western Sydney and on the Main North Line and Main South Line corridors that connect Greater Sydney with other regions.

Strategic freight network in 20 years with initiatives for investigation

The 2036 network, with initiatives for investigation in place, will enable 24/7 freight rail access between ports and intermodal terminals.

East-west freight rail capacity will be boosted by the Western Sydney Freight Line. This will enable containerised goods to be moved by rail between Port Botany and the proposed Western Sydney Intermodal Terminal near WSA.

Should additional container port capacity be required, a rail connection between the Illawarra and Western Sydney would enable containers to be moved efficiently and reliably by rail between Port Kembla and intermodal terminals in Greater Sydney.

Strategic freight network in 40 years with visionary initiatives

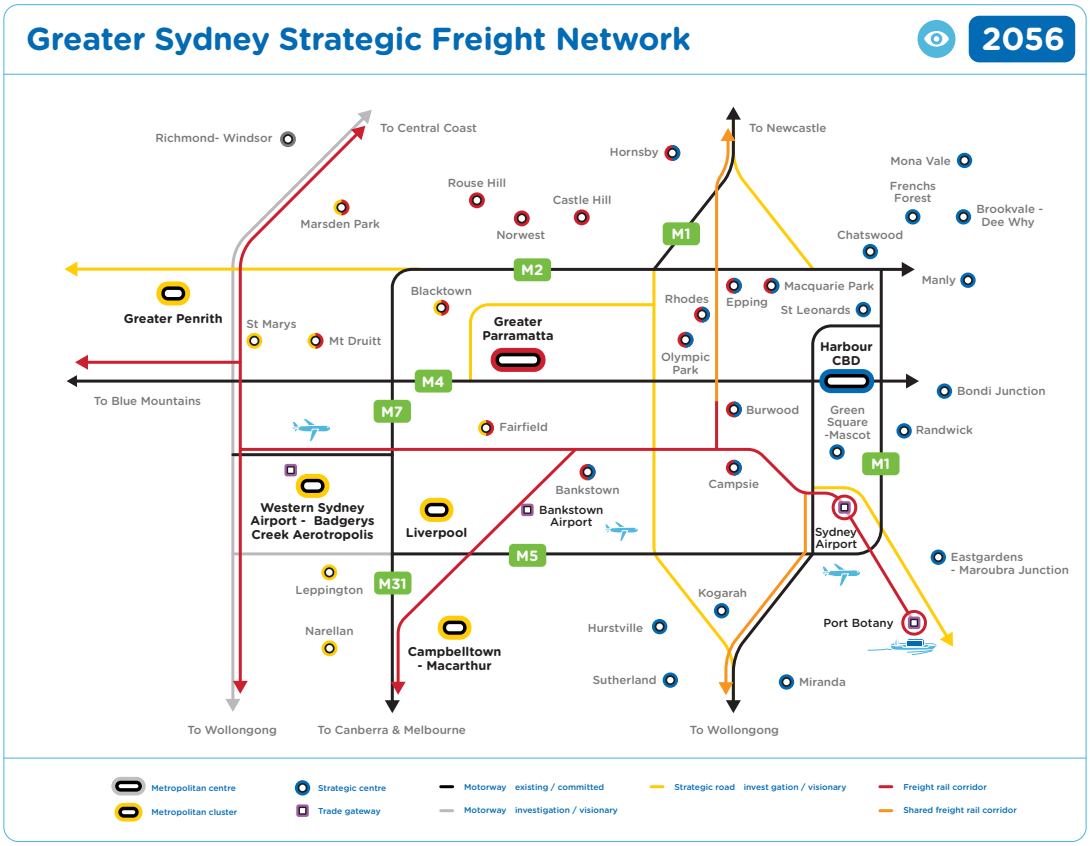


Figure 45: 2056 Greater Sydney strategic freight network vision

The 40 year visionary freight network will provide new north-south and east-west links in the Western Parkland City as it continues to grow. These links will support growth in freight volumes and help manage pressure on local roads by enabling more goods to be moved by rail or on strategic roads.

As demand for freight movements grows, significant investment in the Western Parkland City will be required given the growth of the region and the expected concentration of consolidation and distribution facilities in this area. The Outer Sydney Orbital, a proposed north-south road and rail bypass of Greater Sydney near the Western Economic Corridor, will enable goods, particularly from outside Greater Sydney, to efficiently access these facilities. It will also help reduce pressure on north-south connections in the Eastern and Central Cities.

A higher capacity north-south link in the Western Parkland City would be supported by additional capacity on the east-west road corridor between Liverpool and the Outer Sydney Orbital. A number of significant freight precincts are located near Liverpool, including the Moorebank Intermodal Terminal. Additional capacity on this corridor would support access to these facilities from the future Outer Sydney Orbital. This will help manage future pressure on the M7 corridor and reduce pressure on local roads.

Additional east-west capacity will be supported by the proposed Bells Line of Road – Castlereagh Connection, which would support capacity over the Great Dividing Range by improving access between western Sydney and the Bells Line of Road.

The 40 year visionary freight network will provide new north-south and east-west links in the Western Parkland City as it continues to grow.

CHAPTER

5

Service and infrastructure initiatives

To achieve the customer outcomes and future networks, we have identified and prioritised policy, service and infrastructure initiatives. These include:

- **Committed initiatives (0–10yrs) –** initiatives that either have committed funding, are for immediate detailed planning, or are part of key maintenance, urban renewal, local amenity or safety programs. Some projects included in this category are committed subject to business case and funding decision.
- **Initiatives for investigation (0–10, 10–20yrs) –** intended to be investigated for potential commitment or implementation within the next 20 years. Those listed in 0–10 horizon will be prioritised for more detailed investigation to determine if they are required in the next decade.
- **Visionary initiatives (20+ years) –** longer term initiatives that may be investigated within the next 10 years, but are unlikely to require implementation within 20 years.

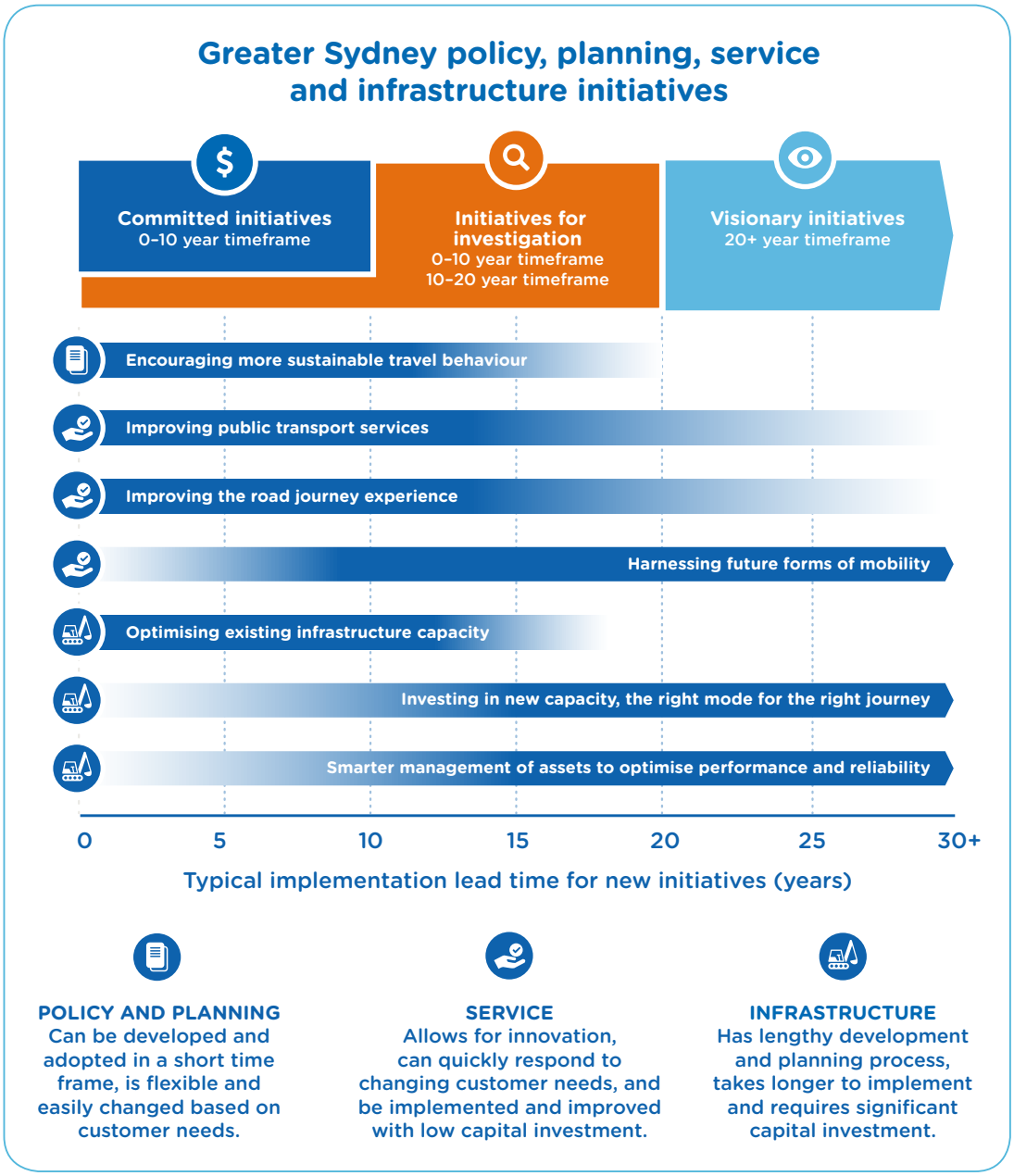


Figure 46: Timing of Greater Sydney initiatives

The policy, planning, service and infrastructure initiatives have been prioritised on the basis of delivering on existing commitments, addressing network constraints, supporting areas of growth and unlocking access to priority precincts by providing new transport links. Initiatives that are for investigation are subject to business cases and funding.

Our investment approach is designed to be flexible, responding to change and uncertainty. The timeframes are indicative, based on preliminary evidence, of when potentially these initiatives may be need to be implemented or committed. Further investigation of all initiatives will be undertaken within the next 10 years to ensure any major impacts in growth patterns or use are considered.

This chapter provides a snapshot of initiatives. The full list of initiatives, including strategic rationale and relationship with customer outcomes, is in chapter 8.

Sydney-wide policy and planning initiatives

COMMITTED INITIATIVES (0-10 YEARS)	
●	Transport Access Program (Improve access to train stations and ferry wharves)
●	Point-to-Point Assistance Package to provide more convenience and choice for customers while improving the efficiency of the transport network.
●	Expansion of Travel Choices Program to encourage customers to change travel behaviours to support better use of transport capacity.
●	Road Classification Review to support effective resource allocation by targeting State resources to the more important roads.
INITIATIVES FOR INVESTIGATION (0-10, 10-20 AND 20+ YEARS)	
●	Implementation of the Movement and Place Framework to balance the efficient movement of people and goods while supporting the liveability of places.
●	Development and implementation of Road Space Allocation Policy supporting efficient throughput of people and goods on movement corridors, requiring more priority for higher productivity vehicles such as buses and shared vehicles.
●	Development and implementation of a Greater Sydney Parking Guideline in collaboration with local government to ensure parking will be provided in a way that is consistent with the level of access by alternative modes of transport, including addressing the future provision of commuter car parks.
●	Implementation of road network planning and development strategies that include road safety principles for all users to support the attainment of NSW Government road safety targets.
●	Policy and regulation for Assisted Mobility Devices (AMDs) to improve the safety of passenger movements across the transport system and support the use of technology to improve accessibility.
●	Innovative walking and cycling initiatives – Development and testing of new approaches to encourage walking and cycling, especially for school age children.
●	Integrated Active Transport Policies to support long term integrated transport and land use planning: Ensuring walking and cycling is provided and integrated as part of upgraded road, rail, bus and transport interchange projects.
●	Policy and Regulation for Connected and Autonomous Vehicles to effectively integrate future forms of mobility into the transport network and ensure they are available to customers and support wider social outcomes.
●	Development and implementation of the Last Mile Freight Policy in collaboration with industry to encourage more freight movements in centres to take place outside of normal business hours.
●	Initiatives to further incentivise more customers to travel in off-peak periods and improve the liveability of centres by reducing road congestion.
●	Identification and protection of transport corridors for future transport links to support the delivery of future transport initiatives, financial sustainability of the transport network and provide greater certainty to the community.
●	Sustainable Transport Package to support NSW Government's objective of net zero emissions by 2050.

Sydney-wide service initiatives

COMMITTED INITIATIVES (0-10 YEARS)	
●	Introduction of higher frequency public transport services on selected corridors across Greater Sydney.
●	Investment in the 'More Trains, More Services' program and Sydney Growth Trains to provide more frequent and express services on selected corridors.
●	Trial of on-demand bus services on selected local bus routes to provide more convenience and choice for customers while improving the efficiency of the transport network.
INITIATIVES FOR INVESTIGATION (0-10, 10-20 AND 20+ YEARS)	
●	Introduction of higher frequency transport services across Greater Sydney: • Turn-up-and-go services (<5 minute frequencies) on city-shaping and city-serving corridors • High frequency (<10 mins) or on-demand services on centre-serving corridors
●	Service Changes to connect to new train lines
●	Metropolitan Interchange Program – Making interchanges safer, faster and more convenient to encourage public transport use. This includes developing centre-specific plans with bus operations requirement, making interchanges more attractive, and providing more services, such as shops, and major interchanges will include bicycle facilities.
●	Investment in Smart Roads – Implementation of improved road network management systems to enable live monitoring of network performance across all modes that use our roads.
●	Implementation of Mobility as a Service (MaaS) model in collaboration with industry.
●	Trial of artificial intelligence applications that actively gather data and use real time analytics to optimise capacity, planning and customer service.
●	Implementation of the Bus Head Start Program – Ensuring that residents of new release areas have access to high quality bus services that are fast, frequent and direct from day one of occupation.
●	Trial of on-demand ferry services on Sydney Harbour
●	Higher frequency public transport services

In focus: The reservation of corridors for further investigation

The NSW Government is planning for long term transport needs of Greater Sydney by identifying and protecting corridors of land that can be used to deliver transport and infrastructure in the future when it is needed. Major infrastructure corridor planning may involve protecting land within the corridor to avoid encroachment of urban development or planning so that future infrastructure does not inhibit new development opportunities. This is all about smart growth and making sure communities have the right transport and infrastructure delivered when they need them.

Community engagement is a key part of the corridor reservation process, as it ensures that local constraints and opportunities are fully understood. This will allow the Government to make more informed decisions around the exact alignment mode or type of infrastructure required within the corridor. Reserving corridors doesn't mean automatic acquisition of houses, it means the NSW Government is thinking long term about areas that might be needed for infrastructure. Acting early, engaging the community, and having an open and transparent process allows certainty for the community and all levels of government when making land use decisions or purchasing land.

Transport for NSW is already investigating corridors of land in the Western Parkland City for the delivery of the South West Rail Link Extension, North South Rail Link, Outer Sydney Orbital, Bells Line of Road- Castlereagh Connection and Western Sydney Freight Line. The NSW Government will continue to consult with communities and landowners on the protection process, the alignment and delivery for the final corridors.

In focus: Smart Roads

The NSW Government is rolling out smart motorways to improve the experience of our road customers. Smart motorways do this through making the most of current technologies:

- Traffic monitoring tools to enable improved and better integrated network operation
- Variable speed and lane use signs and incident detection tools such as cameras to improve incident management and road safety
- Ramp meters (signals) to control and smooth traffic flows to keep traffic moving and improve travel times, reliability and safety for all road users
- Variable message signs that provide real-time information to customers so that they can make informed travel choices.

Smart motorway schemes have successfully reduced the occurrence and severity of congestion and delivered improved travel reliability, efficiency and safety in Melbourne, Brisbane, and cities in New Zealand, USA and Europe.

The M4 Motorway (Lapstone to Mays Hill) will be NSW's first operating full smart motorway with staged construction commencing in August 2017 and final commissioning planned for 2020. Roads and Maritime Services is planning smart motorway improvements across a range of projects, including NorthConnex, WestConnex, Western Harbour Tunnel, Beaches Link, M12 Airport Motorway, Western Distributor, General Holmes Drive and Southern Cross Drive, and the Princes Motorway and Pacific Motorway upgrades. On regional motorways the level of technology will vary depending on the severity of congestion and need for improved incident management tools.

The NSW Government will continue to ensure that investments add value for all road customers as new technologies such as connected and automated vehicles become more commonplace.

For more information on the M4 Smart Motorway project see:
www.rms.nsw.gov.au/projects/sydney-west/m4/index.html

Greater Sydney infrastructure initiatives

Committed initiatives (0–10 years)

Over the next 10 years the NSW Government will improve the capacity and journey time of transport services, provide new transport links to support growth, invest in road-based transport to unlock access to growing areas, make key improvements to the strategic freight network and upgrade local roads, walking and bicycle paths.

In the **Eastern Harbour City,** our focus will be improving capacity on constrained links and optimising journey times on the transport corridors serving the Harbour CBD and surrounding centres. Key initiatives include:

- Sydney Metro Northwest
- Sydney Metro City and Southwest
- CBD and South East Light Rail
- Northern Beaches B-Line
- Western Harbour Tunnel and Beaches Link (subject to Final Business Case and funding)
- F6 Extension Stage 1 (subject to Final Business Case and funding)
- Northern Beaches Hospital road upgrades
- Sydney Airport road upgrades
- Parramatta Road and Victoria Road public transport improvements

In the **Central River City**, we will deliver new mass transit, motorway links and city-serving transport to improve 30 minute access to centres by public transport, particularly Greater Parramatta, support more efficient freight movements and support the creation and renewal of great places. Initiatives include:

- Sydney Metro West (subject to Final Business Case and funding)
- Parramatta Light Rail Stage 1 (Westmead to Carlingford) and Stage 2 (subject to Final Business Case and funding)
- Victoria Road public transport improvements
- WestConnex
- NorthConnex

In the **Western Parkland City**, we will invest in initiatives to support the initial growth of the WSA-Badgerys Creek Aerotropolis and surrounding areas. Initiatives include:

- Western Sydney Infrastructure Plan (in collaboration with the Commonwealth)
- Western Sydney Growth Roads Program
- North South Rail Link in Western Parkland City between St Marys and WSA-Badgerys Creek Aerotropolis (subject to Final Business Case and funding in collaboration with the Commonwealth)
- Upgrades to the Blue Mountains Line, to accommodate our new fleet of intercity trains and provide reliable, comfortable and accessible services to customers
- Access to Moorebank Intermodal Terminal (a Commonwealth initiative)

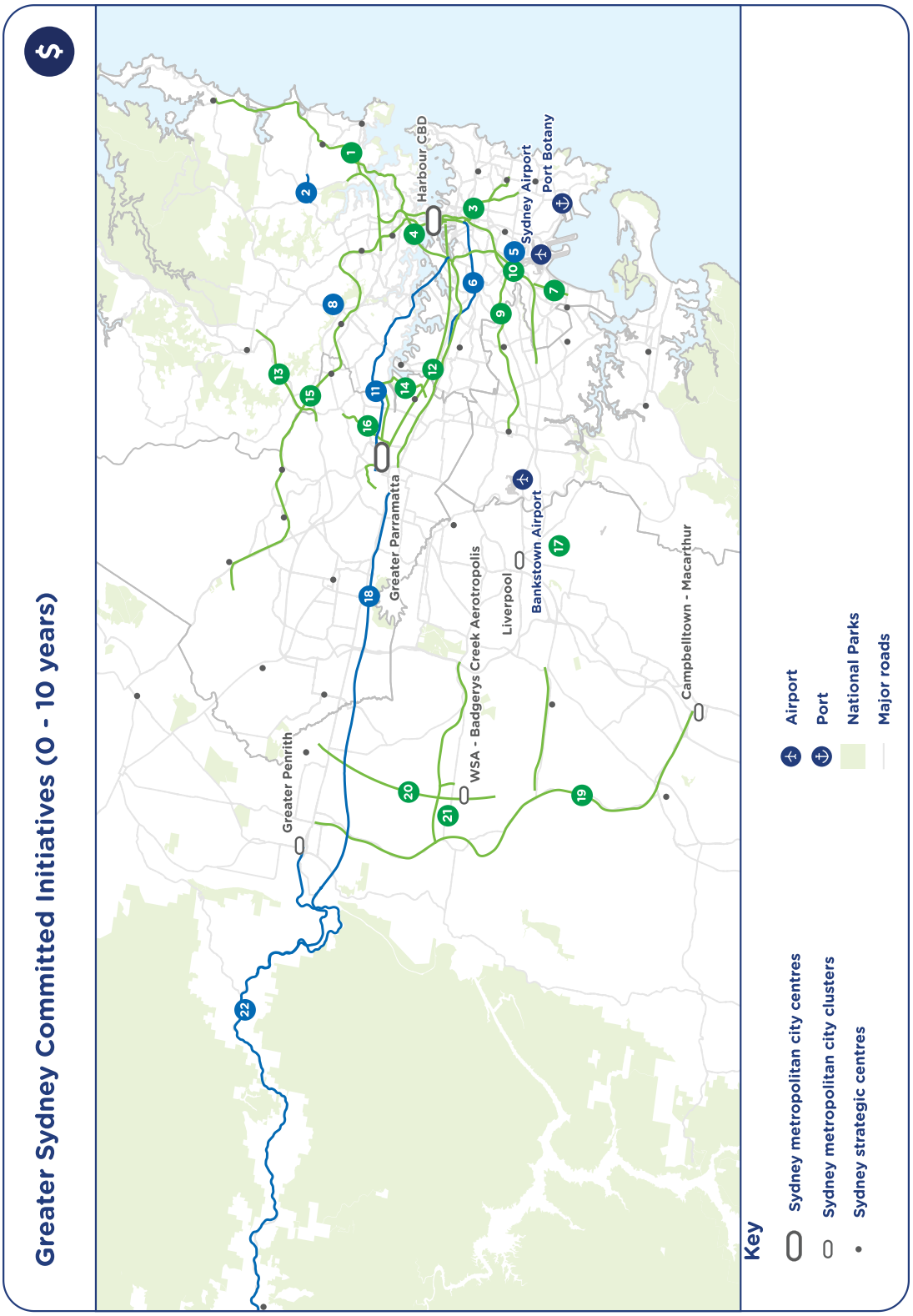


Figure 47: Committed initiatives (0–10 years)

Greater Sydney Committed Initiatives (0 – 10 years)

New Infrastructure

- **1.** Northern Beaches B-line
- **3.** CBD & South East Light Rail
- **4.** Western Harbour Tunnel and Beaches Link*
- **7.** F6 Extension – Stage 1 West Connex to President Ave, Kogarah*
- **9.** Sydney Metro City and Southwest
- **10.** WestConnex
- **12.** Sydney Metro West*
- **13.** NorthConnex
- **14.** Parramatta Light Rail – Stage 2*
- **15.** Sydney Metro Northwest
- **16.** Parramatta Light Rail – Stage 1
- **17.** Access to Moorebank Intermodal Terminal†
- **19.** Western Sydney Infrastructure Plan including the new M12°
- **20.** North-south Rail link in Western Parkland City: St Marys – Western Sydney Airport – Badgery's Creek Aerotropolis°
- **21.** Western Sydney Growth Roads Program

Major Infrastructure upgrades

- **2.** Northern Beaches Hospital road upgrade
- **5.** Sydney Airport road upgrades
- **6.** Parramatta Road public transport improvements
- **8.** Macquarie Park Interchange and precinct improvements†
- **11.** Victoria Road public transport improvements
- **18.** M4 Smart Motorway
- **22.** Upgrade to Blue Mountains Line

Sydney-wide projects/programs

Priority Cycleway links in the Central River City

Ferry Fleet Replacement Program, including upgraded services on Parramatta River Ferries

Priority Cycleway links in inner Sydney

New Intercity Fleet

Priority Cycleway links in the Western Parkland City

New and replacement buses

Sydney-wide projects/programs

Transport Access Program (Improve access to train stations and ferry wharves)

Cycling and Pedestrian Infrastructure

Public Transport passenger service improvements

Pinch Point Program

Council partnership program to improve
local walking and cycling connections

Safer Roads Program

Bus Priority Infrastructure Program

* Subject to final business case and funding

° Subject to final business case and funding in collaboration with the Commonwealth

† In collaboration with the Commonwealth

‡ For priority planning in collaboration with the Commonwealth

In focus: Western Sydney Rail

New passenger rail in Western Sydney will play a major role in connecting to the airport and shaping the future growth and development of the Western Parklands City with the Australian and NSW governments jointly committing to delivering the first stage of the North South Rail Link from St Marys to Badgerys Creek Aerotropolis via Western Sydney Airport.

The commitment is part of the Western Sydney City Deal – a 20 year agreement between the three levels of government to deliver a vision for Western Sydney as part of an integrated planning and city-shaping approach.

The new North South Rail Link will create the spine of the Western Parkland City and play a vital role in bringing people closer to job opportunities, health, education and leisure activities. New train stations will support development of higher density housing with great transport access, meaning shorter travel times, less reliance on cars and less congestion on roads.

As a first step, the Australian and NSW Governments will each contribute up to $50 million towards a business case process for Western Sydney Rail, in consultation with local government.

This business case and market engagement process will consider:

- staging and station location options
- opportunities across Western Sydney to support long-term planning for housing and employment
- detailed transport demand
- detailed economic benefits and value sharing opportunities, and
- cost estimates based on detailed engineering work required for different types of rail service, such as rapid metro or light metro.

The Australian and NSW Governments will be equal partners in funding the first stage of the North South Rail Link and have a shared objective to connect rail to Western Sydney Airport in time for opening in 2026, informed by the business case.

This commitment follows the joint Scoping Study to determine a long-term Preferred Network that sets out a vision for passenger rail to service both Western Sydney and Western Sydney Airport.

Protecting land for future rail corridors will be critical to implementing the Preferred Network with corridor protection a key recommendation of the Scoping Study.

The community will continue to be involved as governments plan for Western Sydney's rail future.

View the project here: https://www.transport.nsw.gov.au/projects/current-projects/western-sydney-rail-needs-scoping-study

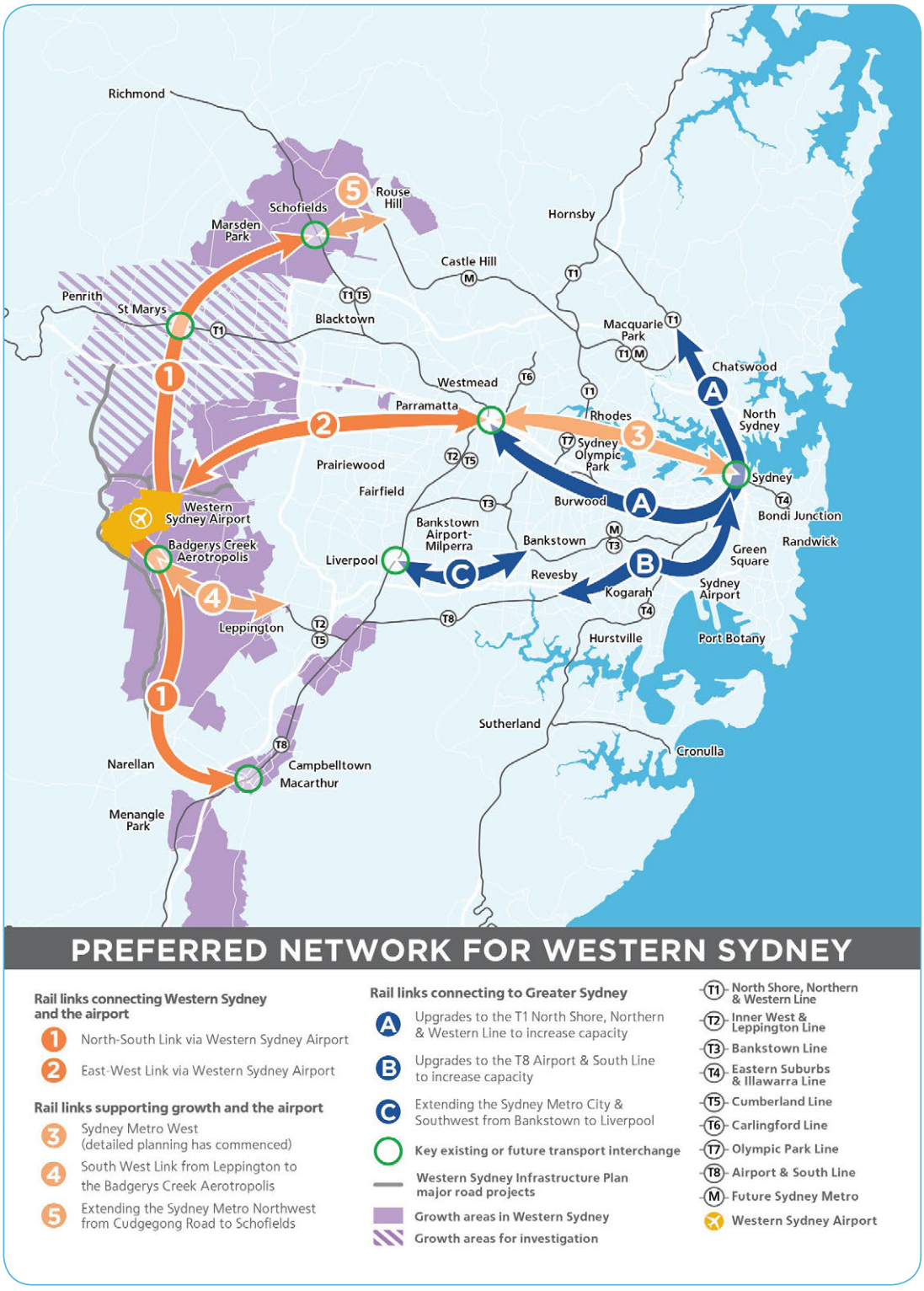


Figure 48: Western Sydney Rail – Preferred network

Across **Greater Sydney**, we will continue investing in infrastructure that improves the safety of our transport network, including upgrades to stations, wharfs and bus stops and deploying smart technology on selected motorways to address pinch-points and reduce congestion. We are also investing in priority bicycle and walking infrastructure and working with local government, to ensure our communities are safe, walkable, and provide more opportunities for active transport.

Initiatives for investigation (0–10 years)

Further infrastructure initiatives will be investigated for potential commitment or implementation within the next 20 years. Initiatives listed in 0–10 horizon will be prioritised for more detailed investigation to determine if they are required in the next decade. These initiatives include upgrades to road and rail corridors to improve capacity and reliability, investigations into strategic public transport links, analysis and identification of potential corridors for future transport solutions, and improvements in the strategic freight network and overall safety of the Greater Sydney transport network.

In the **Eastern Harbour City**, we will investigate upgrades to road and rail corridors to improve capacity and reliability including:

- Train improvements on T8 Airport Line, T4 Illawarra Line (including South Coast Line) and T1 Western Line as part of the More Trains, More Services program, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning)
- East-west public transport connection from Mona Vale to Macquarie Park
- F6 Extension – Kogarah to Loftus (for immediate detailed planning)
- Heathcote Road improvements – M5 to M1
- Duplication of Port Botany freight rail line and Foreshore Road upgrade as part of Port Botany Precinct Planning (in collaboration with Commonwealth)
- Northern Sydney Freight Corridor Stage 2

In the **Central River City**, we will investigate strategic public transport links around Greater Parramatta to improve 30 minute access, including the prioritisation of on-road public transport and bus service improvements. Specific initiatives include:

- Train improvements on T1 Western Line as part of the More Trains, More Services program, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning)
- Parramatta inner ring road

In the **Western Parkland City**, we will examine potential early investment in strategic links. Another priority will be assessing potential infrastructure upgrades to support rapid bus links between centres to shape a sustainable urban form and support access to WSA. Specific initiatives include:

- Train improvements on T8 Airport Line, and T1 Western Line as part of the More Trains, More Services program, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning)
- Leppington to WSA-Badgerys Creek Aerotropolis rail link (for priority planning in collaboration with the Commonwealth)
- St Marys to Cudgegong Road rail link (for priority planning in collaboration with the Commonwealth)
- WSA-Badgerys Creek Aerotropolis to Campbelltown-Macarthur rail link (for priority planning in collaboration with the Commonwealth)
- Infrastructure to support rapid bus connections between WSA-Badgerys Creek Aerotropolis and Greater Penrith, Liverpool, Blacktown and Campbelltown-Macarthur (for priority planning in collaboration with the Commonwealth)
- WSA-Badgerys Creek Aerotropolis to Parramatta rail link (in collaboration with the Commonwealth)
- Service improvements on the Richmond Line
- Suburban passenger train improvements south of Macarthur (including consideration of passenger services to support growth at Wilton)
- Appin and Picton Road improvements
- Bells Line of Road improvements
- Protection of future corridors

We will investigate ways to improve reliability and journey times for freight movements between regional NSW and Greater Sydney through upgrades to the Southern Sydney Freight Line and protection of future transport corridors.

Across **Greater Sydney**, we will investigate service wide capacity enhancements through the More Trains, More Services program. We will also continue to prioritise infrastructure investment that improves the safety of customers across Greater Sydney, investing in new roads that are designed to 4 or 5 star standard, deploying smart technology on additional motorways and investing in safety improvements at transport interchanges. Working with local councils, we will investigate further improvements to walking and cycling infrastructure, focusing on improving access to metropolitan and strategic centres.

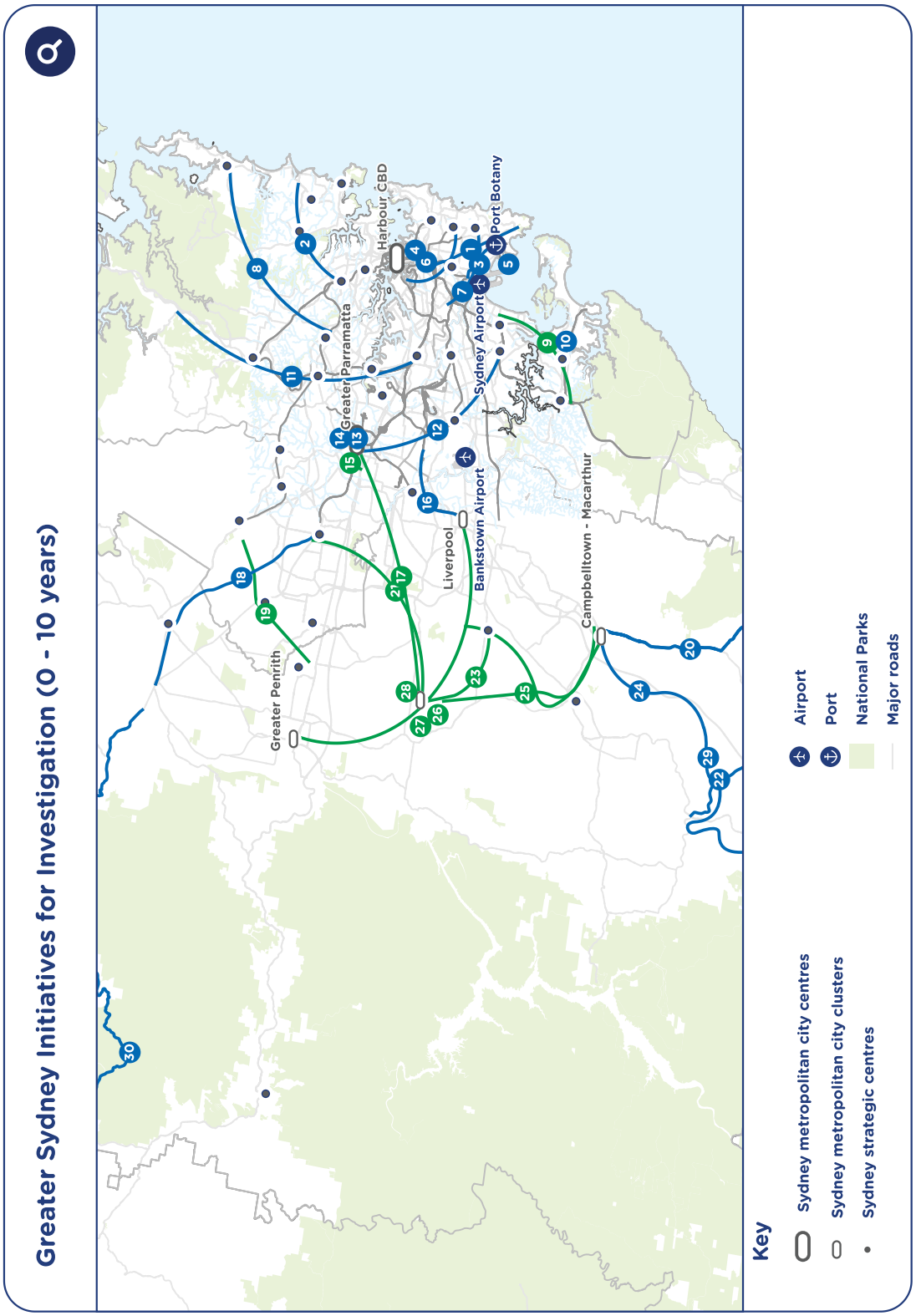


Figure 49: Initiatives for investigation (0–10 years)

Greater Sydney Initiatives for Investigation (0 – 10 years)

New Infrastructure

- **9.** F6 Extension – Kogarah to Loftus
- **15.** T-way to T-way Link
- **17.** Western Sydney Airport – Badgerys Creek Aerotropolis – Parramatta Rail Link†
- **19.** North-south Rail Link in Western Parkland City: Cudgegong Road – St Marys‡
- **21.** Infrastructure to support Rapid Bus Connections and Improved Bus Connections between Western Sydney Airport – Badgerys Creek Aerotropolis and Penrith, Liverpool, Blacktown and Campbelltown – Macarthur
- **23.** Leppington to Western Sydney Airport – Badgerys Creek Aerotropolis Rail Link‡
- **25.** North-south Rail Link in Western Parkland City: Western Sydney Airport – Badgerys Creek Aerotropolis – Campbelltown-Macarthur‡
- **26.** Western Sydney Aiport – Badgerys Creek Aerotropolis CAV zone
- **27.** Western Sydney Fuel Pipeline
- **28.** Western Parkland City Bus Interchange

Major Infrastructure upgrades

- **1.** Green Square to La Perouse Rapid Bus Link
- **2.** Improved bus services between Northern Beaches and Chatswood
- **3.** Duplication of Port Botany freight rail line†
- **4.** More Trains, More Services program
- **5.** Foreshore Road Upgrade†
- **6.** Harbour CBD to Green Square Mass Transit Link
- **7.** Eastern Suburbs to Inner West Rapid Bus Links
- **8.** East-west public transport connection from Mona Vale to Macquarie Park
- **9.** Sutherland to Cronulla Active Transport Link
- **10.** Northern Sydney Freight Corridor Stage 2
- **11.** Parramatta to Bankstown to Hurstville / Kogarah Rapid Bus Link
- **12.** Parramatta Inner Ring Road
- **13.** Improved bus services between North of Parramatta and centres to the south of Parramatta
- **14.** Southern Sydney Freight Line improvements†
- **18.** Improved services on the Richmond Line
- **20.** Improved bus connections between South-west Sydney and Illawarra
- **22.** Appin and Picton Road improvements
- **24.** Sydney-Canberra Faster Rail Improvements
- **29.** Passenger train improvements to support growth at Wilton
- **30.** Bells Line of Road Improvements

Sydney-wide projects/programs

Roll-out of electric vehicles charge points

Identification and protection of corridors for future transport links

Sydney-wide projects/programs

Safe cycleway network within 10km of Parramatta

Additional cruise ship capacity

Heathcote Road improvements

Inner Sydney Regional Bike Network within 10km of the Harbour CBD

Bus priority access program for centres

Bus priority infrastructure to support new services

Centres and Placemaking Enhancement Package

Cycling improvements around metropolitan and strategic centres and on the Principal Bicycle Network

Investment in Smart Roads

Walking improvements around metropolitan and strategic centres

Precinct Improvement Program

Expanded 40km/h High Pedestrian Activity Area Program

'Pedestrian Safe System' Program

* Subject to final business case and funding

° Subject to final business case and funding in collaboration with the Commonwealth

† In collaboration with the Commonwealth

‡ For priority planning in collaboration with the Commonwealth

In focus: More Trains, More Services and its role in improving the existing train network

Sydney's existing train network will continue to be the most significant component of Greater Sydney's public transport system for customers.

Customers will see staged capacity increases, including significant upgrades to ensure peak hour crowding does not impact reliability by mid-2020s.

More Trains, More Services is a service capacity upgrade program designed to transform the existing rail system using changes in technology and innovation to create integrated, automated, high capacity turn up and go services for our customers. This program has the ability to transform Sydney's busiest train lines over the next 10 years and beyond, through digital systems, advanced signalling and infrastructure upgrades.

The More Trains, More Services program is staged to be able to address urgent priorities, whilst establishing a strong foundation for future network growth. The program is designed to deliver an integrated network that supports seamless connectivity with other modes of transport into the future, enabling the delivery of the Future Transport Strategy. More Trains, More Services demonstrates the Government's commitment to develop an integrated transport system by investing in both roads and public transport.

Over the next decade the focus of investigations into the More Trains, More Services program will involve greater use of advanced signalling and control technologies to maximise the efficiency of train movements, infrastructure works to increase the capacity of Central Station and the transformation of the T1 Western, T4 Illawarra (including the South Coast Line) and T8 Airport lines.

Initiatives for investigation (10–20 years)

Additional infrastructure initiatives are intended to be investigated for potential commitment or implementation within the next 20 years. In the **Eastern Harbour City**, we will investigate investments in higher capacity public transport links in selected parts of the City to improve 30 minute access and to support urban growth. These initiatives include:

- Mass transit / train link to South East
- Light rail extension to Maroubra Junction
- Light rail to Bays Precinct

In the **Central River City**, we will focus on the development of high capacity mass transit links around Greater Parramatta to boost 30 minute access, particularly from the north and south. We will also investigate initiatives to improve the city-serving transport network around Parramatta to support the quality of places in the city. Initiatives include:

- Parramatta to Epping mass transit / train link
- Parramatta to Kogarah mass transit / train link
- Parramatta Light Rail extensions
- Parramatta outer ring road

In the **Western Parkland City**, we will examine measures to support population and jobs growth through higher capacity public transport and road links. We will also investigate initiatives to support the efficient movement of freight between the city and ports and regions. Initiatives include:

- Outer Sydney Orbital (motorway and freight rail) from Great Western Highway and Western Line to WSA-Badgerys Creek Aerotropolis
- Western Sydney Freight Line
- Additional capacity on Southern Sydney Freight Line (in collaboration with Commonwealth)

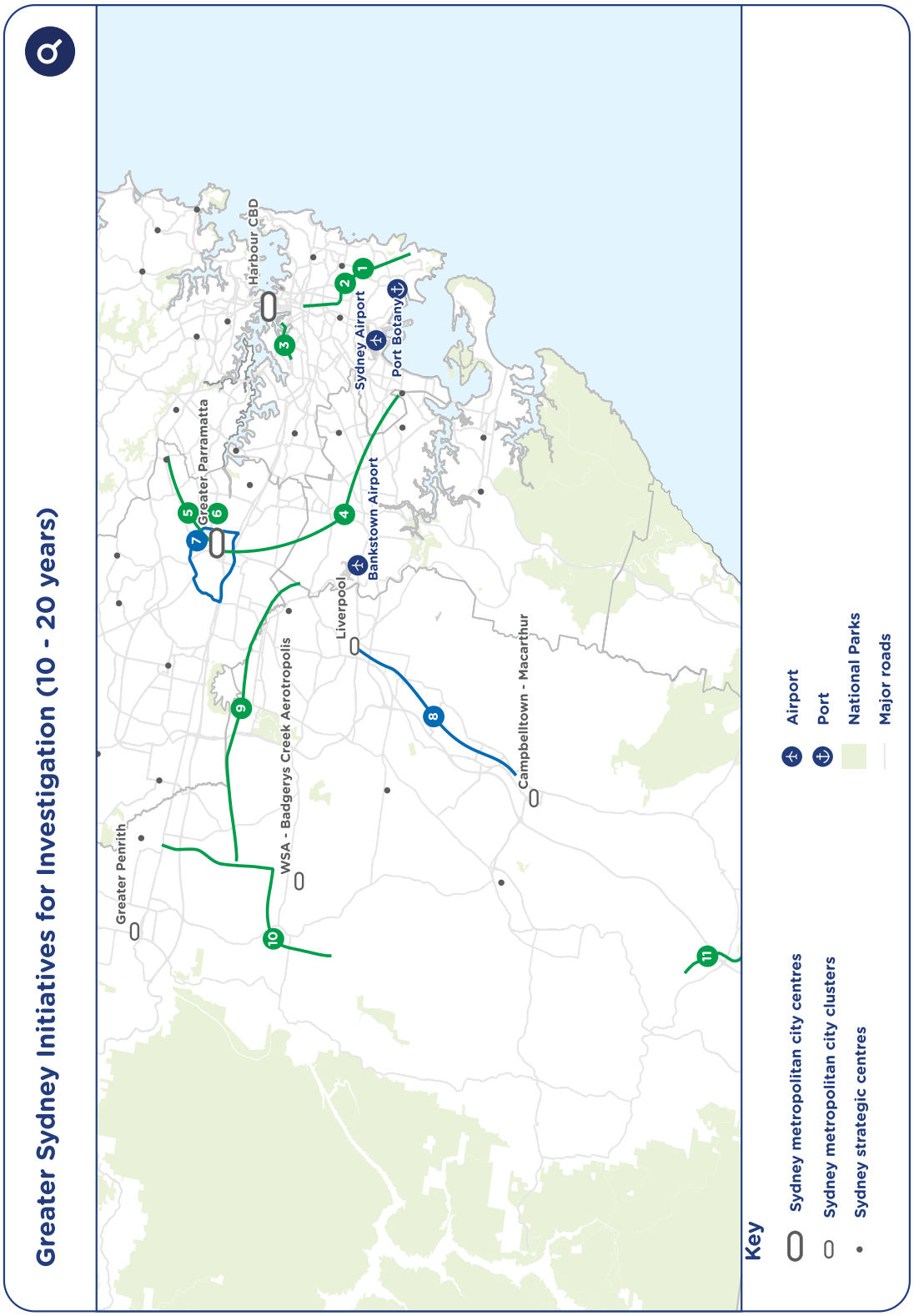


Figure 50: Initiatives for investigation (10–20 years)

Greater Sydney Initiatives for Investigation (10 – 20 years)

New Infrastructure

- **1.** Light Rail Extension to Maroubra Junction
- **2.** Mass transit / train link to South East
- **3.** Light Rail to Bays Precint
- **4.** Parramatta to Kogarah Mass Transit / Train Link
- **5.** Parramatta to Eppin Mass Transit / Train Link
- **6.** Parramatta Light Rail Extensions
- **9.** Western Sydney Freight Line
- **10.** Outer Sydney Orbital from Great Western Highway to Western Sydney Airport – Badgerys Creek Aerotropolis
- **11.** Completion of Maldon to Dombarton railway line

Major Infrastructure upgrades

- **7.** Parramatta Outer Ring Road
- **8.** Additional capacity on Southern Sydney Freight Line†

Sydney-wide projects/programs

Further investment in cycling connections within 5km of strategic centres

Major cycleway connections between centres on the Principal Bicycle Network

Safe cycleway network within 10km of Greater Penrith, Liverpool, Campbelltown-Macarthur and WSA Badgerys Creek Aerotropolis

Corridor protection for higher speed connections

* Subject to final business case and funding

° Subject to final business case and funding in collaboration with the Commonwealth

† In collaboration with the Commonwealth

‡ For priority planning in collaboration with the Commonwealth

Visionary initiatives (20+ years)

Visionary initiatives are those that will we investigate in the longer-term to support the transport and land use vision for Greater Sydney in 2056.

In the **Eastern Harbour City** we will examine ways of addressing longer-term capacity constraints on selected corridors through new supporting mass transit/train and road links. Initiatives include:

- Extension of potential South East mass transit / train link to Miranda
- Address long-term capacity constraints on the Pacific Highway
- Address long-term capacity constraints to Port Botany and South East

In the **Central River City** we will explore further investments in north-south transport links near Greater Parramatta to improve access and support the creation and renewal of great places. These include:

- Parramatta to Norwest mass transit / train link
- Mass transit / train link Macquarie Park to Hurstville via Rhodes
- Central City strategic road corridor

In the **Western Parkland City** we will examine higher capacity transport connections between centres to support population and jobs growth, including:

- Sydney Metro City and Southwest extension to Liverpool
- Outer Sydney Orbital (motorway and freight rail) from Great Western Highway and Western Line to Central Coast
- Outer Sydney Orbital (motorway and freight rail) from WSA-Badgerys Creek Aerotropolis to M31 Hume Motorway and South Line
- Outer Sydney Orbital (motorway) from M31 Hume Motorway to Illawarra
- Bells Line of Road-Castlereagh Connection
- Delivery of Great Dividing Range long term solution
- WSA-Badgerys Creek Aerotropolis inner and outer ring roads
- M5 motorway extension from Liverpool to Outer Sydney Orbital

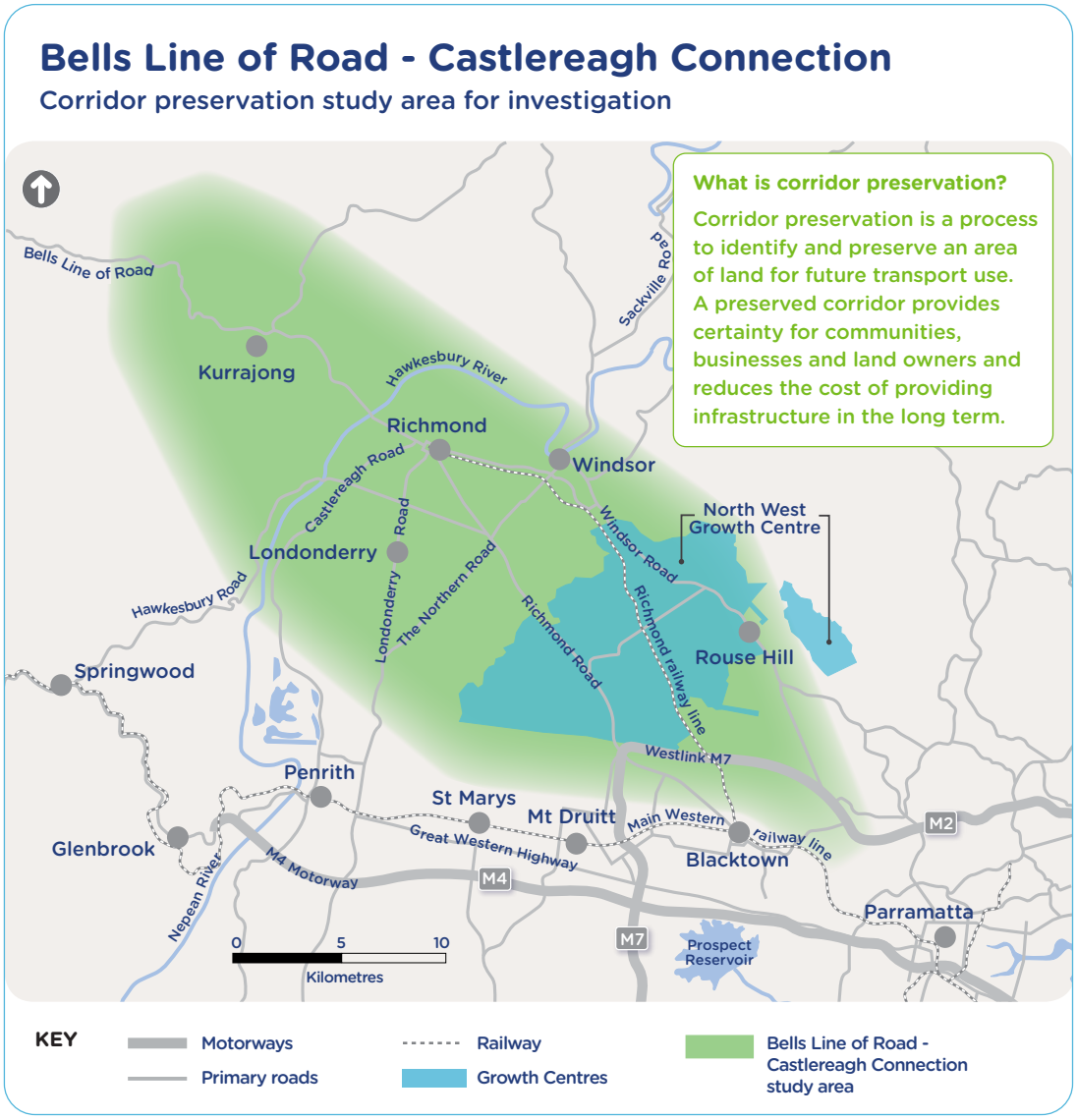


Figure 51: Bells Line of Road – Castlereagh Connection corridor preservation

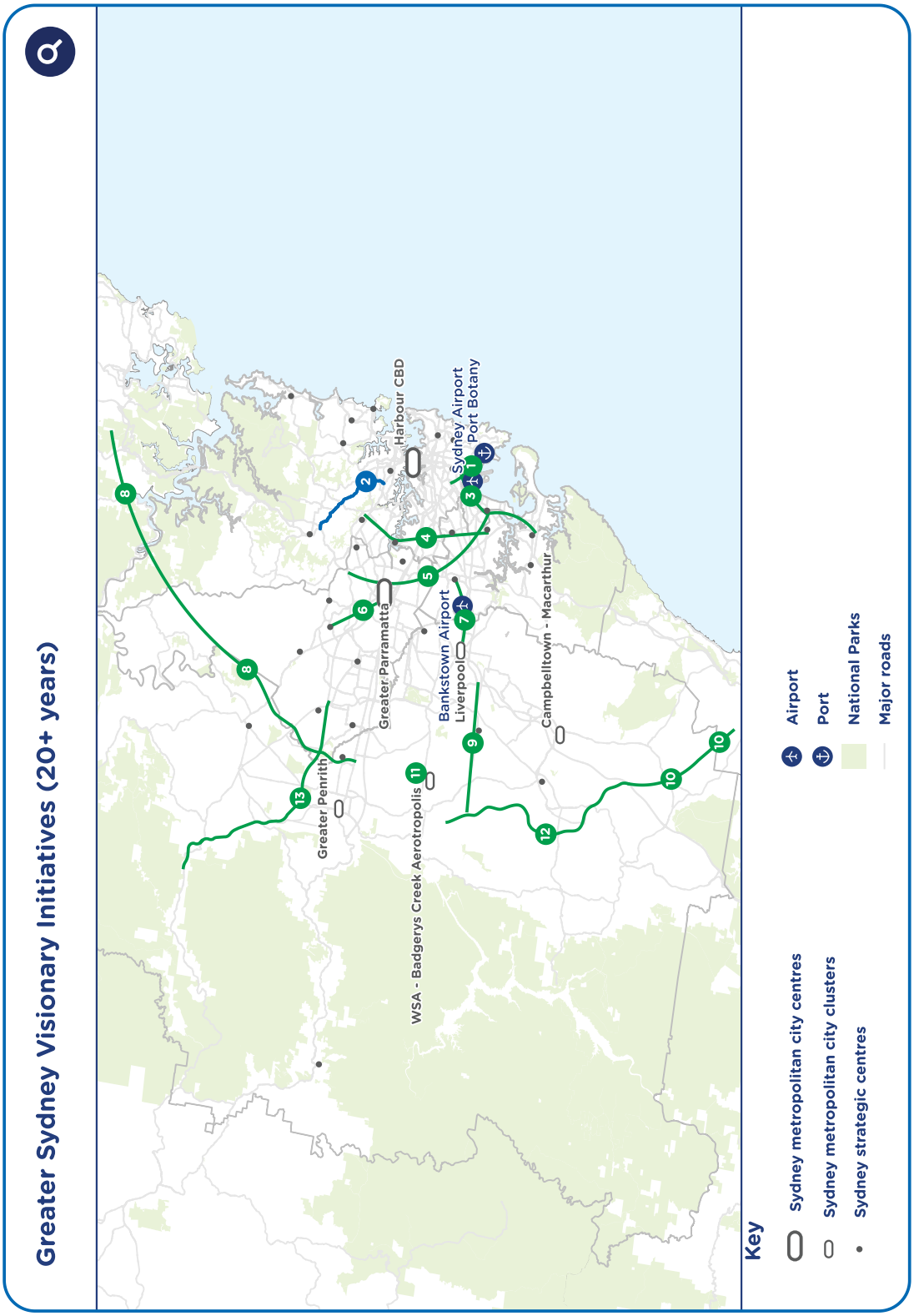


Figure 52: Initiatives for investigation (20+ years)

Greater Sydney Initiatives for Investigation (20+ years)

New Infrastructure

- **1.** Address long term capacity constraints to Port Botany and South East
- **3.** Extension of South East Mass Transit / Train Link to Miranda
- **4.** Train / Mass Transit Link Macquarie Park to Hurstville via Rhodes
- **5.** Central City Strategic Road Corridor (North Connex to Southern Sydney)
- **6.** Parramatta to Norwest Mass Transit / Train Link
- **7.** Sydney Metro City and Southwest Extension to Liverpool
- **8.** Outer Sydney Orbital from Great Western Highway to Central Coast
- **9.** M5 motorway extension from Liverpool to Outer Sydney Orbital
- **10.** Outer Sydney Orbital from Hume Motorway to Illawarra
- **11.** Western Sydney Airport – Badgerys Creek Aerotropolis Inner and Outer Ring Roads
- **12.** Outer Sydney Orbital from Western Sydney Airport – Badgerys Creek Aerotropolis to Hume Motorway
- **13.** Bells Line of Road – Castlereagh Connection

Major Infrastructure upgrades

- **2.** Address long term capacity constraints on the Pacific Highway

Sydney-wide projects/programs

Further investment in cycling connections within 5kms of strategic centres and key connections to the Principal Bicycle Network

* Subject to final business case and funding

° Subject to final business case and funding in collaboration with the Commonwealth

† In collaboration with the Commonwealth

‡ For priority planning in collaboration with the Commonwealth

Initiatives connecting Greater Sydney to the regions

People travel between Sydney, Newcastle, Central Coast and Wollongong for work, business, tourism, health and education. By 2056 this area will be home to a combined population of approximately 10 million people. The metropolitan areas of these regions also accommodate significant trade gateways which service freight across the State. Enhancing the transport connections between these cities will enable greater economic opportunities created by a combined population of 10 million people.

By 2056, NSW will be home to a combined population of 12.1 million people. To support connectivity across of all of NSW, the NSW Government has identified initiatives that will maintain and enhance the regional transport network. More detail on these initiatives is provided in the Regional NSW Services and Infrastructure Plan.

Connecting Sydney to the Global Gateway and Satellite cities

The demand for travel between Sydney and the cities of Newcastle, Canberra, Gold Coast, Brisbane and Melbourne will continue to grow as global connections become increasingly important. With recent significant investment in road infrastructure on the corridors linking these cities (Pacific and Hume Motorways), alternate public transport links have significant room for improvement in journey times to become competitive with car and air travel.

Emerging technologies for land based long distance travel are rapidly evolving however tested and proven methods of transport remain some time off and the previously federally investigated (2012) mode of high speed rail (HSR) was not deemed to be feasible until the 20+ year timeframe. Whilst the operation of emerging technologies are likely to be some way off, investigations into corridor preservation based upon the most constrained design criteria (HSR) should be investigated within the 10–20 year timeframe.

Another constraint for the implementation of higher speed connections is the requirement to navigate the complex urban environment and established transport network of Greater Sydney. To increase potential passenger catchment, it is recommended that any higher speed connection travelling through Greater Sydney enters from Campbelltown and Hornsby and passes through Parramatta (Central River City) where rapid connections to the metro network would provide access to the Eastern and Western Cities.

In the next decade it is recommended that Faster Rail corridor infrastructure investment programs be focused on Satellite and Global Gateway cities to achieve significant travel time savings. For Wollongong and Gosford the aspiration is for a 60 minute journey time. For the Global Gateway of Newcastle the travel time aspiration is 2 hours, while for Canberra it is under 3 hours. The Australian Government has recently announced that it will provide matched funding for the development of a strategic business case for Faster Rail in the Sydney to Newcastle corridor. These investments will be required independently of the introduction of higher speed connections which would appeal to different rail travel markets (i.e. less or no stops and potentially higher fares) and deliver benefits to both passenger and freight flows.

Access to the trade gateways of Newcastle port and Port Kembla from inland NSW will continue to be important for the next 40 years with the movement of coal dominating the rail transport task. The establishment of a 24-hour international airport in Western Sydney will also provide new opportunities for agriculture and passenger access from the Central West and Orana, and South East and Tablelands.

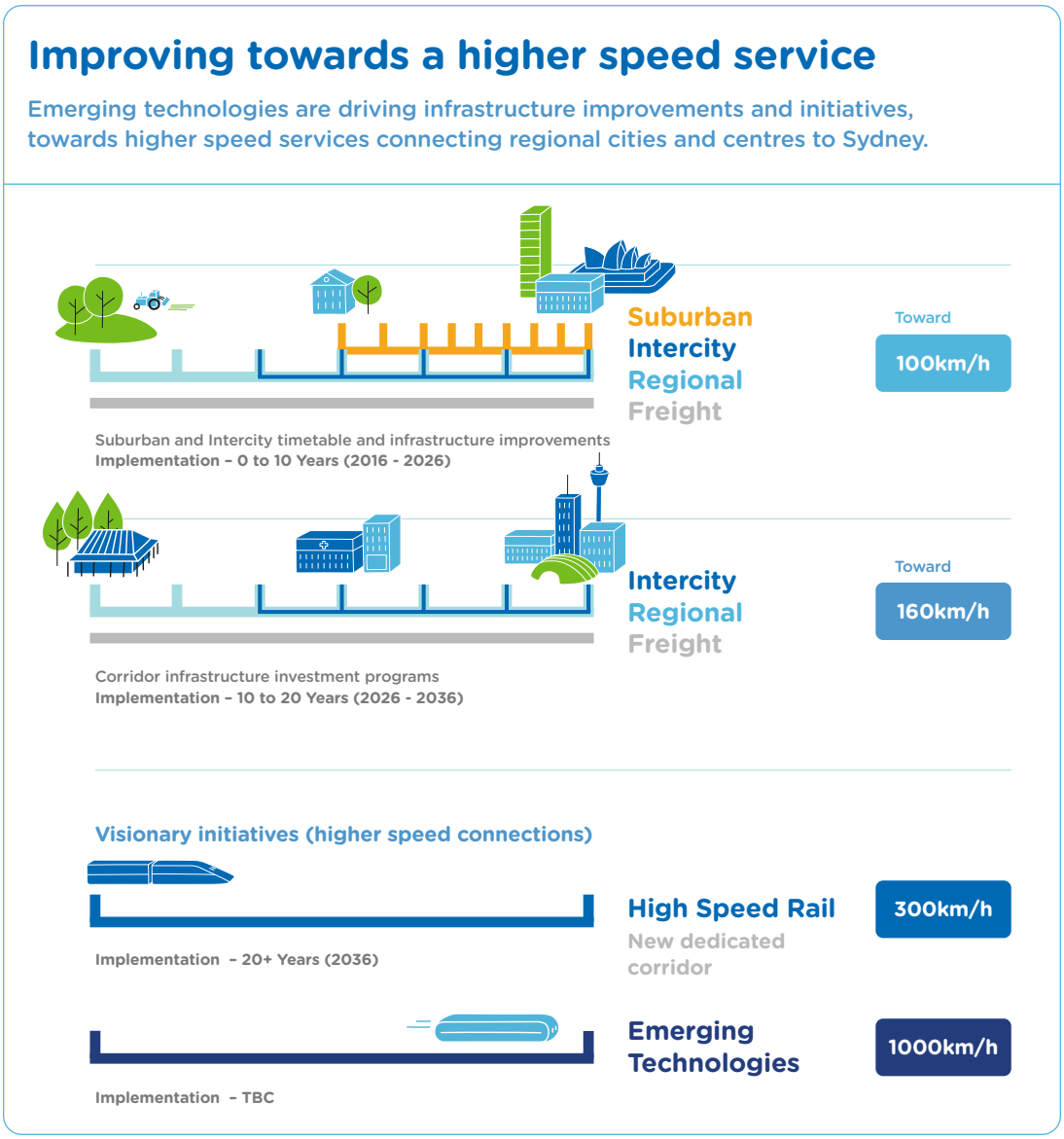


Figure 53: Options for connecting Global Gateway Cities to Sydney

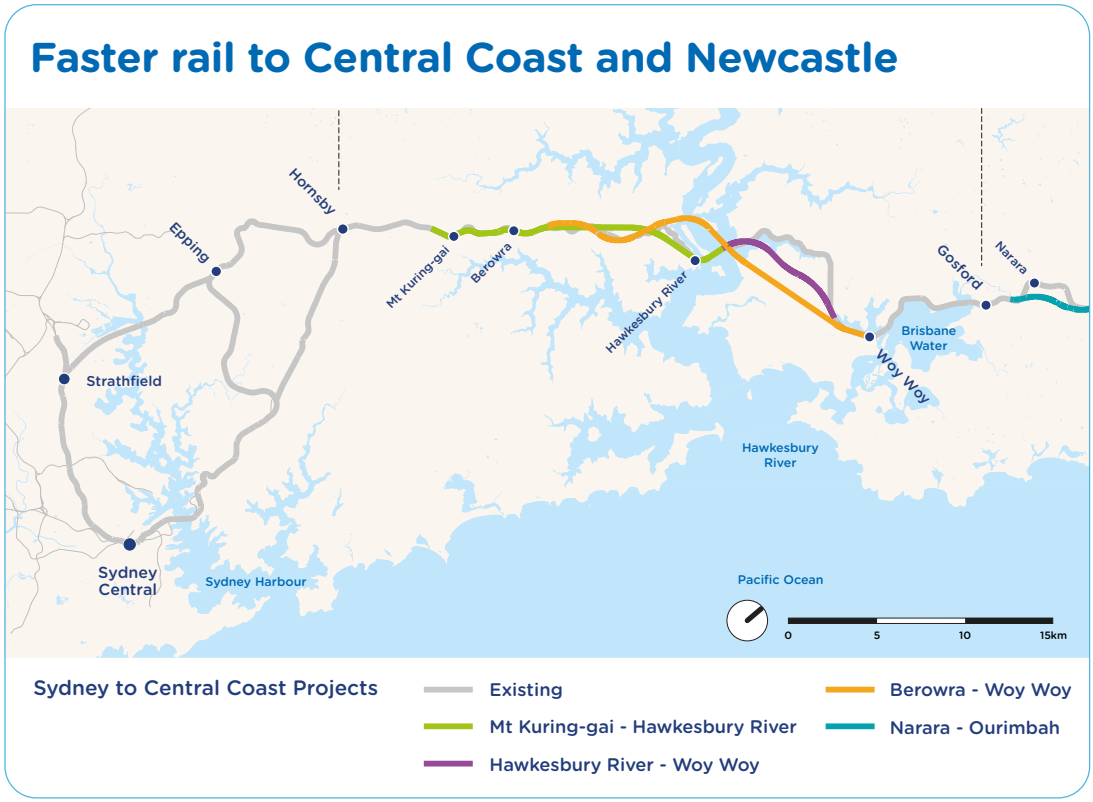


Figure 54: Potential Faster Rail improvements to the Central Coast and Newcastle rail line

Connecting Greater Sydney and the Central Coast

Gosford has been identified as a Satellite city of Greater Sydney reflecting its status as the key city of the Central Coast region. Strong population growth in the Central Coast over the next 40 years will see the region's relationship with Greater Sydney grow. This is reflected in the increased travel demand by both private vehicle and public transport expected between Greater Sydney and Central Coast each day.

Initiatives for investigation to better connect these regions include:

- New Intercity Fleet
- Delivering the Hub and Spoke model
- Delivering the Regional Rail Fleet Project
- Faster rail improvements between Sydney and Newcastle
- Freight Separation Program (Northern Sydney Freight Corridor)
- Outer Sydney Orbital
- Delivery of the NorthConnex link between the M1 and M2
- M1 Smart Motorway

Connecting Greater Sydney and the Illawarra

Wollongong has been identified as a Satellite City of Greater Sydney due to its proximity and improved road and rail initiatives. Improvements are identified to connect the region to the three cities of Sydney:

- New Intercity Fleet replacement program
- Faster Rail improvements between Sydney and Wollongong
- More Trains, More Services program between Sutherland and Hurstville to separate suburban passenger services from intercity services and freight rail movements
- High frequency limited stop transport services between Campbelltown and the Illawarra
- Lower frequency transport services from Wollondilly Shire to the Illawarra via the southern road corridors and the Outer Sydney Orbital (southern link)
- Investigation of the completion of the Maldon-Dombarton rail link between south western Sydney and the Illawarra
- Delivering the Hub and Spoke model
- Delivering the Regional Rail Fleet Project
- Increasing capacity on the Southern Sydney Freight Line
- Enhancing links on Appin Road between the growth areas of West Appin, Menangle Park and Mt Gilead to Wollongong and investigation of the use of bus priority measures along the corridor
- The Outer Sydney Orbital will also connect the Illawarra to Campbelltown
- M1 Princes Motorway improvements
- Princes Highway upgrade to 4 lanes and town bypasses
- M1 Princes Smart Motorway

Connecting Greater Sydney and the Southern Highlands

The Southern Highlands will mark a transition point between the Greater Sydney and Canberra catchments. The Southern Highlands will have a more dominant access to Sydney, particularly connecting to the Western Parkland City and Western Sydney Airport.

The M31 Hume Highway and the Main South freight and passenger rail line provide the regional road and rail corridor that connects the Western and Central City to the Southern Highlands and Canberra.

- New Intercity Fleet
- Delivering the Hub and Spoke model
- Delivering the Regional Rail Fleet Project
- Electrification of the intercity network to Goulburn
- Faster Rail improvements between Sydney and Canberra
- Increasing capacity on the Southern Sydney Freight Line
- Investigation of passenger rail link to Wilton
- Enhancing the road corridor
- M31 Hume Motorway/Highway improvements
- M31 Smart Motorway

Connecting Greater Sydney and the Blue Mountains

The Great Western Highway and the Main Western Rail Line over the Blue Mountains connect the Western Parkland City and Western Sydney Airport to the Central West and Orana Region. This corridor provides freight connections to Port Botany, Port Kembla and Newcastle port, and will provide access to the new Western Sydney Airport and the Western Parkland City. The Bells Line of Road connects the region to the Western and Central Cities and offers alternative freight connections to Greater Sydney.

- The More Trains, More Services program between Penrith and St Marys to separate suburban passenger services from intercity services and freight rail movements
- New Intercity Fleet and Regional Rail Fleet Project
- Ongoing improvements to Main Western Line
- Potential electrification of the intercity network to Bathurst
- Further investigation into re-opening of the 'Cowra Lines', which includes the Blayney to Demondrille line
- Ongoing improvements to assets (Bells Line of Road, Great Western Highway, Golden Highway)
- Inland NSW connections – Strategic examination of options to improve connectivity for freight from inland NSW to Sydney, Newcastle and/or Wollongong. It will consider existing roads such as Great Western Highway, Bells Line of Road, Golden Highway, Lachlan Valley Way, Castlereagh Highway and Mid-Western Highway as well as rail corridors Main Western, Dubbo-Newcastle, Cowra lines (including Blayney-Demondrille), Gulgong to Maryvale.

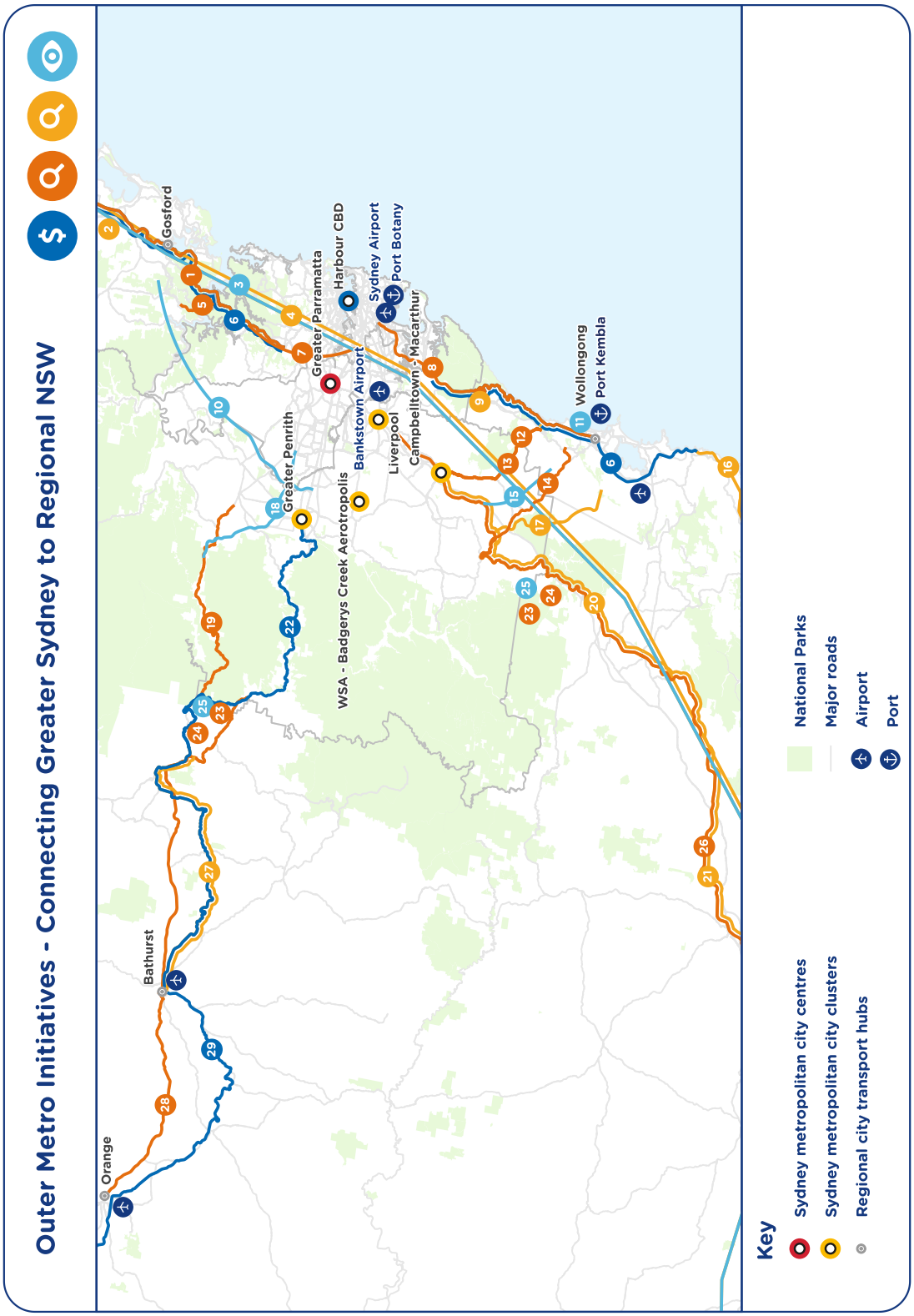


Figure 55: Connecting Regional NSW to Greater Sydney

Outer Metro Initiatives – Connecting Greater Sydney to Regional NSW

Key

- Committed 0–10 years
- Initiatives for investigation 0–10 years
- Initiatives for investigation 10–20 years
- Visionary initiatives 20+ years

All initiatives for investigation are subject to business case development.

Initiatives

- **6.** New Intercity Fleet
- **22.** Upgrades to Blue Mountains Line
- **29.** Upgrades to Main West Line
- **1.** Sydney-Central Coast-Newcastle Faster Rail Improvement
- **5.** M1 Motorway improvements (Hawkesbury River – Mt White)
- **7.** Northern Sydney Freight Corridor Stage 2
- **8.** Sydney-Wollongong Faster Rail Improvement
- **12.** Improved bus connections between South West Sydney and Illawarra
- **13.** Bus priority measures on Appin Road
- **14.** Picton Rd and Appin Rd Improvements
- **19.** Bells Line of Road improvements
- **23.** Great Dividing Range long term solution study
- **24.** Great Dividing Range long term solution corridor preservation
- **26.** Sydney-Canberra Faster Rail Improvement
- **28.** Mt Victoria to Orange road corridor improvements to achieve travel time savings and road safety outcomes
- **2.** M1 – Newcastle SMART Motorway
- **4.** Corridor Preservation for Higher Speed Connections
- **9.** M1 Princes SMART Motorway
- **16.** Electrification of intercity to Bomaderry/Nowra
- **17.** Completion of Maldon to Dombarton railway line
- **20.** M31 Hume SMART motorway
- **21.** Electrification of intercity to Goulburn
- **27.** Electrification of intercity to Bathurst
- **3.** Higher Speed Connections (east coast)
- **11.** Illawarra Escarpment long term solution
- **10.** Outer Sydney Orbital from Great Western Highway to Central Coast
- **15.** Outer Sydney Orbital from Hume Motorway to Illawarra
- **18.** Bells Line of Road-Castlereagh Connection
- **25.** Delivery of Great Dividing Range long term solution

CHAPTER

6

Next Steps and Implementation

The Greater Sydney Services and Infrastructure Plan establishes a vision for supporting the transition to a metropolis of three cities where people can access their nearest centre within 30 minutes.

We are already making significant progress in implementing the Plan, with nearly 40 major initiatives being delivered or committed to by the NSW Government. Building on this, we will use the Plan to progress detailed planning for specific initiatives, consider funding and delivery options and track our performance in delivering on the customer outcomes. We will continue to engage with our customers, the community and stakeholders to ensure our plans are meeting the needs of customers and being responsive to new challenges and opportunities.

Continuing to engage with our customers

The Greater Sydney Services and Infrastructure Plan is a 'living' plan that will continue to be updated as the region changes, technology evolves and new opportunities emerge. An agile and flexible approach is the hallmark of our approach to planning in Future Transport 2056.

This means we will continue to engage closely with our customers, the community and stakeholders, including federal departments, state departments and agencies, local councils and industry. This will be important for ensuring that customer, community and stakeholder insights inform more detailed planning and that this planning is integrated across government and with industry.

In focus: Collaborating across Government

Collaboration across the three tiers of government and across State agencies is essential for coordinating land use and infrastructure planning and delivery. An example of this collaboration already underway is the Collaboration Areas led by the Greater Sydney Commission.

Collaboration Areas

Collaboration Areas are places where the Greater Sydney Commission will facilitate the establishment of governance arrangements and support the coordination of activities across key stakeholders to deliver significant regional and district productivity, sustainability and liveability outcomes.

Collaboration Areas are nominated by the Greater Sydney Commission where a place-based approach to address complex multi-faceted issues is required. This may involve the alignment of the activities of councils and agencies at the NSW and/or Australian Government level and a range of public and private stakeholders such as hospitals, universities and research institutions.

A tailored approach for each Collaboration Area process is established through the following steps. Members of each Collaboration Area will:

- Establish a vision for the area
- Identify impediments and opportunities
- Agree to priorities for the Collaboration Area
- Identify projects and initiatives to deliver the vison

These elements will be documented in a Place Strategy supported by a suite of supporting strategies that best deliver outcomes.

The Greater Sydney Commission has facilitated a collaborative process with key stakeholders to establish a shared vision and whole-of-government approach to GPOP (the Greater Parramatta and the Olympic Peninsula) and is piloting a growth infrastructure compact. The growth infrastructure compact will provide greater context for the NSW Department of Planning and Environment's Greater Parramatta Interim Land Use and Infrastructure Implementation Plan on issues such as optimal integration of land use and transport through staging and sequencing.

Other collaboration roles by the Commission include providing expert advice on significant regional and district collaborations led by other government agencies such as NSW Department of Planning and Environment's Planned Precincts at St Leonards, Frenchs Forest and Macquarie Park.

The Greater Sydney Commission will continue to identify, prioritise and lead Collaboration Areas across Greater Sydney. It will annually review the Collaboration Area program and priorities.

In consultation on the draft Plan, our customers told us that they want more input into the location of train lines, stations and the design of infrastructure. A number of key factors are considered when identifying potential station locations including:

- Connectivity to other transport services
- Proximity to key destinations such as employment, education and health facilities
- Opportunities to increase accessibility and serve or stimulate development
- Environmental and heritage constraints

The location of stations will be subject to further planning and consultation during the development of future train/mass transit links.

By closely engaging with our customers as we update the Plan and progress detailed planning, we will be responsive to this feedback. To build the transport network of the future we will use a 'co-design' approach which means that we will continue to work with customers, communities, industry and all levels of government on future strategy, policy, infrastructure and service planning. The co-design approach ensures that the people who use or are affected by our transport network have a place at the table in making planning decisions.

Contacting us

Visit our website for details on how to contact us. You can also contact us or access information about initiatives on Facebook, Twitter, Instagram, LinkedIn and YouTube.

An agile and flexible approach is the hallmark of our approach to planning in Future Transport 2056.

Progressing our plans

Establishing customer outcomes and a vision for our transport system, and identifying and prioritising initiatives to deliver on these is just the first step in planning for the future. To ensure we are delivering the best outcomes for customers and the community, we will undertake detailed planning and feasibility studies for specific initiatives.

Transport for NSW will immediately progress the planning for initiatives in the "0–10 for investigation" category in the Greater Sydney and Regional NSW Services and Infrastructure Plans. Prioritisation will be based on urgency of need, and the process will start with the place-based plans focussed on improved integrated outcomes for cities, regions, corridors or precincts. These plans will form the initiation phase of project initiatives and will be used to inform Gate 0, Investment Briefs, which will need to be aligned with the principles of the broader integrated, place-based plans identified by Future Transport. This will be followed by Strategic Business Cases focussed on achieving key customer outcomes in line with the integrated plans developed that have informed the investment briefs, and not be focussed on single mode outcomes or outcomes for transport projects alone.

Prioritisation

A critical next step to guide the above process is prioritisation. The cluster will work through the financial capacity and planning prioritisation to determine which initiatives can be focussed on over the next 4 years (budgeting process). Prioritisation will be based on:

- Alignment with Future Transport Outcomes and NSW Government Priorities
- NSW Government committed initiatives
- Initiatives supporting delivery the 30 Minute City in Greater Sydney and/or the Hub and Spoke Model
- Better use of existing infrastructure – including reallocation of road space, prioritisation of productive vehicles and creation and renewal of great places on and around transport networks
- Projects identified through the integrated place-based planning process to include consideration of wider benefits

Our immediate priority will be to develop more detailed corridor and place-based plans, exploring different options for meeting future demand on city-shaping, city-serving, centre-serving and dedicated freight corridors. As these plans are defined, we will then progress to detailed feasibility assessments of specific initiatives as part of the business case process. The business case process will ensure initiatives that are progressed for funding and delivery deliver value for money for the people of NSW.

Figure 56: Summary of next steps

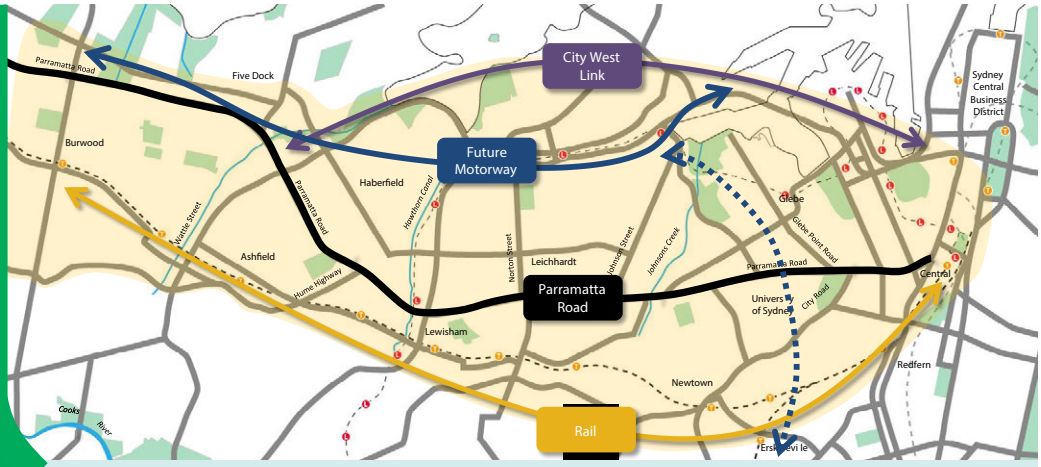


Figure 57: Example of a corridor as a broad, linear geographic area

In focus: Corridor and place plans

Guided by the Future Transport 2056 Strategy, Greater Sydney Services and Infrastructure Plan and supporting plans, we will develop more detailed corridor and place plans. These plans will focus on more regional and local transport needs and how these fit into the wider Greater Sydney transport vision. The plans will also enable us to assess in more detail where and when the identified initiatives are most appropriate for addressing the transport needs of these corridors and places to align with land use planning. Importantly, they will also enable us to address community feedback on specific regional and local initiatives we should investigate.

Continued overleaf

Rather than a specific road or train line, a corridor in the context of strategic planning is a broad, geographic linear area, such as Parramatta to the Harbour CBD (for example, see above). Planning for the needs of a corridor ensures that different transport investments work together as part of an integrated solution. Developing plans for the city-shaping corridors will be a particular focus. These corridors are shown in Figure 18 in chapter 2 and include:

1. WSA-Badgerys Creek Aerotropolis – Greater Parramatta
2. Greater Parramatta – Harbour CBD
3. Mount Victoria – Richmond-Windsor – Blacktown
4. Mount Victoria – Greater Penrith – St Marys – Mount Druitt – Blacktown – Greater Parramatta
5. WSA-Badgerys Creek Aerotropolis – St Marys / Greater Penrith– Marsden Park – Richmond-Windsor / Rouse Hill
6. WSA-Badgerys Creek Aerotropolis – Leppington – Liverpool – Bankstown
7. Picton – Campbelltown-Macarthur – Liverpool – Fairfield – Greater Parramatta
8. Campbelltown-Macarthur – Narellan – Camden – WSA-Badgerys Creek Aerotropolis
9. Rouse Hill – Norwest – Greater Parramatta
10. Mona Vale –Frenchs Forest/ Brookvale-Dee Why – Harbour CBD
11. Brooklyn – Hornsby – Chatswood – St Leonards – Harbour CBD
12. Rouse Hill – Norwest – Castle Hill – Epping – Macquarie Park – Chatswood / Harbour CBD
13. Greater Parramatta – Epping – Hornsby
14. Bankstown – Campsie – Sydney Kingsford Smith Airport
15. Greater Parramatta – Bankstown – Kogarah / Hurstville
16. Harbour CBD– Kogarah – Hurstville – Sutherland / Miranda – Waterfall

Funding and delivery

Our commitment is to ensure the transport system is financially sustainable, meeting the needs of our customers and the community and enabling us to continue investing in services and infrastructure. That is why we have prioritised initiatives, to ensure we can stage delivery starting with those that we believe will deliver the greatest benefit.

As initiatives progress to business case phase, we will investigate a range of funding and delivery options as part of assessing whether initiatives will deliver value for money.

Staging of initiatives

Our plan prioritises initiatives on the basis of existing NSW Government commitments and the challenges that are most important to address. Initiatives are staged over 0–10, 10–20 and 20+ year periods, with existing infrastructure commitments, upgrades and service and policy initiatives a key focus in the first decade and further city-shaping initiatives proposed for subsequent decades.

Infrastructure initiatives deliver significant benefits for our customers and the community, but they are capital-intensive and take time to plan and deliver, which is why initiatives are staged. On corridors where major new infrastructure is not yet needed, upgrades to existing infrastructure or service improvements may represent better value.

The staging of investment in each corridor or place will consider the appropriate initiative to align with land use changes and integrate with the wider transport network. The interventions will support and complement each other over time rather than compete for benefits. As we undertake more detailed planning, we will review the proposed staging to ensure we are achieving the best outcomes for our customers.

We have prioritised initiatives, to ensure we can stage delivery starting with those that we believe will deliver the greatest benefit.

Sources of funding

One of our customer outcomes is to ensure the transport system is financially sustainable through informed decision-making and services and infrastructure being delivered, operated and maintained in a way that is affordable over the long-term.

There are many sources of funding for transport projects. User charging will remain a source of funding but is complemented by other measures as the way we build and operate transport becomes more sophisticated. As the public transport network grows, new and expanded interchanges and stations will be needed to meet demand. There are opportunities to fund this work through developments of airspace on the transport estate, and by playing a more active role in transport-led development.

We will investigate innovative and efficient ways to fund our transport projects including:

- Commercial approaches to asset ownership that involve a greater level of scrutiny of funding arrangements and tighter budgeting, performance and efficiency targets and cost constraints
- Making sure that in all future capital investment decisions we consider and pursue opportunities to deliver commercial returns on new assets beyond their core transportation uses
- Improving capital investment and upgrading practices to reduce whole of life costs
- Continuing the transition to partnering and service commissioning models for delivery of services
- Including tangible targets and benchmarks in planning, construction, operation and maintenance contracts

Delivery mechanisms

As part of evaluating initiatives, we will consider a range of delivery mechanisms, consistent with the directions in the Future Transport Strategy. Where appropriate, we will partner with industry to delivery transport initiatives – whether this be enabling new services and infrastructure to be developed by industry or continuing to engage the private sector to deliver, operate and maintain services and infrastructure.

Local government will also be a key partner for delivery for the Greater Sydney Services and Infrastructure Plan. For initiatives related to cycling paths, local road upgrades and local footpaths, local councils will be essential for delivery.

In focus: City Deal

Collaboration across the three tiers of government and across State agencies is essential for coordinating land use and infrastructure planning and delivery.

The Western Sydney City Deal is a partnership between the Australian Government, NSW Government, and local governments of the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly.

The Australian and NSW Governments jointly commit to deliver the first stage of the North South Rail Link from St Marys to Badgerys Creek Aerotropolis via Western Sydney Airport, with a joint objective of having rail connected to the Western Sydney Airport in time for its opening.

Work will immediately commence on a thorough design and investment case for the North South Rail Link (including the South West Rail Link) as part of an integrated planning and city-shaping approach.

Key features of the *Connectivity* part of the City Deal include:

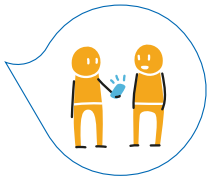
- North South Rail Link (from St Marys to the Aerotropolis via Western Sydney Airport) connecting people with new high-value jobs and the world
- Rapid bus services linking Liverpool, Penrith and Campbelltown with the Aerotropolis by the opening of the airport
- Exploring 5G network and smart digital technology to generate opportunities for creative, digital and technology businesses and better connected communities.

For more information on the City Deal see www.nsw.gov.au/improving-nsw/projects-and-initiatives/western-sydney-city-deal/ or https://cities.infrastructure.gov.au/western-sydney-city-deal

Measuring and monitoring our progress

To track our progress in delivering on the outcomes established by the Future Transport 2056 Strategy we have established specific targets and measures. We will continue to explore opportunities for using new forms of data to provide insights on the performance of the transport system and how we are tracking against targets.

In addition, Transport for NSW is the lead on three State Priorities. We will continue to report on our performance against these priorities, which include improving road travel reliability, on-time running of public transport and reducing road fatalities.

Transport Outcomes	Performance focus	Measures and indicators
Customer Focused 	**Maintain consistently high customer satisfaction**	**Transport for NSW Customer Satisfaction Index** › % customers satisfied or highly satisfied
Successful Places 	**Delivery of transport initiatives that improve liveability of places**	**Liveability of places** We will investigate the most suitable measure of how well transport is supporting health and wellbeing outcomes in our communities, incorporating › Application of Movement and Place principles to centres › Walkability, public transport accessibility and active transport

Transport Outcomes	Performance focus	Measures and indicators
A Strong Economy 	**Efficient connectivity for passengers and freight**	**Metropolitan 30 minute city** › % of population within Greater Sydney with 30 minute or less access by public transport to their nearest strategic centre **Regional Centre connectivity** › % of towns and centres with day return public transport services to nearest regional city **Freight movement efficiency** › Volumes, cost and network efficiency
Safety and Performance 	**Towards zero trauma on a reliable network**	**Reduction in fatalities and serious injuries** › Number of fatality and serious injury across the road and transport network per 100,000 persons **Journey time reliability** › Travel times for each mode **Public transport travel time competitiveness** › Public transport travel times compared to private vehicle travel time on major metropolitan and regional corridors

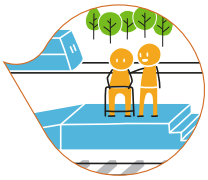
Transport Outcomes	Performance focus	Measures and indicators
Accessible Services 	**Whole of journey accessibility for customers wherever they live and regardless of age or ability or personal circumstances**	**Public and active transport accessibility to education, jobs, health and community services** › Measures under development **Physical accessibility of infrastructure, vehicles and services** › Measures to be confirmed **Services used and satisfaction of customers with specific needs** › Including by age, people with disability, people from culturally and linguistically diverse backgrounds and Aboriginal people
Sustainability 	**Improved financial sustainability** **Contribution to net zero emissions**	**Cost effectiveness** › The cost per service kilometre and cost recovery for public transport and cost effectiveness of road expenditure **Carbon emissions** › Transport-related greenhouse gas emissions and energy intensity › mode shift from private motor vehicle to active and public transport › Energy efficiency of the vehicle fleet and electric vehicle use

Figure 58: Measures and indicators for Future Transport Strategy outcomes

The Greater Sydney Services and Infrastructure Plan is not a static document. Its purpose is to guide future transport planning in an unpredictable environment and help us respond and adapt to changes as they arise.

We will constantly monitor and report on our progress in delivering on the Future Transport objectives.

Accountability for keeping different elements of the Plan current will be delegated to specific areas across the Transport Cluster, with a document produced during 2018 providing clarity for all as to where these responsibilities lie.

CHAPTER

7

Glossary

Glossary for Greater Sydney Services and Infrastructure Plan

Term	Definition
30 Minute City	A planning concept for a city in which citizens can easily access the places they need to visit on a daily basis within 30 minutes travel from where they live. In the Greater Sydney context the focus is on access to the nearest centre within 30 minutes by public transport.
A Metropolis of Three Cities	The Greater Sydney Region Plan (*A Metropolis of Three Cities*) was developed by the Greater Sydney Commission concurrently with Future Transport 2056 and the State Infrastructure Strategy. It integrates land use, transport and infrastructure planning between the three tiers of government and across state agencies.
Accessibility	The ability for everyone, regardless of age or ability, personal circumstances or where they live, to use and benefit from the transport system.
Active transport	Transport that is human-powered, such as walking or cycling.
Advanced Train Control System	System that supervises train speed and intervenes by applying the train's brakes should the permissible limits be exceeded.
Aerotropolis	A metropolitan subregion where the layout, infrastructure, and economy are centred on an airport which serves as a multimodal "airport city" commercial core. It is similar in form to a traditional metropolis, which contains a central city commercial core and commuter-linked suburbs. The area around Western Sydney Airport (WSA) is envisaged to perform this role.
Amenity	The extent to which a place, experience or service is pleasant, attractive or comfortable. Improved features, facilities or services may contribute to increased amenity.
Assisted mobility devices	Forms of transport that facilitate individual personal transportation. Examples include powered wheelchairs, scooters, segways, bicycles and unicycles. Although many such devices are used by people with activity or mobility restrictions, mobility aids can be employed generally such as for transportation in place of private vehicles.

Term	Definition
Automation	Use of control systems, such as computers, robots or artificial intelligence to undertake processes previously done by humans. Transport technology may be fully or partially automated, with the latter involving some form of human input to or manage the technology.
Better places	Enhancing the design quality of the built environment and focusing on the public realm and open spaces to attract residents, workers, visitors, enterprise and investment.
Better use	Optimising existing and new infrastructure to extract maximum sustainable capacity from the network. Examples include re-allocating road space to vehicles that can carry more people in the same amount of space.
Bus Head Start Program	Program that ensures that residents of new growth areas have access to high quality bus services (fast, frequent and direct) from day one of occupation.
Bus priority infrastructure	Infrastructure that make bus services faster and more reliable such as bus lanes, bus priority at traffic lights or more efficient bus stop placement.
Car share	A model of car rental, with the ability to rent a car for a short period of time, often by the hour.
Catchment	The area from which a location or service attracts people.
Central River City	One of the three cities of the Greater Sydney metropolis, anchored by Greater Parramatta in the Central City District.
Centre-serving corridors	Local transport corridors connecting typically lower density local areas with strategic centres and city-shaping corridors that pass through these centres.
City-serving corridors	Concentrated transport corridors within ~10km of a metropolitan centre providing high frequency access to the metropolitan centre from the inner urban areas in each of the three cities.

Term	Definition
City-shaping corridors	Major transport corridors providing higher capacity, high frequency access to metropolitan centres as well as connecting the three cities.
Coastal geography	The area broadly represented as between the Great Dividing Range and the NSW coastline. It excludes Greater Sydney and the Outer Metropolitan area.
Committed initiatives (0-10 years)	Projects, service changes or policies that either have committed funding, are committed/contractually committed, are for immediate detailed planning, or are part of key maintenance, renewal or safety programs. Some committed initiatives are subject to final business cases and funding.
Congestion	When demand for a part of the transport network during a particular time nears its capacity, resulting in lower average speed, increased delay and unreliable journeys.
Connected and Automated Vehicles (CAVs)	A connected vehicle is able to communicate wirelessly with other vehicles, infrastructure and/or devices. An automated vehicle has one or more element of the driving task that is automated and therefore does not require a human driver for at least part of the driving task. Levels of automation range from assisting the human driver with the driving task, through to fully and highly automated vehicles that can drive themselves. “Connected and automated vehicle” is widely used as a collective term to refer to the full range of different vehicles equipped with varying ranges and capabilities of connected and/or automated vehicle technologies.
Conurbation	The merging of separate cities generally through population growth and physical expansion to form an extended urban area.
Corridor	A broad, linear geographic area between places.
Customer	Everyone who uses transport services or infrastructure is a customer of the NSW transport system. Whenever a person drives, travels by train, bus or light rail, or walks or cycles they become a customer of the transport system. Customers also use the transport network for business purposes, to deliver goods and services, and to move freight across the State and beyond.

Term	Definition
Customer outcomes	The economic, social and environmental benefits which customers can expect from the transport system. Used by planners to guide investment, policy and service provision.
Demand management	Systems, processes and activities that are aimed at efficiently allocating available capacity to meet demand or influence customers' choices about when, where and how they travel.
Demand-responsive (or on-demand)	Transport services that are responsive to the demands of individual customers, rather than a fixed timetable or route.
Disability Discrimination Act (DDA) (1992)	A Commonwealth Act that makes it unlawful to discriminate against a person, in many areas of public life, including: employment, education, getting or using services, renting or buying a house or unit, and accessing public places, because of their disability.
Drone	An unmanned aerial vehicle (UAV) which may be remotely controlled or can fly autonomously.
Eastern Harbour City	One of the three cities of the Greater Sydney metropolis, anchored by the Harbour CBD in the Eastern City District.
E-bike	An electric bicycle, a standard pedal-powered bicycle with an electric motor built-in to assist the rider with additional propulsion.
Faster rail	Major investments in track straightening and signalling improvements to maximise the operational capabilities of the new Intercity fleet and new Regional Rail fleet between Sydney, Central Coast/Newcastle, Canberra and Wollongong/Illawarra.
First-mile and last-mile	A term applied to the first and final stage of a journey in which people or goods travel to a broad range of origins or destinations. An example of a last mile journey is the trip made between a train station and the final destination of a shopping centre or place of work.
Fleet	A collection of vehicles. This may describe all vehicles within NSW or the vehicles of an organisation, transport company or service.

Term	Definition
Freight	Goods or cargo transported by truck, light commercial vehicles (e.g. vans and utes), cycle couriers, rail, aircraft or ship.
Global city	City that services and supports the complex and specialised economic activities of global markets.
Global gateway cities	Cities that provide state level services and facilities to support a broad population catchment while also having international connections through their airport and/or port. Canberra, Greater Sydney, Greater Newcastle and Gold Coast are global gateway cities that support NSW.
GPOP	GPOP stands for Greater Parramatta and the Olympic Peninsula — a 4,000-hectare area in Greater Sydney. It spans east–west from Strathfield to Westmead, and north–south from Carlingford to Lidcombe and Granville.
Greater Newcastle	The area comprising five local government areas of Cessnock, Lake Macquarie, Maitland, Newcastle and Port Stephens.
Greater Parramatta	Greater Parramatta is at the core of the Central River City, encompassing Parramatta CBD, North Parramatta and Westmead, connected via Parramatta Park.
Greater Sydney	The 33 local government areas of Bayside, Blacktown, Blue Mountains, Burwood, Camden, Campbelltown, Canada Bay, Canterbury-Bankstown, Cumberland, Fairfield, Georges River, Hawkesbury, Hornsby, Hunters Hill, Inner West, Ku-ring-gai, Lane Cove, Liverpool, Mosman, Northern Beaches, North Sydney, Parramatta, Greater Penrith, Randwick, Ryde, Strathfield, Sutherland, The City of Sydney, The Hills, Waverley, Willoughby, Wollondilly and Woollahra.
Greater Sydney Commission (GSC)	An independent organisation funded by the NSW Government, responsible for coordinating and aligning the planning that will shape the future of Greater Sydney.
Greater Sydney Region Plan	See A Metropolis of Three Cities

Term	Definition
Greater Sydney Parking Guideline	A guideline for Greater Sydney to ensure parking availability takes into account the level of access provided by public transport.
Hub and spoke model	A transport network model that provides connections (spokes) to and from key centres (hubs). The spokes link to different hubs across an area, rather than focussing on one key hub.
Infrastructure NSW (INSW)	An Independent statutory agency responsible for assisting the NSW Government with identifying and prioritising the delivery of critical public infrastructure for NSW.
Initiatives for investigation (0–10 years, 10–20 years)	Initiatives intended to be investigated for potential commitment or implementation within the next 20 years. Those listed in the 0-10 year horizon will be prioritised for more detailed investigation to determine if they are required in the next decade. They are prioritised based on their expected benefits or strategic importance. Initiatives proposed for investigation are unconstrained by affordability and will be subject to strategic business cases that consider a range of possible solutions.
Interchange	A facility to transfer from one mode of transport, or one transport service, to another. For example, a rail station with an adjoining bus facility.
Intermodal terminal	An intermodal terminal is an area of land used to transfer freight between at least two modes of transport. It is typically used to describe the transfer of international shipping containers from road to rail and vice versa.
Light rail	An urban railway transportation system using vehicles that are capable of sharing streets with vehicular traffic and pedestrians, but may also be operating on an exclusive right-of-way such as a segregated rail corridor, tunnel or elevated structure.
Liveability	The term ‘liveability’ is used in land use planning to focus on the people who live in an area, the places they spend time in, their health and quality of life as well as overall community wellbeing.

Term	Definition
Mass transit	High capacity public transport services between major centres on fixed routes. Mass transit will typically be used on NSW's busiest public transport corridors to quickly and efficiently move a large number of customers.
Metro	An urban railway transportation that is associated with high capacity, high frequencies (typically turn-up-and-go, rather than timetabled) and greater automation.
Metropolitan centre	The central social and economic hubs of Greater Sydney's three cities, namely the Harbour CBD in the Eastern Harbour City, Greater Parramatta in the Central River City and an emerging Western Sydney Airport-Badgerys Creek Aerotropolis in the Western Parkland City.
Metropolitan cluster	The metropolitan city centre for the Western Parkland City will be delivered over time, beginning with a focus on a metropolitan city cluster of four places: Liverpool, Greater Penrith, Campbelltown-Macarthur and Western Sydney Airport and Badgerys Creek Aerotropolis.
Mobility as a Service (MaaS)	A business model for customers to access transport services in which customers can use a single account and booking interface to access a broad range of transport modes, none of which the customer owns. Examples would be allowing a customer to access public transport, car sharing and bike sharing all using the same system.
Mode share	The proportion of overall trips that are taken on a particular mode of transport.
More Trains, More Services program	A staged program of works delivering upgraded rail infrastructure, new trains and extra services across the suburban train network to address the growth in patronage forecast over the next 5 years.
Movement and Place Framework	A framework for planning, designing and operating our road network based on a 'one road network' approach. It considers how different parts of the network perform different functions – moving people and goods and being places for people, particularly in centres.

Term	Definition
Net zero emissions	The aspirational greenhouse gas emission level which the NSW Government has targeted to achieve by the year 2050. Net-zero emissions means NSW emissions will be balanced by carbon storage.
New Intercity Fleet	A new train fleet to service long distance journeys for intercity customers travelling from Sydney to the Central Coast, Newcastle, the Blue Mountains and the South Coast.
NSW Long Term Transport Master Plan	NSW's first integrated transport plan which brought together planning for freight and passenger movements across all modes of transport. Future Transport builds upon the 2012 Long Term Transport Masterplan and the commitments it has delivered.
Outer metropolitan areas / geography	An area encompassing the local government areas of Shellharbour, Wollongong, Central Coast, Lake Macquarie, Cessnock, Maitland, Newcastle and Port Stephens.
Personalised transport	Technology which is used to make transport services and the overall transport network responsive to the needs of customers.
Pinch Point Program	Program of works aimed at fixing traffic congestion points on Sydney's major roads that slow down the broader network, to reduce traffic delays, manage congestion and improve travel times, particularly during weekday peak periods.
Place-making	Refers to the development and management of the built environment to influence the character or experience of places. Successful place-making either maintains or enhances the character of our public spaces, making them more accessible, attractive, comfortable and safe.

Term	Definition
Place plan	Plan to deliver an integrated transport network to improve access to/from/within key places or centres by all modes. It is the application of the Movement and Place Framework to improve the function of transport corridors to enhance the amenity of places. It will include the development of an active transport network, identifying the missing links and initiatives for behaviour change to support more sustainable travel options. Place plans will also include travel demand management policies and tools to support travel such as car sharing and to assist workers and employers better manage travel demand.
Point-to-point	Transport services that go directly from a passenger's origin to their destination. Outside of the private car, taxis and ridesharing services (Uber, Lyft) are the most common point-to-point transport modes.
Precinct	A geographical area with boundaries determined by land use. For example, an area where there is an agglomeration of warehouses may be termed a freight precinct.
Rapid bus	Fast and reliable bus connections providing customers with mass transit level services between major centres which are not linked by trains or light rail.
Real time information	Information about the status of the transport network and services that are completely live or have a lag of less than a minute or two. Real time analytics refers to analysis that is performed on real time data (generally automatically and without input from a human analyst) and is then used to make decisions or take action immediately.
Regional NSW	The area of NSW outside Greater Sydney. It includes the nine regions of Central Coast, Hunter, North Coast, New England North West, Central West and Orana, Far West, Riverina Murray, South East and Tablelands and Illawarra-Shoalhaven.
Resilience	The ability of infrastructure systems and services to withstand unexpected climate, weather and catastrophic events.
Ridesharing	Business models similar to Uber and Lyft which provide point-to-point transport services in private vehicles.

Term	Definition
Road hierarchy	A framework for categorising roads by function. Consistent with the Movement and Place Framework, the hierarchy consists of Motorways, Movement Corridors, Vibrant Streets, Local Streets and Places for People. Each type of road has a different movement and place function.
Road network management system	Systems, processes and activities for the efficient, reliable and safe operation of the road network.
Roads and Maritime Services	Agency of the New South Wales Government responsible for building and maintaining road infrastructure and managing the day-to-day compliance and safety for roads and waterways.
Road Space Allocation Policy	Policy to establish clear principles for allocating road space for different modes of transport on the basis of the efficient movement of people and goods on movement corridors.
Safer Roads Program	Program of road safety infrastructure projects to address key crash types across NSW.
Safe system approach	Planning services and designing infrastructure to integrate with human behaviour to prevent trauma. Improving the safety of all parts of the system, so that if one part fails, the other parts will protect people from being killed or seriously injured.
Satellite city	The cities Wollongong and Central Coast that form part of the conurbation of Greater Sydney.
Service (or transport service)	Service refers to transport services, generally public transport services. Examples include trains, buses, light rail and ferries. Services might also include shuttle buses and a range of privately operated but publicly accessible transport types.
Smart Motorway	Motorways that use embedded sensors, analytics and customer feedback tools to actively manage congestion and safety and respond to traffic incidents.

Term	Definition
State Infrastructure Strategy	The State Infrastructure Strategy was developed by Infrastructure NSW to provide the NSW Government with independent advice on the infrastructure needs of the State over the next 20 years.
Strategic centre	There are 34 centres in Greater Sydney where the mix of activities, size and location enable the community to access a wide range of goods, services and jobs. They also reinforce the success of the three cities. Considering their attributes, the draft Greater Sydney Region Plan identifies them as strategic centres.
Supporting plans	More detailed issues-based or place-based planning documents that will support the implementation of Future Transport 2056.
Three cities	The three cities envisaged by the Greater Sydney Commission are the established Eastern Harbour City, the developing Central River City and emerging Western Parkland City in and around the new airport. Each of these three cities will have their own unique identity and each must be planned to maximise liveability, productivity and sustainability.
Trade gateways	Trade gateways are locations with major ports or airports, and their surrounding precincts. They perform an essential and ongoing role to connect Sydney with locations across Australia and the world. Transport gateways are vital to Sydney's prosperity and often support large concentrations of complementary business activity and employment.
Transport Access Program	The Transport Access Program (TAP) is an initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure such as stations, wharves and commuter car parks.
Transport hub	A major public transport interchange, such as a bus interchange, train station or airport, or for freight, a rail yard, intermodal terminal, seaport or truck terminal.
Trauma	Physical or mental injuries which require medical attention.

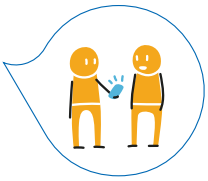
Term	Definition
Travel Choices Program	A Transport for NSW behavioural change initiative to help manage demand on the transport network in response to capacity constraints or disruption. It involves helping individuals and organisations prepare for and adapt to changes on the transport network.
Turn-up-and-go	Services with frequency equal to or under 5 minutes, requiring little to no travel planning.
Urban renewal	A planned approach to the improvement and rehabilitation of city areas with new infrastructure, improved services and renovation or reconstruction of housing and public works.
Visionary initiatives (20+ years)	Longer term initiatives that may be investigated within the next 10 years, but on preliminary evidence are unlikely to require implementation within 20 years. Some initiatives have been planned for investigation in the 20+ years as the funding or benefits may be too uncertain at this stage. Initiatives proposed for investigation are unconstrained by affordability and will be subject to strategic business cases that consider a range of possible solutions.
Western Parkland City	One of the three cities of the Greater Sydney metropolis, anchored by the metropolitan city cluster of Western Sydney Airport and Badgerys Creek Aerotropolis, Liverpool, Greater Penrith and Campbelltown-Macarthur in the Western City District.
Western Sydney Airport (WSA)	The designated name for the second Sydney airport, located within the suburb of Badgerys Creek.
Western Sydney Airport and Badgerys Creek Aerotropolis	The emerging metropolitan centre of the Western Parkland City centred on Western Sydney Airport and surrounding development as the economic catalyst for delivering more jobs and diversity for jobs to the Western City District.
Western Sydney Infrastructure Plan	Australian and NSW Governments' road investment program for western Sydney delivering major road infrastructure upgrades to provide improved road transport capacity ahead of future traffic demand.

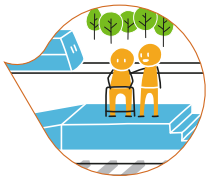
CHAPTER

8

Appendix

Contents

Future Transport Statewide Outcomes	Greater Sydney transport customer outcomes
Customer Focused 	**Convenient and responsive to customer needs** **1.** New technology is harnessed to provide an integrated, end-to-end journey experience for customers **2.** Future forms of mobility are made available to customers and integrated with other modes of transport
Successful Places 	**Sustaining and enhancing the liveability of our places** **3.** Walking or cycling is the most convenient option for short trips around centres and local areas, supported by a safe road environment and suitable pathways **4.** Vibrant centres supported by streets that balance the need for convenient access while enhancing the attractiveness of our places
A Strong Economy 	**Connecting people and places in the growing city** **5.** 30 minute access for customers to their nearest metropolitan centre and strategic centre by public transport seven days a week **6.** Fast and convenient interchanging, with walking times of no longer than five minutes between services

Future Transport Statewide Outcomes	Greater Sydney transport customer outcomes
Safety and Performance 	**Safely, efficiently and reliably moving people and goods** **7.** Efficient, reliable and easy-to-understand journeys for customers, enabled by a simple hierarchy of services **8.** Efficient and reliable freight journeys supported by 24/7 rail access between key freight precincts with convenient access to centres **9.** A safe transport system for every customer with the aim for zero deaths or serious injuries on the network by 2056
Accessible Services 	**Accessible for all customers** **10.** Fully accessible transport for all customers
Sustainability 	**Makes the best use of available resources and assets** **11.** Transport services and infrastructure are delivered, operated and maintained in a way that is affordable for customers and the community **12.** A resilient transport system that contributes to the NSW Government's objective of net-zero emissions by 2050

Sydney-wide Initiatives

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Sydney-wide	Expansion of Travel Choices Program	Policy and planning	Roll-out of Travel Choices Program to additional corridors and precincts. The program will encourage customer travel behaviour change to support better use of transport capacity. The focus includes customers rerouting journeys, retiming journeys, using different modes or reducing the need to travel to spread demand and soften the weekday peak periods. http://mysydneycbd.nsw.gov.au/supporting-business/travel-choices	This initiative will deliver benefits across the network by reducing congestion in peak times, increasing the resiliency of the network, and providing safer, more reliable journeys.	7, 11, 12
0-10 committed	Sydney-wide	Point to Point assistance package	Policy and planning	A $250 million industry adjustment assistance package to provide assistance to perpetual licence owners to adjust to changes in the regulatory framework for booked services and a more competitive market. https://www.transport.nsw.gov.au/projects/programs/point-to-point-transport	Point to Point transport (for example, Uber) provides more convenience and choice for customers while improving the efficiency of the transport network.	1, 2, 7, 10, 11
0-10 committed	Sydney-wide	Road Classification Review	Policy and planning	A review of the road classification across the state.	The classification of roads as State, Regional or Local is a key mechanism to support effective resource allocation by targeting State resources to the more important roads. Review of classifications provides an opportunity to make adjustments to ensure an up to date network that meets the social and economic needs of the community and industry.	7, 11

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Sydney-wide	Trial of on-demand bus services on selected local bus routes	Service	Trials of on-demand buses are taking place in Bankstown, Edmondson Park, Northern Beaches, Sutherland Shire, Manly; Eastern Suburbs, Wetherill Park, and Greystanes. www.transportnsw.info/travel-info/ways-to-get-around/on-demand-public-transport	Trial of on-demand bus services to provide more convenience and choice for customers while improving the efficiency of the transport network, and providing more choices for first and last mile access to the train network.	1, 2, 5, 6, 7, 9, 10, 11,12
0-10 committed	Sydney-wide	Sydney Growth Trains (part of More Trains, More Services program)	Service	Sydney Growth Trains is the centrepiece of the More Trains, More Services program and will provide customers with more frequent and express services on selected corridors. www.transport.nsw.gov.au/projects/current-projects/sydney-growth-trains	The new double deck trains will provide improved accessibility including priority seating, wheelchair spaces and hearing aid loops. Key features include improved air conditioning with advanced temperature control, high definition customer information screens to provide journey and safety information, and internal and external CCTV and customer help points. Overall, these investments will make journeys by train faster, safer, more accessible, and more reliable.	5, 6, 7, 9, 10, 11, 12
0-10 committed	Sydney-wide	Introduction of higher frequency public transport services on selected corridors	Service	Increase in service frequencies on selected train lines and bus services to address capacity constraints or as part of new infrastructure (e.g., Sydney Metro)	This initiative will deliver benefits across the network by reducing congestion in peak times, increasing the resiliency of the network, and providing safer, more reliable journeys.	5, 6, 7, 11
0-10 committed	Sydney-wide	Cycling and pedestrian infrastructure	Infrastructure	Existing walking and cycling improvements already committed by the NSW Government as part of the 2017 NSW Budget	New links will support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, and improve the overall sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 7, 9, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Sydney-wide	Council partnership program to improve local walking and cycling connections	Infrastructure	The NSW Government is committed to working with councils to make walking and cycling, more convenient, safer and enjoyable transport options. By targeting investment to improve walking and cycling in the areas where most short trips occur, the NSW Government supports more accessible, liveable and productive towns, cities and centres.	New links will support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, and improve the overall sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 7, 9, 12
0-10 committed	Sydney-wide	Bus Priority Infrastructure program	Infrastructure	The Bus Priority Infrastructure Program will make bus services faster and more reliable. The program uses various methods to improve services, such as installing more bus lanes, making buses the priority at traffic lights, changing parking restrictions on clearways, and relocating bus stops. www.rms.nsw.gov.au/projects/easing-sydneys-congestion/bus-priority-program.html	This program delivers upgraded and improved bus services across the network, prioritising public transport on roads, reducing travel time, and providing more reliable bus services.	5, 7, 9, 10
0-10 committed	Sydney-wide	New and replacement buses	Infrastructure	Purchase of new buses replacing the ageing bus fleet and adding additional buses bringing thousands of additional and improved weekly services to customers across Greater Sydney. www.transport.nsw.gov.au/newsroom-and-events/media-releases/nsw-budget-brings-bus-bonanza	The new buses will provide improved accessibility including priority seating and wheelchair spaces. Overall, these investments will make journeys by bus faster, safer, more accessible, and more reliable.	5, 7, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Sydney-wide	Transport Access Program (Improve access to train stations and ferry wharves)	Infrastructure	The Transport Access Program is an initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure, and to ensure more stations, stops and wharves are compliant with Disability Discrimination Act requirements www.transport.nsw.gov.au/projects/programs/transport-access-program	Key benefits include stations that are accessible to people with a disability, limited mobility and parents with prams; modern buildings and facilities for all modes that meet the needs of a growing population; and modern interchanges that support an integrated network and allow seamless transfers between all modes for all customers.	6, 9, 10, 11
0-10 committed	Sydney-wide	Public transport passenger service improvements	Infrastructure	Infrastructure upgrade (including passenger information, CCTV, platform upgrades) to ensure that public transport assets meet required safety, performance and operational standards, meet designated customer amenity standards and are reliable and sustainable	Key benefits include stations that are accessible to people with a disability, limited mobility and parents with prams; modern buildings and facilities for all modes that meet the needs of a growing population; and modern interchanges that support an integrated network and allow seamless transfers between all modes for all customers.	6, 7, 9, 10, 11, 12
0-10 committed	Sydney-wide	Pinch Point Program	Infrastructure	Infrastructure upgrade (including passenger information, CCTV, platform upgrades) to ensure that public transport assets meet required safety, performance and operational standards, meet designated customer amenity standards and are reliable and sustainable	Key benefits include stations that are accessible to people with a disability, limited mobility and parents with prams; modern buildings and facilities for all modes that meet the needs of a growing population; and modern interchanges that support an integrated network and allow seamless transfers between all modes for all customers.	6, 7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Sydney-wide	Pinch Point Program	Infrastructure	Projects to help ease congestion at pinch points include widening small sections of road or intersection, lengthening and adding turning lanes, replacing heavily used roundabouts with traffic signals, and monitoring traffic to provide real-time information to motorists to help them make informed travel decisions. www.rms.nsw.gov.au/projects/easing-sydneys-congestion/pinch-point-program/index.html	The Pinch Point Programs aim to reduce traffic delays, manage congestion and improve travel times on Sydney's major roads, particularly during weekday peak periods.	7, 8, 9, 11
0-10 committed	Sydney-wide	Safer Roads Program	Infrastructure	The Safer Roads program includes projects for intersection upgrades, new traffic lights, improved infrastructure for new pedestrian refuges and crossings, new signage to enhance visibility at key locations and road widening projects. www.roadsafety.transport.nsw.gov.au/research/safer-roads/index.html	The Safer Roads Program will contribute to 'Towards Zero', reduce traffic delays, and increase the resiliency of the transport network.	7, 8, 9
0-10 investigation	Sydney-wide	New Intercity Fleet	Infrastructure	A new fleet of long distance, intercity trains from Sydney to the Central Coast, Newcastle, the Blue Mountains and the South Coast. www.transport.nsw.gov.au/projects/current-projects/new-intercity-fleet	The new intercity trains will provide improved accessibility including priority seating, wheelchair and luggage spaces, and charging stations. Overall, these investments will make journeys by train faster, safer, more accessible, and more reliable.	7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Identification and protection of corridors for future transport links	Policy and planning	Investigating and analysing future transport demands, developing multi-modal corridor plans and identifying and preserving corridors for future transport links, particularly to support growth in the emerging Western City, and provide greater east-west and north-south connections.	Identifying corridors supports the delivery of future transport initiatives, supports the financial sustainability of the transport network by reducing the need for more expensive land acquisitions in the future, and provides greater certainty to the community on planned land use to enable informed decisions to be made.	2, 3, 5, 7, 8, 11, 12
0-10 investigation	Sydney-wide	Greater Sydney Parking Guideline	Policy and planning	Development and implementation of policy, in collaboration with local government, to ensure parking will be provided in a way that is consistent with the level of access by alternative modes of transport, including addressing the future provision of commuter car parks.	Support the use of private vehicles to access public transport as an option of a first and last mile solution, support the implementation of the Movement and Place Framework, and provide leadership and guidance to local government on issues of parking.	3, 4, 5, 7, 8, 11, 12
0-10 investigation	Sydney-wide	Implementation of the Movement and Place Framework	Policy and planning	Planning, designing and operating roads in collaboration with local government to balance the efficient movement of people and goods while supporting the liveability of places	Support the financial sustainability of the transport system by making better use of our existing road network, and improve the efficiency and reliability of local journeys in Sydney by separating through traffic and local traffic	3, 4, 5, 6, 7, 8, 9,11
0-10 investigation	Sydney-wide	Road Space Allocation Policy	Policy and planning	Development and implementation of policy supporting efficient throughput of people and goods on movement corridors, requiring more priority for higher productivity vehicles such as buses and shared vehicles	Support the reliability and productivity of the transport system by making better use of our existing road network, and prioritising public transport links.	3, 4, 5, 7, 8, 9, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Last Mile Freight Policy	Policy and planning	Development and implementation of policy in collaboration with industry to encourage more freight movements in centres to take place outside of normal business hours	Improve the liveability of centres by reducing road congestion.	4, 8, 9, 11
0-10 investigation	Sydney-wide	Innovative walking and cycling initiatives	Policy and planning	Development and testing of new approaches to encourage walking and cycling, especially for school age children	Improving the sustainability of the transport network by encouraging more short trips to be made by walking or cycling	3, 4, 7, 9, 11, 12
0-10 investigation	Sydney-wide	Road network planning and safety development strategies	Policy and planning	Implementation of road network planning and development strategies that include road safety principles for all users to support the attainment of NSW Government road safety targets. Improving safety for customers across Greater Sydney by ensuring all transport investments meet 4-5 star safety outcomes. Consider integration and support for Level 4 or 5 automated vehicles in road infrastructure.	Improve the safety of passenger and freight movements across the transport system	2, 7, 8, 9, 11
0-10 investigation	Sydney-wide	Integrated active transport policies to support long-term integrated transport and land use planning	Policy and planning	Development and implementation of policy to ensure walking and cycling is provided and integrated for, where appropriate, as part of new and upgraded road, rail, bus and transport interchange projects, such as State Infrastructure Multi Modal Corridor Program (i.e. delivering cycling routes within state owned assets). Train fleet and station upgrades will include space for active transport devices and major interchanges will include bicycle facilities.	Improving the sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 5, 6, 7, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Policy and regulation for Assisted Mobility Devices (AMDs)	Policy and planning	NSW will enable assisted mobility devices to be used safely on the network to assist with short journeys within centres, including developing and adopting safety standards for new devices entering the market and review existing regulatory frameworks to ensure they are available to customers and support wider social outcomes	Improve the safety of passenger movements across the transport system, and support the use of technology to improve accessibility to the transport system	2, 3, 9, 10, 11, 12
0-10 investigation	Sydney-wide	Policy and regulation for Connected and Automated Vehicles (CAVs)	Policy and planning	Collaborating with industry and local government to effectively integrate Connected and Automated Vehicles (CAVs) into the transport network through a number of specific initiatives to ensure they are available to customers and support wider social outcomes.	Enable future forms of mobility, such as CAVs, to be available to customers by ensuring infrastructure is enabled to support this	1, 2, 9, 10, 12
0-10 investigation	Sydney-wide	Initiatives to further incentivise more customers to travel in off-peak periods	Policy and planning	Implementing mechanisms as part of smart roads to reflect changing levels of congestion	Improve the liveability of centres by reducing road congestion and incentivising off-peak travel	4, 7, 8, 11
0-10 investigation	Sydney-wide	Mobility as a Service (MaaS) implementation	Service	We will harness the potential of MaaS to provide a more integrated, convenient journey experience for customers by working with industry to enable MaaS service providers to operate in Greater Sydney. This will include ensuring transport data is made available to MaaS operators and that technology platforms are in place.	Providing a more integrated, convenient journey experience for customers, and improving the sustainability of our transport system by attracting more customers to using public transport	1, 2, 6, 7, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Trial of artificial intelligence applications	Service	Create intelligent transport networks, managed with data: installing technologies and building networks that actively gather data, using Artificial Intelligence and real time analytics to optimise capacity and planning.	Improve the efficiency and reliability of journeys across the transport network and support the use of technology to improve accessibility to transport the system	1, 2, 11
0-10 investigation	Sydney-wide	Implementation of the Bus Head Start Program	Service	The purpose of the Bus Head Start Program is to ensure that residents of new release areas have access to high quality bus services (fast, frequent and direct) from day one of occupation.	The Program aims to maximise the demand for public transport services and reduce reliance on private vehicles, helping to delay the on-set of congestion and the associated broad ranging impacts by prioritising buses on selected roads.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Sydney-wide	Service changes to connect to new train lines	Service	As new train links are delivered, bus services will be reconfigured so that they provide faster access to train lines and enable more people to access their nearest Metropolitan City Centre within 30 minutes	Encouraging the take up of public transport by providing convenient and reliable connections to train and higher-capacity transport links.	1, 2, 5, 6, 7, 10, 12
0-10 investigation	Sydney-wide	New services on key routes	Service	As new transport links are delivered, services will be reconfigured so that they provide faster access and enable more people to access their nearest Metropolitan City Centre within 30 minutes	Encouraging the take up of public transport by providing convenient and reliable connections	1, 2, 5, 6, 7, 10, 12
0-10 investigation	Sydney-wide	Metropolitan Interchange Program	Service	Making interchanges safer, faster and more convenient to encourage public transport use. This includes developing centre-specific plans with bus operations requirement, making interchanges more attractive, and providing more services, such as shops, and major interchanges will include bicycle facilities.	Improve the range of services at interchanges to improve the attractiveness of interchanging, thereby boosting public transport mode share	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Higher frequency public transport services	Service	Increase in service frequencies on selected train lines and bus services to support the vision for Greater Sydney as a '30 minute city'.	Improve the efficiency and reliability of journeys across the transport network by encouraging greater public transport use, and boost 30 minute access to centres through more frequent services	5, 6, 7, 11, 12
0-10 investigation	Sydney-wide	Trial of on-demand ferry services on Sydney Harbour	Service	A trial of on-demand ferry services may provide more convenience and choice for customers and tourists travelling on Sydney Harbour	Provide more convenience and choice for customers and tourists travelling on Sydney Harbour	1, 2, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Sydney-wide	Centres and Placemaking Enhancement Package	Infrastructure	A program to support the implementation of the Movement and Place Framework on our road network, enabling the road network in centres to support local activity and improve walking and cycling	Improve the safety, efficiency and reliability of road journeys by better separating local and through journeys around centres	3, 4, 7, 8, 9, 11
0-10 investigation	Sydney-wide	Cycling improvements around metropolitan and strategic centres and on the Principal Bicycle Network	Infrastructure	Investment in cycling access within 10km of Metropolitan Centres and 5km of Strategic Centres as well as investment in the Principal Bicycle Network in collaboration with local council	Support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them	3, 4, 7, 9, 11, 12
0-10 investigation	Sydney-wide	Walking improvements around metropolitan and strategic centres	Infrastructure	Making improvements around metropolitan and strategic centres to support walking and cycling as the most convenient option for short trips. Includes implementing safety measures identified from Safe System design principles for corridor planning	Support walking and cycling being the most convenient option for short trips in and around metropolitan and strategic centres by providing safer, improved access paths	3, 4, 7, 9, 11, 12
0-10 investigation	Sydney-wide	Bus priority access program for centres	Infrastructure	Implementation of programs to prioritise access for buses over private vehicles in our metropolitan and strategic centres.	Support 30 minute access by public transport to the nearest centre for customers living in areas not served by train lines, by prioritising buses on selected roads	4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Precinct Improvement Program	Infrastructure	Provide bicycle parking at interchanges and partner with developers to provide cycling end of trip facilities within precincts.	Support walking and cycling being the most convenient option for short trips around centres	3, 4, 12
0-10 investigation	Sydney-wide	More Trains, More Services program	Infrastructure	A staged program of works delivering upgraded rail infrastructure, new trains and extra services across the suburban train network to address the growth in patronage forecast over the next 5 years. Train improvements on T1, T2, T4, T5, and T8 lines, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning) roll out of Advanced Train Control System to improve safety, capacity and reliability; upgrade of junctions to segment different lines on the network; additional tracks on some sections of existing corridors to boost capacity.	Enable an increase in reliable service frequencies on the Sydney Trains network through a step-change in signal technology, and improve network reliability for customers	5, 6, 7, 9, 11, 12
0-10 investigation	Sydney-wide	Roll-out of electric vehicle charge points	Infrastructure	Support the roll-out of publicly accessible charging stations encouraging take up of electric vehicles as they become more affordable	Encouraging take up of electric vehicles will rely on access to publicly accessible charging stations to ensure energy availability and address “range anxiety,” reduced air pollution and lower greenhouse gas emissions compared to internal combustion engines	2, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Sydney-wide	Bus priority infrastructure to support new services	Infrastructure	Bus Priority Infrastructure supports the delivery of fast and reliable bus services for customers where and when they are needed. These projects can include: bus lanes; bus priority at traffic lights; more efficient bus stop placement.	Support 30 minute access by public transport to the nearest centre for customers living in areas not served by train lines, by prioritising buses on selected roads	5, 7, 9, 11, 12
0-10 investigation	Sydney-wide	Investment in Smart Roads	Infrastructure	Implementation of improved road network management system to enable live monitoring of network performance across all modes that use our roads	Support the financial sustainability of the transport system by better using existing road infrastructure, and enable future forms of mobility, such as CAVs, to be available to customers by ensuring infrastructure is enabled to support this	1, 2, 7, 8, 9, 11, 12
0-10 investigation	Sydney-wide	'Pedestrian Safe System' Program	Infrastructure	Package of additional road safety infrastructure measures to improve safety at key high-risk pedestrian hot spots, supported by community engagement and enhanced enforcement	The Pedestrian Safe System Program will contribute to 'Towards Zero', reduce traffic delays, and increase the resiliency of the transport network. The program will be considered as part of the NSW Road Safety Plan 2021, which includes additional measures to improve road safety.	7, 8, 9
0-10 investigation	Sydney-wide	Expanded 40km/h High Pedestrian Activity Area Program	Infrastructure	Program to expand implementation of 40km/h High Pedestrian Activity Areas at appropriate locations such as transport interchanges and shopping precincts. www.transport.nsw.gov.au/newsroom-and-events/media-releases/its-official-our-40kmh-zones-are-keeping-us-safe	The Expanded 40km/h High Pedestrian Activity Area Program will contribute to 'Towards Zero', reduce traffic delays, and increase the resiliency of the transport network. The program will be considered as part of the NSW Road Safety Plan 2021, which includes additional measures to improve road safety.	7, 8, 9
10-20 investigation	Sydney-wide	New services on key routes	Service	As new transport links are delivered, services will be reconfigured so that they provide faster access and enable more people to access their nearest Metropolitan City Centre within 30 minutes	Encouraging the take up of public transport by providing convenient and reliable connections	1, 2, 5, 6, 7, 10

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation	Sydney-wide	Service changes to connect to new train lines	Service	As new train links are delivered, bus services will be reconfigured so that they provide faster access to train lines and enable more people to access their nearest Metropolitan City Centre within 30 minutes	Encouraging the take up of public transport by providing convenient and reliable connections to train and higher-capacity transport links.	1, 2, 5, 6, 7, 10
10-20 investigation	Sydney-wide	Service changes to connect to new train lines	Service	As new train links are delivered, bus services will be reconfigured so that they provide faster access to train lines and enable more people to access their nearest Metropolitan City Centre within 30 minutes	Encouraging the take up of public transport by providing convenient and reliable connections to train and higher-capacity transport links.	1, 2, 5, 6, 7, 10
10-20 investigation	Sydney-wide	Further investment in cycling connections within 5kms of strategic centres	Infrastructure	Further investment in cycling connections within 5kms of strategic centres	Further investment in connections to strategic centres and in the Principal Bicycle Network will support our 20+ year vision for walking or cycling to be the most convenient option for short trips around all Metropolitan and Strategic Centres and local areas, improving health outcomes, safety and convenience for customers as well as boosting the productivity, liveability and sustainability of Greater Sydney	3, 4, 7, 9, 11, 12
10-20 investigation	Sydney-wide	Major cycleway connections between centres on the Principal Bicycle Network	Infrastructure	Major cycleway connections between centres on the Principal Bicycle Network	Investment in the Principal Bicycle Network will support the vision for walking or cycling to be the most convenient option for short trips around all Metropolitan and Strategic Centres and local areas, improving health outcomes, safety and convenience for customers as well as boosting the productivity, liveability and sustainability of Greater Sydney	3, 4, 7, 9, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Sydney-wide	Sustainable Transport Package	Policy and planning	Various measures to support NSW Government's objective of net zero emissions by 2050	To achieve net zero emissions by 2050 while meeting increasing energy requirements, we will need to rethink how we power transport.	11, 12
20+ visionary	Sydney-wide	Investment in higher speed connection along East Coast	Infrastructure	Deliver a high speed transport connection along the East Coast of NSW (traversing Greater Sydney)	Future connectivity between Western Sydney and Central Coast, Newcastle and Canberra, providing cross-border connections and connecting Sydney, Global Gateway Cities and Regional Cities	2, 5, 7, 9, 10, 11, 12
20+ visionary	Sydney-wide	Further investment in cycling connections within 5kms of strategic centres and key connections to the Principal Bicycle Network	Infrastructure	Further investment in cycling connections within 5kms of strategic centres and key connections to the Principal Bicycle Network	Further investment in connections to strategic centres and in the Principal Bicycle Network will support our 20+ year vision for walking or cycling to be the most convenient option for short trips around all Metropolitan and Strategic Centres and local areas, improving health outcomes, safety and convenience for customers as well as boosting the productivity, liveability and sustainability of Greater Sydney	3, 4, 7, 9, 11, 12

Eastern Harbour City Initiatives

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Eastern Harbour City	North	Sydney Metro Northwest	Infrastructure	Sydney Metro Northwest is the first stage of Sydney Metro, delivering a high-frequency, high capacity rail service between the growth areas in the Northwest and Chatswood with interchanges to the North Shore and Northern train lines. www.sydneymetro.info/northwest/project-overview	Sydney Metro Northwest will deliver, for the first time, a reliable public transport service to a region which has the highest car ownership levels per household in NSW. It will reduce congestion on our roads, and provide a modern turn-up-and-go service to the Eastern Harbour CBD.	2, 3, 4, 5, 6, 7, 9, 10, 11, 12
0-10 committed	Eastern Harbour City	North	Sydney Metro City & Southwest	Infrastructure	A 30km extension of metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations and south west to Bankstown. www.sydneymetro.info/citysouthwest/project-overview	Sydney Metro City & Southwest will deliver a fast, reliable metro service for the Eastern Harbour City, and will be fully segregated from the existing Sydney Trains network between Sydenham and Bankstown, improving the reliability of services on the line. The metro will provide additional rail capacity and stations to further reduce congestion in the Harbour CBD.	2, 3, 4, 5, 6, 7, 9, 10, 11, 12
0-10 committed	Eastern Harbour City	Eastern City North	Northern Beaches B-Line	Infrastructure	A program to improve the capacity, reliability and comfort of the bus system relied on by the Northern Beaches community for access to the Sydney CBD and major local health, education, commercial and retail destinations at Mona Vale, Brookvale-Dee Why and Neutral Bay. www.transport.nsw.gov.au/projects/b-line-bus	The new double-decker bus service will provide more frequent and reliable services for commuters travelling between the Northern Beaches, Lower North Shore and the Sydney CBD, as well as new and upgraded commuter car parking facilities and road infrastructure upgrades.	3, 4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Eastern Harbour City	Eastern City	CBD & South East Light Rail	Infrastructure	A high-capacity and frequent service to improve access between the Sydney CBD and south-eastern suburbs. The 12km route extends from Circular Quay along George Street to Central Station, through Surry Hills to Moore Park, then to Kensington and Kingsford via Anzac Parade and Randwick via Alison Road and High Street. www.transport.nsw.gov.au/projects/current-projects/cbd-and-south-east-light-rail	The Light rail will provide reliable, efficient, turn-up-and-go public transport, with services every four minutes between CBD and Moore Park, and every eight minutes to and from Randwick and Kingsford between 7am and 7pm. A combined bus and light rail network will significantly improve public transport access to the Harbour CBD, major sporting and entertainment facilities at Moore Park and Randwick along with the University of NSW, TAFE and health precincts.	3, 4, 5, 6, 7, 9, 10, 11, 12
0-10 committed	Eastern Harbour City	North	Northern Beaches Hospital road upgrade	Infrastructure	Upgrades to the roads around the new Northern Beaches Hospital, including the intersections of Warringah Road with Wakehurst Parkway and Forest Way. www.rms.nsw.gov.au/projects/sydney-north/northern-beaches-hospital/index.html	The upgrades will provide customers with a better travel experience, increased capacity on the road network and improved access through the area, including for pedestrians and cyclists.	7, 8, 9, 11
0-10 committed	Eastern Harbour City	Eastern City	Sydney Airport road upgrades	Infrastructure	Upgrades to roads around Sydney's Kingsford Smith Airport and removing the General Holmes Drive rail level crossing by constructing a road underpass. www.rms.nsw.gov.au/projects/sydney-south/sydney-airport/index.html	The upgrades will provide customers with a better travel experience, increased capacity on the road network and improved access to Sydney's Kingsford Smith Airport and Port Botany.	7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Eastern Harbour City	Eastern City North South	Priority Cycleway links in inner Sydney	Infrastructure	Priority Cycleway links in inner Sydney including the Inner West Greenway and Sydney Harbour Bridge cycleway connections, to be developed and delivered in partnership with local councils, where appropriate. www.rms.nsw.gov.au/projects/sydney-inner/sydney-harbour-bridge/access-projects/cyclist-access/cycleway-access-proposals.html	New links will support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, and improve the overall sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 7, 9, 11
0-10 committed (in collaboration with Commonwealth)	Eastern Harbour City	North	Macquarie Park Interchange and precinct improvements	Infrastructure	A suite of improvements to the Macquarie Park interchange at Macquarie University station, including road upgrades, bus infrastructure improvements and pedestrian and safety improvements. www.pm.gov.au/media/macquarie-park-interchange-win-commuters www.rms.nsw.gov.au/projects/sydney-north/macquarie-park-bus-priority-capacity-improvement/index.html	These interchange upgrades will deliver faster, efficient and more reliable travel times through the Macquarie Park area for buses and all road users, improve pedestrian safety and access with new and improved crossing facilities, provide short-term support for the additional buses needed for the temporary closure of the Epping to Chatswood rail line, and provide long-term ongoing benefits for key bus corridors and local bus services through improved and upgraded bus priority infrastructure.	3, 4, 5, 6, 7, 9, 10,12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Eastern Harbour City	Eastern City Central City	Ferry Fleet Replacement Program, including upgraded services on Parramatta River ferries	Infrastructure	Provision of new ferries for a more comfortable, reliable, efficient and accessible journey. This includes new inner harbour and Parramatta River ferries, and improved services on Parramatta River ferries which will provide faster, more frequent service. www.transport.nsw.gov.au/projects/current-projects/sydneys-ferry-fleet	This program will deliver faster, safer, more comfortable and accessible travel experiences for our ferry customers, with Wi-Fi-enabled vessels capable of carrying bicycles and luggage and increased ability for rapid and safe boarding.	5, 7, 9, 10, 11, 12
0-10 committed	Eastern Harbour City	Eastern City	Parramatta Road public transport improvements	Infrastructure	Investment in improved on-road public transport between Strathfield and the Harbour CBD. Options will be considered to integrate with, and complement other committed and proposed initiatives within the corridor such as Sydney Metro West, Parramatta Light Rail and WestConnex.	Transport improvements on this corridor will improve 30 minute access to Greater Parramatta and the Harbour CBD by improving the efficiency and reliability of public transport on this corridor, as well as deliver urban renewal options to transform the Parramatta Road Corridor into a more attractive place to live and work.	3, 4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed – *subject to Final Business Case and funding*	Eastern Harbour City	Eastern City North	Western Harbour Tunnel and Beaches Link	Infrastructure	Western Harbour Tunnel and Beaches Link will connect to WestConnex at Rozelle, cross under Sydney Harbour and connect with the Warringah Freeway at North Sydney. Towards the Northern Beaches the tunnel will cross under Middle Harbour and connect with the Burnt Bridge Creek Deviation at Balgowlah and the Wakehurst Parkway, which would be upgraded to two lanes each way between Seaforth and Frenchs Forest. The project will also offer new 'east-west' connectivity with links to the Lane Cove Tunnel and M2 Motorway www.rms.nsw.gov.au/projects/sydney-north/western-harbour-tunnel-beaches-link/index.html	This project will deliver a new crossing of Sydney Harbour to cut congestion across northern Sydney and the Harbour CBD, make Sydney's busiest corridor shock-proof, and take through-traffic out of the Harbour CBD and off the Harbour Bridge. This project will also provide better east-west and north-south connectivity for our motorway network, and include better public transport links between the Northern Beaches and North Sydney.	5, 7, 8, 9, 11, 12
0-10 committed – *subject to Final Business Case and funding*	Eastern Harbour City	Eastern City South	F6 Extension Stage 1 WestConnex to President Ave, Kogarah	Infrastructure	Stage 1 of the F6 Extension, a motorway connection between the New M5 at Arncliffe and Loftus, will link WestConnex with the A1 at President Ave, Kogarah www.rms.nsw.gov.au/projects/sydney-south/f6/index.html	The F6 Extension Stage 1 will provide a connection for motorists from Southern Sydney to the wider Sydney motorway network, improve travel times between southern Sydney and Sydney CBD, and ease congestion on the local road network.	7, 8, 9, 11
0-10 investigation	Eastern Harbour City	Eastern City South	F6 Extension – Kogarah to Loftus	Infrastructure	This section of the F6 Extension will complete a missing link in the Sydney motorway network by connecting Stage 1 at President Ave, Kogarah to the Princes Highway at Loftus	The F6 will provide better access for people and goods travelling between southern Sydney, the Illawarra and other parts of Greater Sydney and ease congestion on the local road network	7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Eastern Harbour City	Eastern City	Harbour CBD to Green Square mass transit link	Infrastructure	Harbour CBD to Green Square rapid bus link on Botany Road	Boost the liveability and vibrancy of centres along Botany Road corridor by improving the attractiveness of public transport use on the corridor.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Eastern Harbour City	Eastern City	Green Square to La Perouse rapid bus link	Infrastructure	An investigation of a rapid bus link between Green Square and La Perouse via Eastgardens	Improve 30 minute access to the Harbour CBD by enabling customers to use rapid, high frequency buses, as opposed to lower frequency suburban services	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Eastern Harbour City	Eastern City	Eastern Suburbs to Inner West rapid bus links	Infrastructure	Eastern Suburbs to Inner West rapid bus links: Randwick to Sydney University to the Bays Precinct; Maroubra Junction to Sydney Airport to Marrickville	Support the efficiency and reliability of passenger journeys, and accessibility between Eastern Suburbs and Inner West	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Eastern Harbour City	North	Improved bus services between Northern Beaches and Chatswood	Infrastructure	Improved bus services between Northern Beaches (Brookvale-Dee Why) and Chatswood	Support the efficiency and reliability of passenger journeys between the Northern Beaches and Chatswood, and improve 30 minute access to key employment centres by enabling customers to use rapid, high frequency buses, as opposed to lower frequency suburban services.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Eastern Harbour City	Eastern City North South	Inner Sydney Regional Bike Network within 10km of the Harbour CBD	Infrastructure	Inner Sydney Regional Bike Network within 10km of the Harbour CBD	Support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them.	3, 4, 7, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Eastern Harbour City	North	East-west public transport connection from Mona Vale to Macquarie Park	Infrastructure	Investigate a transport corridor from Mona Vale to Macquarie Park along the A3 corridor.	Support the efficiency and reliability of passenger journeys west from the Northern Beaches, and improve 30 minute access to key employment centres by enabling customers to use rapid, high frequency buses, as opposed to lower frequency suburban services.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Eastern Harbour City	South	Sutherland to Cronulla Active Transport Link	Infrastructure	A shared, two-way pedestrian and bicycle path between Sutherland and Cronulla. The proposed route will provide a practical connection to residential and commercial areas, as well as hospitals, schools and transport links.	The proposed active transport link aims to address the current heavy reliance on motor vehicle transport for short trips in the Shire by improving opportunities for cycling and walking	3, 4, 7, 9, 11
0-10 investigation	Eastern Harbour City	Eastern City North Central City	Northern Sydney Freight Corridor Stage 2	Infrastructure	Investment in third tracks and/or quadruplication between Strathfield and north of Greater Sydney to improve freight rail capacity www.transport.nsw.gov.au/projects/programs/northern-sydney-freight-corridor-program	Improve the efficiency and reliability of freight movements between Greater Sydney and regions to the north by improving the separation of freight and passenger trains on the T1 Northern Line.	7, 8, 9, 11, 12
0-10 investigation	Eastern Harbour City	South	Heathcote Road improvements	Infrastructure	Capacity improvements to Heathcote Road to reduce traffic congestion improve safety and meet future traffic volumes. www.rms.nsw.gov.au/projects/sydney-south/heathcote-road-upgrade/index.html	Providing better access for people and goods travelling between the Western Parkland City and the Illawarra	7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Eastern Harbour City	Eastern City	Additional cruise ship capacity	Infrastructure	Manage and facilitate the growth of the cruise industry by implementing a Cruise Development Plan, which includes actions to manage the cruise industry development in the short, medium and long-term. At the same time Transport for NSW will investigate options to facilitate better connections to cruise terminals, including examining the suitability of White Bay Cruise Passenger Terminal. www.transport.nsw.gov.au/operations/logistics-network/nsw-port-network/cruise-ships	These initiatives will support the visitor economy in Greater Sydney.	9, 10, 11
0-10 investigation (in collaboration with Commonwealth	Eastern Harbour City	Eastern City	Foreshore Road upgrade	Infrastructure	Road improvements around Kingsford Smith Airport and Port Botany to boost the efficiency of the network outside of new major corridors (part of Port Botany Precinct Planning, NSW Freight and Ports Plan).	Support the efficiency and reliability of passenger and freight access to Sydney's Kingsford Smith Airport and Port Botany.	7, 8, 9, 11
0-10 investigation (in collaboration with Commonwealth)	Eastern Harbour City	Eastern City	Duplication of Port Botany freight rail line	Infrastructure	Duplication of the line between Port Botany and Cooks River including construction of new track and duplication of three existing single track bridges (Robey Street, O'Riordan Street and Southern Cross Drive). www.transport.nsw.gov.au/projects/current-projects/duplication-of-botany-rail-line	Support the growth, reliability and safety of container movements to and from Port Botany by enabling more goods to be reliably moved by rail between the port and intermodal terminals in Greater Sydney and regional NSW.	8, 9, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation	Eastern Harbour City	Eastern City	Mass transit/ train link to South East	Infrastructure	Mass transit/train link from the Harbour CBD to Malabar via Randwick and Eastgardens-Maroubra Junction	Support urban renewal and growth in the south-east, including around Malabar, by providing a high-capacity mass transit/train link, reduce the AM peak public transport travel time between Maroubra Junction and the Sydney CBD, and address potential longer-term capacity constraints by providing an additional mass transit link to the south and south-east of the Harbour CBD.	2, 5, 6, 7, 9, 10, 11, 12
10-20 investigation	Eastern Harbour City	Eastern City	Light rail extension to Maroubra Junction	Infrastructure	Extension of the current CBD and South East Light Rail project to Maroubra Junction.	Support urban renewal and growth to the south of Kingsford with a mode of transport that supports street activation; enable future connectivity between CBD and Southeast Light Rail and mass transit/train link to South East at Maroubra Junction. This will improve access to key centres in the south-east, such as Randwick Health Precinct for customers living west of the Harbour CBD, and alleviate potential long-term capacity constraints on CBD and Southeast Light Rail by enabling customers to interchange between mass transit/train link and light rail at Maroubra Junction.	4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation	Eastern Harbour City	Eastern City	Light rail to Bays Precinct	Infrastructure	A proposed loop from the existing Inner West Light Rail connecting the existing line at North Leichhardt and at Pyrmont via The Bays Precinct and Old Glebe Island Bridge	Support urban renewal of the Bays Precinct with a mode of transport that supports street activation, provide efficient and reliable local access by public transport to the Bays Precinct for customers in the Inner West, alleviate potential long-term capacity constraints on the Inner West light rail line by spreading inbound demand from west of Lilyfield via two branches – either via Glebe or via the Bays Precinct, and enable interchange between Inner West Light Rail and Sydney Metro West at Bays Precinct, improving access to jobs and services for Inner West customers.	4, 5, 6, 7, 9, 10, 11, 12
20+ visionary	Eastern Harbour City	Eastern City South	Extension of South East mass transit/ train link to Miranda	Infrastructure	Bifurcation of the potential mass transit/ train link to South East at Randwick. The mass transit/ train link would then extend to Sydney Airport, Kogarah and (via the Sandringham Peninsula) to Miranda	Support reliable 30 minute access by public transport for customers in southern Sydney by addressing capacity constraints on the existing train line and connecting new parts of the area by mass transit/ train, including the Sandringham Peninsula	2, 5, 6, 7, 9, 10, 11, 12
20+ visionary	Eastern Harbour City	North	Address long term capacity constraints on the Pacific Highway	Infrastructure	Improved road connectivity to centres along the Pacific Highway corridor between M1 (at Wahroonga) and M2 (at Artarmon)	Improving the movement function of the Pacific Hwy corridor while balancing the need for convenient access with enhancing the attractiveness of places adjacent to the corridor	4, 7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Eastern Harbour City	Eastern City	Address long term capacity constraints to Port Botany and south-east Sydney.	Infrastructure	Improved road connectivity between WestConnex and Port Botany and towards the south-east	Support the long-term growth in container movements to and from Port Botany by enabling freight to access the port by a direct route distinct from roads around Kingsford Smith Airport, and enable efficient and reliable road-based journeys for customers in the south-east as the population of the area expands as a result of urban renewal	4, 7, 8, 9, 11

Central River City Initiatives

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Central River City	Central City Eastern City	WestConnex	Infrastructure	WestConnex is 33km new and upgraded motorway currently under construction to provide a western bypass of the Harbour CBD with connections to the M4, the proposed Western Harbour Tunnel and Beaches Link, Sydney Airport and Port Botany, and the upgraded M5. www.westconnex.com.au	WestConnex is part of an integrated transport plan to keep Sydney moving – easing congestion, creating jobs and connecting communities. The new motorway will reduce travel times on the M4 and across the road network, take trucks off local roads, enable new public transport options on the key corridors of Parramatta Road and Victoria Road, and provide crucial support for Sydney's long-term economic and population growth.	7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Central River City	Central City North	NorthConnex	Infrastructure	NorthConnex is a 9km tunnel that will link the M1 Pacific Motorway at Wahroonga to the Hills M2 Motorway at West Pennant Hills. www.northconnex.com.au/	NorthConnex will deliver significant benefits to local communities by easing congestion and removing around 5000 trucks daily from Pennant Hills Road. This will help improve safety, local air quality and reduce traffic noise. Motorists will be able to travel from Newcastle to Melbourne without a single set of traffic lights, reducing travel times for motorists and delivering state and national freight efficiencies. The motorway will also provide opportunities to improve public transport travel times and services around Pennant Hills Road.	7, 8, 9, 11
0-10 committed	Central River City	Central City North	Victoria Road public transport improvements	Infrastructure	Improvements will include upgrading bus services and infrastructure on the Victoria Road corridor, through the Bus Priority Infrastructure Program. This initiative is to support planned growth in the Bays Precinct, and to integrate with committed and proposed initiatives within the corridor such as Sydney Metro West and WestConnex	Transport improvements on this corridor will improve 30 minute access to Greater Parramatta and the Harbour CBD by improving the efficiency and reliability of public transport on this corridor, as well as deliver urban renewal options to transform the Victoria Road Corridor into a more attractive place to live and work.	3, 4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Central River City	Central City	Parramatta Light Rail Stage 1	Infrastructure	The first stage of Parramatta Light Rail will connect Westmead to Carlingford via Parramatta CBD and Camellia. www.parramattalightrail.nsw.gov.au	Light rail will create new communities, connect great places and help both locals and visitors move around and explore what the region has to offer. The route will link Parramatta's CBD and train station to the Westmead Health precinct, Parramatta North Urban Transformation Program, the new Western Sydney Stadium, the Camellia Precinct, the new Powerhouse Museum and Riverside Theatres Cultural Hub, the private and social housing redevelopment at Telopea, Rosehill Gardens Racecourse and three Western Sydney University campuses.	3, 4, 5, 6, 7,9, 10, 11, 12
0-10 committed	Central River City	Central City	Priority cycleway links in the Central River City	Infrastructure	Priority cycleway links to Greater Parramatta, Westmead and Sydney Olympic Park including through Carlingford and Parramatta North, to be developed and delivered in partnership with local councils, where appropriate.	New links will support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, and improve the overall sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 7, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed – subject to Final Business Case and funding	Central River City	Central City Eastern City	Sydney Metro West	Infrastructure	A new underground metro railway under investigation to link the Parramatta and Sydney CBDs. Key precincts already identified to be serviced by Sydney Metro West include Parramatta, Sydney Olympic Park, The Bays Precinct and the Sydney CBD. www.transport.nsw.gov.au/projects/current-projects/sydney-metro-west	Sydney Metro West doubles the capacity of the currently overcrowded T1 Western Line and establishes future capacity for Sydney's fast growing west and the planned airport. Passengers will also enjoy faster travel times all the way from Penrith and Blacktown to the Eastern Harbour City. This project also delivers strong city-shaping outcomes along its proposed route.	2, 3, 4, 5, 6, 7, 9, 10, 11, 12
0-10 committed – subject to Final Business Case and funding	Central River City	Central City	Parramatta Light Rail Stage 2	Infrastructure	The second stage of Parramatta Light Rail will connect to Stage 1 and run north of the Parramatta River through the rapidly developing suburbs of Ermington, Melrose Park and Wentworth Point to Sydney Olympic Park. www.parramattalightrail.nsw.gov.au/stage-2	Light rail will create new communities, connect great places and help both locals and visitors move around and explore what the region has to offer. Stage 2 will connect to Stage 1 and run north of the Parramatta River through the rapidly developing suburbs of Ermington, Melrose Park and Wentworth Point to Sydney Olympic Park, providing a new public transport option to this booming sport, entertainment and employment hub.	3, 4, 5, 6, 7,9, 10, 11, 12
0-10 investigation	Central River City	Central City South	Parramatta to Bankstown to Hurstville/ Kogarah rapid bus link	Infrastructure	New rapid bus link from Parramatta to Bankstown to Hurstville / Kogarah	Support the efficiency and reliability of passenger journeys between Parramatta to Bankstown and Hurstville and improve 30 minute access to Greater Parramatta by enabling customers to use rapid, high frequency buses, as opposed to lower frequency suburban services.	4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Central River City	Central City	Improved bus services between north of Parramatta and centres to the south of Parramatta	Infrastructure	Improved bus services between north of Parramatta and centres to the south of Parramatta	Support the efficiency and reliability of passenger journeys between Parramatta and centres to the north and south of Parramatta, and support the growth of the Central River City.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Central River City	Central City	Parramatta inner ring road (improve-ments to existing surface roads)	Infrastructure	Upgrade of existing surface roads on the outskirts of Greater Parramatta's centre to function as arterial movement corridors. This includes surface treatments, minor interventions and some potential widening to improve the prioritisation of vehicles	Support the growth and vibrancy of Greater Parramatta as a Metropolitan Centre by ensuring major north-south and east-west through movements for freight and private vehicles occur outside the centre. Support walking and cycling being the most convenient option for short trips in Greater Parramatta by enabling road-space in the centre to continue to support pedestrian and cyclist access, where appropriate.	3, 4,7, 8, 9, 11
0-10 investigation	Central River City	Central City	T-Way to T-Way link	Infrastructure	A link between the Liverpool – Parramatta T-Way with Northwest T-Way via Westmead to support more 'through-routing' of buses and better connect centres north and south of Greater Parramatta	Improve 30 minute access to Greater Parramatta by enabling customers using T-Way buses to transfer to train at Westmead rather than travelling on busy streets near Parramatta, and managing the number of buses travelling through Parramatta by enabling them to bypass the main centre.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Central River City	Central City	Safe cycleway network within 10km of Parramatta	Infrastructure	Safe cycleway network within 10km of Parramatta	Support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them.	3, 4, 7, 9, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation	Central River City	Central City	Parramatta to Epping mass transit / train link	Infrastructure	A mass transit / train link between Greater Parramatta and Epping via Carlingford to be considered as part of a Parramatta to Epping corridor study.	This would extend 30 minute access to Greater Parramatta to a significant number of suburbs on the train network, especially for customers from centres such as Rouse Hill, Hornsby, Epping and Macquarie Park. This would also improve the resilience of the train network by providing a new north-south train link in Greater Sydney that does not traverse the Harbour CBD and better spreading demand away from the busiest corridors in the Eastern City	2, 5, 6, 7, 9, 10, 11, 12
10-20 investigation	Central River City	Central City South	Parramatta to Kogarah mass transit / train link	Infrastructure	A mass transit / train link from Greater Parramatta to Kogarah via Bankstown.	Extend 30 minute access to Greater Parramatta to a significant number of suburbs on the train network by unlocking network benefits, improve the resilience of the train network by providing a new north-south train/mass transit link in Greater Sydney that does not traverse the Harbour CBD and better spreading demand away from the busiest corridors in the Eastern City.	2, 5, 6, 7, 9, 10, 11, 12
10-20 investigation	Central River City	Central City	Parramatta outer ring road	Infrastructure	Parramatta Outer Ring Road would link the Cumberland Highway, M4 and James Ruse Drive. The Outer Ring Road would be linked to major roads that transport to and from Parramatta and feed into Parramatta Inner Ring Road around the centre	Support the growth and vibrancy of Greater Parramatta as a Metropolitan Centre by ensuring major north-south and east-west through movements for freight and private vehicles occur outside the centre	4, 7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation	Central River City	Central City	Parramatta Light Rail extensions	Infrastructure	Potential extensions of Parramatta Light Rail to be considered.	Improve the vibrancy and liveability of suburbs in and around Greater Parramatta by supporting the renewal of these areas with a high-quality on-street public transport mode	3, 4, 5, 6, 7, 9, 10, 11, 12
20+ visionary	Central River City	Central City	Central City strategic road corridor (NorthConnex to Southern Sydney)	Infrastructure	A future strategic road corridor linking NorthConnex near the M2 with Greater Parramatta and the F6 in southern Sydney.	Improve the safety, efficiency and reliability of north-south freight movements through the Central City, particularly for trucks travelling between freight precincts near Chullora and regions to the north and south of Greater Sydney. This benefit will be achieved by reducing the reliance of freight traffic on the congested A3, and improve the vibrancy and liveability of centres on the A3, including Beverley Hills, Roselands, Rhodes and West Ryde, by reducing congestion and providing a new dedicated link for major through movements	4, 7, 8, 9, 11
		South					

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Central River City	Central City	Parramatta to Norwest mass transit/ train link	Infrastructure	A mass transit/ train link from Greater Parramatta to Norwest; preferred station locations TBC. Could potentially be connected to the proposed mass transit/ train link to Kogarah to from a north-south link through Parramatta.	Travel time analysis suggests that this project would dramatically improve travel times between Norwest Business Park and Parramatta, providing 30 minute access to Greater Parramatta from Rouse Hill and surrounding centres in the Hills area. This project would also alleviate longer-term capacity pressures on Sydney Metro Northwest (west of Epping) by providing a more direct link between the Hills area and Greater Parramatta (rather than via Epping).	2, 5, 6, 7, 9, 10, 11, 12
20+ visionary	Central River City	Central City Eastern City South	Train/ mass transit link Macquarie Park to Hurstville via Rhodes	Infrastructure	A potential mass transit/train link from Hurstville (or Kogarah) to Burwood and Strathfield and then potentially on to Rhodes and Macquarie Park.	This project would alleviate longer-term capacity pressures and improve the resiliency of the network by providing an additional north-south connection through Macquarie Park, Rhodes and Hurstville, enabling customers to transfer between Illawarra Line, East Hills Line, Metro Southwest-CBD, the Metro West, the Main West Line and the Northern Line.	2, 5, 7, 9, 10, 11, 12

Western Parkland City Initiatives

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed (Subject to Final Business Case and funding in collaboration with the Common-wealth)	Western Parkland City	Western City	Western Sydney Infrastructure Plan, including the new M12	Infrastructure	The Australian and NSW governments are funding a 10 year, $3.6 billion road investment program. The Plan includes upgrading The Northern Road, Bringelly Road, the Glenbrook intersection and local road upgrades as well as building the Werrington Arterial that was completed in May 2017, and a new M12 motorway linking the new airport and the M7. www.rms.nsw.gov.au/projects/sydney-west/m12-motorway/index.html www.rms.nsw.gov.au/projects/sydney-west/infrastructure-plan/index.html	This will deliver new and upgraded roads to support integrated transport in the region and capitalise on the economic benefits from developing the Western Sydney Airport at Badgerys Creek.	5, 7, 8, 9, 11
0-10 committed	Western Parkland City	Western City	Priority Cycleway links in the Western Parkland City	Infrastructure	Priority Cycleway links connecting Penrith, Blacktown and Liverpool, including the Nepean River Green Bridge, to be developed and delivered in partnership with local councils, where appropriate.	New links will support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, and improve the overall sustainability of the transport network by encouraging more short trips to be made by walking or cycling.	3, 4, 7, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Western Parkland City	Western City Central City	M4 Smart Motorway	Infrastructure	The M4 Smart Motorway project will introduce intelligent technology, known as a motorway management system, to Sydney's M4 Motorway between Pitt Street, Mays Hill and Russell Street, Lapstone. www.rms.nsw.gov.au/projects/sydney-west/m4/index.html	The M4 Smart Motorway will introduce a smarter way of travelling the M4 by using real time information, communication and traffic management tools to provide motorists with a safer, smoother and more reliable journey. The project will cut congestion and reduce travel time, providing benefits to customers travelling between the Central River City and Western Parkland City.	2, 7, 8, 9, 11
0-10 committed	Western Parkland City	Western City	Western Sydney Growth Roads Program	Infrastructure	Western Sydney Growth Roads Program delivers new and upgraded road infrastructure in Western Sydney's growth areas. www.budget.nsw.gov.au/supporting-our-regions/western-sydney/connecting-western-sydney	This will deliver new and upgraded roads to support integrated transport in the region and capitalise on the economic benefits from developing the Western Sydney Airport at Badgerys Creek.	7, 8, 9, 11
0-10 committed (in collaboration with the Commonwealth)	Western Parkland City	Western City	Access to Moorebank Intermodal Terminal	Infrastructure	Development of a package of road upgrades to alleviate impacts from Moorebank Intermodal Terminal (MIT) and related regional traffic growth. www.investment.infrastructure.gov.au/key_projects/initiatives/moorebank_intermodal_terminal.aspx	The terminal will boost productivity and improve transport links enabling import-export freight travelling through Sydney to and from Port Botany to be transported on rail instead of the road network, providing cheaper and more efficient freight transportation.	8, 9

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed (subject to Final Business Case and funding in collaboration with Commonwealth)	Western Parkland City	Western City	North-south rail link in Western Parkland City: St Marys – WSA-Badgerys Creek Aerotropolis	Infrastructure	The north-south rail link is a new rail link for the Western City linking the growth areas in the Northwest and Southwest with WSA-Badgerys Creek Aerotropolis.	Provide 30 minute access to WSA-Badgerys Creek Aerotropolis along the north-south spine of the Western City, including for customers in suburbs north of WSA-Badgerys Creek Aerotropolis, St Marys and Schofields	5, 6, 7, 9, 10, 11, 12
0-10 investigation (for priority planning in collaboration with Commonwealth)	Western Parkland City	Western City Central City	North-south rail link in Western Parkland City: Cudgegong Rd – St Marys	Infrastructure	The north-south rail link is a rail train link for the Western City linking the growth areas in the Northwest and Southwest with WSA-Badgerys Creek Aerotropolis. This stage will connect the existing Sydney Metro Northwest terminus at Cudgegong Road to St Marys on the Western Line.	Provide 30 minute access to growth areas in the north west, and provide efficient and reliable access by train to Greater Parramatta, Penrith and other centres on the train network via an interchange at St Marys	5, 6, 7, 9, 10, 11, 12
0-10 investigation (for priority planning in collaboration with Commonwealth)	Western Parkland City	Western City	North-south rail link in Western Parkland City: WSA-Badgerys Creek Aerotropolis – Campbelltown-Macarthur	Infrastructure	The north-south rail link is a new train link for the Western City linking the growth areas in the Northwest and Southwest with WSA-Badgerys Creek Aerotropolis. This stage will extend from WSA-Badgerys Creek Aerotropolis to Campbelltown-Macarthur	Provide 30 minute access to WSA-Badgerys Creek Aerotropolis from Campbelltown-Macarthur and surrounding suburbs, improving access to jobs and services for customers in this area and shape a sustainable urban form in the Western City by providing a mass transit spine to attract sustainable development and minimise sprawl	5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation (for priority planning in collaboration with Commonwealth)	Western Parkland City	Western City	Leppington to WSA-Badgerys Creek Aerotropolis rail link	Infrastructure	Potential extension of the South West Rail Link from Leppington to the metropolitan centre of WSA-Badgerys Creek, providing access to WSA via an interchange with the north-south train link	Provide efficient and reliable access to WSA for customers to the east. Strategic modelling indicates this project would reduce the AM peak public transport travel time between Liverpool and WSA from approximately 68 minutes to 36 minutes, and support a sustainable urban form in the Western City by providing an additional east-west train link that supports convenient access to centres by public transport.	5, 6, 7, 9, 10, 11, 12
0-10 investigation	Western Parkland City	Western City Central City	Improved services on the Richmond Line	Service	A corridor investigation for improved services, including potential duplication of Richmond Line to Riverstone, Vineyard, Marsden Park, North West Priority Growth Area	Support improved reliability, capacity, and journey times on the Richmond Line.	5, 7, 9, 11, 12
0-10 investigation (in collaboration with the Commonwealth)	Western Parkland City	Western City Central City	WSA-Badgerys Creek Aerotropolis-Parramatta rail link	Infrastructure	New rail link from Parramatta to WSA-Badgerys Creek Aerotropolis via Prairiewood to reduce journey times between these centres and the Harbour CBD.	Connect the three Metropolitan Centres with a high frequency, high capacity transport link, acting as the central east-west public transport spine for Greater Sydney, and boost 30 minute access to Greater Parramatta for residents living to the south-west of the centre.	5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Western Parkland City	Western City Central City	Infrastructure to support rapid bus connections and improved bus connections between WSA-Badgerys Creek Aerotropolis and Penrith, Liverpool, Blacktown and Campbelltown-Macarthur	Infrastructure	New dedicated bus links or implementation of bus priority on existing and new roads to enable efficient and reliable rapid bus links between the identified centres. The link between Liverpool and WSA-Badgerys Creek Aerotropolis could potentially include an extension of the Liverpool-Parramatta T-way, and upgrades along Fifteenth Avenue.	Supporting urban growth in the Western City, particularly near the WSA-Badgerys Creek Aerotropolis, and improve 30 minute access to WSA-Badgerys Creek Aerotropolis and its surrounding major strategic centres by improving the efficiency and reliability of public transport on this corridor, and prioritising higher frequency services as an alternative to local bus routes.	4, 5, 6, 7, 9, 10, 11, 12
0-10 investigation	Western Parkland City	Western City	Western Parkland City bus interchange	Infrastructure	A new bus interchange to improve connectivity between Penrith, Liverpool, Campbelltown-Macarthur and WSA-Badgerys Creek Aerotropolis	Supporting urban growth in the Western City, particularly near the WSA-Badgerys Creek Aerotropolis, and improve 30 minute access to WSA-Badgerys Creek Aerotropolis and its surrounding major strategic centres by improving the efficiency and reliability of public transport on this corridor.	4, 5, 6, 7, 9, 10, 11
0-10 investigation	Western Parkland City	Western City	WSA-Badgerys Creek Aerotropolis CAV zone	Infrastructure	Implementation of zones within the WSA-Badgerys Creek Aerotropolis only accessible for Connected and Automated Vehicles.	Support customer access to new forms of mobility by providing a new dedicated zone for CAVs.	1, 2, 4, 7, 9, 10, 11, 12
0-10 investigation	Western Parkland City	Western City Central City Eastern City	Western Sydney Fuel Pipeline	Infrastructure	Planning for a fuel pipeline corridor to service Western Sydney Airport and Western Sydney more broadly www.transport.nsw.gov.au/projects/current-projects/western-sydney-fuel-pipeline	Support efficient operation of WSA and reduce movement of dangerous goods on road network.	8, 9, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation (in collaboration with the Commonwealth)	Western Parkland City	Western City Central City	Southern Sydney Freight Line improvements	Infrastructure	Supporting freight with upgrades to the Southern Sydney Freight Line north of Liverpool to increase capacity for freight and support Moorebank	Improve the efficiency and reliability of rail freight movements by providing additional capacity for freight, particularly to and from Moorebank Intermodal Terminal.	5, 7, 8, 9, 11, 12
10-20 investigation	Western Parkland City	Western City	Outer Sydney Orbital from Great Western Highway to WSA-Badgerys Creek Aerotropolis	Infrastructure	A future North – South orbital transport corridor around Greater Sydney. Including motorway and freight rail, it will provide a continuous bypass of Greater Sydney, ultimately connecting the Illawarra, Sydney and the Central Coast. This first stage will connect the Great Western Highway to WSA-Badgerys Creek Aerotropolis. The freight rail connection will link the Western Line to the Western Sydney Freight Line, north of WSA-Badgerys Creek Aerotropolis www.transport.nsw.gov.au/projects/current-projects/outer-sydney-orbital-corridor-study	Support the efficient and reliable movement of freight bypassing Greater Sydney with a single dedicated outer bypass, and support growing demand to access WSA from the Central West and centres such as Penrith and surrounding areas with a higher capacity road link	4, 7, 8, 9, 11
10-20 investigation	Western Parkland City	Western City	Safe cycleway network within 10km of Greater Penrith, Liverpool, Campbelltown-Macarthur and, WSA-Badgerys Creek Aerotropolis	Infrastructure	Safe cycleway network within 10km of Greater Penrith, Liverpool, Campbelltown-Macarthur and, WSA-Badgerys Creek Aerotropolis	Support walking and cycling being the most convenient option for short trips around centres by improving access both around centres and between them, improving the sustainability of the transport network by encouraging more short trips to be made by walking or cycling, and improving the efficiency and reliability of journeys by encouraging more short trips to be made by walking or cycling	3, 4, 7, 9, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
10-20 investigation (in collaboration with the Commonwealth)	Western Parkland City	Western City	Additional capacity on Southern Sydney Freight Line	Infrastructure	Continued network improvements of the SSFL south of Liverpool to increase capacity	Improve the efficiency and reliability of rail freight movements by better separating freight from passenger trains, and enable an increase in passenger train service frequency on the T5 Cumberland Line by opening up additional train paths to passenger trains	5, 7, 8, 9, 11, 12
10-20 investigation	Western Parkland City	Western City Central City	Western Sydney Freight Line	Infrastructure	Western Sydney Freight Line would connect the Southern Sydney Freight Line to an intermodal terminal site in Western Sydney and to the Outer Sydney Orbital which will provide a connection with the Main West Railway Line.	Support dedicated freight rail access between Port Botany and the new Western Sydney Intermodal Terminal, enable an increase in service frequency on the T1 Western Line by removing freight trains from the line between St Marys and Penrith, and support the emergence of Parramatta as a highly liveable Metropolitan Centre by diverting freight rail movements away from the centre	5, 7, 8, 9, 11, 12
20+ visionary	Western Parkland City	Western City South	Sydney Metro City & Southwest extension to Liverpool	Infrastructure	Extension of Sydney Metro City and Southwest from Bankstown to Liverpool	Provide a direct, high-frequency train connection between significant strategic centres in the Central and Western City, improving 30 minute access to jobs and services for customers living in surrounding suburbs, and extend efficient, reliable, high-frequency train access to the Harbour CBD for residents living in Liverpool and surrounding suburbs	2, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Western Parkland City	Western City	M5 motorway extension from Liverpool to Outer Sydney Orbital	Infrastructure	The M5 Extension is a possible link between the M5 Motorway at the Cutler VC interchange with the M7 and the Outer Sydney Orbital motorway at Greendale	Improve the efficiency and reliability of road-based freight journeys between intermodal terminals near Liverpool and the Outer Sydney Orbital, and address longer-term capacity constraints on Bringelly Road and adjacent local roads with a new movement corridor	7, 8, 9, 11
20+ visionary	Western Parkland City	Western City	WSA-Badgerys Creek Aerotropolis inner and outer ring roads	Infrastructure	A hierarchy of motorways, Aerotropolis roads and airport roads to allow for a continuous city road structure that would create maximum connectivity within the Western City Aerotropolis spurring cluster development.	Support the growth and vibrancy of WSA-Badgerys Creek Aerotropolis as a Metropolitan Centre by ensuring major north-south and east-west through movements for freight and private vehicles occur outside the centre	3, 4, 7, 8, 9, 11
20+ visionary	Western Parkland City	Western City North	Outer Sydney Orbital from Great Western Highway to Central Coast	Infrastructure	A future North – South orbital transport corridor around Greater Sydney. Including motorway and freight rail, it will provide a continuous bypass of Greater Sydney, ultimately connecting the Illawarra, Sydney and the Central Coast. This stage will connect the Great Western Highway / Western Line near St Marys via Box Hill in Sydney's Northwest to the Central Coast near Gosford www.transport.nsw.gov.au/projects/current-projects/outer-sydney-orbital-corridor-study	Support the efficient and reliable movement of freight bypassing Greater Sydney with a single dedicated outer bypass, improve the resilience of the transport network connecting Greater Sydney and the Central Coast by alleviating sole reliance on the M1 Pacific Motorway, and support longer-term growth in passenger train movements on the T1 Northern Line by providing a new dedicated freight rail connection between Greater Sydney and the Central Coast	4, 7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Western Parkland City	Western City	Outer Sydney Orbital from WSA-Badg-erys Creek Aerotropolis to Hume Motorway	Infrastructure	A future North – South orbital transport corridor around Greater Sydney. Including motorway and freight rail, it will provide a continuous bypass of Greater Sydney, ultimately connecting the Illawarra, Sydney and the Central Coast. This stage will connect WSA-Badgerys Creek Aerotropolis to the M31 Hume Motorway south of Campbelltown-Macarthur. The freight rail connection will link OSO freight rail and Western Sydney Freight Line (north of WSA-Badgerys Creek Aerotropolis) to the Main South Line south of Campbelltown-Macarthur www.transport.nsw.gov.au/projects/current-projects/outer-sydney-orbital-corridor-study	Support the efficient and reliable movement of freight bypassing Greater Sydney with a single dedicated outer bypass, unlock the benefits of the Maldon-Dombarton link to the Illawarra by providing the connection to OSO freight rail and Western Sydney Freight Line (north of WSA-Badgerys Creek Aerotropolis), and provide additional capacity for road transport to the Western City as demand on The Northern Road grows	4, 7, 8, 9, 11
20+ visionary	Western Parkland City	Western City	Outer Sydney Orbital from Hume Motorway to Illawarra	Infrastructure	A future North – South orbital transport corridor around Greater Sydney. The OSO transport corridor will have the ultimate potential to provide a continuous bypass of Greater Sydney, connecting the Illawarra, Sydney and the Central Coast. This stage will provide a motorway connection between the Western City and the Illawarra. www.transport.nsw.gov.au/projects/current-projects/outer-sydney-orbital-corridor-study	Support the efficient and reliable movement of freight bypassing Greater Sydney with a single dedicated outer bypass, provide additional capacity for road transport between Greater Sydney and the Illawarra as demand on Appin and Picton Road grows, and provide a strategic connection between the Western City and the Satellite City of Wollongong	4, 7, 8, 9, 11

Timing for initiative	City	District	Initiative	Type of investment	Description	Benefit	Customer Outcomes
20+ visionary	Western Parkland City	Western City	Bells Line of Road-Cas-tlereagh Connection	Infrastructure	A corridor to provide a connection from Kurrajong to Sydney's motorway network, and provide an alternate route to the Blue Mountains. www.transport.nsw.gov.au/projects/current-projects/bells-line-of-road-castlereagh-corridor-study	Improve the safety, efficiency and reliability of freight journeys between Sydney, the Central West and other regions west of the Blue Mountains by providing a more direct connection between freight precincts in the Western City and the Bells Line of Road	4, 7, 8, 9, 11

Outer Metro Initiatives

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 committed	Outer Metro	Upgrades to Blue Mountains Line	Infrastructure	Station and track improvements along the rail corridor from west of Springwood Station to Lithgow Station to accommodate new and existing trains. www.transport.nsw.gov.au/projects/current-projects/new-intercity-fleet-program-springwood-to-lithgow-rail-corridor	This project will deliver upgraded rail infrastructure allowing our complex network to operate at an even greater capacity, including better signalling systems, power supply upgrades and station improvements.	5, 7, 9, 10, 11, 12
0-10 investigation	Outer Metro	Great Dividing Range long term solution study	Policy and planning	A strategic examination of options to improve freight connectivity across the Great Dividing Range from inland areas of NSW to Greater Sydney.	Solution will resolve a long standing issue regarding access between Inland NSW and Coastal areas of the Greater Sydney conurbation.	1, 5, 7, 8, 9, 11, 12
0-10 investigation	Outer Metro	Great Dividing Range long term solution corridor preservation	Policy and planning	Corridor preservation to improve freight connectivity across the Great Dividing Range in order to connect inland areas of NSW to Greater Sydney.	Solution will resolve a long standing issue regarding access between Inland NSW and Coastal areas of the Greater Sydney conurbation.	1, 5, 7, 8, 9, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Outer Metro	Appin and Picton Road improvements	Infrastructure	Capacity improvements to Appin and Picton Road to support additional freight, public transport and private vehicle journeys. In collaboration with local council, upgrades to also focus on supporting liveability of centres that roads pass through, as well as safety measures identified from Safe System design principles for corridor planning www.rms.nsw.gov.au/projects/illawarra/picton-road-safety-improvements/index.html www.rms.nsw.gov.au/projects/illawarra/appin-road/index.html	Support access to jobs and services in the Illawarra for the growing population in the south west of Greater Sydney, particularly in the Wingecarribee LGA, and support the efficiency and reliability of freight and passenger journeys between the south-west of Sydney and the Illawarra by addressing capacity constraints on the corridor	5, 7, 8, 9, 11
0-10 investigation	Outer Metro	Bells Line of Road improvements	Infrastructure	Safety and traffic improvements for the existing route along the Bells Line of Road corridor to improve safety and journey times for vehicles crossing the Blue Mountains www.rms.nsw.gov.au/projects/sydney-west/bells-line-of-road/index.html	Safer journeys for vehicles crossing the Blue Mountains, and improved freight access between Greater Sydney, the Blue Mountains, Central West and other regions to the west	4, 7, 8, 9, 11, 12
0-10 investigation	Outer Metro	Sydney-Canberra Faster Rail Improvement	Infrastructure	A program of operational, fleet and targeted fixed infrastructure improvements south of Macarthur (for example, electrification and new deviations to eliminate curvatures and flatten grades).	Improved rail travel times, services and facilities to enable increased capacity. Connect and develop greater economic synergies between Sydney and the Global City of Canberra as well as improve cross-border connections.	5, 6, 7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Outer Metro	Sydney-Central Coast-Newcastle Faster Rail Improvement	Infrastructure	A program of operational, fleet and targeted fixed infrastructure improvements (for example, new deviations to eliminate curvatures and flatten grades). This would include a new rail crossing of the Hawkesbury River.	Improved rail journey travel times and services and facilities to enable increased capacity. Will result in stronger connections and the development of greater economic synergies between Sydney and the Satellite City of Gosford and the Global Gateway City of Newcastle Assist in easing housing affordability pressure and provide a strategic connection between Sydney, the Satellite City of Gosford and the Global Gateway City of Newcastle.	5, 6, 7, 9, 10, 11, 12
0-10 investigation	Outer Metro	Sydney-Wollongong Faster Rail Improvement	Infrastructure	A program of operational, fleet and targeted fixed infrastructure improvements (for example, new deviations to eliminate curvatures and flatten grades). This would include a new rail crossing through the Illawarra Escarpment	Improved rail travel times to provide a time and cost competitive freight corridor (when compared with road). Improved rail services and facilities to enable increased capacity. Connect and develop greater economic synergies between Sydney and the Satellite City of Wollongong and Sydney, supporting the easing of housing affordability pressure.	5, 6, 7, 9, 10, 11, 12
0-10 investigation	Outer Metro	Improved bus connections between South West Sydney and Illawarra	Infrastructure	Additional and upgraded bus services to connect South West Sydney and the Illawarra, including high frequency limited stop transport services from Campbelltown-Macarthur and lower frequency transport services from Wollondilly Shire	Support the efficiency and reliability of passenger journeys between South West Sydney and the Illawarra.	4, 5, 6, 7, 9, 10, 11, 12

Timing for initiative	Location	Initiative	Type of investment	Description	Benefit	Customer Outcomes
0-10 investigation	Outer Metro	Passenger train improvements to support growth at Wilton	Infrastructure	A program of operational, fleet and targeted fixed infrastructure improvements (for example, electrification and new deviations to eliminate curvatures and flatten grades) to facilitate improved service frequencies to support Wilton Growth Area	Improved rail travel times, and connectivity to support Wilton Growth Area	5, 6, 7, 9, 10, 11, 12
10-20 investigation	Outer Metro	Corridor Preservation for Higher Speed Connections	Policy and planning	Confirm and begin the preservation of a corridor, based on the corridor set out in the Australian Government's High Speed Rail Study Phase 2, for a high speed rail link between Melbourne, Sydney and Brisbane.	Enable a future high speed connection to be delivered more affordably by minimising the risk of future land acquisitions being required, and providing greater clarity of land use for the community to enable them to make more informed decisions when purchasing land	2, 5, 7, 11, 12
10-20 investigation	Outer Metro	Completion of Maldon to Dombarton railway line	Infrastructure	Complete the Maldon to Dombarton Railway, a 35-kilometre single-track rail line between the Main South Line at Maldon (in Wollondilly Shire) and Dombarton (near Port Kembla), in the Illawarra region. www.transport.nsw.gov.au/projects/current-projects/maldon-to-dombarton-railway-line	Enable higher passenger train service frequencies on the T4 Illawarra Line by diverting rail freight movements between the Illawarra and Greater Sydney to the Maldon-Dombarton link, improve the efficiency and reliability of rail freight movements between the Illawarra, Greater Sydney and regions to the north and west of Sydney with a dedicated, more direct freight rail line, and support the potential future growth of container movements to and from Port Kembla by providing dedicated 24/7 freight rail access between the port and intermodal terminals in the west of Sydney	5, 7, 8, 9, 11, 12
20+ visionary	Outer Metro	Delivery of Great Dividing Range long term solution	Infrastructure	Delivery of solution to improve freight connectivity across the Great Dividing Range in order to connect inland areas of NSW to Greater Sydney.	Solution will resolve a long standing issue regarding access between Inland NSW and Coastal areas of the Greater Sydney conurbation.	1, 5, 7, 8, 9, 11, 12

Greater Sydney Services and Infrastructure Plan

ISBN: 978-0-6482978-1-9

Disclaimer

Transport for NSW
18 Lee Street
Chippendale NSW 2008

transport.nsw.gov.au