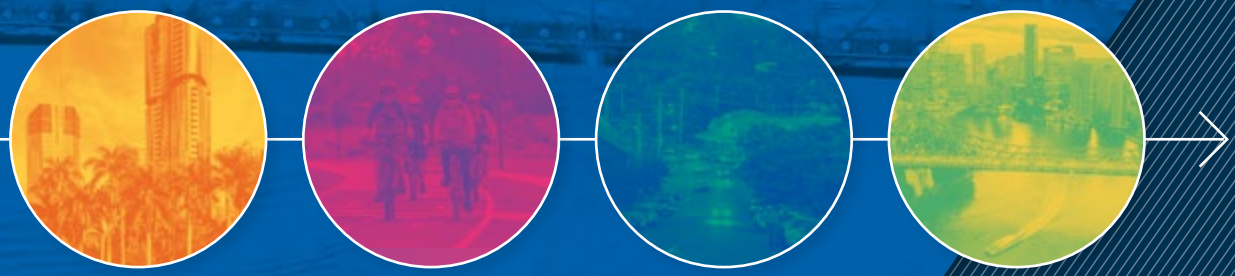
Transport Plan for Brisbane —

Strategic Directions



brisbane
australia's new world city

BRISBANE CITY

Dedicated to a better Brisbane

The Lord Mayor's message

Brisbane is a great place to live, work and relax — it's a safe, vibrant, green and prosperous city, valued for its friendly and optimistic character and enjoyable lifestyle.

Having a connected, flexible and sustainable transport network means we can easily commute to work, conduct business, access lifestyle and leisure opportunities, and visit family and friends. It is fundamental to maintaining our high-quality of life.

Brisbane's future is an exciting one, with our city growing every day. By 2041, South East Queensland is predicted to be home to nearly 1.9 million extra people. More people want to live and work here, more companies want to invest here and more commuters than ever will need to travel into and around our city.

The *Transport Plan for Brisbane — Strategic Directions* has been developed to guide the evolution of our transport network over the next 25 years and beyond to make Brisbane Australia's most liveable city.

This plan proactively addresses emerging challenges, opportunities and strategic directions to meet the needs of Brisbane residents, industry, commuters and visitors now and into the future as our city continues to grow.

The plan supports Council's vision for a connected city, where transport enhances liveability, supports business and investment, takes advantage of new technology and delivers integrated and flexible solutions. It also identifies opportunities to partner with private industry and other levels of government, so we can deliver smart and sustainable solutions for the people of Brisbane.

I thank the organisations, community members and industry experts who have provided valuable input on Brisbane's transport future. All feedback has been carefully considered in preparation of this plan.

Together we can continue to move our city forward.

Graham Quirk
Lord Mayor

Shaping the plan

Council has been very fortunate to have had the assistance of a number of key stakeholders in developing the *Transport Plan for Brisbane — Strategic Directions*. Those involved have generously shared their time to discuss current and future issues and opportunities. Their ideas have helped shape the strategic directions for Brisbane's transport future set out in this plan. Council would like to thank the previous and current members of the Lord Mayor's External Reference Group and looks forward to working with all stakeholders in implementing the plan.

Council acknowledges the contribution made by the Queensland Government through the State-wide Capability Development Fund to assist Council in developing the plan.

The draft *Transport Plan for Brisbane — Strategic Directions* was prepared in consultation with key stakeholders, including the Lord Mayor's External Reference Group. In November 2017, Council invited the community to provide feedback on the draft plan and to provide their ideas for the future of transport in Brisbane. Community submissions were received up to 30 April 2018.

During the consultation period, Council engaged with the community at locations across the city including local markets, shopping centres and libraries. Industry workshops and stakeholder meetings also provided opportunities to discuss and explore the transport issues facing Brisbane in the future. Feedback was invited via email and mail, and through tools provided on the Council website, including online polls and surveys.

Council received more than 3000 submissions ranging from short messages to detailed responses. Many of the ideas and comments received were consistent with the intent of the draft plan. Council received significant positive feedback through community and stakeholder engagement.

Some feedback highlighted areas where the plan could be enhanced or altered.

All feedback has been reviewed and taken into consideration in development of the final *Transport Plan for Brisbane — Strategic Directions* and the *Transport Plan for Brisbane — Implementation Plan 2018*.

Council has also released the Draft Transport Plan for Brisbane — Consultation Report to summarise all comments received during the consultation period and identify how this was used to shape the transport plan and implementation plan.

Council would like to thank everyone who took the time and effort to participate in engagement activities. Your feedback was extremely valuable in formulating the final plan. Ongoing engagement with the community, government and industry will be essential in achieving the outcomes of the plan.

Members of the Lord Mayor's External Reference Group

Current members

Associate Professor Matthew Burke, Cities Research Centre, Griffith University

Professor Laurie Buys, Creative Industries Faculty, Queensland University of Technology

Guy Gibson, General Manager — Queensland, Communities, Lendlease

Professor Philip Charles, Transport Group School of Civil Engineering, The University of Queensland

Professor Narelle Haworth, Director Centre for Accident Research and Road Safety Queensland, Queensland University of Technology

Michael Kilgariff, Managing Director and Chief Executive, Australian Logistics Council

Gerard Reardon, Chairman Transport Australia Society Queensland Committee, Engineers Australia

Chris Mountford, Queensland Executive Director, Property Council of Australia, Queensland

Paul Turner, Chief Communication Officer, Royal Automobile Club of Queensland

Mike Keating, Assistant Commissioner, Queensland Police Service

Anne Savage, Chief Executive Officer, Bicycle Queensland

Renaye Peters, Chairman, Brisbane Infrastructure Council

Ciaran Callaghan, Transport Planning Chair, Planning Institute of Australia

Sue Johnson, Group Executive Queensland, Transurban

Queensland Department of Transport and Main Roads representative

Previous members

Wesley Ballantine, Group General Manager, Transurban Queensland

Planning Institute Australia

Shannon Batch, Former Transport Planning Committee Chair, Planning Institute of Australia

Ben Wilson, Former Chief Executive Officer, Bicycle Queensland

Phil Kesby, Chairman, Brisbane Infrastructure Council

Contents

Introduction

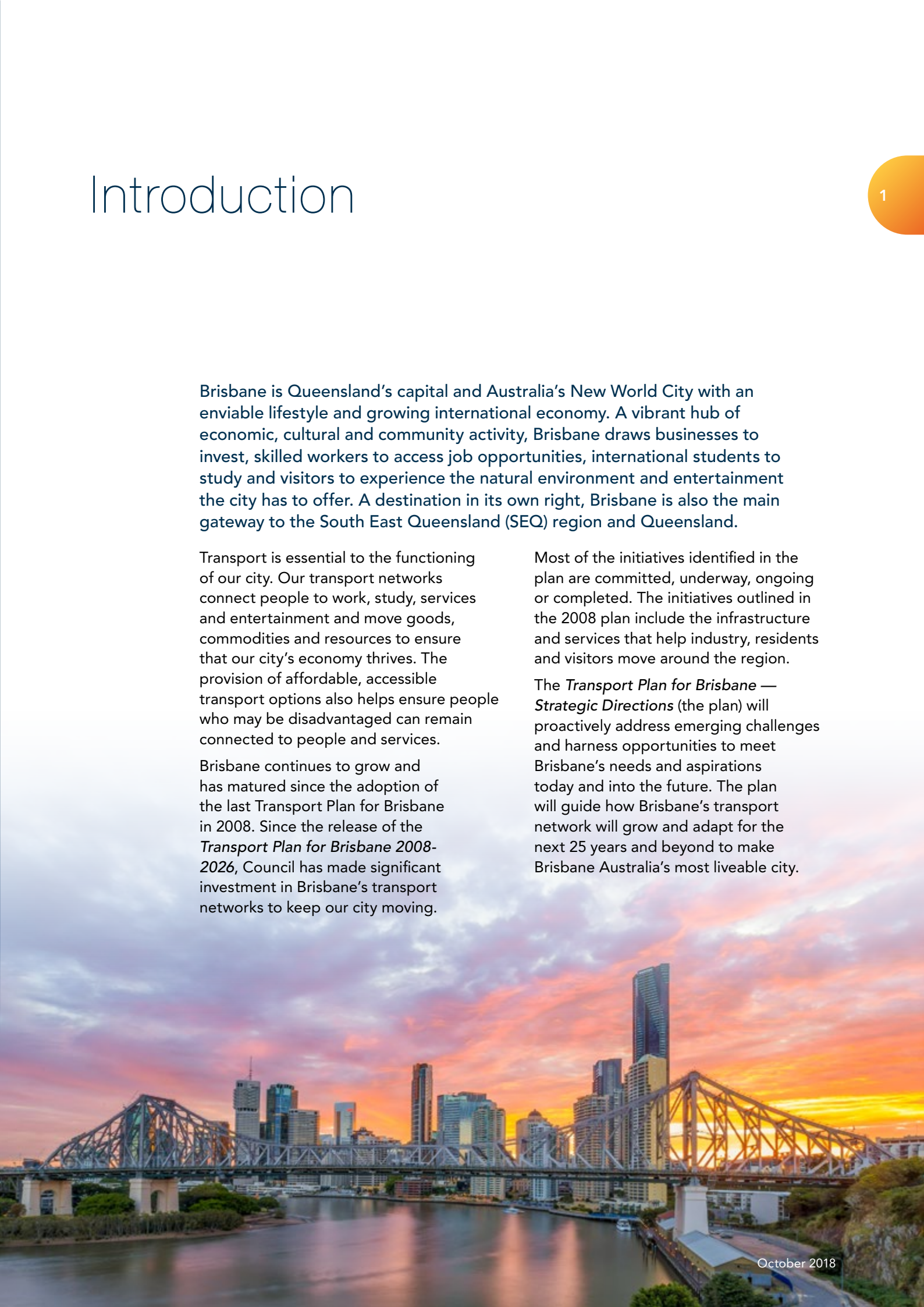
Brisbane is Queensland's capital and Australia's New World City with an enviable lifestyle and growing international economy. A vibrant hub of economic, cultural and community activity, Brisbane draws businesses to invest, skilled workers to access job opportunities, international students to study and visitors to experience the natural environment and entertainment the city has to offer. A destination in its own right, Brisbane is also the main gateway to the South East Queensland (SEQ) region and Queensland.

Transport is essential to the functioning of our city. Our transport networks connect people to work, study, services and entertainment and move goods, commodities and resources to ensure that our city's economy thrives. The provision of affordable, accessible transport options also helps ensure people who may be disadvantaged can remain connected to people and services.

Brisbane continues to grow and has matured since the adoption of the last Transport Plan for Brisbane in 2008. Since the release of the *Transport Plan for Brisbane 2008-2026*, Council has made significant investment in Brisbane's transport networks to keep our city moving.

Most of the initiatives identified in the plan are committed, underway, ongoing or completed. The initiatives outlined in the 2008 plan include the infrastructure and services that help industry, residents and visitors move around the region.

The *Transport Plan for Brisbane — Strategic Directions* (the plan) will proactively address emerging challenges and harness opportunities to meet Brisbane's needs and aspirations today and into the future. The plan will guide how Brisbane's transport network will grow and adapt for the next 25 years and beyond to make Brisbane Australia's most liveable city.



Plan structure and intent

The plan will direct the development and management of Brisbane's transport network over the next 25 years.

It sets out how transport will contribute to achieving our vision for our city, supporting economic, social and environmental outcomes for current and future generations. The plan also articulates how our transport networks link into regional, state, national and international networks.

The transport network encompasses multiple transport modes owned and managed by various government and non-government entities. These function as a whole to meet the needs of Brisbane's industry, community and visitors as one network.

Council plays a fundamental role in ensuring our city remains accessible and provides for the safe and efficient movement of people and goods into and throughout our city. The plan provides the framework to ensure the transport network (regardless of responsibility) will meet the city's transport needs, as well as being flexible to respond to opportunities and challenges ahead.

The plan provides an integrated framework for transport outcomes and initiatives to deliver the community's desired future for Brisbane and the region.

Transport Plan for Brisbane — Strategic Directions structure

Our Brisbane

- Our city and region
- Planning for Brisbane's future
- Our transport network
- How and why we travel

Transport directions

- Transport principles
- Enhancing liveability
- Delivering economic benefits
- Harnessing innovation
- Evolving the network

Transport networks

- Global, national and state
- Regional and Greater Brisbane Metropolitan Area
- Brisbane citywide
- Brisbane inner city
- Brisbane suburban

Making it happen

- Implementation
- Partnerships and engagement
- Measuring success

Our Brisbane

4

Our city and region

Brisbane

Brisbane's subtropical climate, open spaces, relaxed outdoor lifestyle and strong economy support its place as Australia's New World City.

As Queensland's capital city, Brisbane is a major centre for employment, providing access to specialist services, recreation and entertainment for the region's population. Brisbane is the largest local government area in Australia with a population of around 1.2 million,[1] around 820,000 jobs [2] and more than 450,000 dwellings.[3]

Brisbane's lifestyle and economic opportunities play important roles in creating a place where people want to live, work, play and visit. By managing growth sustainably we can protect and enhance our way of life.

The significance of Brisbane's size is demonstrated by Council's annual budget, currently $3.1 billion. Brisbane is also the heart of the third largest and fastest growing metropolitan area in the country.

$162 billion
Value of Greater Brisbane economy

Nearly 1/4
of Queensland's population lives in Brisbane City [1]

3rd largest city
in the world in area [4]

1 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p34
2 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p54
3 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p42
4 Brisbane Marketing, *Choose Brisbane*, www.choosebrisbane.com.au

October 2018

South East Queensland

Brisbane lies at the centre of South East Queensland (SEQ), one of the fastest growing urban regions in Australia.

The SEQ region extends from the Sunshine Coast in the north, Toowoomba to the west and the Gold Coast and hinterland to the south covering some 22,900 square kilometres and including 12 local government areas.

The region is a combination of heavily urbanised coastal areas separated by inter-urban breaks with semi-rural, rural and landscape areas in the west and south-west.

Brisbane is the primary hub for employment, health, education and other services supported by a network of regionally significant activity centres in other local government areas.

Currently home to
3.5m people,
by 2041 SEQ is expected to increase by almost 1.9 million people [5]

Regional employment growth
will increase by 950,000 to around 2,600,000 jobs by 2041 [6]

Greater Brisbane Metropolitan Area

The Greater Brisbane Metropolitan Area includes the local government areas of Brisbane City, Moreton Bay Region, Redland City, Logan City and Ipswich City.

The Greater Brisbane Metropolitan Area operates as an integrated urban environment with people often living, working, going to school or accessing services in different local government areas.

The major new greenfield development areas are located in the local government areas adjacent to Brisbane. However, Brisbane will continue to provide the major employment growth for the area.

Effective management of commuter, freight, business and personal transport movements within the Greater Brisbane Metropolitan Area will be critical in maintaining Brisbane's sustainability.

By 2041, Greater Brisbane Metropolitan Area is
expected to exceed 3.5m people and 1.8m jobs, [7]
with Brisbane City responsible for over 66% of the employment growth [6]

5 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p34
6 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p54
7 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p34 and 54

SOMERSET

Population	Employment
2016	2016
25,200	7170
2041	2041
38,000	10,015

MORETON BAY

Population	Employment
2016	2016
438,300	122,555
2041	2041
656,000	189,182

NOOSA

Population	Employment
2016	2016
54,000	22,779
2041	2041
63,000	33,454

SUNSHINE COAST

Population	Employment
2016	2016
303,400	117,851
2041	2041
495,000	193,092

TOOWOOMBA

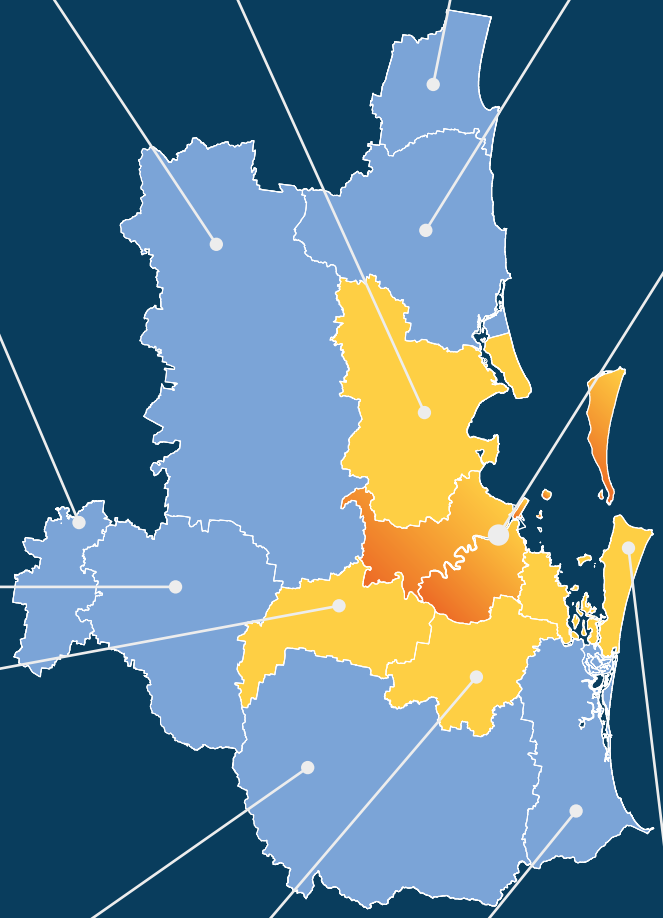
Population	Employment
2016	2016
134,000	63,110
2041	2041
180,000	86,641

LOCKYER VALLEY

Population	Employment
2016	2016
39,500	12,341
2041	2041
61,000	19,178

IPSWICH

Population	Employment
2016	2016
200,100	67,927
2041	2041
520,000	128,800



BRISBANE

POPULATION

2016
1,184,200

2041
1,571,000

EMPLOYMENT

2016
817,004

2041
1,247,608

SCENIC RIM

Population	Employment
2016	2016
41,000	14,171
2041	2041
62,000	21,780

LOGAN

Population	Employment
2016	2016
313,800	101,979
2041	2041
586,000	168,128

GOLD COAST

Population	Employment
2016	2016
576,900	254,909
2041	2041
928,000	433,431

REDLAND

Population	Employment
2016	2016
152,000	47,284
2041	2041
188,000	69,193

Source: Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p34 and p54

Planning for Brisbane's future

Coordinating planning and development activities across Brisbane and SEQ is critical to achieving a sustainable and prosperous community.

Key city and regional plans and strategies will guide Brisbane's growth and development as a global New World City over the next 25 years and protect and enhance those aspects that make Brisbane and SEQ a great place to live and do business.

Brisbane Vision 2031

Brisbane Vision 2031 is Council's long-term plan for the city. It details the aspirations for our city's future and outlines ideas for achieving this vision.

OUR ACCESSIBLE, CONNECTED CITY

Our integrated transport system provides efficient and safe movement of people and goods into and throughout our city, with residents and visitors adopting sustainable travel choices including walking, cycling and public transport.

OUR ACTIVE, HEALTHY CITY

Brisbane has active and healthy communities and offers diverse and accessible recreational opportunities for all ages, abilities and backgrounds.

OUR CLEAN, GREEN CITY

Subtropical open spaces and natural areas provide breathing spaces for the city. Our river, creeks and bay are enhanced, protected and enjoyed by all.

OUR FRIENDLY, SAFE CITY

Brisbane is a city of strong and diverse communities. We welcome new residents, migrants, students and visitors, celebrate cultural diversity, and provide support to people who are disadvantaged. Our city is safe, confident and prepared for natural hazards.

OUR NEW WORLD CITY

Brisbane is regarded as a top 10 lifestyle city worldwide and students, businesses, researchers, innovators and entrepreneurs from all over the world want to live, study and work here. Community, business and political leaders work together to seek economic, social, infrastructure and environmental opportunities for the city and the region, both at home and internationally.

OUR SMART, PROSPEROUS CITY

The Brisbane economy is strong and productive, leading the economic development of the SEQ region and the State. New business growth and the attraction of skilled workers provide a highly-stable environment to support the community and economic development.

OUR VIBRANT, CREATIVE CITY

Brisbane is a vibrant, 24-hour, cultural city — a city that attracts creative endeavours and people, and enables innovation. Brisbane's rich social, cultural, historical and creative resources provide an enduring legacy of liveability for future generations.

OUR WELL-DESIGNED, SUBTROPICAL CITY

Brisbane is a well-designed, outdoor living city. The design of our buildings and spaces maximise the region's climate and lifestyle attributes. Planning and development in our city prepares effectively for population and employment growth and demographic change.

Brisbane City Plan 2014

Population, housing and employment distribution and growth has a significant influence and demand on our transport network.

The trips made every day on our transport network are all influenced by where we live and the location of services, education and employment.

Brisbane City Plan 2014 (City Plan) provides the strategic and statutory planning framework for managing future growth and development in Brisbane. City Plan guides integration between land use, economic activity and transport planning to create a diversified economy while continuing to protect our city's enviable way of life.

Future population growth will be predominantly catered for through infill development and urban consolidation in the inner city, at regional/district centres and along selected transport corridors. This approach will ensure easy access to employment, goods, services and community facilities for new residents.

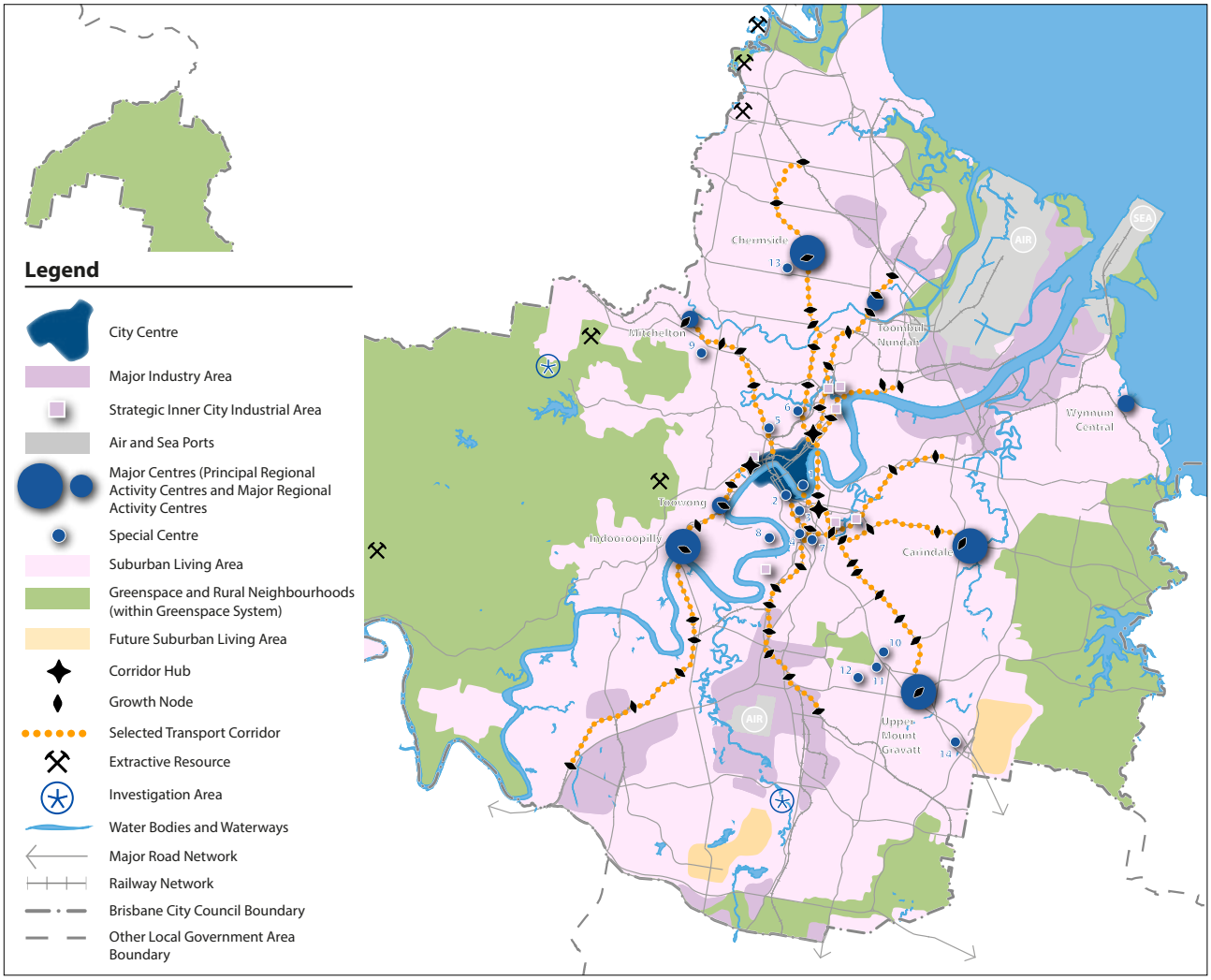
As Brisbane continues to develop, the CBD and inner suburbs will provide a diverse range of employment, services, facilities and recreational and entertainment experiences. Mixed use and compact development, carefully planned and integrated with public and active transport networks will provide high levels of accessibility.

Existing suburban residential areas will undergo some change while greenfield areas will be developed for new communities with an appropriate mix of housing types, transport infrastructure, services and employment opportunities.

Much of the growth in industry is expected to be accommodated in the three Major Industrial Areas (MIAs) — Australia TradeCoast (ATC), South West Industrial Gateway (SWIG) and Northern MIA. These areas will continue to be major employment and economic activity areas and generate a high demand for efficient freight and commercial transport networks.

Special centres such as education, health and business hubs are expected to intensify and diversify, with growth in these and related sectors seeking to cluster to share ideas and technologies. Consolidation of linked industries in defined Global Precincts in the inner city, ATC and elsewhere in Brisbane will provide a forum for new growth opportunities for the city.

Brisbane CityShape 2031 Land Use Strategic Strategic Framework Map



Brisbane Economic Development Plan 2012-2031

The *Brisbane Economic Development Plan 2012-2031* seeks to ensure that Brisbane retains and grows its economic value and its reputation as a New World City.

As well as attracting trade growth with the expanding Asia-Pacific market and nurturing economic activity, it is important for Brisbane to maintain a desirable lifestyle that encourages business and investment, visitors and tourists, skilled workers and international students.

Economic development planning for the city is also underpinned by:

- *Brisbane's Global Precincts — A shared vision for Australia's New World City*
- *Brisbane 2022 New World City Action Plan*
- *Draft Brisbane Industrial Strategy.*

Brisbane. Clean, Green, Sustainable 2017-2031

Keeping Brisbane clean and green is all about making our city liveable and sustainable for our children, and their children to follow.

THEME		WHERE WE WANT TO BE
1	**Clean air**	Brisbane will consistently have clean, healthy air.
2	**Biodiversity**	Brisbane will grow and connect its natural areas to protect its rich biodiversity.
3	**Low carbon**	Council is recognised as a leader in reducing carbon.
4	**Sustainable CityShape**	Brisbane embraces development that enhances our city's subtropical lifestyle.
5	**Parks**	Brisbane parks are diverse and accessible.

THEME		WHERE WE WANT TO BE
6	**Green transport**	More trips will be made by public and active transport, helping to reduce congestion, fossil fuel consumption and emissions.
7	**Waste and resource recovery**	Brisbane will reduce, reuse and recycle waste.
8	**WaterSmart City**	Brisbane is a resilient, water smart city that uses water sustainability and protects its waterways.
9	**Urban forest**	Brisbane will value, nurture and protect its urban forest.

Planning for South East Queensland

The growth and development of the SEQ region has a significant impact on Brisbane urban areas, centres, employment nodes and transport networks.

Ensuring strong linkages between land and transport planning at the regional and city level is critical to the continued success of Brisbane and the SEQ region.

ShapingSEQ South East Queensland Regional Plan 2017

***ShapingSEQ* is the Queensland Government's plan to guide the future of the SEQ region.**

ShapingSEQ responds to the region's projected growth, opportunities and challenges and sets the direction for maintaining the region's sustainability and global competitiveness.

ShapingSEQ provides the overarching regional population, employment and development strategy used to inform the development of the plan.

South East Queensland Regional Transport Plans

The Queensland Government, in partnership with local governments, is currently preparing new regional transport plans for SEQ.

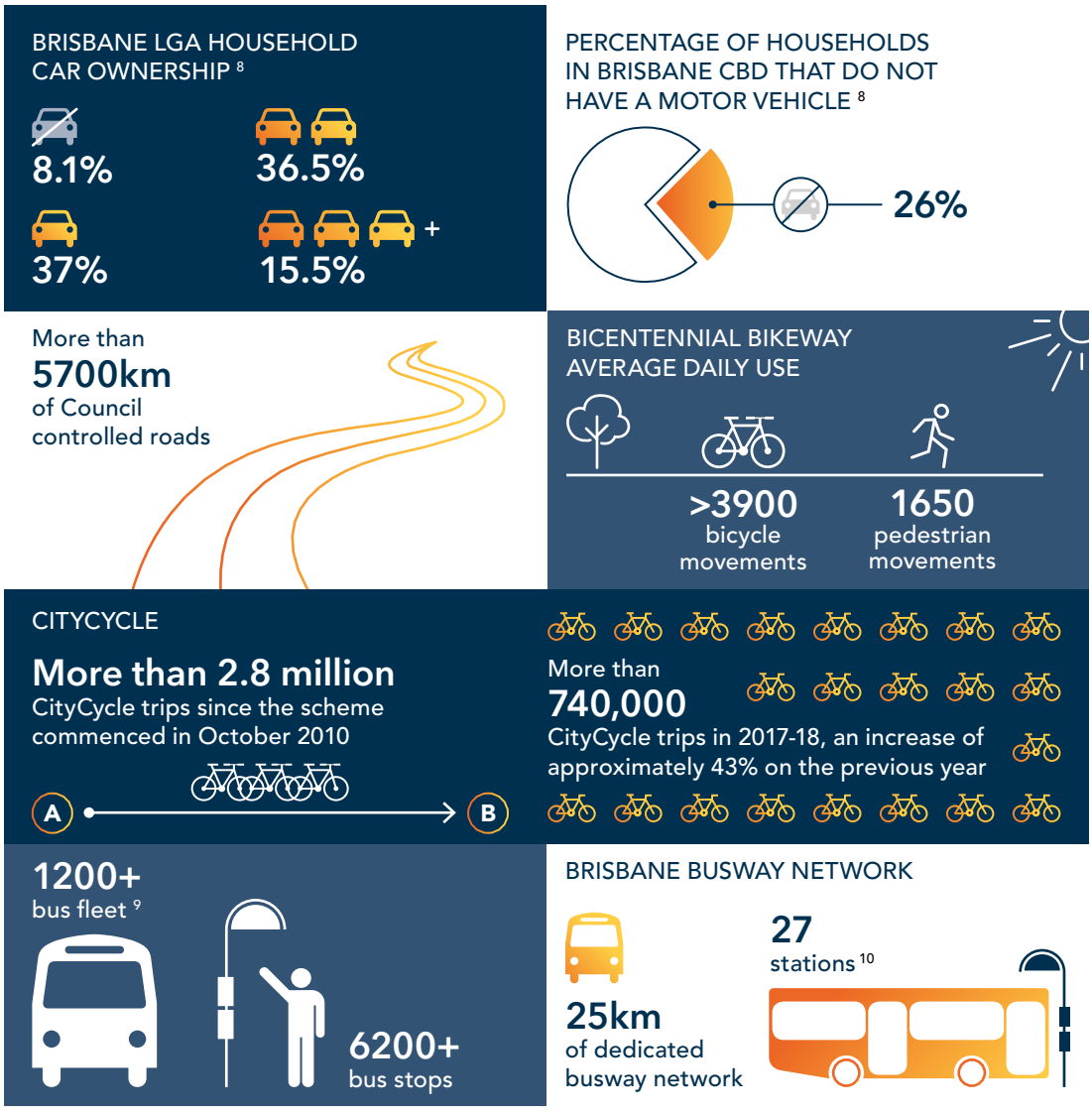
The new plans will support *ShapingSEQ* and local government planning schemes by identifying priorities for the regional transport system.

The regional transport plans will facilitate consolidated urban structure, economic performance, environmental sustainability and maintaining the quality of life in the region.

Our transport network

Brisbane has well established and extensive transport infrastructure which supports a wide range of public, private, freight and personal transport movements. The region's transport network has affected, and been influenced by, the physical landform and settlement patterns of Brisbane and SEQ.

The Brisbane River has been a significant factor in the development of the city's transport network, influencing the location of key infrastructure such as the airport and sea port, bridges and tunnel structures. The river is also used as a public transport corridor.



8 Australian Bureau of Statistics, *2016 Census*, 2017
9 Department of Infrastructure, Local Government and Planning, *Connecting Brisbane*, Brisbane, June 2017, p18
10 TransLink, www.translink.com.au

Active transport — walking and cycling

Pedestrian network

With our subtropical climate, expansive open space and parklands, and increasing densification of residential neighbourhoods, walking is a major part of how we move around our city.

Brisbane's pedestrian network is made up of footpaths, pathways, tracks, urban spaces and bridges. Riverwalk and the Eleanor Schonell, Kurilpa, Victoria, Go Between and Goodwill bridges provide connectivity for high-volume movements across and along the Brisbane River. Pedestrian-focused urban spaces feature in many of Brisbane's activity centres, neighbourhoods, universities and mixed-use precincts.

Bicycle network

Brisbane has an extensive on and off-road bikeway network which keeps our community active and healthy and helps manage traffic congestion.

High-volume primary cycle routes connect residential areas to major destinations such as employment centres, regional activity centres and regional recreation areas. Local cycle routes link individual properties and residential catchments with local amenities and destinations.

The Bicentennial Bikeway, Kedron Brook Bikeway and Bulimba Creek Bikeway are major Council bikeways. Veloways that run parallel to the Pacific Motorway and the Western Freeway are managed by the Queensland Government. The Moreton Bay Cycleway is a joint local government and Queensland Government bikeway linking Redcliffe, Brisbane and Redland Bay along the Moreton Bay coastline.

Public transport

Passenger rail network

Citytrain is SEQ's rail transport network. Managed by Queensland Rail, it consists of high-capacity passenger heavy rail spines that connect in the CBD and inner city area.

The network spans more than 800km of track across 11 separate lines and 149 stations, connecting commuters travelling to Brisbane from the Gold Coast, Ipswich, Caboolture, Redcliffe, Redlands and the Sunshine Coast. Airtrain, owned and managed by a private entity, connects the Citytrain network to Brisbane Airport.

Brisbane is the central hub for a number of regional and interstate rail services, terminating at Roma Street station. A standard gauge rail line from New South Wales terminates at Roma Street station for interstate passenger trips.

Bus network

Brisbane's extensive bus network provides inter suburban and local distribution services and carries around 65% of public transport passengers in Brisbane.

The busway network, comprised of the South East, Northern and Eastern busways, provides a dedicated network for bus services. On-road bus routes extend to major centres and throughout the Brisbane suburbs. Dedicated bus lanes and transit lanes provide priority for bus movements in some areas of the city.

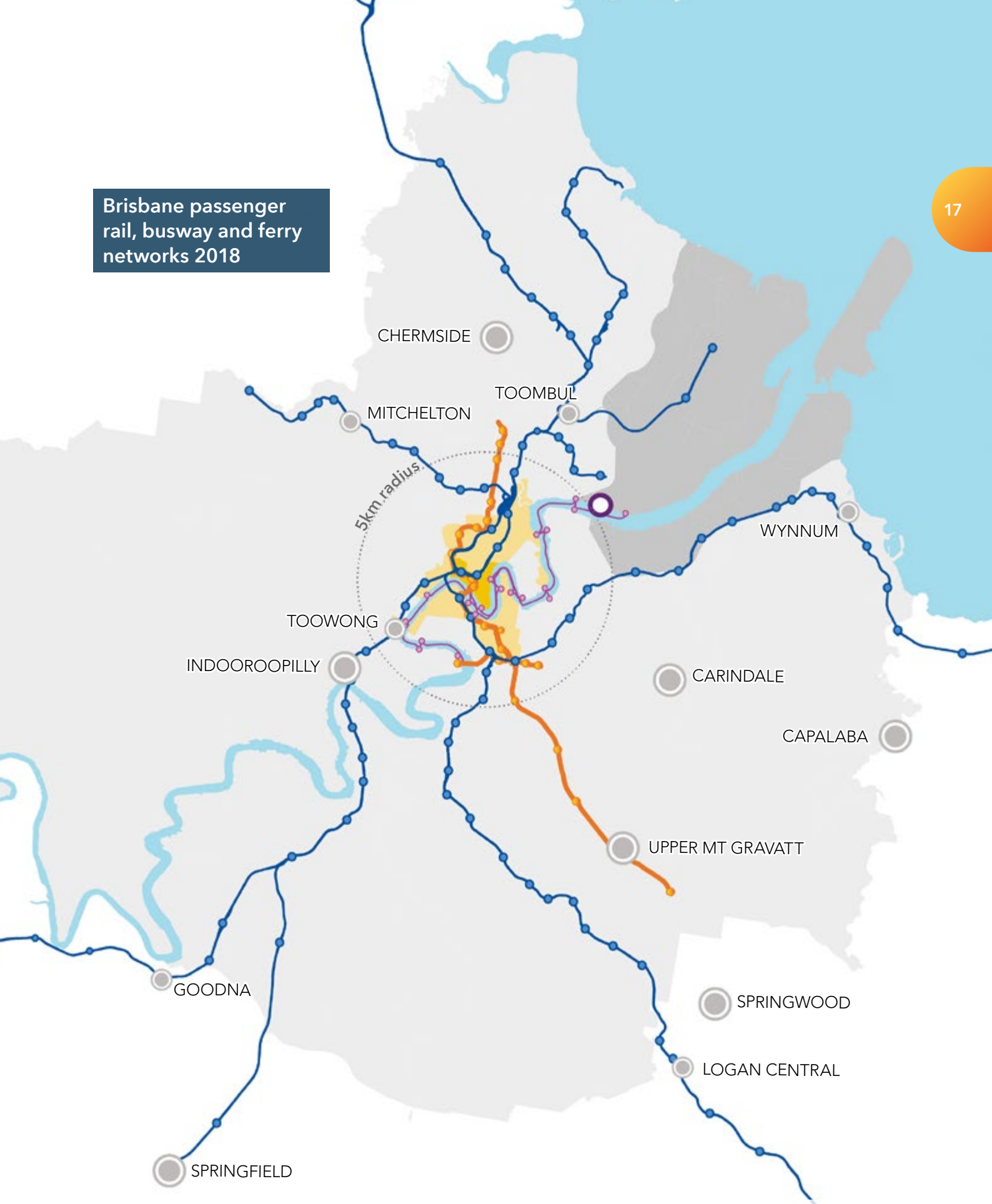
A network of 'no timetable needed' high-frequency buses known as BUZ services run daily along major routes between the city and outer suburbs. The CityGliders and free CBD/Spring Hill Loop buses also provide high-frequency services in the inner city area.

Supporting the bus network are more than 6200 bus stops, bus layovers, depots and interchanges.

65%
of public transport customers in Brisbane are
bus users

76 million
bus passenger trips
in 2017-2018

Brisbane passenger rail, busway and ferry networks 2018



LEGEND

- Local government area
- CBD
- City frame
- Principal and major centres
- Australia TradeCoast
- Cruise terminal
- Passenger rail and stations
- Busway and stations
- CityCat/ferry routes and terminals
- Motorway and arterial roads

October 2018

Ferry network

Brisbane's ferry services provide a unique experience for tourists and inner city residents along the Brisbane River.

The Brisbane CityCat, CityHopper and CityFerry network extends 22km from The University of Queensland (UQ), St Lucia (upstream), to Northshore Hamilton (downstream) with 25 terminals throughout the network. The network is owned and managed by Council.

CityCats operate around 18 hours a day at a 15-minute service frequency and with some express services during peak periods.[11]

Cross river CityFerries operate at three locations along the river with the free inner city CityHopper operating between North Quay and Sydney Street.

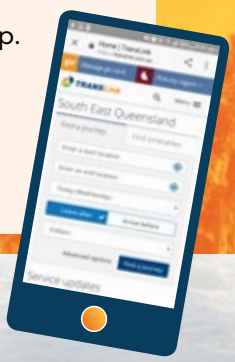
TransLink

Queensland's public transport services are managed by TransLink, a division of the Queensland Department of Transport and Main Roads (TMR).

TransLink has overall responsibility for public transport in Queensland including coordination and planning of services across rail, light rail, bus and ferry modes, fare setting, distribution of revenue to service providers and delivering effective infrastructure and services through its delivery partners.

In SEQ, TransLink's public transport networks are supported by the *go* card integrated ticketing system.

The pre-paid system allows passengers to tap on and off services and transfer between the rail, bus and ferry networks on the one payment system. Service information covering all public transport modes is available through TransLink's website, call centre and app.



11 TransLink, www.translink.com.au

Future mass-transit projects

Brisbane Metro

Brisbane Metro is a high-frequency public transport system that will cut travel times, reduce CBD bus congestion and put more buses in the suburbs.

The project will deliver a high-frequency metro network across 21km of existing busway that links Eight Mile Plains, Royal Brisbane and Women's Hospital (RBWH), UQ Lakes busway stations and all busway stations in between.

As well as fixing critical bottlenecks and inner city bus congestion, the project will deliver a new state-of-the-art underground Cultural Centre station and Adelaide Street tunnel, enhancing the CBD amenity by reducing the number of buses at street level.

Artist impression of Brisbane Metro.

Cross River Rail

Through an investment of $5.4 billion, the Queensland Government plans to deliver a new high-speed, high-frequency rail link from Dutton Park to Bowen Hills including 5.9km of tunnel under the CBD and the Brisbane River.[12]

The link will connect the northern and southern rail networks providing Brisbane with a third river crossing for rail. New stations at Boggo Road, Woolloongabba, Albert Street and connections to upgraded facilities at Roma Street and Exhibition stations will significantly improve regional transport access to the CBD and inner city area.

The project will boost the rail capacity of the inner city network, improving travel time reliability and journey times. The project will also help to reduce congestion across the road network by improving the capacity and performance of the rail network, thereby encouraging more train travel.

12 Building Queensland, *Cross River Rail Business Case*, August 2017, pE1

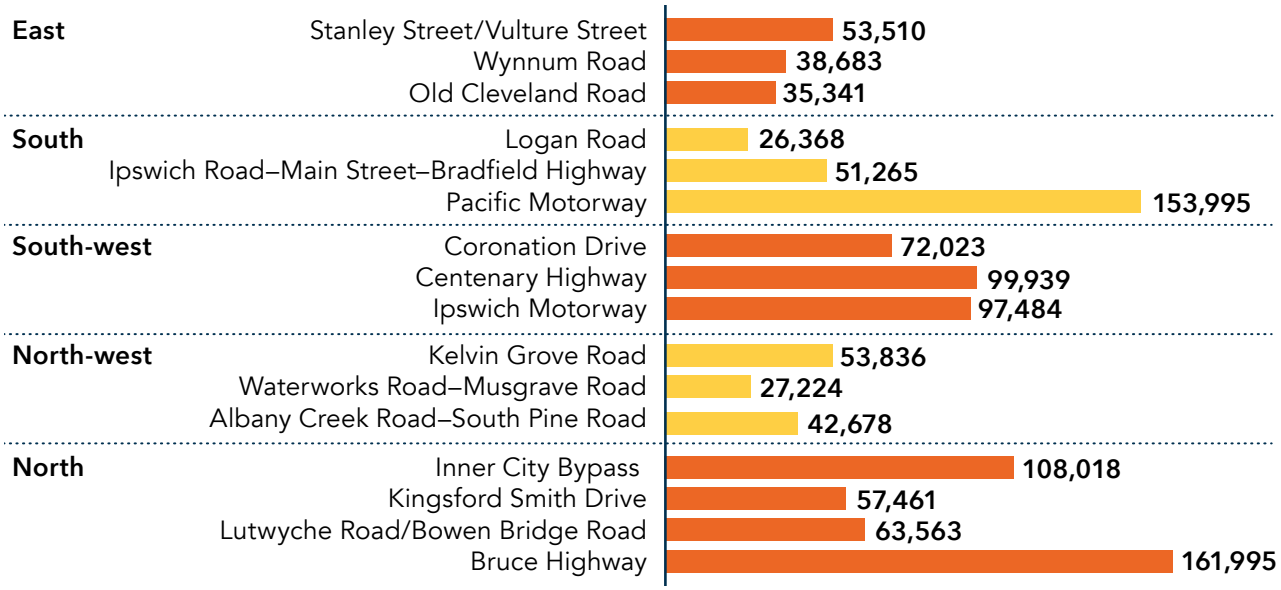
Road network

Brisbane has a well-developed road network comprised of a range of road types including motorways, local access roads and laneways.

The motorway network is owned and operated by a mix of government and private organisations. These roads are linked and provide long-distance and regional connections as well as access to key destinations in Brisbane. Motorways also support national freight movements and links to the Port of Brisbane (the Port) and Brisbane Airport.

Council's extensive local road network supports the movement of people, goods and services throughout the city. In terms of the functional road hierarchy, arterial roads connect centres and major employment areas and link to motorways and intra-regional destinations. Suburban and district roads provide for traffic distribution within the city and provide access to specialist centres, employment areas and residential suburbs. Local and neighbourhood roads connect residential land uses and provide access to our homes.

Average daily traffic volume January to June 2018



Brisbane road network 2018

LEGEND

- Local government area
- CBD
- City frame
- Australia TradeCoast
- Principal and major centres
- Motorway
- Arterial
- Future arterial
- Future transport corridor

October 2018

Rail freight network

The rail network provides for the movement of freight between Brisbane, regional Queensland and the national network via New South Wales.

The rail freight network shares the passenger rail network in most locations in Brisbane except for Lindum to the Port, Corinda to Yeerongpilly and Salisbury to Acacia Ridge.

While the main freight links in Queensland have narrow gauge rail, the interstate link from New South Wales to the Port has dual standard and narrow gauge tracks, enabling trains to run direct from the Port to New South Wales.

Airports

Brisbane Airport is Queensland's primary international and domestic airport.

In 2017, Brisbane Airport carried around 5.8 million international and 17.4 million domestic passengers.[13] The airport provides services to international destinations and direct flights to Sydney, Melbourne, Canberra, Adelaide, Darwin and Perth and a number of large interstate regional centres. The airport also provides flights to Queensland's regional towns. Future airport activities will be boosted with the new parallel runway due to open in 2020.

Archerfield Airport is also a key facility for general aviation activities, located within the SWIG MIA.

Sea port

The Port is Australia's third-busiest container port and supports nine per cent of Queensland's bulk material movements.[14]

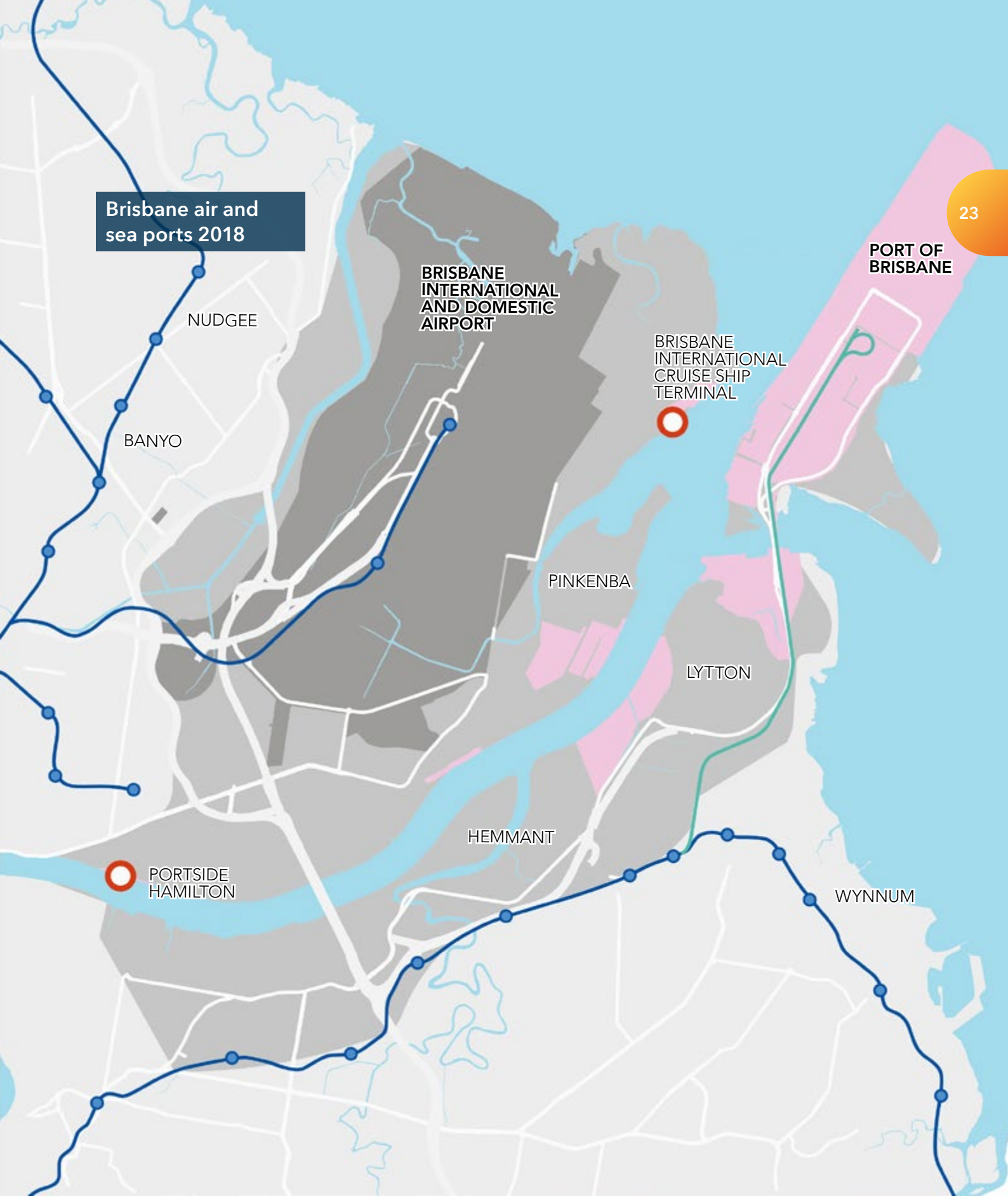
The strategic location of the Port on Australia's east coast and its road and rail links to markets in Queensland and New South Wales provide substantial opportunity for future import and export growth.

The cruise ship industry is currently serviced by dedicated cruise ship facilities at Portside Hamilton as well as the occasional use of the multi-use terminal at the Port. The new Brisbane International Terminal at Luggage Point will provide facilities for modern mega cruise ships.

13 Brisbane Airport Corporation 2018

14 Department of Transport and Main Roads, *Trade Statistics for Queensland Ports: Throughput statistics for the five years ending 20 June 2016*, 2017, p6

Brisbane air and sea ports 2018



LEGEND

- Local government area
- Port of Brisbane
- Australia TradeCoast
- Brisbane Airport
- Cruise ship terminals
- Regional rail freight
- Passenger rail and stations

October 2018

Personalised transport

Personalised transport options in Brisbane include taxis, ride sharing, community buses and other services.

Taxi services operate throughout Brisbane and SEQ. Taxi ranks are located at strategic locations around the city including entertainment precincts and at special events.

Community transport services provide door-to-door services for older residents and people with disability.

Ride share and car share schemes have arisen as alternative personal transport services in recent years. Integrating these services into the city's transport network is a sustainable way of providing travel options in Brisbane.

Private coaches provide specialised services such as tourist trips and group transport.

Council's personalised public transport (PPT) services operate in areas with limited or no coverage by TransLink services.

PPT services pick up passengers where safe to do so on a fixed route and can carry up to 10 people. Council, in partnership with Yellow Cabs, provides eight PPT routes at locations across Brisbane — Aspley, Bald Hills, Calamvale, Carindale, Hemmant, Karana Downs, Upper Brookfield and Wynnum-Manly.

The Council Cabs service organises shared taxis at scheduled times for residents who find it difficult to get to their local shops. Council Cabs operate weekly in most Brisbane suburbs.

Council's transport achievements 2008-2016

Better networks

- **TransApex,** a central strategy of the previous Transport Plan for Brisbane, delivered Clem7, Airport Link, Go Between Bridge and Legacy Way. These projects addressed major road network gaps with new tunnel and bridge connections providing more options for cross-city travel with reduced travel times.
- **The Road Action Program** fast-tracked the planning and delivery of 15 years of major road improvement projects into a four-year program targeting Brisbane's most congested roads.
- **Rail level crossing replacement projects** at Bracken Ridge and Geebung have improved safety, reduced delays and increased the reliability of the rail and road networks. These projects were delivered in partnership with the Queensland Government.
- **Better Bikeways 4 Brisbane** delivered new infrastructure to complete key links in the bikeway network to encourage more active travel.

Public transport accessibility

- **Council's bus fleet** is the most modern in Australia and is now fully air-conditioned and wheelchair accessible, making travel more comfortable and enjoyable in Brisbane's subtropical climate.
- **CityCat ferry terminal upgrades** and new terminals at Teneriffe, Northshore Hamilton and Milton have improved accessibility and flood resilience.
- **CityGliders** deliver high-frequency timetable-free bus services in the inner city with 24-hour operation on Fridays and Saturdays.
- **CityCycle** is Queensland's first public bike share scheme and provided more than 740,000 trips last year in the CBD and inner city area. There have been more than 2.8 million trips since the scheme commenced in October 2010.

Safety and resilience

- Council introduced new **safety technology** for public transport including closed-circuit television (CCTV) cameras and emergency call-points at ferry terminals.
- **The bikeway lighting program** has improved safety for users including early and late hour commuters.
- **The Black Spot road safety program** delivered in partnership with the Australian Government, has improved safety on our road network through upgrades to key intersections and corridors.

Encouraging sustainable travel options

- Council's **Active School Travel program** encourages Brisbane primary school students, parents and teachers to leave the car at home and walk, cycle, scooter or take public transport to school.
- Launched in March 2014, **Cycling Brisbane** has more than 16,000 members and provides comprehensive information on all aspects of cycling in Brisbane to encourage residents to make more trips by bicycle.

Technology

- Brisbane's **signalised intersections** are actively managed by computerised systems to assist safety and congestion management.
- **The Brisbane Metropolitan Transport Management Centre**, operated in partnership with the Queensland Government, provides real-time monitoring and operation of the city's road and busway networks.
- **Ticketless parking, tap and go** credit card payments and **mobile and web-based** parking services have been introduced.
- All new **Council buses** use high-efficiency, environmentally-friendly diesel engine technology.

TransApex

Council's TransApex strategy delivered a number of major road projects to connect the city's motorway networks.

Clem7, Go Between Bridge, Airport Link and Legacy Way are four major road projects that have effectively helped ease traffic congestion in Brisbane's inner and middle suburbs, reduced traffic delays and improved travel time reliability by allowing traffic to bypass the CBD to travel across the city. Advocated and partly funded by Council, these major projects were completed in a period of just over 10 years. With the opening of Legacy Way, the TransApex projects have removed more than 120,000 vehicle movements from Brisbane's surface roads each day.

Clem7
opened in March 2010

Airport Link
opened in July 2012[15]

Go Between Bridge
opened in July 2010

Legacy Way
opened in June 2015

Projects in the pipeline

The Australian and Queensland Governments and local government, plus major private transport operators, are committed to a number of significant transport projects over the next five years.

When completed, these projects will improve medium to long-term transport network performance.

ACTIVE TRANSPORT

- North Brisbane Bikeway
- V1 — Veloway
- Woolloongabba Bikeway
- Kangaroo Point Bikeway
- Indooroopilly Bikeway
- Kingsford Smith Drive Bikeway

PUBLIC TRANSPORT

- Brisbane Metro
- Cross River Rail
- New generation rail rolling stock

OTHER

- Brisbane International Cruise Terminal
- Brisbane Airport parallel runway

ROAD TRANSPORT

- Gateway Upgrade North
- Logan Motorway
- Ipswich Motorway
- Kingsford Smith Drive
- Telegraph Road
- Wynnum Road

15 Transurban, www.transurban.com

How and why we travel

Understanding why, when and how people travel can assist the planning and delivery of Brisbane's transport networks. Factors such as trip purpose, the time of day the trip is undertaken and the choice of travel mode affect the transport network and its capacity to meet individual, community and business needs.

Trip purpose

A trip can be undertaken for a range of purposes: to move freight, access the airport, attend school or work, go shopping, attend a major event or visit the park. The concentration of trips of a particular purpose is influenced by location, day of the week and time of the day and can differ across the community.

Commuter work trips make up a significant proportion of morning and afternoon peak travel periods with higher education trips (universities and TAFE) and school trips the other significant contributors. Often, school-based trips, particularly for primary schools, are combined with a journey to work.

For Brisbane, the concentration of employment, universities, hospitals and large private schools in the inner city area compounds the impacts of commuter and education-based trips in these areas.

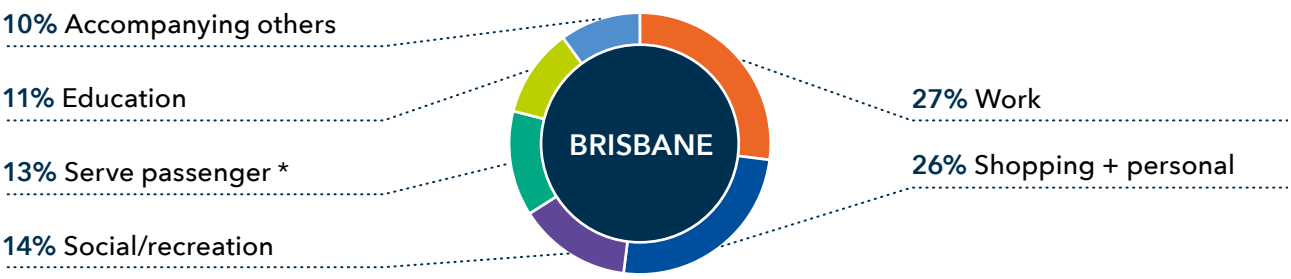
Business-to-business, shopping and accessing personal services tend to be distributed across the whole city, with concentrations around centres and employment areas. These trips occur throughout the day and are less affected by peak-time traffic congestion.

The movement of goods and services, including heavy freight, is critical to the city's economy. These trips often involve specific destinations, such as the Port, regional centres and industrial precincts.

Recreation, social and entertainment trips are important to Brisbane residents and visitors. The timing of these trips is often outside the peak periods but can have a significant local impact on evenings and weekends.

Many of the trips occurring in Brisbane have origins and destinations outside the Brisbane local government area. Currently around 800,000 trips are made into Brisbane from the surrounding local government areas each weekday, primarily to access jobs but also to access services, entertainment, shopping and personal business.

Different trip purposes for Brisbane [16]



16 Department of Transport and Main Roads, State of Queensland, *Travel in South-East Queensland: An analysis of travel data from 1992 to 2009*, 2012, p18

* *Trips that are made primarily as a non-work service to someone else (for example driving children to school or an elderly person to the shops).*

How we travel

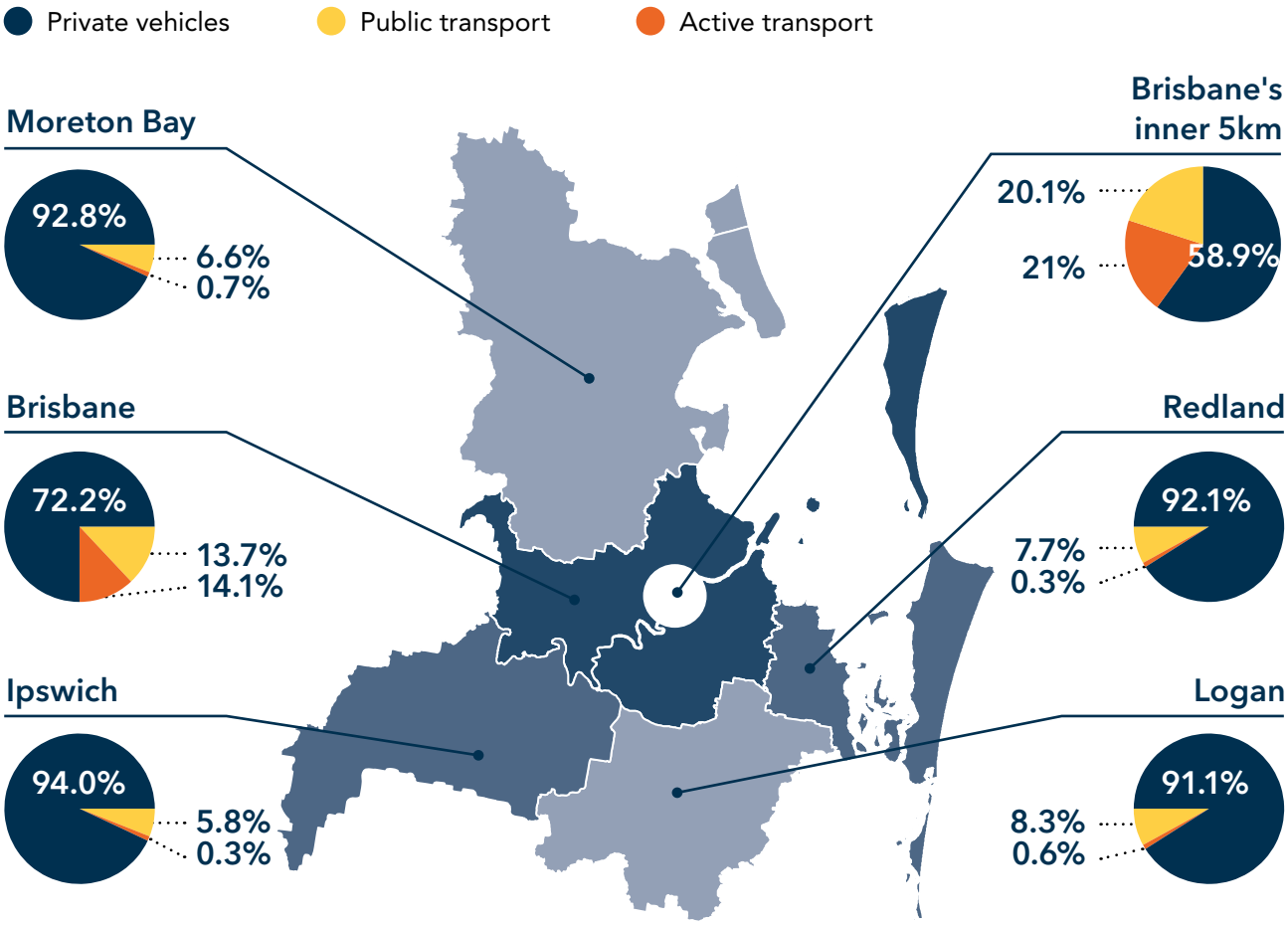
Brisbane and SEQ have a well-established transport system offering a wide range of travel modes for people, goods and services.

Travelling by car is still the most popular mode of transport for trips. The high proportion of single occupancy vehicles in peak periods is a significant contributor to congestion on the road network.

Public transport is predominantly used for trips to, from and within the CBD and inner city. These areas have significantly higher access to public transport services than other areas of the city and region due to the CBD-centric layout of the network. A significant change to the mode share split in these areas will only be achieved with improvements to public transport links between residential and employment areas. This applies to the outer suburbs and urban areas outside Brisbane.

Active transport currently accounts for a relatively low portion of the city's and region's transport demand. However, walking and cycling are more prevalent in areas with good active transport infrastructure with short, safe and direct travel to intended destinations, such as within the CBD and inner city areas.

Estimated current Greater Brisbane Metropolitan Area transport mode splits for trips to the Brisbane local government area



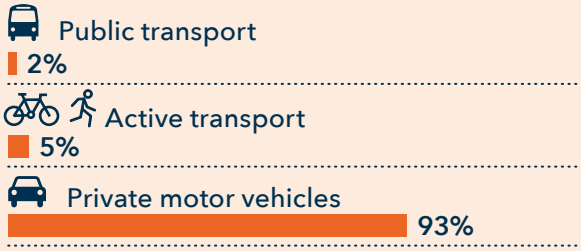
Maximising the moving capacity of our transport corridors

Public and active transport provide the opportunity to move greater numbers of people on the network by reducing the number of trips by private car and their resulting congestion impacts.

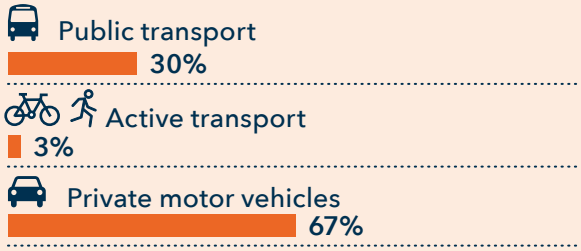
The Milton Road/Coronation Drive corridor provides for a range of transport modes — the most diverse of all transport corridors in Brisbane. In addition to road transport, the corridor includes the Bicentennial Bikeway, the Ipswich and Springfield rail line, CityCat services and a number of bus services including high-frequency BUZ services.

While accounting for less than two per cent of vehicle movements along the corridor, public transport accounts for more than 30% of people movements.

MILTON ROAD/CORONATION DRIVE CORRIDOR PERCENTAGE TRANSPORT MOVEMENTS



MILTON ROAD/CORONATION DRIVE CORRIDOR PERCENTAGE PEOPLE MOVEMENTS



Factors influencing mode choice

Travel mode decisions can be made based on facts, perceptions and established travel habits. Facts and perceptions related to the questions below can influence the mode used to undertake a trip.

Travel time	How fast is my door-to-door trip?
Cost	How much will it cost (perceived and real costs)?
Convenience and reliability	How accessible is transport, how long do I need to wait, will the service turn up on time, will I know what time I will arrive, will I need to walk far?
Safety	Do I feel safe travelling during the day and/or night?
Legibility	Do I have to change travel modes to get where I need to go?
Comfort	Will the weather impact my trip, will I get to sit down, will it be crowded?

These and other factors need to be taken into account if a sustainable shift is to be made from private car trips to public transport, active transport or personalised transport (e.g. ride sharing) options.

Comfort and convenience are significant factors influencing the choice to travel by private car. Even though many people are aware of the benefits — to themselves, the community and the environment — of travelling by public and active transport, many still choose to travel by private car.

Breaking ingrained travel behaviour is achieved through a combination of education and awareness, infrastructure and service improvements and/or a change in the transport network that motivates a user to question car travel. This could be a change in parking availability or cost, increased congestion or a new workplace or routine.

Emerging challenges and opportunities

Changes and trends occurring at a global, national and regional level influence Brisbane's way of life and economy, as well as how we move goods and services and meet our everyday transport needs. Keeping pace and responding proactively to emerging challenges and opportunities is necessary in delivering a transport network that protects our liveability and helps grow our economy.

Climate change

The world faces significant impacts from climate change. Increasing severity and frequency of extreme weather events, including floods and storms, rising sea levels and ocean acidification will have a range of impacts on the environment, food security, community wellbeing and the economy. The impacts of climate change will put Brisbane's transport networks and infrastructure to the test and resilience will become even more important over time.

An ageing population

Better living standards including nutrition, health care, education and sanitation means people are living longer and remaining active in the community. An ageing population may bring changes to the way we deliver transport services to meet the needs of less mobile members of the community.

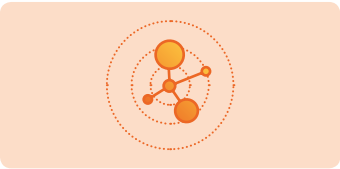
As we get older, health issues such as dementia and arthritis can restrict personal mobility, placing extra demand on public transport and personalised transport services.

Health and wellbeing

In Australia more than 64% of adults and 26% of children are overweight or obese.[17] Rates of obesity in Australia are continuing to rise, increasing the risk of cardiovascular disease, Type 2 diabetes and other medical conditions. Loneliness and isolation are also increasing in Australia. Exercise, such as walking and cycling has demonstrated physical and mental health benefits. Given the associated health benefits, active transport can be viewed as a lifestyle choice as well as a means of moving around.

Consumer trends

A shift in attitude and values is changing the way business and transport operates. Increasingly people are valuing experience over ownership seeing growth in the sharing economy. Ride sharing and car sharing provide examples of this for personal transport. Changes in consumer shopping patterns is resulting in changes to freight and goods delivery systems. Our future transport networks and services will need to be more adaptive and responsive to individual needs.



Disruptive technology

New technologies are enabling change at a rapid rate. Cloud computing, virtual and augmented reality and autonomous vehicles (AV) are just some of the technologies with the potential for significant impacts on our lives. The Internet of Things, whereby everyday devices are connected to the internet and to each other, is another technological advance with the potential to greatly change the way we live, work, access goods and services and how and why we travel.

Economic globalisation

Increased integration and interdependence of national, regional and local economies have led to economic globalisation. The Asia-Pacific region has become increasingly important with more dynamic economies and faster economic growth than other regions due to global business and foreign investment. While globalisation has largely benefited the Australian and Brisbane economies, it has had negative impacts on some industries, and local economies are becoming increasingly vulnerable to volatility in overseas markets.

17 Queensland Health, *The Health of Queenslanders 2016 Report of the Chief Health Officer Queensland*, October 2016, p75

Urbanisation and urban structure

Australia is experiencing the global trend of urbanisation with more than 67% of our population living in cities.[18] The Brisbane and SEQ urban areas will continue to attract significant population and employment growth over the next 25 years. Within Brisbane, around 94% of new dwellings are expected to be created by infill and redevelopment of existing urban areas.[19] Carefully planned urbanisation provides the opportunity for more sustainable land use and efficient use of resources and infrastructure to address the challenges for space, affordability, accessibility and amenity.

Transport infrastructure demand and provision

The level of growth expected in Brisbane will place increasing demands on all our infrastructure networks. Although Council has delivered significant transport infrastructure since 2008, a deficit in the infrastructure required to meet transport demands remains. There are already fundamental capacity issues and constraints on our bus and rail networks. There are also constraints for space, particularly in the inner city, and funding for major upgrades and new infrastructure. While improvements to service design and operational efficiencies will partially resolve these issues, suitable innovative and sustainable infrastructure solutions are required to accommodate and manage this growth.

Tourism and visitors

Tourism delivers economic benefits to Brisbane and the SEQ region. In 2017, more than 1.2 million international visitors and more than 6.7 million domestic visitors visited Brisbane.[20] While tourism growth is expected to continue, the level of growth and the location of source markets are harder to predict as economic volatility has significant impact on the demand for business and recreational travel. Ensuring that Brisbane remains a desirable destination, including suitable transport infrastructure and services and easily understood public transport networks, will be critical to attracting visitors in the future.

18 Australian Bureau of Statistics, *2016 Census*, 2017

19 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p108

20 Tourism and Events Queensland, *Brisbane Regional Snapshot — Year Ending September 2017*, 2017, p2-3

Transport Directions

The Brisbane transport system is essential to the function of the city and provides the infrastructure and services required to achieve a sustainable, liveable city.

The transport directions framework provides:

- transport principles to support a balanced approach to transport network decision making
- desired community outcomes to align the future transport network to *Brisbane Vision 2031*
- transport directions that address challenges and maximise opportunities to achieve desired community outcomes.

Transport principles

The plan is underpinned by a set of transport principles that form a checklist for decisions that will deliver a transport network that meets the needs of the city by becoming more sustainable, accessible and inclusive and less car-dependent.

People first	Transport must meet people's needs and provide suitable choices for movement of people and goods, taking a customer first approach.
Safety	Support the safety of people using our transport networks and those who may be impacted by our networks.
Equity	The benefits and cost of transport should be shared equitably within and across existing and future generations.
Accessibility	Provide accessible transport options to meet the needs of all residents and visitors.
Sustainability	Make transport decisions that are financially, socially and environmentally sustainable.
Environmental management	Manage transport to protect and enhance the city's air, water, vegetation and natural habitats.
Effectiveness	Transport infrastructure and services should be fit-for-purpose and deliver intended outcomes.
Connectivity	Transport provides easily understood and connected paths of travel from trip start to finish.
Reliability	Transport networks and services shall have a high reliability and resilience to external impacts.
Integration	Transport networks and services must work together and operate in partnership with land use and economic activities.
Demand management	Manage demands and influence transport choice for movement of people and goods to improve network efficiencies and reduce or delay the need for new infrastructure.
Asset utilisation	Address transport performance and whole-of-life economic, social and environmental costs and reduce or delay the need for new infrastructure.

Enhancing liveability

Why is this important?

Liveability can be defined as "the sum of the factors that add up to a community's quality of life — including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities" (Partners for Liveable Communities).

Our subtropical environment and outdoor lifestyle are factors that influence people's choice to live in Brisbane. Liveability outcomes underpin *Brisbane Vision 2031* and are a major priority for Council and the Brisbane community. Liveability is also critical in attracting businesses, visitors and new residents to Brisbane. Our open space and natural areas, clean air, extensive public and active transport networks, cultural and creative resources, stable government and prosperous economy, help to bring people to Brisbane.

Our transport network can have both positive and negative impacts on our liveability. A high reliance on private vehicles exacerbates congestion, and increases air and noise pollution. This has adverse effects on amenity, public health and the natural environment.

Attracting more trips to sustainable modes of transport and reducing congestion are key strategies to improve Brisbane's amenity, natural environment and liveability.

A clean, green, sustainable city

OUTCOME

The design and operation of transport networks minimise impacts on the environment and help mitigate the impacts of climate change.

Transport contributes 14% of Australia's carbon emissions linked to global warming and climate change.[21]

In the last 20 years, there has been a 60% increase in kilometres driven by cars in Brisbane,[22] leading to increased congestion, energy use and emissions.

Encouraging the uptake of sustainable transport options, including walking, cycling, public transport and motorcycles can significantly reduce the impacts of transport on our environment. The uptake of more energy-efficient power options such as solar and electric vehicles, in combination with improved battery technology, vehicle computerisation and engine technology, will also help to reduce greenhouse gas emissions.

Noise, gas and particulate emissions from transport can have negative environmental and health impacts, particularly for at-risk members of the community. Transport related air pollutants are known to affect respiratory and cardiovascular health. Hospitals, schools and residential areas particularly require consideration in the planning and design of the transport network to manage potential noise and air quality impacts. Reducing emissions will also enhance Brisbane's appeal as a clean and attractive city.

Brisbane's network of natural areas and waterways help protect and enhance the city's rich ecology and habitats. Our public open spaces, natural areas and tree-lined streets also contribute to the comfort and enjoyment of the city's residents and visitors.

Transport corridors can separate these areas, providing significant barriers for wildlife and ecological functions. Preserving the integrity and function of our natural and open space areas by providing safe and effective crossing measures for wildlife, for example, is critical in maintaining the distinctive landscape, environmental values and ecological functions of the city. Transport solutions should also maintain a 'no net loss' approach to open space and natural areas.

Transport can also affect the natural environment through water runoff carrying material and debris and heat from surfaces such as roads and pavements. Design features such as permeable paving can reduce runoff and filter pollutants from water. Alternative materials could be considered for pathways and hard coverings to reduce heat impacts. Providing trees and vegetation along transport corridors, including local streets and pathways, provides valuable shade for transport users and assists in reducing overall city temperatures.

21 Department of the Environment and Energy, *National Inventory by Economic Sector 2016*, February 2018, p3
22 Bureau of Infrastructure, Transport and Regional Economics (BITRE), *Yearbook 2017: Australian Infrastructure Statistics*, Statistical Report, BITRE, Canberra, 2017, p84

Elements of Brisbane's transport networks such as CityCat and ferry services and walking and cycling paths use some of the city's natural areas and waterways. Appropriate design and management practices are required to provide the desired level of community accessibility while protecting environmental and ecological values of our natural areas and waterways.

TRANSPORT DIRECTION	
1	Encourage reduction in private car travel by improving the attractiveness of sustainable transport options through high-quality public and active travel infrastructure.
2	Promote the uptake of low-emission vehicles, electric vehicles and technology to improve vehicle efficiency, emissions and noise.
3	Improve amenity and reduce impacts on the city's natural environment in the planning, design and retro-fitting of transport infrastructure.
4	Design and operate transport networks in natural areas and waterways to protect environmental and ecological values.

Community health and wellbeing

OUTCOME

Brisbane residents have improved health and wellbeing through greater use of walking and cycling to access work, education services and for recreation.

Good health and wellbeing are fundamental to a sustainable, vibrant and prosperous community.

Health data for Australia shows an increasing rate of obesity across all age groups and an increase in many manageable health issues.

A sedentary lifestyle can lead to increased obesity and incidents of chronic disease like cardiovascular disease, diabetes, cancer and mental health.

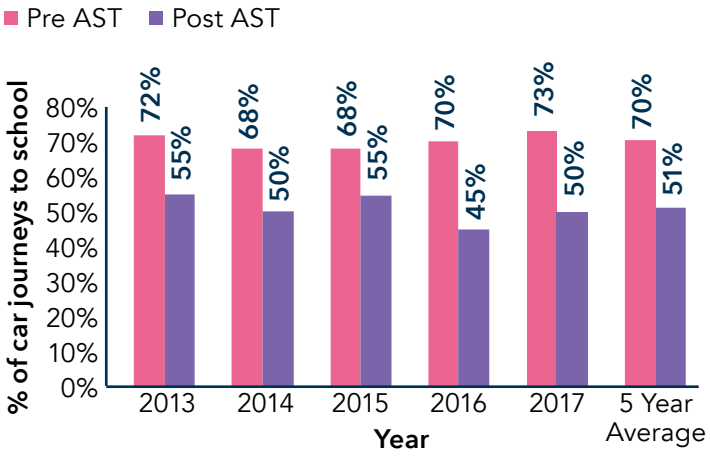
Walking, running, cycling and other non-motorised transport options provide direct health and wellbeing benefits. Safe, easily understood and enjoyable walking and cycling environments connecting to where people want to go are key factors in attracting more people to take more trips by active transport. This includes the provision of safe, accessible and comfortable walking and cycling pathways and associated infrastructure.

Public transport is also important to an active lifestyle. Studies have shown people using public transport are likely to walk up to five times longer each trip than those taking a private vehicle trip.

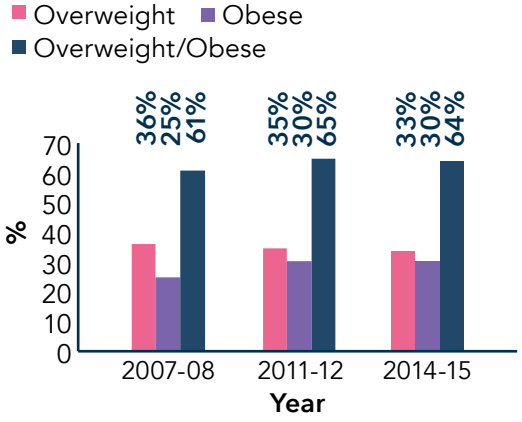
Better integration of land use and transport planning can assist in encouraging an active and healthy lifestyle.

Raising the community's awareness of the benefits of an active lifestyle and providing local walking and cycling facilities can encourage uptake of active transport. Age-specific, workplace and suburb-focused programs can take a targeted approach to changing behaviours by responding to the needs of a particular group or area.

Per cent of car journeys to school pre and post Active School Travel



Rate of adult obesity in Queensland [23]



23 Queensland Health, *The Health of Queenslanders 2016 Report of the Chief Health Officer Queensland*, October 2016, p75

Council's award-winning Active School Travel program demonstrates the success of this approach.

The popularity of personal activity monitors and apps and the availability of GPS trip planning on mobile devices have increased awareness of active transport options. Supporting the expansion of digital technologies and tailoring information to meet the needs of different community users will provide ready access to customised information to guide users to active transport options when planning or undertaking a trip.

Community health and wellbeing can be enhanced by undertaking sport and outdoor recreation activities. Good transport connections encourage the use of sport and recreation areas as well as providing for recreational use of the infrastructure itself.

TRANSPORT DIRECTION	
5	Plan and deliver a network of accessible walking and cycling pathways and infrastructure to encourage more active lifestyle choices.
6	Provide safe, easily understood, comfortable and shaded walking paths and footpaths to connect to local services, shopping, schools and public transport.
7	Develop, implement and promote awareness and behaviour change programs to encourage more people to walk and cycle.
8	Use technology and other incentives to encourage people to adopt active travel.
9	Provide public, active and road transport connections to recreation areas, parks, open spaces and sporting facilities.

Meeting people's needs

OUTCOME

The transport network meets the needs of all users for personal, goods and service movements by providing equitable, affordable and accessible transport options.

People undertake transport trips for a wide range of purposes. Individual trips can include travel to work, dropping children off at school, shopping, accessing services or attending an event. Freight, business-to-business trips and trade services trips support the operation of our city and the economy.

The options available for individual trips can vary. Factors affecting travel mode choice include trip purpose, start and finish locations, availability of different transport modes and personal mobility requirements. Identifying personal or business trips that can be undertaken by public and active transport can assist in reducing the need for private vehicle trips.

The diverse needs of the community, including older residents, people of different cultural backgrounds, people with young children and people with disability need to be met by the transport system.

The type and level of disability can also have an impact on transport accessibility. For example, provision of audio facilities at bus stops and stations and on buses can significantly improve access to public transport for people with a visual impairment.

Access to public and personal transport services is particularly important for people with people with disability as it can provide a degree of freedom to move about that may not always able to be provided by private car travel.

The *Brisbane Access and Inclusion Plan 2012-2017* sets out Council's framework for providing equitable transport accessibility for all residential areas, workplaces, services and recreation areas.

The Australian Government's *Disability Discrimination Act 1992* and *Disability Standards for Accessible Public Transport 2002* provide direction for Council and other authorities on the provision and upgrade of public transport infrastructure to provide equitable access for all users.

Intergenerational differences can also influence travel patterns. Youth easily embrace new technology and travel options such as ride sharing and public transport. Alternatively, older people may have difficulty with new technology and rely on transport being highly accessible for their full trips.

Transport affordability is a key contributor to the cost of living. How far you travel, the route, frequency and the mode are all factors. Providing affordable transport options, including public transport and personalised transport to communities of highest need can ease cost of living pressures and encourage smart travel choices.

Consideration also needs to be given to the needs of marginalised sectors of the community including

"Affordable, accessible and appropriate public transport for marginalised people is of critical importance to their general wellbeing and engagement in society."

Feedback Draft Transport Plan for Brisbane — Strategic Directions, 2018

the homeless, low-income families and in areas with limited access to public transport. Improving access to transport services, including public transport, can have a significant impact on their ability to participate in society, access community services and access employment opportunities.

Personalised transport options are providing more flexible transport alternatives to complement traditional public transport. Council Cabs provide services to seniors and those with mobility impairment. Council's services provide affordable and accessible options for residential areas not serviced by TransLink. Taxis, ride sharing and community buses also assist in providing access across the city and options for the 'first and last mile' travel, linking to public transport.

Paratransit services

Paratransit transportation services, including community transport, provide on-demand or planned transport options for people unable to access mainstream public transport or private vehicle.

A range of community and private operators in Brisbane and South East Queensland currently provides paratransit services.

Paratransit services often use small vehicles and mini-buses, provide pre-booked or demand-driven services and do not follow fixed routes or timetables.

Where services are provided for the aged or people with disability, trained drivers provide door-to-door personal assistance.

Paratransit services may also provide efficient 'first and last-mile' services in suburban areas, to link to conventional public transport services.

TRANSPORT DIRECTION	
10	Provide equitable, safe, sustainable, affordable and easily understood transport options for travel in Brisbane for all residents and visitors.
11	Engage with communities, business and industry to inform transport planning and delivery, to meet the diverse transport needs of Brisbane's communities.
12	Provide a range of affordable and safe transport options to meet the needs of transport-disadvantaged sectors of the community.
13	Plan, design and operate public transport infrastructure in accordance with universal accessibility principles and provisions of the *Disability Standards for Accessible Public Transport 2002*.
14	Support the provision of accessible, affordable, personalised and on-demand transport options to connect with and complement public transport to achieve greater coverage and flexibility.

Better journey experience

OUTCOME

Travelling around Brisbane is easy, safe and enjoyable for all.

While the focus of travel is often on the destination, the quality of the journey is just as important.

All users have the right to feel comfortable, safe and in control of their journey from start to finish.

Technology has significantly changed how we plan our transport trips. Smartphone apps, GPS and the internet are used to plan, access and track our personal transport trips and the delivery of goods and services.

Real-time data on the operation of the transport network provides users more control of their journey, enabling consideration of alternative options including mid-trip. Information on traffic congestion and accidents can assist freight and service deliveries to be re-routed to more efficient routes. Information can also be provided to public transport users on disruptions to services and connecting services.

Tangible transport service information including wayfinding signage, public transport timetables and on-board announcements are still needed by many transport users. Signage integrated across networks contributes to user comfort and safety and improves network legibility.

Alternative information delivery mechanisms need to be considered, to assist people with differing needs including older residents, children, visitors and people with disability, for example. Specific approaches are needed to make transport accessible for some community members such as auditory messaging for people with a vision impairment.

The design of individual transport elements needs to consider the comfort and safety of intended users. To encourage more trips by active and public transport, every element of the journey needs to contribute to an enjoyable and stress-free travel experience.

Crime Prevention through Environmental Design (CPTED) principles can be used to identify and minimise risks to transport users. Installation of lighting can significantly improve safety for pedestrians, cyclists and public transport users at night. Providing seating and shade using trees and shelters can help to improve comfort in Brisbane's subtropical climate.

Transport facilities should add to a 'sense of place' and be designed to reflect the unique and attractive qualities of Brisbane, its people and its subtropical lifestyle.

Travelling along or on the edges of the Brisbane River is an enjoyable and uniquely Brisbane experience for visitors and residents alike. Iconic streets like James Street and Oxford Street benefit from the close and personal links between the transport network and the local urban environment. Integrating transport planning and design with the urban realm can enhance the attractiveness of public and active transport.

Many trips in Brisbane involve a change of transport mode. This can be as simple as walking from home to a public transport stop or station, driving to a park 'n' ride facility or changing from a local bus to a train service.

Well-designed, safe, accessible and easily understood interchange facilities with integrated services and timely transfers make transport mode changes more seamless and will encourage people to choose the right mix for their journey.

TRANSPORT DIRECTION	
15	Provide users access to real-time information about the transport network and alternative options to inform user decisions, including pre-travel planning.
16	Provide travel and wayfinding information via a range of delivery mechanisms that are easy to understand, accessible to everyone and help people to navigate our transport networks.
17	Incorporate safety and user comfort in the planning, design and management of transport infrastructure and services.
18	Design transport corridors, streets, pathways and public transport to contribute to a 'sense of place' that reflects Brisbane's unique identity and lifestyle.
19	Plan, construct and manage attractive, easily understood, well-located and integrated transport interchange facilities to support end-to-end transport trips.

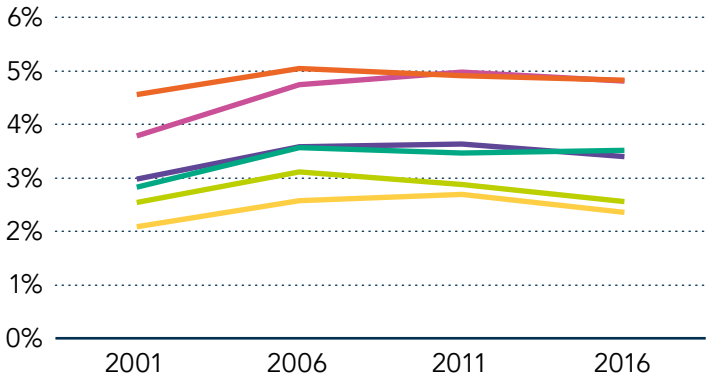
Commute to work: mainland state capital city comparisons

- Brisbane (LGA)
- Brisbane (UCL)
- Sydney (UCL)
- Melbourne (UCL)
- Perth (UCL)
- Adelaide (UCL)

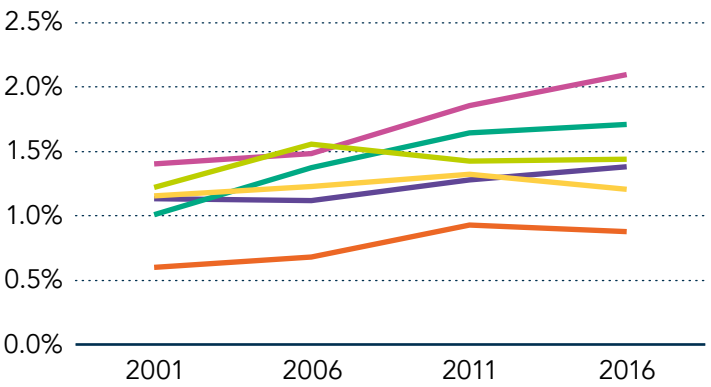
An urban centre and locality (UCL) is a statistical region of concentrated urban development defined by the Australian Bureau of Statistics (ABS).

Source: Australian Bureau of Statistics, *2016 Census*, 2017

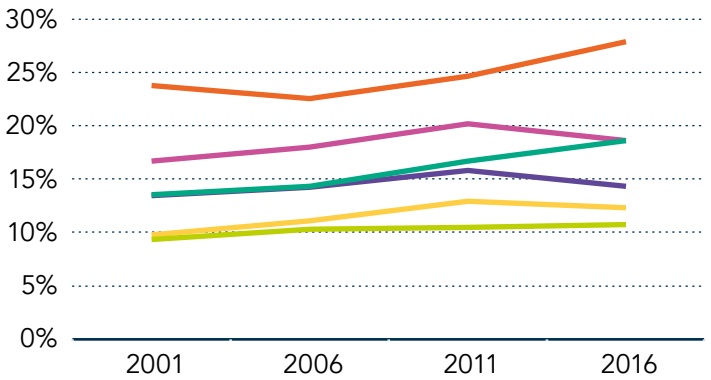
Walking



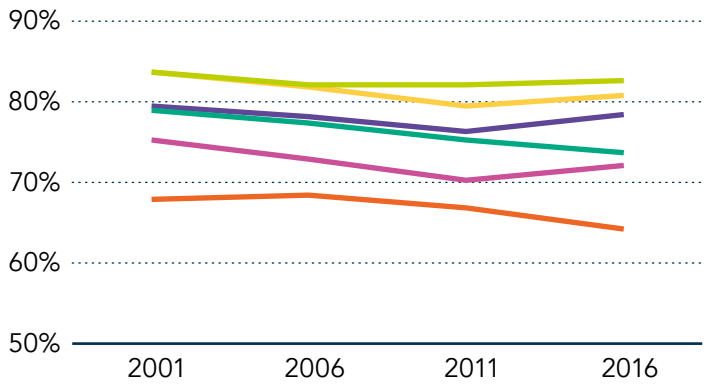
Cycling



Public transport



Car (driver or passenger)



Delivering economic benefits

Why is this important?

Brisbane is Queensland's economic engine room and will continue to support significant economic and employment growth.

We have a diverse industry base providing employment across a range of sectors. More jobs and economic activity means higher demand on the transport network. People need to be able to get to employment speedily and reliably. Goods and services need to be transported to, from and within Brisbane efficiently and with minimal delays.

Sustained growth of business and industry

OUTCOME

Our transport systems help Brisbane and SEQ business and industry to grow and prosper.

The city's economic growth and sustainability is reliant on the efficiency in which people, goods and services are moved around the city to meet the demands of businesses and industries.

The city's transport networks need to align with and facilitate the continued growth and development of Brisbane's economic and industry precincts.

Brisbane's economy is increasingly expanding into high-value industries such as professional, scientific and technical services, health care, education and training, public administration and tourism. Transport and logistic services are important, and based around the growth of Brisbane International Airport and the Port.

The CBD and inner city area is Queensland's major business, commercial and employment hub. It includes regional hospitals and health research hubs, universities and international student centres, entertainment and cultural precincts, retail and recreation activities.

Reliable and connected road, public and active transport networks within the CBD and inner city will strengthen Brisbane's competitive advantage over other Australian centres.

Brisbane's Global Precincts include knowledge, health, science, education and research institutions located in close proximity to benefit from synergies and foster innovation. The Boggo Road, Princess Alexandra Hospital and University of Queensland (UQ) precinct is an example of the agglomeration of education, medical and science institutions which can foster leadership in medical products and services.

Convenient, reliable travel options within and between precincts will foster growth. Affordable and accessible public transport options are also essential for these precincts.

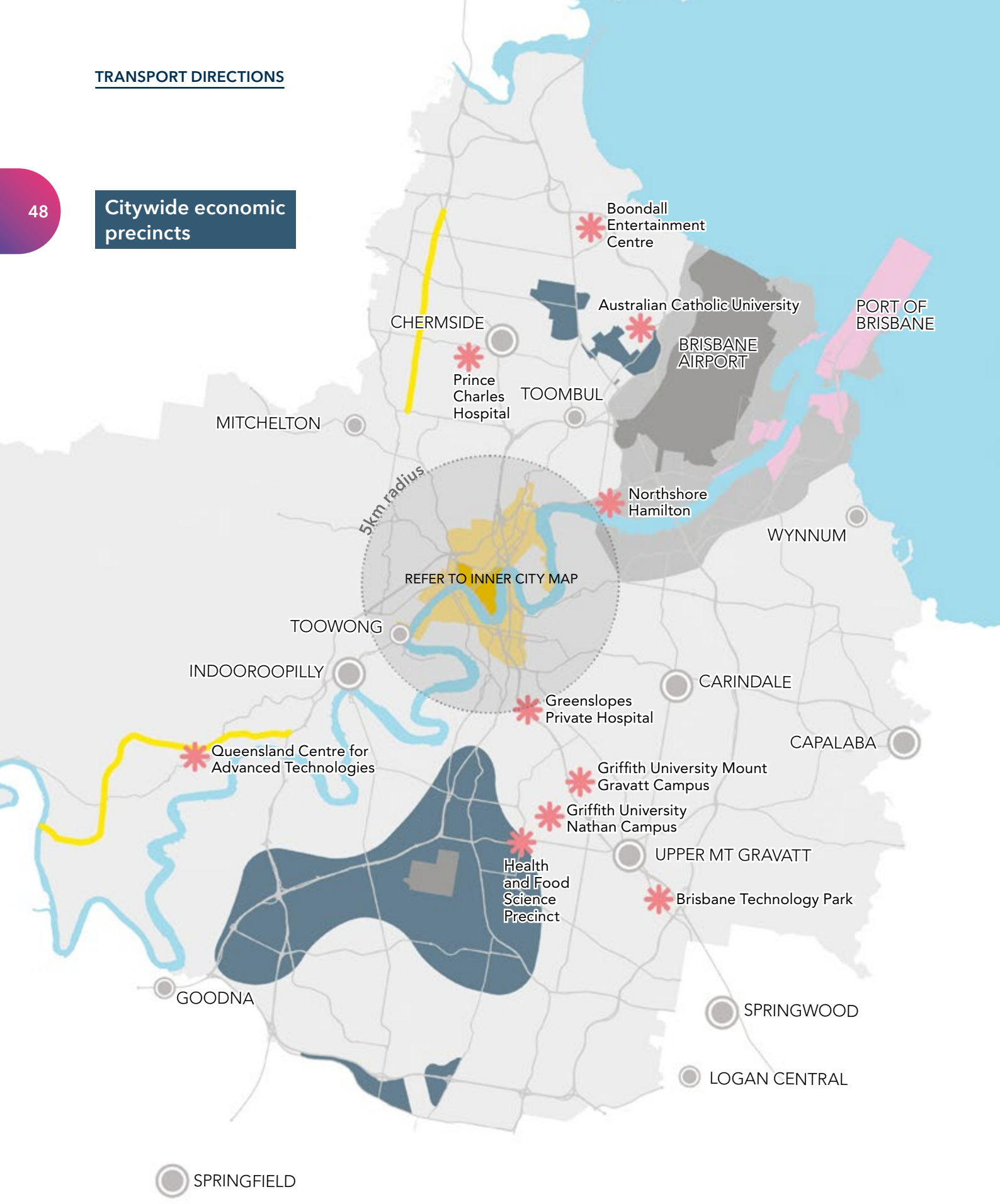
Outside the inner city area, key economic activity areas include: regional centres at Chermside, Indooroopilly, Upper Mount Gravatt and Carindale; suburban technology parks and business centres; and MIAs — ATC MIA, SWIG MIA and the Northern MIA.

Efficient and reliable connections between economic activity areas and customers contribute to productivity and profitability. Extended travel times can increase the cost in moving goods and providing services.

Traffic congestion is a major cost to business and industry. Road management and travel demand strategies aim to 'free-up' road transport capacity for more efficient movement of freight and business services.

TRANSPORT DIRECTION	
20	Encourage high-quality integrated transport networks within and between economic activity centres to support businesses and industries in Brisbane.
21	Ensure the integrated transport network in the CBD, inner city and Global Precincts supports efficient and effective business-to-business travel.
22	Manage road network congestion and travel demand to facilitate the efficient and timely movement of goods, services and passengers.

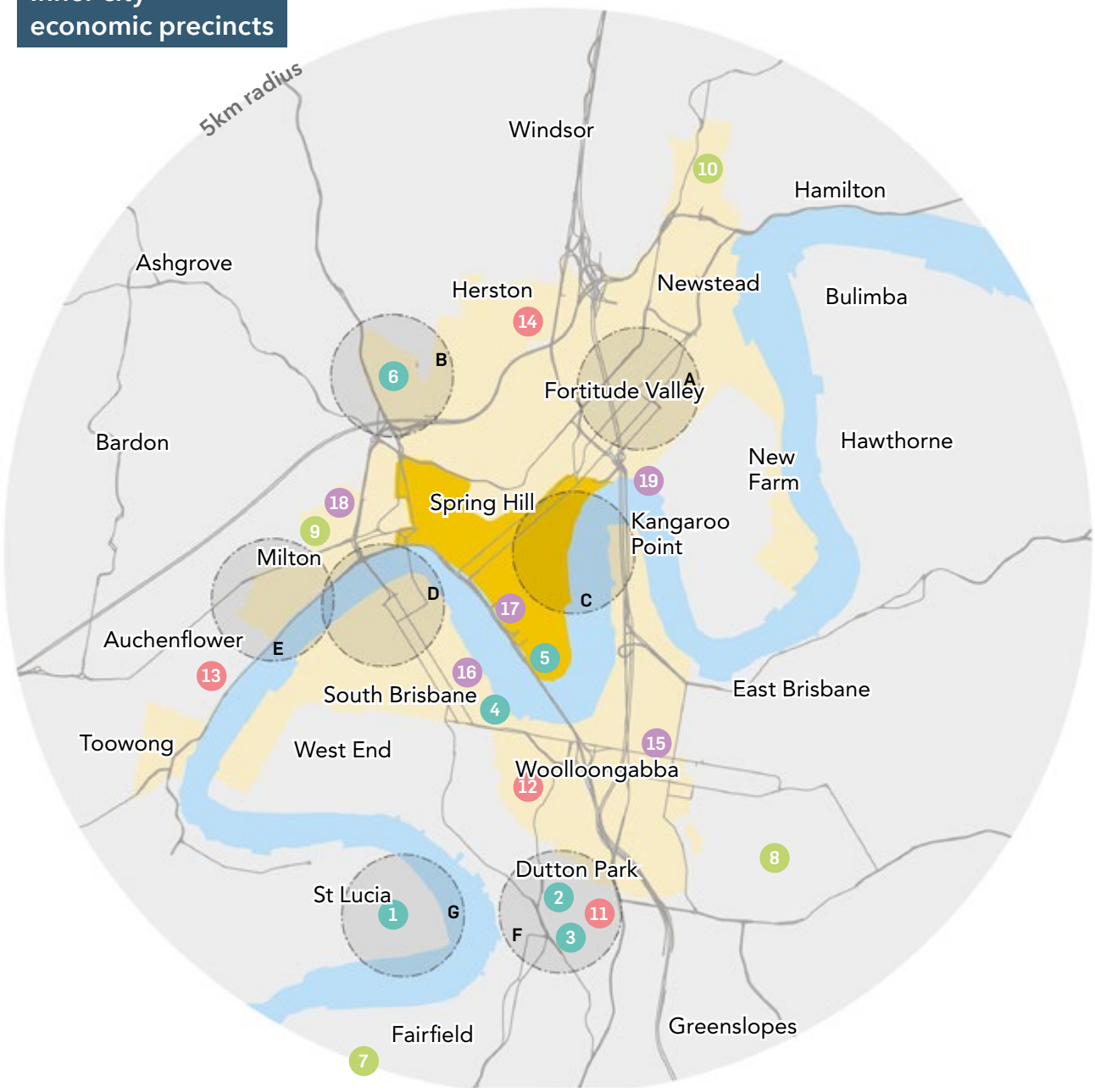
Citywide economic precincts



LEGEND

- Local government area
- CBD
- City frame
- Airports
- Australia TradeCoast
- Principal and major centres
- Major Industrial Areas
- Port of Brisbane
- Other activity areas
- Future transport corridor
- Motorway and arterial roads

Inner city economic precincts



LEGEND

- CBD
- City frame
- Global precincts
- University precincts
- Strategic inner city industrial precincts
- Major hospitals
- Tourism precincts
- Motorway and arterial roads

GLOBAL PRECINCTS

- **A** Valley Gateway
- **B** Herston/Kelvin Grove
- **C** City Reach
- **D** South Brisbane/Kurilpa
- **E** City West/Milton
- **F** Boggo Road/PA Hospital
- **G** University of Queensland, St Lucia Campus

OTHER ACTIVITY AREAS

1. University of Queensland, St Lucia Campus
2. Boggo Road Ecosciences Precinct
3. Translational Research Institute
4. Griffith University, South Bank Campus
5. Queensland University of Technology, Gardens Point Campus
6. Queensland University of Technology, Kelvin Grove Campus
7. Yeronga Industrial Area
8. Woolloongabba Industrial Area
9. Milton Industrial Area
10. Newstead Industrial Area
11. Princess Alexandra Hospital
12. Mater Hill Hospital
13. The Wesley Hospital
14. The Royal Brisbane and Women's Hospital and QIMR Berghofer
15. The Gabba Stadium
16. South Bank
17. Queen's Wharf Brisbane
18. Suncorp Stadium
19. Howard Smith Wharves

October 2018

Convenient commuting

OUTCOME

Travel to work options meet commuters' needs with increased use of public and active transport for commuter travel.

As the economic centre for SEQ, Brisbane accounts for approximately 71% of all jobs in the Greater Brisbane Metropolitan Area and approximately 50% of jobs in SEQ.[24]

With Brisbane's employment projected to reach 1.25 million by 2041,[24] managing commuter transport demand is one of the major challenges facing the city over the next 25 years.

The morning and evening commute peaks have a significant impact on the capacity and operation of all transport modes in the city. The impact is compounded by the concurrence with trips to educational facilities, including universities, TAFE and schools.

As a whole, travelling by car as a driver or a passenger makes up approximately 63% of commuter trips for Brisbane residents. This is lower than adjoining local government areas where car travel represents around 74% (Moreton Bay), 76% (Redland), 77% (Ipswich) and 78% (Logan) of residents' commuter trips.[25]

Commuter travel choices are heavily influenced by:

- the location of residential and employment areas
- distance and time of travel
- availability of transport services to and between destinations
- quality, safety, frequency and cost of service.

The impact of single driver car trips is a critical factor in creating congestion during the morning and evening commute. Approximately 80% of all car trips in peak hour at Moggill Road, Indooroopilly, are single occupancy vehicles.

People movements in one hour period during AM peak by mode

11,000 [26]
TRAIN
Central Station

12,000
BUS
South East Busway Inbound (Woolloongabba junction)

1550
PEDESTRIAN
Victoria Bridge

750
BICYCLE
Bicentennial Bikeway

The total number of trips to Brisbane
is expected to more than double
from approximately 250,000 per day in 2016 to approximately
516,000 per day in 2041. [27]

To be sustainable, priority needs to be given to maximising the use of public and active transport for commuter trips, reducing the demand on private car trips and reducing road congestion. This will require a raft of transport measures and infrastructure investment across Brisbane and SEQ and significant changes in individual travel behaviours.

Investing in strategic upgrades to the public transport network, making it faster and more convenient to access destinations, even where interchanging is necessary, will attract more commuters to public transport and position Brisbane as a commuter-friendly city.

High-speed, high-capacity, 'turn up and go' mass-transit on rail, busway and metro trunk networks are the most effective way for moving large numbers of people to employment areas such as the CBD, inner city and major activity centres.

Connecting Brisbane, a joint Queensland Government and Council strategy, provides a framework for developing and modernising Brisbane's public transport network. The citywide public transport network will be comprised of:

- fixed rail routes
- busway and metro routes
- high-frequency and express bus routes
- CityCat and ferry services
- cross-city and feeder bus routes.

An integrated network will require some passengers to change from one service or mode to another. The quality and efficiency of interchange nodes will be critical as will the frequency and coordination of different services.

Delivery of high-frequency, reliable public transport services to destinations outside the inner city is also needed to meet Brisbane's future transport demands. Provision of improved cross-city public transport services, linked to CBD trunk networks, can assist in providing access to major employment areas at regional centres, business parks and MIAs.

In outer areas where densities are lower and public transport services are more dispersed, flexible, personalised transport options can complement public transport to provide complete door-to-door travel or satisfy shorter local travel requirements.

Park 'n' ride facilities are important for workers in suburban and semi-rural areas to access public transport. Park 'n' ride facilities should be located in convenient and accessible locations that improve access to public transport services with minimal impact on local amenity and road congestion.

On-road bus services will remain the primary public transport option in many areas of the city. Implementing on-road priorities for buses, including transit lanes and intersection priorities, could assist in mitigating the impacts of road congestion on travel times and reliability. In some cases, linking these services to high-speed, dedicated trunk rail, metro or busway services will assist travel.

In addition, motorcycles and mopeds can provide an alternative commute to low-occupant car transport. By lane filtering, motorcyclists can move through stationary and slow-moving traffic, allowing them to negotiate congested urban roads more effectively than cars. Council's inner city motorcycle parking scheme has provided more than 1600 spaces to assist accessibility.

24 Department of Infrastructure, Local Government and Planning, The State of Queensland, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p54
25 Australian Bureau of Statistics, *2016 Census*, 2017
26 Building Queensland, *Cross River Rail Business Case*, August 2017, p50
27 Queensland Treasury, *Regional Employment Projections Data Tables, 2010-11 to 2040-41*, June 2017

Cycling is attracting a growing proportion of commuter trips, even for distances over 10km. Attractive, direct, safe and easily understood pathways to major activity centres along key commuter corridors and the provision of end-of-trip facilities in many workplaces has supported this change. Electric bikes are also making cycling a viable option for some in the community, making travelling longer distances possible.

Walking is a part of most commuter trips. Providing safe and easily understood pedestrian links between public transport services and home, work and other activities will provide an improved whole-of-trip experience.

In the high-density CBD and inner city areas, improving pedestrian pathways and connectivity can significantly reduce the need for car-based trips.

Many workplaces such as hospitals, factories and ports, and industries such as entertainment and hospitality require commuter transport services outside of conventional business hours.

Likewise, many industrial areas have their job base spread over a wide area making it difficult to service by conventional public transport. Innovative options to enhance public and active transport in these areas will help to reduce demands on the road network.

TRANSPORT DIRECTION	
23	Promote effective and sustainable commuter public and active transport networks linking residential areas to employment hubs.
24	Support an integrated, safe, accessible and affordable citywide commuter public transport network underpinned by a high-speed, high-frequency, high-capacity mass-transit system.
25	Develop a robust, accessible and reliable cross-city public transport network linked to major activity areas and trunk public transport corridors.
26	Develop an accessible, connected and direct commuter cycling and pedestrian network linked to public transport hubs, employment and activity centres.
27	Develop integrated, connected and accessible pedestrian networks for the CBD, inner city and regional centres.
28	Provide for the use of two-wheeled commuter modes including motorcycles and mopeds.
29	Facilitate well-located park 'n' ride facilities linked to high-capacity public transport services in suitable suburban areas.
30	Develop opportunities to establish personalised transport and paratransit options in suburban and low-density urban areas.
31	Develop innovative commuter transport solutions for low-density employment areas and non-conventional business hours activities.

Safe and efficient freight movement

OUTCOME

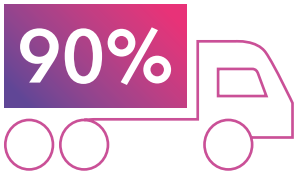
A safe, fit-for-purpose and integrated freight transport network that provides for the efficient movement of goods to, from and within the city.

Moving freight safely and efficiently is essential to Brisbane's economic growth and productivity. Balancing the efficient movement of freight with community safety and amenity is a key challenge.

Road, rail, air and sea freight networks need to be planned, designed and managed to respond to expected growth, taking advantage of supply chain innovations and technology improvements. This can be best achieved through close working relationships between government, industry and transport providers.

Planning for the growth of the freight and logistics industry, responding to new logistics technologies and its integration with the transport network will contribute to the productivity of the sector.

More than



of all freight movements within SEQ are by **road-based transport.** [28]

Heavy vehicle routes: On-road freight movements are increasingly being delivered by larger vehicles. Future directions will also see greater use of automated and semi-automated vehicles for the movement of containers and bulk commodities. The definition of major heavy freight routes, with separation from sensitive land use, will be critical in responding to and benefiting from these innovations.

The Port: Brisbane's Port supports exports and imports servicing SEQ, regional Queensland and northern New South Wales. Protection of port land and facilities from encroachment of incompatible land uses and continued development of landside transport access to and from the Port is required to maintain the Port's competitive advantage as a freight hub.

Airports: Air cargo is a growing export opportunity for Brisbane. Brisbane Airport's 24-7 hours of operation and access to multiple national and international markets makes it attractive for air freight. Archerfield Airport may also provide opportunities to develop specialised air cargo services.

28 Queensland Transport and Logistics Council and Port of Brisbane, *Import/Export Logistics Chain Study, Summary Report,* June 2013, p11

Rail freight: The rail network is relatively underutilised in the movement of freight within Brisbane. Freight capacity, efficiency and safety can be improved by maximising the use of rail for container and bulk material movements, particularly to and from the Port. Future rail opportunities include the proposed Inland Rail project and potential dedicated rail link to the Port.

Urban freight: The movement of freight within the urban environment to centres, businesses and homes is critical to the city's operation. Urban freight includes a wide range of vehicles from courier vans and light commercial trucks to semi-trailers. Urban freight often includes the 'first and last mile' freight distribution function. Urban freight movements need to be incorporated into land use and transport planning.

Construction industry: The construction industry is a major contributor to the movement of materials and bulk products around Brisbane. While it is essential to ensure that construction activities can be undertaken in a cost-efficient and timely manner, effective management of construction traffic is required to mitigate impacts on sensitive land uses and other road users.

New technology: New and emerging technologies such as automation and drones are likely to have impacts on the freight industry. Automation of the freight industry is well-advanced in some areas such as the waterfront container terminals at the Port. Future automation of rail, freight trucks and modal transfer stations could significantly improve freight efficiencies and reliability.

TRANSPORT DIRECTION	
32	Engage with business and industry to identify their transport needs and develop robust and sustainable freight transport solutions.
33	Plan and develop strategic freight networks for Brisbane and SEQ including supply chain networks linking to regional, national and international markets.
34	Plan for efficient and safe urban freight movements and minimise the amenity impacts on local neighbourhoods.
35	Support and facilitate freight functions at the Port of Brisbane, Brisbane Airport and major industry areas.
36	Ensure major construction activities have safe, efficient and robust traffic management plans that meet the needs of industry while protecting local communities from potential impacts.
37	Facilitate the rollout of new technology to improve the efficiency, safety and competitiveness of the freight network.

Supporting the tourism and visitor industry

OUTCOME

Transport services, infrastructure and information help to attract more visitors to Brisbane and make their stay enjoyable.

Tourists and visitors, including business travellers, international students and local tourists, are an important and growing component of Brisbane's economy.

Brisbane is a gateway for tourists visiting Queensland and SEQ. Brisbane Airport, Brisbane Cruise Terminals, Roma Street station and the national road network all provide gateway access into Brisbane, contributing to a visitor's first impression of our city. Fast and reliable transport connections to the Gold Coast, Sunshine Coast and hinterland regions are required.

Visitor transport networks need to be of high-quality, easy to use, affordable and available at different times of day. Our transport networks facilitate safe and enjoyable trips from gateways to accommodation and activities and can be a significant component of the visitor experience to our city.

Public and active transport options provide an ideal opportunity to see and explore the city and its unique features. Integrated payment options and accessible, multi-lingual transport information readily available before and during their visit will enhance the travel experience.

Tourism transport also needs to be accessible for visitors with special needs, including older users and people with disability.

VISITORS TO BRISBANE [29]
2017

International visitors
1,237,000

Domestic visitors
6,711,000

TOTAL VISITORS
7,948,000

Value to Brisbane's economy year ending 2017
$6.2 billion

"Convenience, accessibility and connectivity has a significant influence on the attractiveness of a destination and the propensity for visitors to stay and disperse across the region."

Feedback on the Draft Transport Plan for Brisbane — Strategic Directions, 2018

29 Tourism and Events Queensland, *Brisbane Regional Snapshot — Year Ending September 2017*, 2017, p1

Experiencing the Brisbane River

The Brisbane River is an important part of the visitor experience to our city as well as a transport corridor.

The iconic CityCat and CityFerry network provides a visitor-friendly way to experience Brisbane from the water. Future initiatives in the River Access Network include a number of River Access Hubs and provision for water taxis.

Brisbane hosts a wide range of State, national and interstate sporting and cultural events and festivals, conventions, exhibitions and business events. Facilities include Suncorp Stadium, the Gabba, and Brisbane Exhibition and Convention Centre. Growth in entertainment and tourist industries means that the demands on transport services in the CBD and inner city are moving towards 24-7 operation.

Night time public transport services are provided on key links between the CBD and regional centres. Free public transport is provided for major sporting and some entertainment events. Extending public transport service hours and frequencies to meet visitor and community needs will ensure Brisbane retains its role as a New World City.

TRANSPORT DIRECTION	
38	Provide safe, sustainable, affordable and easily understood transport options for tourist and visitor travel in and to Brisbane that focus on customer needs.
39	Provide tourists, visitors, and students with travel information and services via multi-platform and multi-lingual mechanisms to enhance their experience.
40	Develop public and private transport services and facilities on the Brisbane River to meet community and visitor needs and complement the existing ferry network.
41	Provide integrated, high-quality public and active transport networks to support businesses, convention, sporting and entertainment events and facilities.
42	Expand public transport and personalised transport services to meet the needs of an evolving 24-7 city, by providing more reliable and frequent services to the CBD, inner city areas and other areas of high-demand outside traditional business hours.

Harnessing innovation

Why is this important?

We live in a fast-changing world where new and sometimes disruptive technology and world events can significantly alter our city environment, economy and transport system.

Compared to twenty years ago, low-cost air travel has made our community more mobile on a national and global scale; semi-automated vehicles and low-emission engines have made cars safer and more reliable; smart phones, GPS and the internet have changed the way we receive information and find our way around our transport network. Cities that demonstrate how they adopt smart solutions (technology-enabled or other) are more likely to attract skilled workers and students who in turn contribute to the local economy and local community in their own creative and innovative way.

Innovative transport systems

OUTCOME

Planning, design and management of our transport systems are robust, responsive and adaptive to future opportunities and changes.

Transport systems are not static. Transport networks, operating systems, vehicles and information technology continue to evolve at a rapid pace.

Mobility as a Service (MaaS) describes the emerging move from personally owned forms of transport (predominantly cars) to use of transport services provided by or shared with others. If implemented successfully, MaaS options may provide opportunities to reduce the reliance on private car ownership and its associated infrastructure, including parking spaces.

MaaS systems include:

- taxis and ride sharing
- public transport
- car and bike sharing
- paratransit and community transport
- shared parking
- food and goods delivery services.

MaaS systems may also use a range of new technologies, apps, GPS, online booking systems and in the future, AVs to manage their operations. Integrating these transport modes in the Brisbane transport network will provide more flexible and robust ways of managing future transport tasks.

Employment in manufacturing and industrial areas is changing and employment in education, health, technology and entertainment is growing. These activity centres tend to be more densely developed than traditional industrial areas, providing greater opportunities for public and active transport.

The potential to work from outside the standard office and to engage in education and training outside the traditional school and university environment gives people more choice and opportunity in how they spend their day. Working from home or working from local business centres can reduce the demand on peak-hour commutes to the CBD. Our transport systems need to be responsive to these changes including providing more cross-city services outside of the normal commuter peaks.

Emerging systems also change the way the people interact with transport providers. The rise in sharing places more control in the hands of the consumer and private industry than in traditional transport modes. Raising awareness and educating the community on these changes will be important.

Design innovations can assist in achieving better transport outcomes, often at a lower cost than conventional treatments. 'Smart intersections' are able to use digital technology to change their operations based on real-time, site-specific information. Constantly reviewing, trialling and adopting cutting-edge transport design ideas to meet the needs of the Brisbane community will ensure we maintain a sustainable and accessible transport network.

Planning and regulatory frameworks will need to be adapted and developed to manage transport system innovation.

TRANSPORT DIRECTION	
43	Develop strategies and regulatory frameworks to manage the growth of Mobility as a Service (MaaS) transport modes in Brisbane.
44	Develop transport network solutions that respond to changing work trends, education, communities and lifestyles in Brisbane.
45	Invest in innovative transport design, infrastructure and management solutions to improve the efficiency and effectiveness of Brisbane's transport systems.

Technology-enabled solutions

OUTCOME

The strategic use of technology improves the efficiency and effectiveness of Brisbane's transport networks and services.

Technology has led to significant changes to the way we work, study, socialise with our friends and enjoy our Brisbane lifestyle.

The Brisbane Metropolitan Transport Management Centre (BMTMC) and Transurban Motorway Management Centre provide cutting-edge management of road and bus transport networks through use of Intelligent Transport Systems. These and future technologies will help us monitor our networks and will allow for better data gathering to inform future planning, enable fast responses to incidents, optimise performance and improve network reliability.

The widespread use of vehicle and personal GPS, phone apps for information on public transport, taxi and ride sharing services and computerised tracking of the delivery of goods and services are all making transport much more personalised.

Most of these new technologies are being provided by the private sector to meet growing community demands. Engaging with transport authorities to provide access to real-time travel data across all transport modes can assist in developing new initiatives for Brisbane.

Automation and semi-automation of transport services and vehicles is gaining momentum in terms of applications, capabilities and use on transport networks. Automation technologies are well-advanced in some sectors including the Port freight handling systems, aviation management systems and smart features in many new cars.

The next decade is expected to deliver significant changes towards increased automation of transport services including public transport, freight movements and personal transport.

Development of the regulatory framework for autonomous vehicles is largely being led by the Australian and Queensland Governments. However early planning is required from transport authorities to identify potential changes to transport infrastructure (roads, busways, rail etc.) that may be needed to accommodate autonomous and semi-autonomous vehicles in the future.

Future public transport services need to have high efficiency and reliability and provide flexibility to meet changing demands. Queensland Rail is developing a new operating system to manage the urban train network. Off-board electronic tickets, all-door boarding and new generation buses will provide opportunities to improve bus services. Use of mobile technology to provide on-demand public transport services are being trialled overseas.

Technology can also be used to improve transport accessibility for people in the community not able to access conventional private vehicle or public transport services. Development of on-board bus audio messaging for people with a visual impairment and other communication and information tools using new technology will assist community members.

Informing future transport network decisions

Data on how the transport network is used every day to move people and goods to where they need to go is fundamental to transport and urban planners and decision makers in deciding on operating strategies and where to invest in new infrastructure or services and in assessing the impact of changing land use.

Transport data is collected across different modes and authorities. Often, while the data is useful for its specific intended purpose, the data has not easily been able to be transferred between different authorities. Open data — data that can be used, re-used and distributed by anyone — has great potential. A collaborative and agreed approach across government and the private sector to the capture, storage, management, sharing and release of data regarding all transport networks in a timely way will contribute to better transport outcomes for Brisbane.

Advances in technology will provide new ways to collect data and enable faster data analysis. Critical thinking, scenario planning, rapid risk assessment and quality data analysis are part of the toolkit needed to assess, respond and thrive in times of rapid change.

TRANSPORT DIRECTION	
46	Improve the efficiency and effectiveness of transport networks through Intelligent Transport Systems and technology-enhanced systems.
47	Monitor and adapt to disruptive technologies and facilitate innovative private investment in transport services and delivery.
48	Facilitate the collection, sharing and analysis of data to support transport planning and decision-making.
49	Facilitate opportunities for future automation of transport vehicles in the planning, design and development of our transport networks.
50	Facilitate use of technology to improve accessibility to transport services, including by people with disability.

Robust organisations and partnerships

OUTCOME

Transport authorities and stakeholders in Brisbane are responsive and work together effectively and collaboratively to be well-placed to anticipate and respond to change.

All levels of government and some non-government organisations contribute to the planning, funding, delivery and maintenance of Brisbane's transport networks.

The multiple agency ownership of the Brisbane transport network is often unseen by the community. Travellers expect to have a seamless 'one network' journey when moving around the city.

Continuing to develop an integrated shared vision and direction for the management of transport within Brisbane across local, state and federal government and industry will enable resources to be prioritised to achieve the best outcome for the city and region.

The rapid rate of change in national and global events, including technology change, requires transport authorities to demonstrate agility to respond more quickly and flexibly to challenges and opportunities. Creativity, innovation and willingness to change conventional approaches to the provision of infrastructure and services will be required to meet these challenges.

Governments have a lead role in providing a robust regulatory base for transport. The rapid roll-out of drones and the projected growth in automated and semi-automated vehicles are currently well ahead of government regulatory processes.

Achieving timely delivery of appropriate policy and regulation to ensure public safety and to protect people's rights is a priority for all levels of government.

The way transport infrastructure and services are funded, including the impact of subsidies, and the spread of funding responsibilities across different user groups, is not well-known or understood by the community. Providing greater clarity around the cost and funding of transport infrastructure and services can assist people to make more informed travel choices and understand funding and investment decisions.

Traditional funding models of government-only funding of infrastructure and services is not keeping pace with growing demand on our transport system. Alternative transport funding initiatives, such as public private partnerships, user pays systems and private industry transport providers have been successfully used in Australia and globally. Identifying a mix of potential funding options suited to the Brisbane environment will provide a more robust and viable transport system.

Private industry is becoming more and more responsible for the delivery of transport innovations, often in partnership with government. Innovations such as ride sharing, car sharing, GPS and travel apps are the result of private industry initiatives. Expanding opportunities to embrace and work with private industry will provide a competitive edge in managing future transport demands for the city.

Collaboration with universities, research institutes and industry bodies is also key to harnessing innovation. Brisbane is home to a number of world-class universities and research centres, all with the proven ability to propose potential outcomes and solutions. These institutions can provide the research and ideas to improve our transport systems.

Transport authorities such as Council and the Queensland Government can provide the mechanisms to implement and refine these ideas in practice. Effective collaboration can provide a winning edge to addressing the city's future transport needs.

TRANSPORT DIRECTION	
51	Collaborate with key partners and integrate transport planning and delivery functions in Brisbane and SEQ to deliver transport services as one network.
52	Develop organisational processes and partnerships to better anticipate and respond to new transport opportunities for the city.
53	Apply a coordinated approach to innovation in transport technologies and business models through a framework of assessment, risk management, and regulatory and legislative review and reform.
54	Develop strategic partnerships between transport authorities, universities and industry research teams to advance transport planning, delivery and management outcomes for Brisbane.

Evolving the network

Why is this important?

Brisbane has well-developed and mature transport networks.

Making the most of existing networks, improving the attractiveness of sustainable transport options and ensuring networks perform their desired function and are safe and resilient is important.

Effective integration with land use and connections within and between transport modes is also crucial in meeting customer demands for safe, efficient and connected end-to-end journeys.

High-performing networks are cost-effective and financially sustainable. Building more infrastructure will not always be the best solution. Innovative approaches and smart solutions to optimise use of existing infrastructure, manage demands on the network and the strategic provision of new infrastructure need to be considered to ensure our transport networks continue to meet the city's transport needs.

Integrated land use and transport

OUTCOME

Our transport systems and land uses work together to ensure both function effectively.

Decisions about transport and land use should be considered together to achieve the best overall outcome for the community.

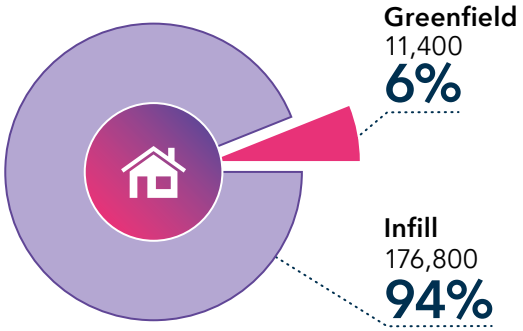
Transport and land use integration for SEQ is managed through the regional plan, *ShapingSEQ*, and for Brisbane through City Plan. A core component of both plans is the accommodation of much of Brisbane's growth through consolidation and infill development in existing urban areas.

The CityShape component of City Plan provides the framework for the integration of land use and transport for Brisbane. CityShape designates areas intended for future residential and economic development and identifies the core transport corridors servicing these growth areas. Under CityShape, future development will be concentrated in the CBD, inner city, regional centres, economic activity areas and nodes along primary public transport corridors.

Our centres provide community access to a wide range of services, including business, retail and community services, and in some cases higher education and health services. While road-based transport services to and within centres are important, they should not dominate the centre or detract from the walkability and amenity of the centre.

Land use and transport delivery needs to be sequenced to ensure effective integration and to deliver high levels of accessibility as development occurs. Delays in providing transport services can result in poor accessibility for new developments or high congestion levels on existing networks. Conversely, premature investment in infrastructure may have high financial costs with low initial benefits. In Brisbane, the *Local Government Infrastructure Plan* (LGIP) provides the framework for linking urban development and transport infrastructure delivery.

Projected additional dwellings in Brisbane LGA 2016-2041 [30]



30 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p108

Brisbane is becoming increasingly urbanised with most land use changes and transport network upgrades taking place within existing built up areas. Planning and protection of transport corridors and facilities from potential land use conflicts lessens economic and social impacts associated with future infrastructure development.

Major community facilities such as universities, hospitals, sporting and entertainment centres in Brisbane generate significant transport demands. Developing and implementing precinct-specific transport strategies for these facilities can reduce demands on the road network and support more sustainable transport choices.

Local facilities, particularly schools, are also high transport generators. Retro-fitting transport services to these facilities is often difficult and disruptive to local communities. Proactive consideration and integration of effective transport solutions should be a major factor in the selection of sites for new community facilities, including schools, and the upgrade of existing facilities.

TRANSPORT DIRECTION	
55	Planning and delivery of transport will be consistent with and support the intents of *ShapingSEQ* and City Plan.
56	Develop high-quality public and active transport services to and within the CBD, inner city and Principal Regional Activity Centres.
57	Integrate walking and cycling infrastructure to support convenient active travel to and within activity centres including connections to the wider transport networks.
58	Coordinate and sequence the planning and delivery of transport infrastructure and services to maximise community and industry outcomes.
59	Identify and protect land required for future transport upgrades and manage land use activities to protect existing and future transport corridors and infrastructure.
60	Plan for high levels of connection with public and active transport for significant developments including major public facilities, universities, hospitals, schools and sporting venues.

Well planned, designed and managed networks

OUTCOME

Brisbane's transport networks meet projected population and employment needs and are designed to optimise effectiveness and performance of the network.

The efficiency, legibility and functionality of our transport networks are fundamental to moving people, goods and services around Brisbane.

Each of the city's transport networks — pedestrian, cycling, public transport and roads — plays an important role in moving people, goods and services around our city.

Walking is a component of most trips, including connections to public transport. Walking is also the major form of movement in high activity areas such as the CBD, entertainment areas and centres.

Safety and connectivity are key factors in the pedestrian network. This includes improvements to pedestrian crossings at busy intersections, provision of continuous pathways to public transport services and activity areas, and improved safety around at-risk areas, such as schools and hospitals.

Developing pedestrian-friendly areas, including shared zones and dedicated pedestrian pathways can assist improving pedestrian mobility. Car-free days in high activity areas can change the focus to emphasise urban spaces and pedestrian movements.

Improving the connectivity, safety and quality of the bikeway network has the potential to significantly increase the number of cycling trips in the city. Developing separated cycling facilities on major routes, providing lighting for evening and early morning trips and providing end-of-trip facilities can assist in making cycling a more attractive transport option.

Network connectivity and legibility are critical for transport users, particularly pedestrians and cyclists. In some cases, the absence of key connections and poor network legibility may discourage potential network users. Completing critical network links can improve community confidence in using our active and public transport networks.

The Brisbane River, other waterways, major roads and rail lines are all barriers to the movement of people, goods and services around Brisbane. New cross-river bridges and improved crossings of road and rail corridors can assist in providing a more connected and accessible active transport networks. The Brisbane Metro and Cross River Rail projects propose dedicated public transport crossings of the Brisbane River.

As a major metropolitan city, Brisbane's future transport network needs to be underpinned by a high-speed, high-frequency, integrated public transport network. *Connecting Brisbane* provides the framework for developing a world-class trunk network and well-located and designed interchanges. Walking, cycling, local public transport and personalised transport will be used to provide end-to-end transport links in the network.

Proactive planning is required to identify, plan for and preserve future public transport and mass-transit transport corridors and facilities. Establishing coordinated, long-term planning for the extension of Brisbane's public transport networks, including key links to adjoining local government areas, is critical to managing transport demand growth on a sustainable basis.

The road network is and will continue to provide for the majority of transport movements across the city. Road network congestion has significant social, economic and environmental costs.

However, continuing to build new road infrastructure or widening existing road corridors is not a long-term, sustainable solution. Management of congestion needs to be undertaken on a holistic basis with a combination of infrastructure improvements, operational changes and demand management strategies.

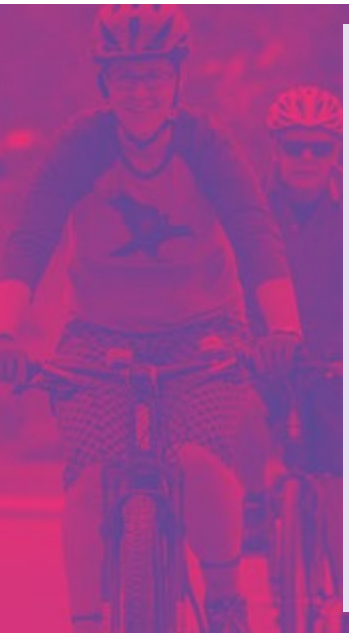
The BMTMC monitors and manages the city's road network, including traffic signal operations and on-road incidents.

Planned upgrades to the network are undertaken through corridor, intersection and local network projects.

Road network upgrades consider the requirements for pedestrians, cyclists, public transport, freight and general traffic.

Parking is a key component in the city's transport networks, including both on-road (kerbside) parking and off-road parking (commercial and private car parks and public parking areas). Management of parking can have an influence on traffic volumes and distribution as well as affecting street amenity and the movement of pedestrian and cyclists.

The Brisbane Parking Taskforce recommendations have provided for improved management of on-street parking across the city. Parking management will continue to be a key element in managing transport outcomes for the CBD and inner city areas.



Maximising benefits from infrastructure investment

Existing transport infrastructure represents a significant community funding investment over many years.

Sound management of our existing transport assets, including whole-of-life management and optimising utilisation of assets, can significantly reduce the need or affect the timing of new infrastructure. Emerging technologies can be used to better monitor and report on asset condition and new technologies and materials can assist in extending asset life.

Where new infrastructure or services are necessary, they should complement and strengthen the existing networks, be fit-for-purpose and provide best value to the community over the life of the asset.

A whole-of-life approach to infrastructure investment that considers capital, operating, maintenance and renewal costs will support sound investment decisions.

Transport hierarchy plans provide a strategic framework for aligning the transport network function with the urban environment. Designation of arterial, local and specialised network links (e.g. freight routes) can assist in providing for efficient transport movements and providing appropriate access to land use activities.

Transport planning in our major corridors must consider priority across transport functions (pedestrian, cyclist, public transport, motor vehicles, etc.) to ensure decisions reflect long-term, sustainable outcomes. As a well-established city, there is often limited ability to widen transport corridors without impacting on existing land uses and urban communities. Optimising and balancing the allocation of space within these corridors will enable more efficient use of these limited resources.

Integration of different transport networks can facilitate reliable and safe movement across the city. Intermodal transfer nodes are important for the movement of people (e.g. car to public transport) and goods (e.g. road freight to rail freight). Integration of services within a specific network are also important, such as the transfer of public transport patrons between different service routes.

Separation of networks is also important where there are potential functional conflicts. Planning for all transport networks needs to balance the degree of integration or separation required at different points in the network.

"Population growth pressure on the road system will need to be offset by an increase in more efficient public and active modes in order to avoid increased road congestion."

Feedback on the Draft Transport Plan for Brisbane — Strategic Directions, 2018

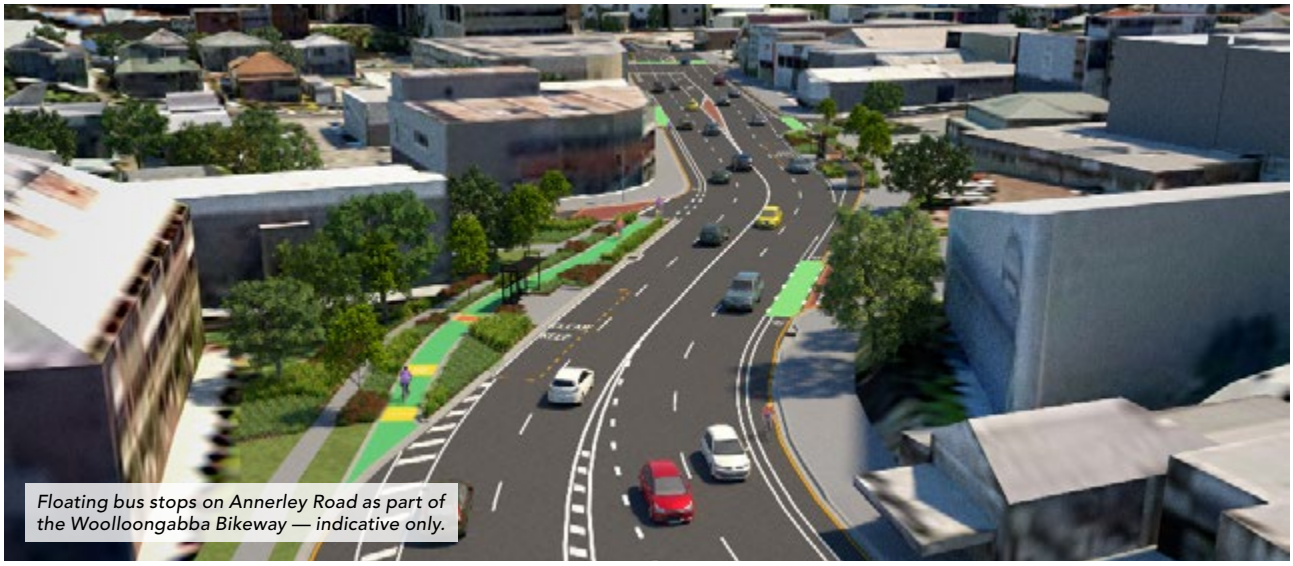
Congestion management

Congestion on our road network has a significant impact on bus services, freight networks and business as well as delaying private vehicle movements.

Travel demands on the road network are heavily influenced by the morning and afternoon commuter and school peak travel times. Outside of these times, the road network is capable of meeting normal transport demands.

To be sustainable, congestion management needs to focus on the movement of high-capacity passenger vehicles, freight and business services and not on the movement of single-occupant private cars. Assistance is also required from the Queensland Government and SEQ local governments to manage the unconstrained movement of private vehicles into and out of Brisbane in peak periods.

TRANSPORT DIRECTION	
61	Develop or update functional and integrated transport network hierarchy plans for all Brisbane transport networks.
62	Plan, design and develop transport corridors taking into account the balanced demands for active, public, freight and car-based transport movements.
63	Evaluate network deficiencies and implement sustainable short, medium and long-term network upgrades to maintain connected and efficient transport networks.
64	Manage transport congestion across all transport networks to provide for more sustainable transport options.
65	Plan, develop and manage an integrated, efficient and accessible public transport network consistent with *Connecting Brisbane* and integrated with SEQ regional networks.
66	Take a whole-of-life approach to planning, funding, building, maintaining and operating our transport assets.
67	Continually review transport design standards to provide high-value, safe, sustainable and fit-for-purpose infrastructure.
68	Investigate and implement opportunities to improve active and public transport movements across transport barriers including new strategic 'green bridge' crossings of the Brisbane River.
69	Allocate and manage parking to support sustainable transport and land use outcomes.



Floating bus stops on Annerley Road as part of the Woolloongabba Bikeway — indicative only.

Travel demand management and behaviour change

OUTCOME

Travel demand and behaviours of the community and businesses will improve transport network efficiency and reduce costs.

Private motor vehicle use has had an enormous impact on Brisbane's urban form and our travel behaviour. Car travel is the dominant mode of transport across the city and peak demands lead to congestion across the network despite new and upgraded infrastructure.

With population and employment growth forecast for Brisbane and the SEQ region, continued growth in travel by private vehicle will be unsustainable. Travel behaviours will need to change, supported by strategic investment in sustainable transport options and maximising the use of existing infrastructure.

Upgrading and providing new road infrastructure in a well-established city comes at considerable financial, environmental and community cost. Adverse impacts can include property resumption, fracturing communities, loss of green space, increased emissions and diversion of government funding from other programs. Travel demand management and travel behaviour change strategies make better use of our existing transport network and reduce or delay the need for new infrastructure.

A key demand strategy to manage congestion on the road network is to encourage a reduction of single-occupant car trips, particularly in peak periods, through providing appealing alternatives for current road users and improving travel times for high-occupancy vehicles. Fewer trips by low-occupancy cars and more use of public and active transport options can effectively 'free up' space for the movement of goods and services relieving or delaying the need for building new road infrastructure. Switching to public transport and other multiple-occupant vehicles can reduce emissions and move more people more efficiently.

Managing travel demand can also include reducing the number of trips by changing other behaviours, for example, telecommuting, and consolidating trips for shopping and accessing services. Changing travel times can also assist in managing demand. Off-peak movement of goods and services and priority allocation for preferred movements are examples of this.

Programs such as Council's Active School Travel program have been very successful in changing travel behaviour for parents and students across a wide number of primary schools in Brisbane. Developing programs targeted at workplaces and wider community sectors including commuters, universities, high schools and hospitals can be equally successful.

Making information easily available to the community on the true cost and impact of transport options, the alternatives available for their specific trip needs and the benefits of choosing more sustainable travel options can significantly improve people's willingness to consider change.

Improving the accessibility, quality, safety, cost and convenience of more sustainable travel choices such as waking, cycling, public transport and vehicle sharing and pooling will

support travel behaviour change. Targeting transport infrastructure delivery to facilitate community travel behaviour change is critical.

Transport pricing structures can also influence travel demand and travel choice. For example, variable road tolls or charges based on time and location of travel can act as deterrents to reduce trips on congested roads in peak periods. The real and perceived cost of public transport, car ownership and parking can all influence people's travel choices. Successful development and implementation of transport pricing strategies is best undertaken jointly by all levels of government in consultation with industry and the community.

Workplace travel plans

Workplace travel plans can incorporate a combination of workplace design, access to alternative transport options, employee education and awareness and business leadership for change.

Workplace travel plans support organisations and employment centres (e.g. shopping centres and hospitals) to make changes to how employees travel to and from work and how they complete business-related trips during their work day to improve access to sustainable travel choices and significantly reduce reliance on private vehicle travel and parking spaces.

Sustainable travel choices by customers or clients can also be encouraged through providing information on sustainable transport options to access a work site. For employees, altering work hours away from peak travel times and telecommuting where possible can deliver significant travel time savings.

Working with specific industries, such as the freight and logistics industry can identify changes in operating times, vehicle types and route selections that can reduce the impact of congestion in delivery times and improve industry effectiveness.

TRANSPORT DIRECTION	
70	Engage with the community, business and industry to gain an understanding of motivating factors and barriers to changing travel behaviours.
71	Identify desired travel behaviours across a range of trip purposes and develop and implement robust travel behaviour change programs to encourage the uptake of desired travel behaviours.
72	Develop and implement targeted travel behaviour change programs for high-activity locations, including universities, hospitals, schools, business centres and the CBD.
73	Provide alternative transport options to encourage and support consumer demand change and travel behaviour choice.
74	Monitor and review transport pricing impacts on travel behaviour and mode choice.

Safe transport networks

OUTCOME

Brisbane's transport networks provide for the safe movement of people, goods and services.

Our transport networks need to be safe, resilient and flexible to meet existing and future customer needs. Eliminating death and serious injury on our transport networks is a primary principle of transport design, management and operation.

Safety considerations must include all transport network users as well as those who are affected by the network such as people living adjacent to transport corridors.

Safety is a critical consideration for pedestrians and cyclists as our most vulnerable road users. Separation of pedestrians and cyclists from general traffic movements is a key mechanism for improving safety. Real and perceived safety issues are often quoted as a major barrier in choosing cycling or walking as a transport option. Improving safety can encourage more trips by active transport, particularly for people who are not confident in cycling on the road network.

Gaps in the primary bikeway network can expose cyclists to potential safety risks when they are required to share general traffic lanes when travelling between sections of dedicated bikeway. Providing separated on-road lanes and completing off-road pathways will improve safety. Provision of pathways and bridges over barriers such as major roads, rail lines and waterways can also improve safety as well as providing more direct connections.

Speed contributes to the severity of a crash, particularly where a pedestrian or cyclist is involved. The implementation of a 40km/hr speed limit in the CBD in 2009 has seen a reduction in reported pedestrian-related incidents fall from 58 in 2008 to 21 in 2016.[31] Traffic research indicates that the severity of pedestrian and cyclist injuries significantly reduces where traffic speeds are lowered.[32]

Council's Local Area Traffic Management (LATM) program aims to manage traffic in local neighbourhood areas to provide safer streets. Reduced speeds in school zones and infrastructure works undertaken to improve safety around schools also assists. Lower speed zones (40km/hr) or use of shared zones could be considered as part of a suite of safety improvements for high-volume pedestrian and cycling areas (CBD, inner centres, school zones etc.).

Pedestrian safety can be improved by providing sealed, connected footpaths of suitable width and maintaining pathways in good condition. Safety at interfaces between pedestrians and cars or pedestrians and bicycles can be enhanced through infrastructure design.

Improved pedestrian facilities in the CBD and centres where there are higher pedestrian numbers will also help to improve safety. This may include provision of increased footpath space, longer crossing times at traffic signals or scramble-crossings at key intersections.

31 Department of Transport and Main Roads, *Webcrash 2005-2016*, 2017
32 The International Transport Forum, *Speed and Crash Risk — Research Report*, 2018, p6

Grade separation of pedestrians and vehicles such as elevated walkways and overpasses could also be considered in appropriate locations.

Planning of new development can incorporate ways to improve pedestrian and cyclist safety by including provision for separated pathways and improving active transport connections to facilities.

The interface between trains, pedestrians, cyclists and motor vehicles at level crossings is a growing safety challenge. With greater rail frequencies, increased freight tonnages and higher road traffic volumes, the potential for incidents at level crossings has increased. As well as the safety impacts, these incidents affect the operation of the wider transport network. Infrastructure and operational solutions to eliminate or reduce the interface of different transport modes at these crossings require cooperation and investment from all levels of government.

Safer Roads, Safer Queensland; Queensland's Road Safety Strategy 2015-21 has provided guidance to transport agencies to move towards a vision of zero road deaths and serious injuries. Sweden's Vision Zero transport safety program has been highly successful in decreasing road fatalities and transport service injuries over the past 20 years.[33] Development of a Brisbane transport safety plan could provide direction and guidance for long-term safety improvements on our networks.

The transport network plays a critical role in weather events, disasters and major incidents through supporting access for emergency services. Effective functioning of the network at these times can be aided through disaster management, security planning and mitigation measures that address a range of scenarios (man-made, natural event or major maintenance).

Redundancies in our transport networks, particularly public transport networks, will provide effective contingencies when the functioning of individual network elements are hindered or disabled due to critical events or incidents.

Transport safety and improvement programs

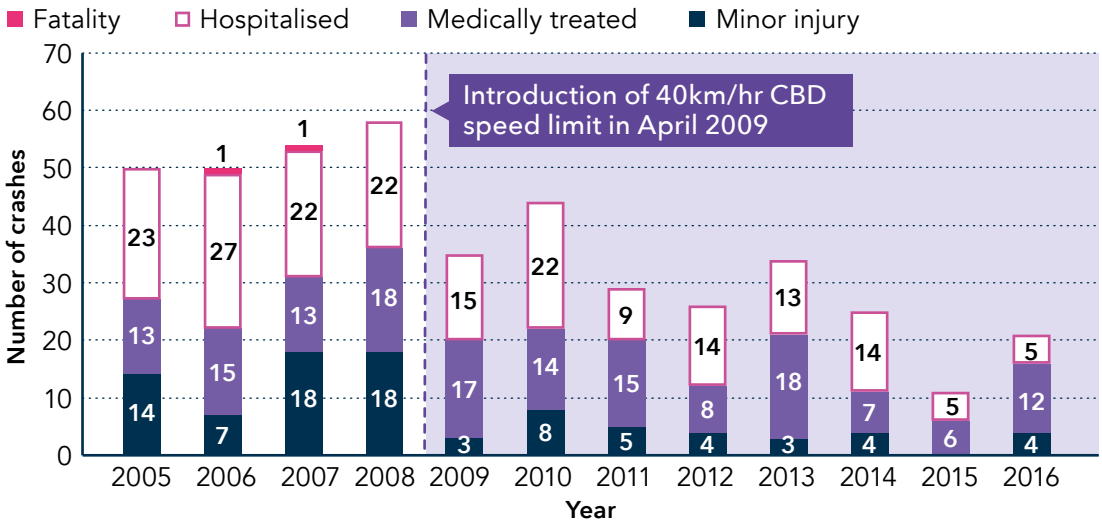
All levels of government have contributed to initiatives to improve safety on our transport networks. This reflects the importance of transport safety.

The Australian Government's Black Spot Program and Council's Bikeway Lighting Program are well-established examples. Reduction of traffic speeds in the CBD and school zones has also assisted.

Improvements to planning, design, operation and monitoring have improved safety over time and will continue to be a priority for Brisbane's transport network.

33 Sweden Vision Zero, www.visionzeroinitiative.com

Crashes involving pedestrians by severity in CBD* 2005-2016 [34]



TRANSPORT DIRECTION	
75	Support and implement transport network safety upgrade programs and projects.
76	Separate incompatible transport uses particularly in high-volume or high-speed environments.
77	Investigate, plan and implement transport safety improvement programs in the CBD, residential neighbourhoods, school zones and high-pedestrian activity areas.
78	Support the improved management, removal or grade separation of rail level crossings.
79	Develop a Brisbane transport safety plan to guide transport planning design and management.
80	Incorporate disaster management, security and mitigation considerations, including emergency services operations, in planning and operation of transport networks.

34 Department of Transport and Main Roads, *Webcrash 2005-2016*, 2017
* Excludes State-controlled roads including Riverside Expressway and associated on/off ramps

Transport Networks

Transport network tasks

Today's transport challenges of traffic congestion and network performance constraints, coupled with expected population, employment and freight growth, require a multi-faceted approach to managing the network to achieve the community's future vision for Brisbane. There are also many opportunities and innovations that will support the drive towards achieving an accessible and connected city.

Our transport network caters for many trip purposes and connects a multitude of destinations. Five distinct, but highly inter-related transport tasks have been identified. This section of the plan describes each of these tasks, the trends, challenges and opportunities, and how Brisbane's transport network will be developed to meet these tasks and to meet our intended liveability, economic, innovation and network outcomes.

Transport task with level of demand by trip purpose

	TRANSPORT TASKS				
TRIP PURPOSE	Global, national and state	SEQ and Greater Brisbane Metropolitan Area	Brisbane citywide	Brisbane inner city	Brisbane suburban
Commuter	Low	High	High	High	Medium
Education	Low	Medium	High	High	High
Shopping	Low	Low	High	Medium	High
Personal services	Low	Medium	High	High	Medium
Recreation/ entertainment	Low	Medium	Medium	High	Medium
Tourism	High	Medium	Medium	High	Low
Business	High	Medium	High	High	Medium
Freight	High	High	Medium	Medium	Low


CHILD
CROSS

Global, national and state

Brisbane is a gateway to international, national and state destinations and markets for visitors, goods and services. As Australia's New World City, Brisbane requires strong, direct and efficient transport connections to global populations and markets. Similarly, as the economic and administrative centre for Queensland, transport links between Brisbane and regional Queensland and other states, particularly New South Wales and Victoria, are critical.

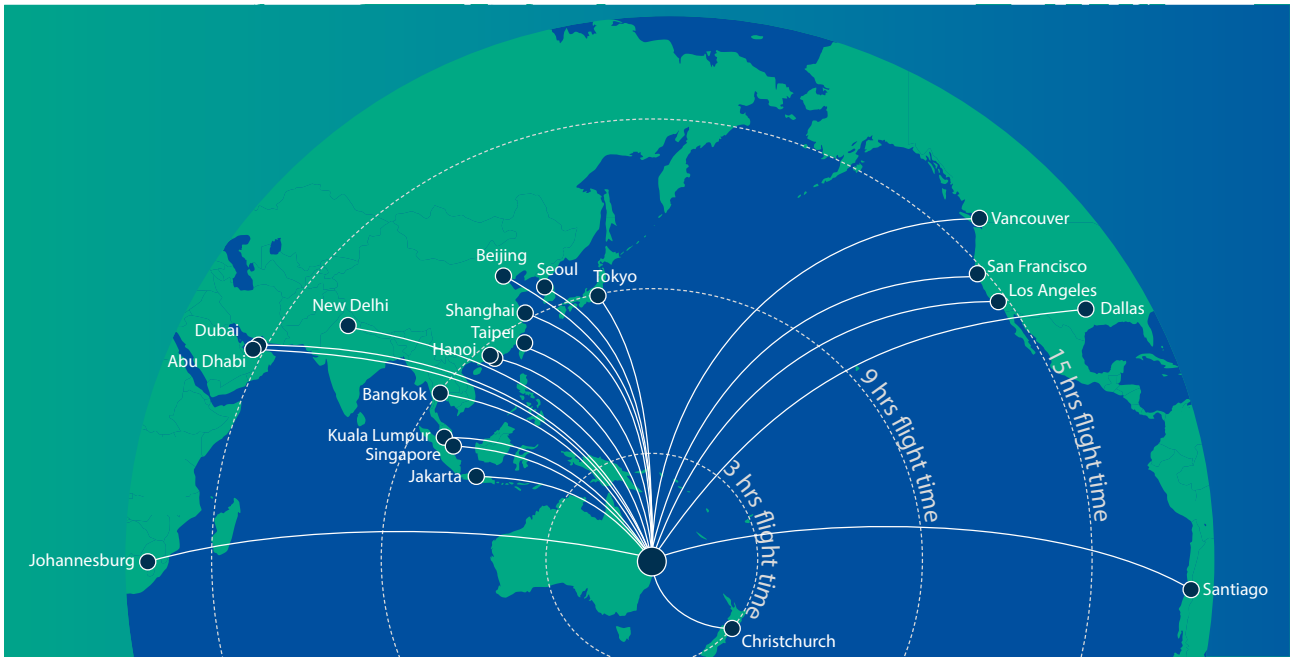
Key global, national and state transport movements for Brisbane include:

- import and export bulk goods, container freight and specialist goods
- visiting tourists and business travellers
- international students
- State-wide access to high-level health care, education and government services.

The hub of Brisbane's global and national transport network is the ATC precinct including the Brisbane Airport and the Port.

The efficiency of the air and sea port functions are heavily influenced by land-based transport connections. Within the next 20 years the landside transport system is projected to need to support almost a tripling of the freight task from Brisbane's sea and air ports,[35] along with an increase of more than 25 million passenger movements to and from other state, national and international destinations.[36, 37]

Road links to state and national destinations are provided by the State and National Highway network. The inter-state rail line connects New South Wales markets to Acacia Ridge and the Port for freight and Roma Street Station for passenger services. The Queensland narrow gauge network links Brisbane to regional and State markets via Ipswich (west) and Caboolture (north).



35 Queensland Transport and Logistics Council and Port of Brisbane, *Import/Export Logistics Chain Study, Summary Report*, June 2013, p34
36 Brisbane Airport Corporation, *Passenger Statistics Year Ending December 2017*, 2018
37 Brisbane Airport Corporation, *Brisbane Airport Corporation 2014 Master Plan, Chapter 5 — Growth Forecasts and Development Objectives*, p58

Trends, challenges and opportunities

Air and sea ports

Increasing global market demands and strong economic growth in Queensland will drive growth in container and bulk freight through the Port and passenger movements through Brisbane Airport. International air cargo is capturing a growing market share providing growth opportunities. Maintaining and improving land transport access to Brisbane Airport and the Port will be critical in supporting Brisbane as a major global city.

The ATC precinct, Brisbane Airport and the Port is the largest employment area in Brisbane outside the CBD and inner city. Providing improved commuter transport options, including public and active transport services, will both reduce the need for private car travel to the area and improve accessibility for workers in the area.

Land freight task

Currently, less than three per cent of container and bulk cargo to the Port is carried on rail.[38]

A comprehensive, long-term transport management plan is required to deal with the projected growth in container freight to the Port, the trend for larger trucks, truck 'platooning' and the impacts of congestion on road movements. This will ensure secure, sustainable freight movements to and from the Port.

Cruise industry

Cruising is one of the fastest-growing sectors in Queensland's tourism industry, contributing approximately $1.1 billion to the Queensland economy in 2016-17.[39] Brisbane is ideally placed to provide base port facilities for cruises to the Pacific Islands and the Australian east coast, as well as a major port of call for the world's mega cruise ships.

The new Brisbane International Cruise Terminal is proposed at Luggage Point to accommodate the large, new-generation cruise ships that are being increasingly used by the industry.

Inland Rail

The Australian Government has committed funding to the Inland Rail project linking Melbourne and Brisbane to open up new market opportunities in western New South Wales and Victoria.

Development of the Inland Rail link will provide an economic boost to both Brisbane and the SEQ region. The new rail link is currently proposed to terminate at Acacia Ridge.

In the long-term, the development of a dedicated freight rail link through to the Port will be required to maintain its global competitive position and resolve freight impacts on Brisbane residents.

38 Port of Brisbane, *Port of Brisbane Response to the Inquiry into National Freight Supply Chain Priorities*, July 2017, p7
39 Cruise Lines International Association, *Cruise Tourism's contribution to the Australian economy 2016-17*, 2017, p8

Transport network intent

The focus of the global, national and state transport network within Brisbane is to:

- maintain and improve Brisbane's competitive edge as a New World City
- efficiently move people, goods and services between Brisbane and external global, national and state markets
- provide efficient and sustainable land-based transport links to our import and export transport facilities
- manage the impact of externally generated transport movements on community amenity and the city's urban environment.

Transport network development

Airports

- Enable the continued operation and expansion of the Brisbane Airport as the premier aviation gateway to Brisbane, SEQ and Queensland.
- Enable the evolution of Archerfield Airport as a secondary aviation gateway to Brisbane.
- Enable operation and expansion of airport and air-service-related industries within and connected to the airports.
- Support efficient and sustainable transport access to Brisbane Airport and adjacent industry precincts.

Port

- Enable the continued operation and expansion of the Port as the region's container and bulk goods cargo port.
- Enable the continued operation and expansion of freight and logistics industries and centres that support Port operations.
- Enable the continued development of the ATC industrial area, including logistics and freight industries allied to the Port.
- Enable the development of the new Brisbane International Cruise Terminal to support the region's tourism industry.

National/State road network

- Facilitate the continued development of the National and State Highway network within Brisbane and SEQ for movement of freight, goods, services and people to global, national and state markets.
- Support development of a high-quality national heavy vehicle freight network.

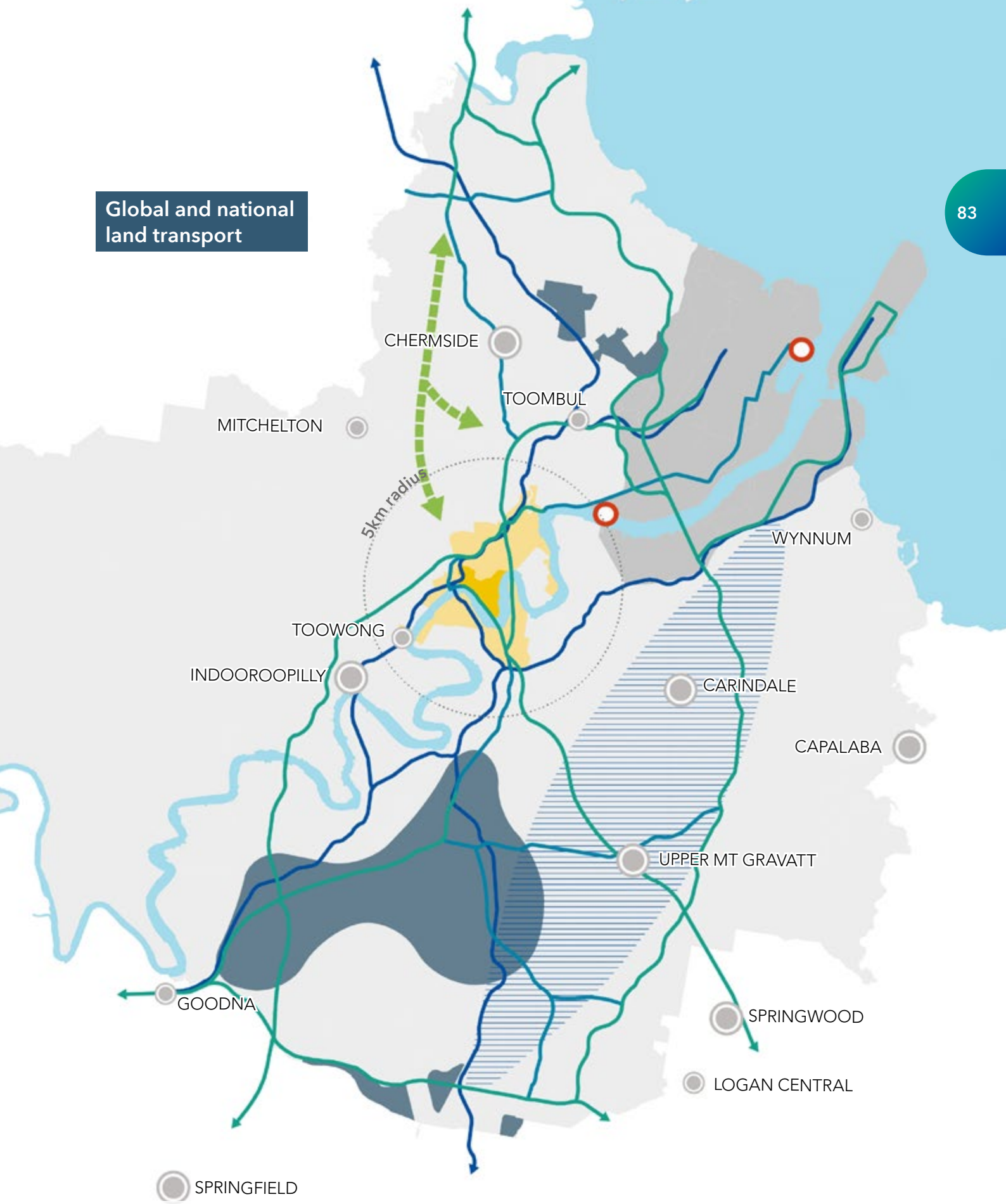
National/State rail network

- Maintain and enhance the rail freight network to the Port and regional freight destinations.
- Facilitate development of Inland Rail between Brisbane and Melbourne.
- Identify and preserve a potential dedicated rail freight corridor connecting Inland Rail to the Port.
- Maintain and enhance regional and interstate passenger rail networks.

Public and active transport networks

- Enhance commuter public transport services to Brisbane Airport, the Port and the ATC.
- Provide and enhance public transport services to Brisbane Airport for visitor and tourists, including services from non-CBD destinations.
- Enhance intermodal transit centre facilities for regional, state and national coaches, rail and other tourist and passenger services.
- Enhance active transport network links to and within the Brisbane Airport, the Port and the ATC.

Global and national land transport



LEGEND

- Local government area
- CBD
- City frame
- Australia TradeCoast
- Major Industrial Areas
- Regional rail links
- Motorway network
- Non-motorway regional links
- Principal and major centres
- Cruise ship terminals
- Future transport corridor
- Port connection investigation extent

October 2018

Regional and Greater Brisbane Metropolitan Area

Brisbane is the primary regional centre of SEQ and the Greater Brisbane Metropolitan Area. Within its boundaries, Brisbane provides the greatest concentration of people, employment, activity and the highest order of services and so attracts people, business and freight travel from across the region.

The SEQ region currently relies heavily on the road network for moving goods, services and people around the region and into/out of Brisbane.

Brisbane's transport networks integrate seamlessly with adjoining local government suburbs with a high proportion of cross-border travel for commuting, schools, services and recreational activities.

Brisbane's transport networks also support the prosperity and wellbeing of the region, providing access to employment, goods and services and leisure activities for the community and driving the region's supply chain.

The regional public transport network, centred around Queensland Rail passenger rail networks, provides efficient connection between regional residential areas and the Brisbane CBD and economic areas.

Region-wide strategies are required to:

- reduce unnecessary car-based trips into/out of Brisbane
- prioritise public transport for commuter and personal trips across SEQ
- provide clear designation and separation of regional road movements from local Brisbane communities
- protect and retain efficient operation of regional freight movement networks.

Trends, challenges and opportunities

Commuting

The projected high population growth in SEQ, coupled with the dominance of new employment being located within Brisbane, will see a potential additional 266,000[40] people needing to commute to Brisbane from outside the local government area on a daily basis by 2041.

The current reliance on private vehicle travel for external commuter trips into Brisbane is affecting road network efficiency, reliability and congestion. Improving the convenience and accessibility of public transport within all SEQ local government areas is fundamental to managing commuter accessibility to Brisbane employment centres.

The rail network provides the primary public transport services between SEQ local government areas and Brisbane. Infrastructure capacity in the Brisbane CBD and inner city area is restricting the ability to meet growing regional demands. The Cross River Rail project will alleviate current capacity restrictions and provide the initiative for further expansion of regional rail services.

Improved cross-city and cross-regional public transport services are also required to meet the growing commuter demand in regional employment centres outside of the inner city area.

Freight movements

Freight movements between the Port and regional industrial precincts and markets will continue to place heavy demand on road and rail transport in Brisbane. Much of this demand is on the south and south-west transport corridors to Ipswich, Logan and the Gold Coast. The Logan and Gateway Motorways support efficient north-south freight movements within SEQ, by-passing the Brisbane inner city area.

Motorway and regional road network

The motorway network provides connections to major regional centres in the Gold Coast, Sunshine Coast, Ipswich, Moreton Bay and Toowoomba. Within Brisbane, motorway and arterial road networks are interconnected to form a Regional Arterial Road Network. Future upgrades to the regional road network will need to be accompanied by network improvements within Brisbane to ensure that additional transport loads are not passed onto the local Brisbane network.

Active transport

There is opportunity to encourage more active transport trips between Brisbane and adjoining local government areas through improved cross-boundary network connections.

The *South East Queensland Principal Cycle Network Plan* guides planning and investment in cross-boundary connections towards a more complete network to encourage greater cycling for recreational and commuting purposes.

40 Queensland Treasury, *Regional Employment Projections Data Tables*, 2010-11 to 2040-41, June 2017

Network intent

The focus of the SEQ region and Greater Brisbane Metropolitan Area transport network within Brisbane is to:

- support the economic, lifestyle, environment and urban needs and values of the SEQ region
- support transport outcomes of *ShapingSEQ* and regional transport plans
- provide for efficient and timely movement of people, goods and services within the SEQ region including through Brisbane
- maximise the use of public transport for movement of people, including commuters, between SEQ local government areas and employment destinations within Brisbane
- manage the impact of transport movements generated from outside Brisbane on Brisbane's community lifestyle values and urban environment.

Transport network development

Public transport network

- Develop an integrated and sustainable regional public transport network compatible with *Connecting Brisbane*.
- Support public transport improvement initiatives in SEQ local government areas to complement and add to the regional public transport network.
- Remove existing inner city constraints on the suburban rail and busway networks and provide opportunities to expand regional mass-transit public transport services through projects such as Cross River Rail and Brisbane Metro.
- Upgrade the regional rail network operating systems and vehicles to provide for future passenger service needs.
- Preserve corridors for future regional transit services, for example Salisbury-Flagstone rail corridor and north-west transport corridor.

Rail freight network

- Identify and develop opportunities to improve utilisation of the rail network for regional freight movement, including to and from the Port.

Road network

- Develop, enhance and continue to upgrade the regional motorway and arterial road network, including key corridors within Brisbane to manage regional road movements.
- Plan and develop strategic missing links in the state arterial road network, ensuring compatibility with the Brisbane road network.
- Facilitate planning and delivery of the north-west transport corridor and associated links to the regional road, public transport and active transport networks.
- Manage the function and performance of road networks across local government boundaries in a cooperative and coordinated way.

Cycling network

- Expand regional bikeways in accordance with the SEQ Principal Cycle Network Plan, including cross boundary connections.
- Deliver SEQ cycling network links to major employment centres within and outside the Brisbane local government area.
- Complete delivery of the Moreton Bay Bikeway between Redland Bay, Brisbane and Redcliffe.

Future Greater Brisbane Metropolitan Area public transport network

October 2018

Brisbane citywide

As a major metropolitan city, Brisbane's citywide transport demands are driven by a wide range of needs including local trips, commuting, business services and freight. Individual transport movements in Brisbane are heavily influenced by where people live and work, and where significant transport generators, such as universities, hospitals, schools and activity centres are located.

Brisbane has highly evolved road, public transport, bikeway and pedestrian networks. Future development of citywide transport networks will focus on improved use of existing networks, upgrading and modernising existing networks and addressing missing links in the network.

Our transport systems need to be robust and responsive to differing transport functions and hourly, daily and weekly demand variations.

Transport Plan for Brisbane — Strategic Directions Brisbane City Council

Trends, challenges and opportunities

Population and employment growth

Brisbane City is currently home to around 1.2 million[41] people and provides employment to approximately 820,000[42] workers from Brisbane and the surrounding areas. By 2041, the city's population is expected to grow by approximately 380,000[41]; employment is expected to grow by 430,000[42]; and dwellings to increase by 190,000[43]. This growth will place significant pressure on existing and future transport infrastructure and services.

Under City Plan, future population and employment growth will be concentrated in the inner city, major industrial areas, major centres and growth nodes along major transport corridors. Population growth will also occur in the city's remaining suburban greenfield areas.

A significant change in travel behaviour and transport infrastructure and services will be required to accommodate projected population and employment growth.

Road network congestion

Road-based transport is, and will continue to be, the major way people, goods and services are moved around the city.

Continued growth in private vehicle trips, particularly in peak periods, will lead to increasing congestion on road networks.

Congestion on the network has the potential to increase travel times, increase pollution emissions and delay public transport and freight movements. Congestion at intersections and network pinch-points can also increase safety risks for motorists, cyclists and pedestrians.

Planned and managed upgrades to the road network will have a network-wide focus on managing congestion, improving safety and providing traffic capacity to meet current and future transport needs. However, continued widening of road corridors to accommodate unconstrained private vehicle demands is not a sustainable option for the city.

41 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p34
42 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p54
43 Department of Infrastructure, Local Government and Planning, *ShapingSEQ: South East Queensland Regional Plan 2017*, Brisbane, August 2017, p42

Connected and functional networks

All citywide transport networks need to be easily understood and connected to provide for end-to-end transport movements. Missing links in the network, network restriction points and congestion all reduce the efficiency and safety of the network. This is the case across all modes of transport.

Separation of transport modes

Separation of network operations — public transport, cycling, walking, freight and general traffic — can provide more efficient and safe operation of our networks. However, full separation of transport is not always physically or economically practical. Prioritising the delivery of separated facilities in high-use or high-conflict areas allows for the efficient allocation of resources.

When full mode separation is not possible, management of transport corridor space and mode priority, such as bicycle lanes and bus priority treatments on the road network should be considered.

Public transport coverage

Brisbane has a well-established public transport network encompassing rail, bus and ferry services. However, due to the highly CBD-centric development of the network, there are locations in the city with lower levels of service than others.

Improving public transport to middle and outer suburbs and providing cross-city services to regional centres and MIAs will provide a more balanced and holistic citywide public transport network.

Network integration

Strategic integration of transport networks can provide improved whole-of-trip experiences for customers and efficient distribution of goods and services. At the citywide level, the location of public transport interchange facilities will be significant in encouraging more people to use public transport. All transport network plans should include provision for well located and easily accessible interchange facilities.

Land use and transport integration

Land use functions, density and distribution patterns have a significant impact on the efficiency of our transport networks. Integrated and coordinated planning and delivery of land use and transport planning can significantly improve mobility outcomes for the community.

Rail level crossings

Brisbane has approximately 44 rail level crossings. Greater rail frequencies and freight tonnages are increasing the risk of incidents at these crossings and affecting road network performance.

Combined with higher traffic volumes on the road network, the impacts of incidents at level crossings on the operation of transport networks can be significant.

Network intent

The focus of the Brisbane citywide transport network is to:

- provide multiple choices for safe and efficient movement of people, goods and services within the city
- provide integrated, functional and coordinated citywide active transport, public transport and road networks
- where practical, separate incompatible transport movements
- manage congestion and movement capacity on all transport networks with a balanced approach to delivering competing transport functions
- provide a modern, high-capacity, integrated citywide public transport system connecting with local and personalised transport services
- establish well-placed and designed transport interchanges.

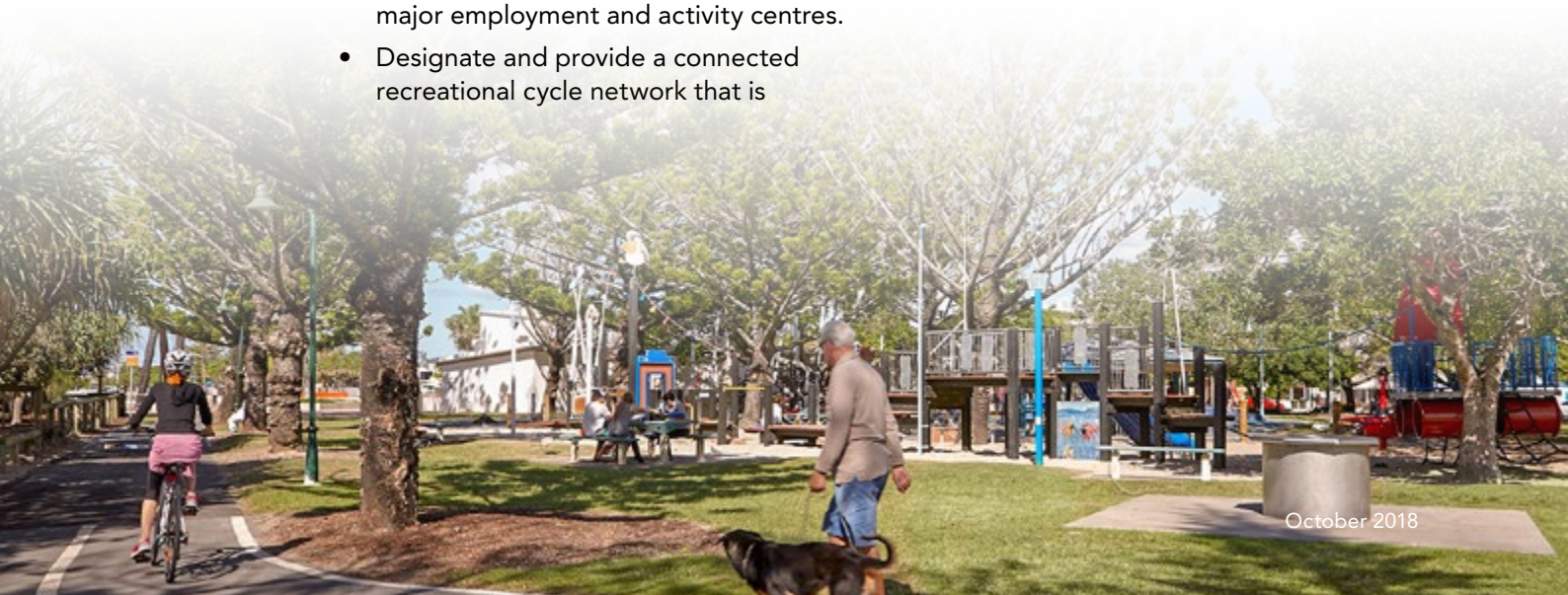
Transport network development

Pedestrian network

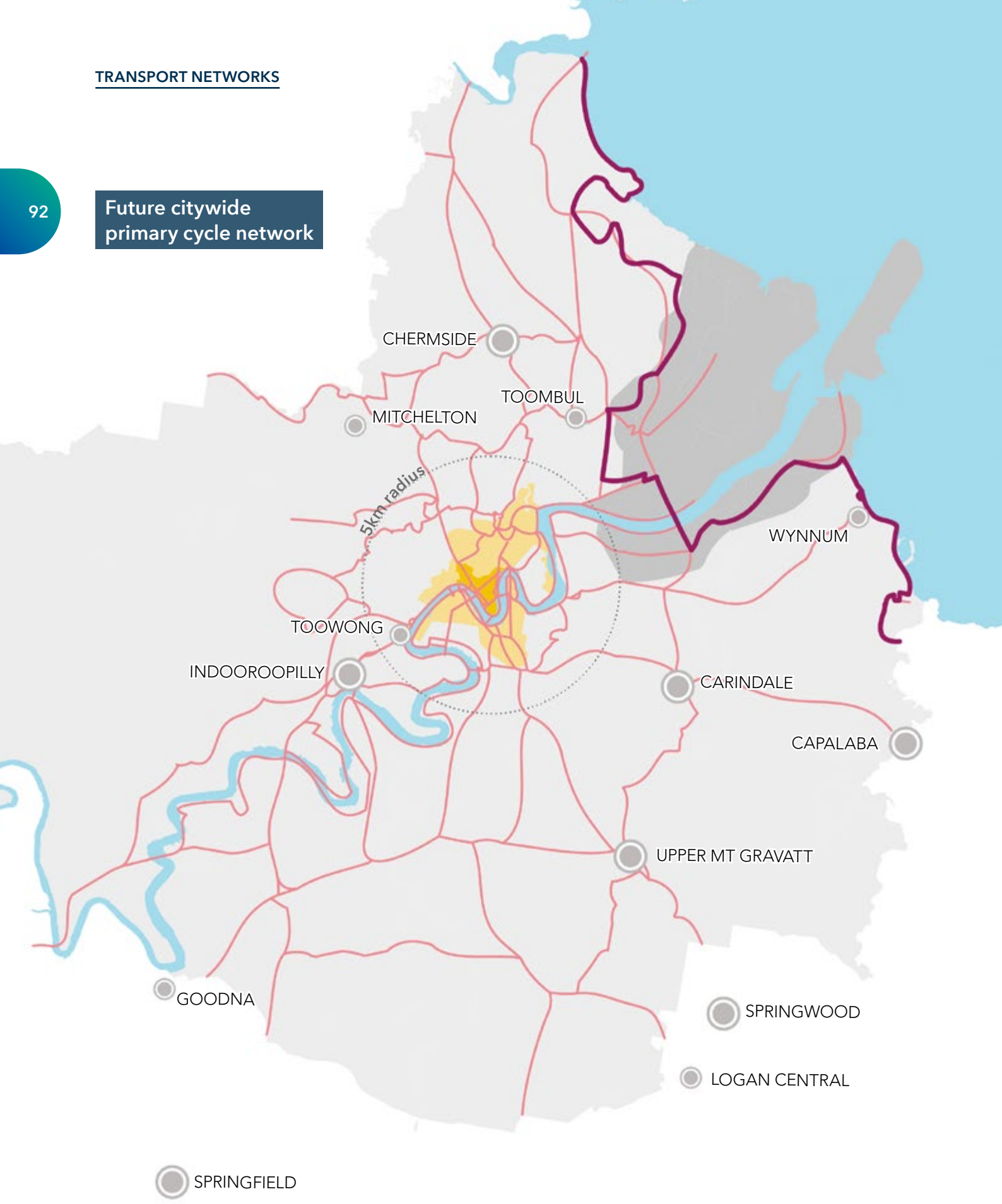
- Provide priority for pedestrian movements within and around centres and major activity areas.
- Provide high-quality, direct and safe pedestrian connections to public transport nodes.
- Provide separated pedestrian or shared (pedestrian and cyclist) networks to provide access to employment areas, schools, universities, hospitals and community services.
- Provide convenient, connected and safe pedestrian crossing facilities for barriers such as the Brisbane River, waterways, rail lines and major roads.

Cycling network

- Designate and provide a primary on and off-road commuter network that provides safe and direct connections to major employment and activity centres.
- Designate and provide a connected recreational cycle network that is continuous, safe, enjoyable and suitable for all age groups and abilities.
- Identify, plan and construct strategic missing links in the primary bikeway network to provide continuous and easily understood paths of travel to key city destinations.
- Separate cyclists from pedestrians and vehicles on high-volume routes.
- Provide on-road facilities where necessary, suited to the form and function of the road.
- Provide convenient, connected and safe cycling facilities for barriers such as the Brisbane River, waterways, rail lines and major roads.
- Provide 'last-mile' cycling network connections in activity centres as well as secure end-of-trip facilities and bike parking.



Future citywide primary cycle network



LEGEND

- Local government area
- CBD
- City frame
- Australia TradeCoast
- Principal and major centres
- Moreton Bay Cycleway
- Primary cycle corridor

Public transport network

- Develop a citywide trunk public transport network comprising:
  - rail network
  - busway and Brisbane Metro network
  - high-frequency and express line-haul bus routes
  - cross-city bus network
  - CityCat and ferry network.
- Protect future primary public transport corridors and facilitate development of new high-capacity trunk routes including: Northern Busway to Bracken Ridge and Aspley; Eastern Busway to Carindale; UQ Lakes to Indooroopilly; and Salisbury to Flagstone rail line.
- Provide high-quality public transport interchanges at strategic locations on the network including Chermside, Indooroopilly, Darra, Upper Mt Gravatt, Mitchelton and Toombul.
- Develop improved public transport to interchanges and connect to major employment centres including Brisbane Airport, the Port and SWIG.
- Encourage the provision of strategically located park 'n' ride facilities in suburban areas to provide improved access to trunk public transport services.
- Provide on-road bus priority on key routes to improve service reliability and network performance.
- Provide high-frequency, cross-city public transport services to connect suburban centres and activity areas.
- Provide improved interchanging between local bus, personalised transport and paratransit services at rail, busway and Brisbane Metro stations.
- Investigate options to provide future public transport connections across the Brisbane River in strategic locations.
- Provide improved cycling and pedestrian links and bike parking to enhance access to public transport stations.

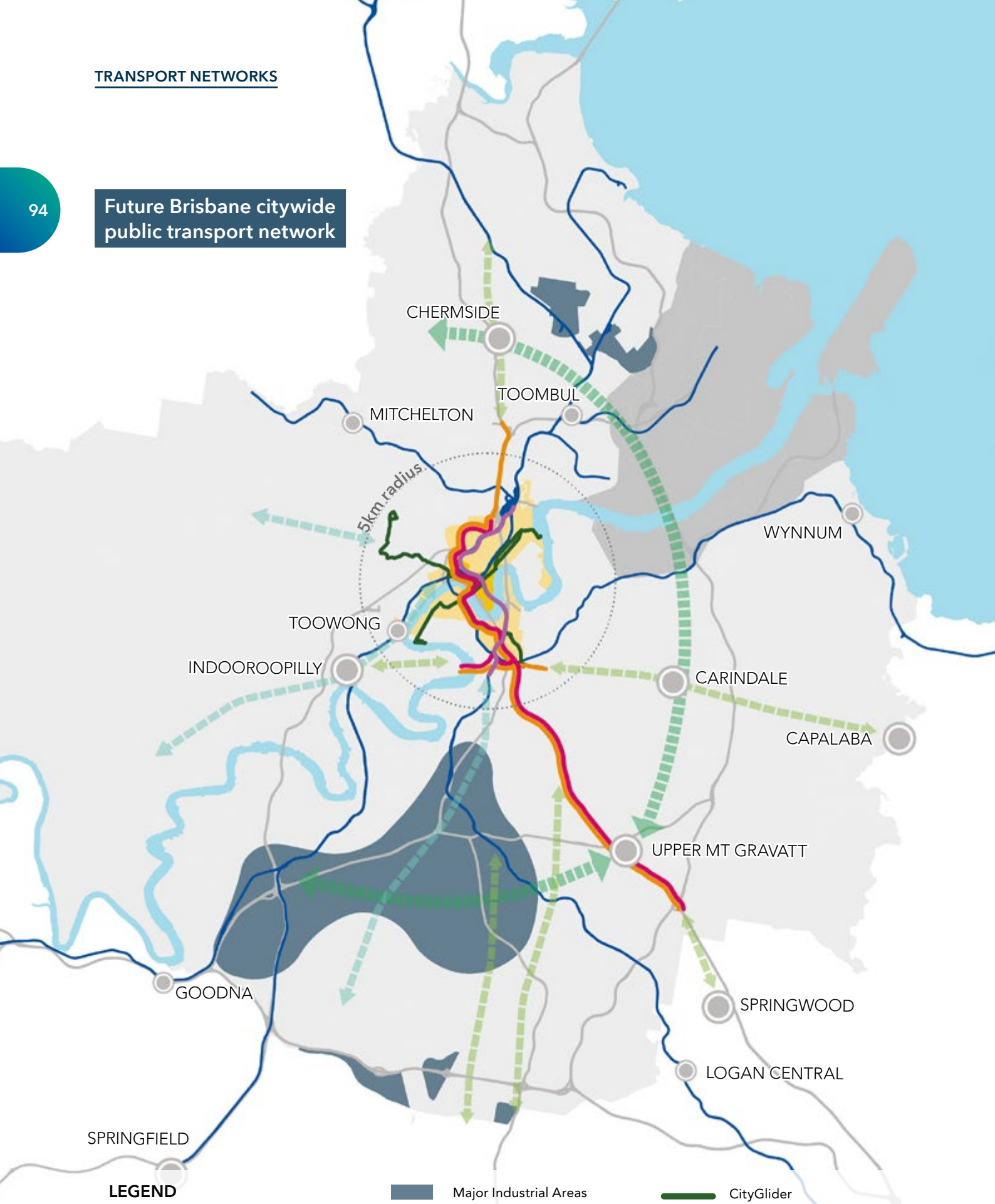
Connecting Brisbane

As Australia's New World City, Brisbane's economic and lifestyle future is dependent on delivery of a high-quality, integrated citywide public transport network.

Connecting Brisbane — an integrated public transport strategy for Brisbane was released on 6 June 2017 as a joint initiative between Council and the Queensland Government, and was prepared in consultation with the Australian Government. The strategy supports evolving the city's public transport network to make the journey experience more effective, efficient and reliable.

Central to the strategy are Brisbane Metro and Cross River Rail as complementary city-shaping projects. Combined, these projects will improve the capacity of Brisbane's public transport system and meet our growing needs through the delivery of modern, high-frequency mass-transit consistent with a New World City.

Future Brisbane citywide public transport network



Road network

- Update the Brisbane road hierarchy plan to provide a functional road network to meet all transport movement needs and to provide clear separation of local and major road corridors.
- Develop functional corridor management plans for major road corridors, incorporating provision for all modes of travel.
- Develop efficient cross-city road links to reduce the need for trips through the CBD and inner city.
- Identify and upgrade road congestion pinch-points in the network.
- Council will assist the Queensland Government to progressively eliminate or improve operation of rail level crossings to improve the safety and efficiency of the road and rail network.
- Provide a designated citywide freight transport network for the efficient movement of goods across the city.
- Develop efficient road network links to adjacent local government areas including regional centres and activity areas.
- Improve the operational capacity and efficiency of the major road network to reduce congestion and facilitate transport movement across the city.

Future Brisbane road network

Brisbane inner city

The Brisbane inner city area covers an approximate five kilometre radius around the CBD and includes a number of major employment and residential precincts accommodating Brisbane's most intense economic activity and its highest density of development.

ShapingSEQ and City Plan identify the CBD and inner city area as the region's primary business and administrative hub. Economic activities will continue to seek to co-locate in the inner city including education, health, professional, scientific and technical services.

The inner city will continue to have a major concentration of residential population and tourist accommodation with a high level of access to world-class services, facilities and cultural and entertainment opportunities.

The *Brisbane City Centre Master Plan 2014* and the City Centre neighbourhood plan aim to guide how the CBD will accommodate forecast growth and demand for office, retail, residential, visitor, transport and public space into the long-term to achieve Brisbane's vision of a growing subtropical, river and New World City.

Trends, challenges and opportunities

Economic growth

Continued economic growth in the CBD and inner city is projected over the next 25 years. Major developments like Queen's Wharf Brisbane and other planned CBD developments are expected to intensify and co-locate more jobs and resident and visitor accommodation within the city area. Continued development of health, education, research and professional service facilities in the inner city are creating specialist precincts and strengthening Brisbane's global reputation as a New World City.

The ability for workers, residents and visitors to move quickly and easily within and between inner city precincts will be essential to the success of Brisbane's economy.

The development of new and expanded inner city train and metro stations as part of Cross River Rail and Brisbane Metro will provide opportunities for renewed economic activities around these facilities.

Mobility within the inner city

The density of development, the integrated mix of land use activities, the convergence of the city's public transport systems and the walking and cycling facilities along the Brisbane River provide a unique opportunity to develop a sustainable transport network within the inner city area that isn't dependent on cars. The Brisbane River while an opportunity has also been a constraint on connectivity due to limited crossings.

Providing an integrated, timetable-free public transport network can assist in moving residents, workers and visitors around the inner city precincts. Motorcycles and mopeds can also provide low-impact alternatives to car-based trips.

Cycle connectivity can be improved in the inner city by addressing missing links in the primary on and off-road bikeway network to provide a safe inner city network. Improving pedestrian connectivity, including at road crossings and intersections, can encourage people to walk more often in the inner city area.

Public transport connections to the inner city

The CBD and inner city area are destinations for a wide range of trips from within Brisbane and SEQ. These include work commutes, business-to-business, education, entertainment and access to higher-level community services.

While the inner city has the greatest density of public transport services in Brisbane and the SEQ region, network design and capacity constraints can limit their effectiveness. This includes busway capacity issues, particularly at the Cultural Centre and Mater Hill stations, and rail capacity issues, particularly at the Merivale Bridge and CBD stations. *Connecting Brisbane* provides an integrated framework for enhancing public transport services in the inner city area.

Inner city arterial road network

The inner city area is the focus of a number of major citywide arterial road corridors. While these corridors are important for moving traffic to and from the inner city area, they also carry a significant volume of through traffic with trip origins and destinations outside of the inner city area.

TransApex includes the CLEM7, Airport Link and Legacy Way tunnels and now provides a high-capacity network that enables through traffic to bypass the inner city area. Combined with the upgrade of the Inner City Bypass and Kingsford Smith Drive, and utilising the Ipswich, Logan and Gateway Motorways, through traffic is able to travel around the city, avoiding the inner city area.

Brisbane River

The Brisbane River is an iconic natural feature of our city that presents a range of recreation, entertainment, tourist and mobility opportunities.

Council's *River's Edge Strategy* intends to improve access and activity on and alongside the inner city reaches of the Brisbane River. The strategy guides the enhancement of the river's recreational and economic development opportunities over the next 10 years.

The associated River Access Network identifies a plan for infrastructure for recreational and tourism-related river activities such as tour boats, water taxis and recreational craft. The network will improve access to the river for residents and visitors as well as promote an active and healthy lifestyle.

Network intent

The focus of the Brisbane inner city transport network is to:

- provide integrated high-quality active and public transport networks that provide a 20-minute connection between destinations and significantly reduces the need for private car travel within the inner city
- provide safe, convenient and attractive movement of pedestrians within the CBD and inner city area, including access to public transport nodes and services
- promote liveable streets with low traffic speeds, shade and with a priority for pedestrian, cyclist and public transport movements
- provide high-frequency, timetable-free mass-transit public transport within the inner city area that services all key activity precincts
- provide an integrated local road network to service the needs of business and industry
- separate through traffic road movements from the inner city road network movements
- develop new transport opportunities along and across the Brisbane River, linked to land-based activity areas.

Transport network development

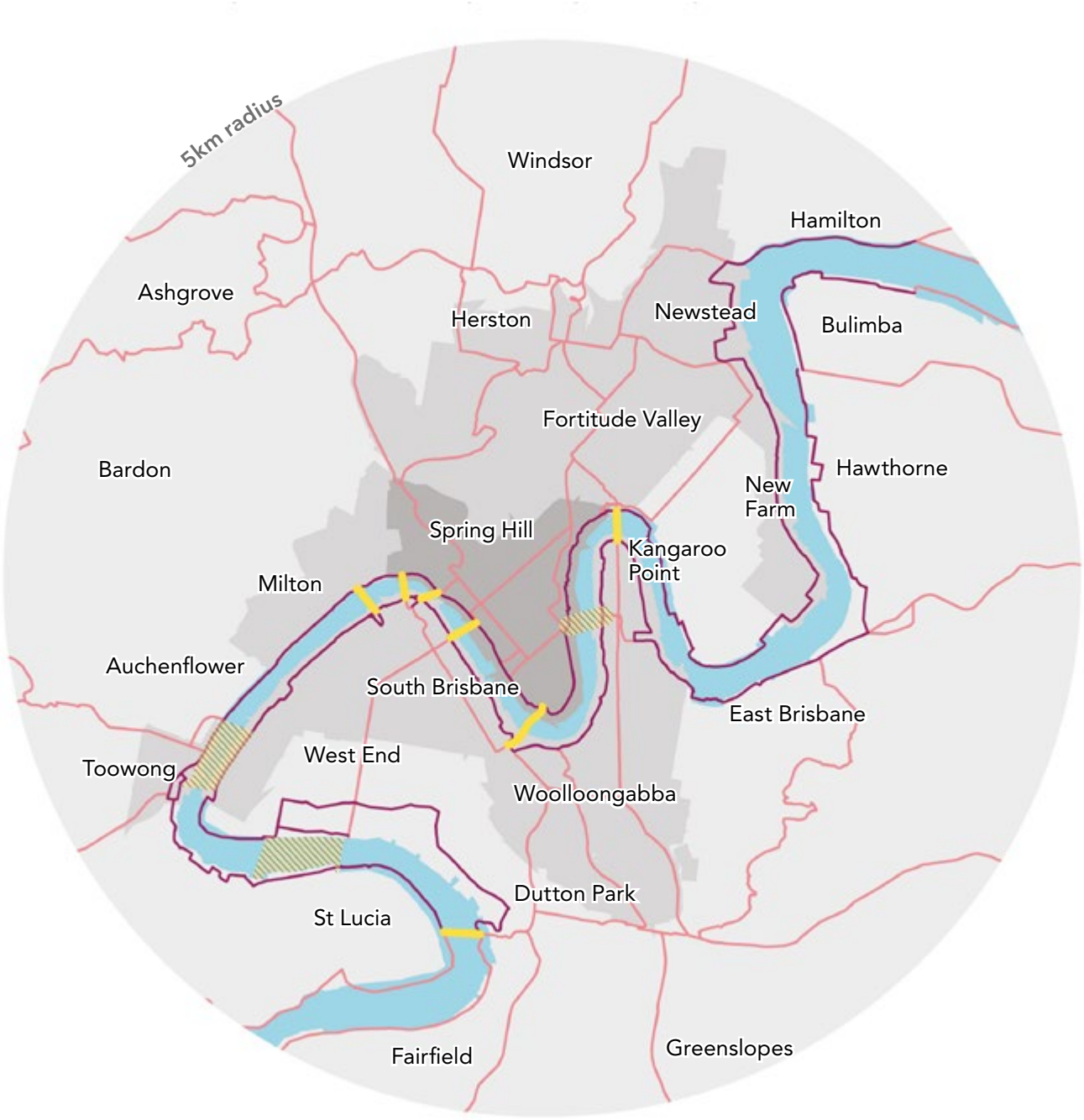
Pedestrian network

- Foster walking as the main mode of travel within high-density environments by providing more walk time at crossings, mid-block crossing points and improving amenity through shade, seating and signage.
- Designate and develop key pedestrian pathways for high-volume movements such as between the CBD, inner city activity precincts, entertainment precincts and transport hubs.
- Provide a continuous and complete Riverwalk network utilising both sides of the Brisbane River with strategically placed river crossings.
- Utilise laneways and other road space and improve through-block movement for pedestrian use.
- Develop strategically located shared zones and other pedestrian priority areas.

Cycling network

- Provide an integrated, continuous and connected inner city bikeway network for community, recreation, tourism and business trips.
- Provide safe on-road routes in the CBD and inner city to complement the off-road network.
- Separate pedestrian and cyclist movements on high-volume routes.
- Provide strategic cross-river connections to link inner city activity precincts and the wider active transport network.
- Connect the bikeway network to key destinations and public transport hubs.
- Provide opportunities for expanding two-wheeled transport modes including electric bikes and personal mobility devices.
- Continue to operate and expand the CityCycle public bike hire scheme.

Future inner city primary cycle network



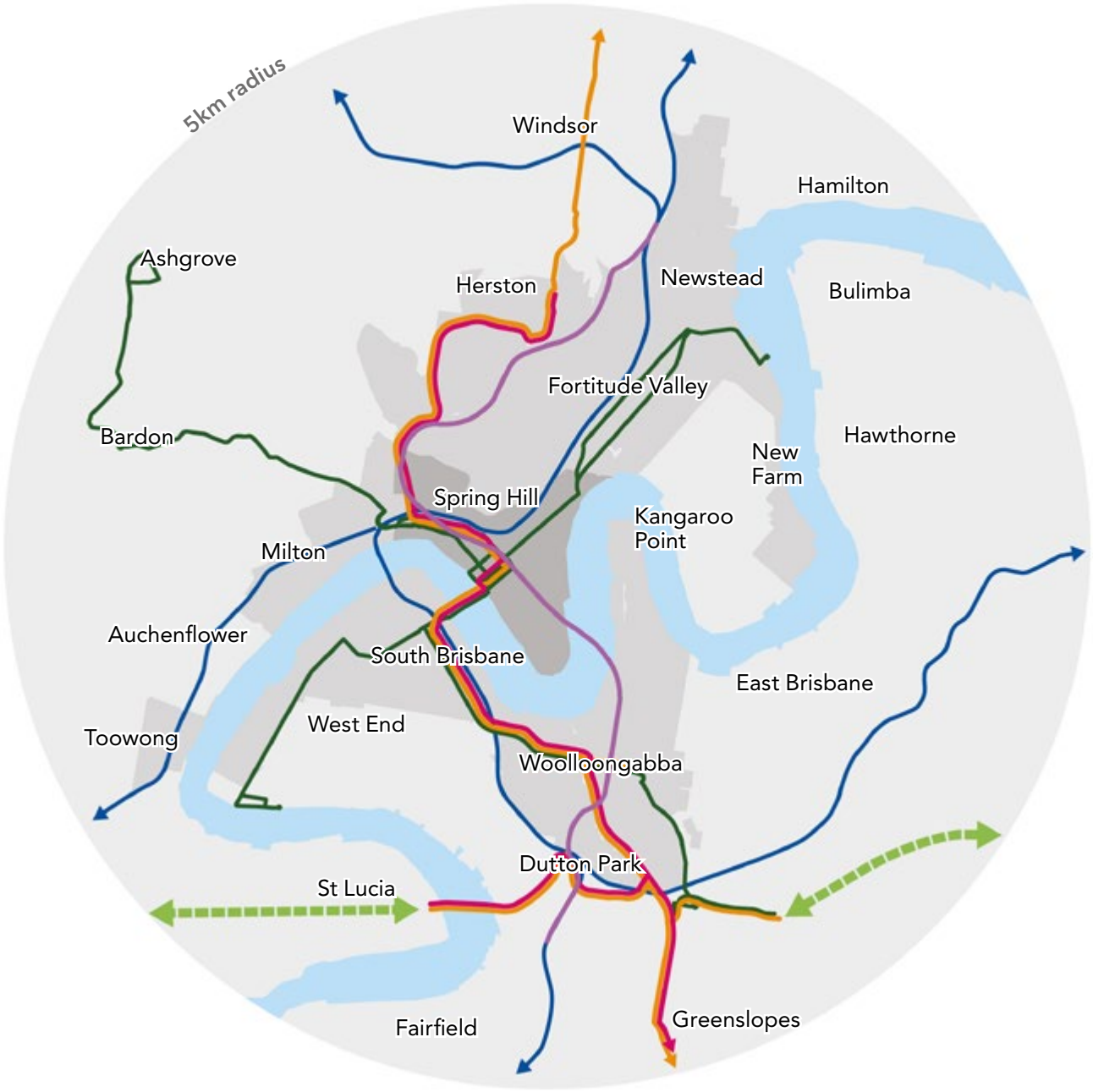
Public transport network

- Provide high-capacity, high-frequency, timetable-free public transport services to and within the CBD and inner city area.
- Deliver Brisbane Metro to increase mass-transit capacity in the inner city and improve network performance.
- Support Cross River Rail to provide improved rail connections to the inner city.
- Undertake planning of the inner city public transport network to maximise the combined benefits of Brisbane Metro and Cross River Rail.
- Provide high-quality public transport interchanges in strategic locations.
- Provide bus priority measures on key road corridors in the inner city to improve service reliability.
- Plan and provide for future public and active transport expansion with new 'green bridges'.
- Investigate options to enhance the CityCat and ferry network services.
- Identify opportunities to provide increased transport options such as water taxis, private boating, tourist and recreational activities on the river through the *River's Edge Strategy*.

Road network

- Manage the inner city local road network to support a vibrant, liveable, economic hub for the city.
- Improve the operational capacity of the road network through travel demand measures and efficiency improvements to minimise requirements for widening and major road upgrades in the inner city.
- Encourage through-traffic movements to use the designated motorway and arterial road networks.
- Manage kerbside allocation to provide for small freight, commercial and service vehicles as well as personalised transport options.
- Identify opportunities to provide increased pedestrian and cycling priority on local roads.
- Provide for enhanced access for motorcycles and mopeds to the CBD and inner city destinations.

Future inner city public transport network



LEGEND

- CBD
- City frame
- Inner 5km
- Busway
- CityGlider
- Brisbane Metro
- Cross River Rail
- Passenger rail
- Future public transport corridor
- Motorway and arterial roads

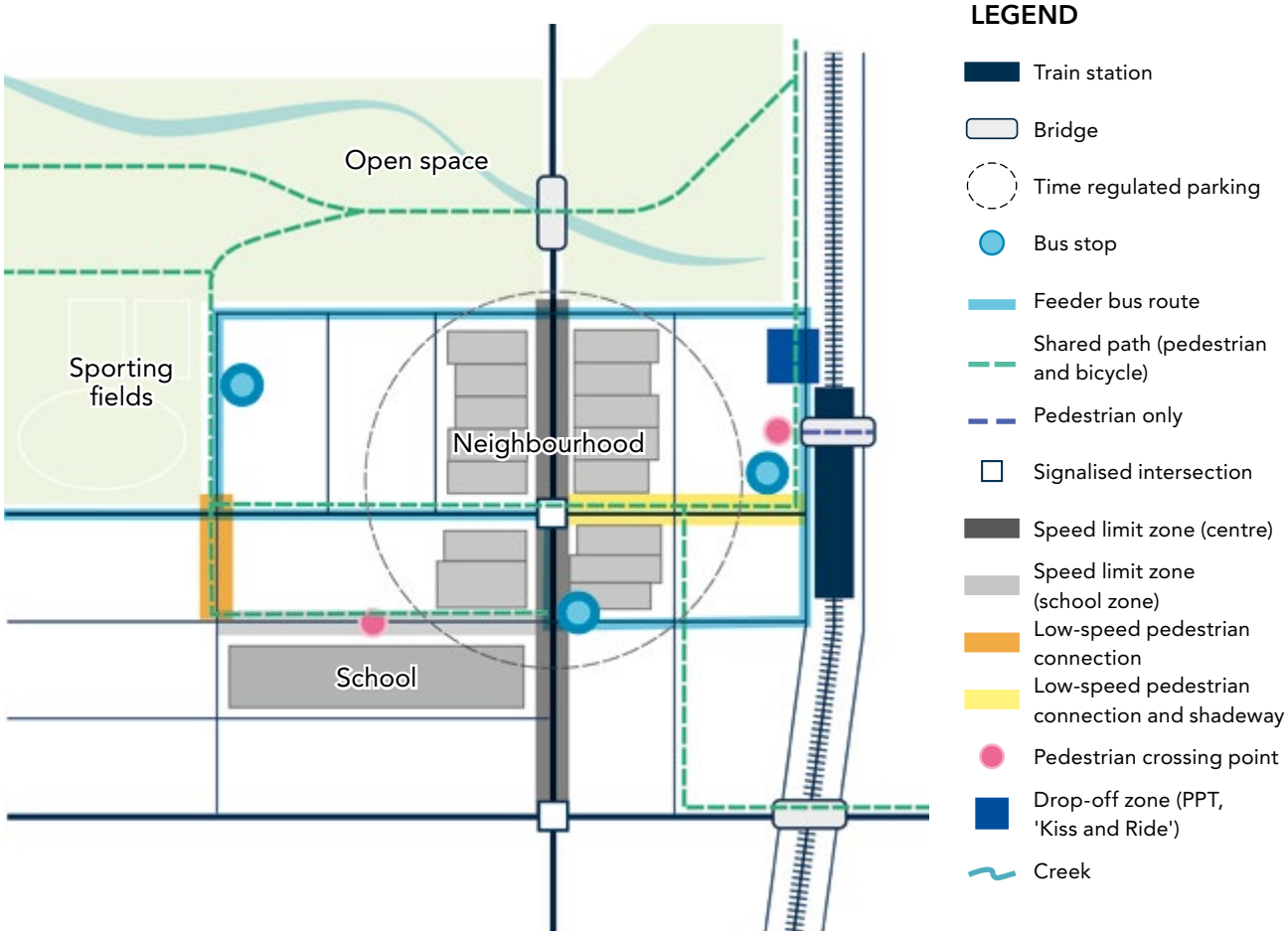
Brisbane suburban

Suburban residential areas cover the majority of the city's urbanised area and vary greatly in terms of topography, land use and transport networks. Approximately 79% of Brisbane's residents live in suburban areas outside the inner city.[44] Housing densities range from low density — particularly in outer and rural residential areas — to medium and high density, particularly along transport corridors and around activity centres.

Many of our suburbs are in transition, either changing in density and supported by new shopping and commercial developments or to a completely different character, such as previously industrial land at Northshore Hamilton. Areas in greatest transition are those around public transport nodes, centres and institutions such as universities.

While most new housing is being provided via infill development, there are a number of new greenfield sites on the city fringe. These areas are being developed at higher densities than the old traditional suburbs with inclusion of service facilities and mixed use development.

Indicative suburban transport elements



44 Australian Bureau of Statistics, *2016 Census*, 2017

Trends, challenges and opportunities

Commuting

Most commuter trips start and return to the suburbs and can include mid-trip mode or service changes. Commuter trips may also be combined with another purpose, such as dropping children to child care or school.

Across Brisbane, public and active transport makes up 26% of suburban trips. However, access to public transport services is not evenly distributed with many outer suburbs having poor access to reliable, high-frequency services. Improving the availability of high-frequency public transport to suburban centres and public transport interchange hubs, coupled with improved feeder services, can assist in providing improved service coverage.

Strategically located park 'n' ride facilities, passenger drop-off areas and personal transport services also provide the last-mile connection for suburban commuters.

Local transport movements

Most suburban areas are dominated by residential housing. Consequently, the transport priority in suburbs changes to provide local access to properties, slow speed traffic environments and enhanced walking and cycling movements to local facilities such as parks, schools and local shops and services.

School trips make up a high proportion of morning and evening peak trips in suburban areas, often leading to high levels of traffic congestion around schools.

Safe, direct and easily understood pedestrian and cycling networks designed for all levels of mobility are necessary to encourage more local trips by active transport. Prioritising the connection of pathways to schools, public transport stops and local centres will meet a high proportion of local trip needs.

Local traffic management

Traffic management in suburban areas requires balancing the need for safe streets for local residents with the need for through-traffic movements and connections to local activity centres such as schools, shopping centres, sports fields and public transport nodes.

The separation of these functions is one way to manage traffic in local areas. Where separation is not feasible, providing mechanisms to manage traffic speeds, improve pedestrian safety and manage parking can assist in improving urban amenity for local residents.

Council's LATM plans provide an integrated approach to managing movement of traffic, including through traffic, to provide improved safety for pedestrians, cyclists and local communities.

Suburban activity centres

High-intensity suburban activity centres, including regional/district centres, hospitals, higher education facilities and local industrial areas can have competing transport demands to the local suburban neighbourhood. High traffic flows, parking demands and freight movement required to service the activity centre can have unintended impacts on the surrounding neighbourhood. Clear articulation of the local road hierarchy and use of LATMs or centre-specific traffic management plans can assist in managing those conflicts.

Local transport barriers

Railway lines, busways and major roads are often barriers to local travel by active transport. While transit stations can be destinations for trips by active transport, the remainder of these networks present physical barriers to cross-suburban walking and cycling movement. Providing safe and convenient crossing points, such as underpasses and bridges, can overcome these barriers and provide significant local community benefits.

Network intent

The focus of the suburban transport network in Brisbane is to:

- protect amenity and provide a safe environment for the local community
- promote high-amenity, people-focused 'liveable' streets with low traffic speeds and priority for pedestrians and cyclists.
- provide the 'first and last mile' transport connection for local residents to their homes
- provide safe and sustainable transport access to local facilities including schools, shopping centres, employment, parks and recreational areas
- provide access to trunk public transport services to major employment and service centres
- provide for suburban transport movements including household services, local freight and public transport including connected access to citywide arterial networks
- manage through-traffic movements to protect local safety and amenity.

Transport network development

Public transport network

- Provide local public transport options that link to high-frequency mass-transit services to major destinations and employment centres.
- Designate and provide major suburban interchanges or service points for access to the public transport network.
- Connect local neighbourhood shopping and commercial precincts to the public transport network.
- Utilise personalised transport options to supplement public transport services to connect to the wider public transport network.
- Plan strategically located park 'n' ride facilities in outer suburban areas linked to the trunk public transport network.
- Planning and development of new suburban areas to incorporate up-front provision or access to public transport services.

Pedestrian network

- Provide safe, shady and comfortable walking paths to connect residents to local services, shopping, schools, employment and public transport.
- Manage and slow down vehicle movements in local streets to improve safety and amenity, and encourage neighbourhood activity.
- Provide safe pedestrian crossing points to enable pedestrians to cross road, rail and bikeway corridors.
- Foster walking as the main mode of travel within medium and high-density environments by providing more time for walking at crossings, mid-block crossing points and improving amenity through shade, seating and signage.

Road network

- Provide safe, liveable, shady and connected local streets with low traffic speeds and with priority for pedestrians and cyclists.
- Adopt suburban road hierarchy plans that manage separation of local and through-traffic movement.
- Maintain the integrity of higher-order roads including connection to local road networks, centres and major suburban destinations to aid efficient movement of through-traffic.
- Utilise LATM plans to manage local transport networks in appropriate precincts.

Cycling network

- Provide safe, shady, legible and comfortable cycling routes to connect residents to services, shopping, schools, employment and public transport.
- Provide an integrated and connected local bikeway network linked to the primary and secondary citywide network.
- Manage local streets to facilitate safe on-road cycling.
- Provide bike storage facilities at public transport stations and local activity centres.

Making it happen

Making it happen

The plan provides the framework to ensure our transport network will meet the city's transport needs over the next 25 years, while being flexible to respond to the opportunities and challenges ahead. The plan will direct and coordinate future activities of government and stakeholders, and will give industry and the community confidence that we are heading towards an agreed transport future.

The plan does not prescribe specific projects, programs or actions. Instead, it provides direction for future investigation and analysis of a range of solutions and initiatives. This will allow flexibility to respond to opportunities and develop innovative solutions to achieve outcomes under the themes of enhanced liveability, delivering economic benefits, harnessing innovation and evolving the network as they arise.

The plan is intended to be a living document to be reviewed following regular monitoring and evaluation of implementation activities. The plan requires a re-think on how transport outcomes are delivered. Implementation must incorporate options that are inclusive of all participants and make best use of existing and emerging technology and modern delivery mechanisms.

Artist impression of the Cultural Centre precinct as part of the Brisbane Metro project — indicative only.

Responsibilities for transport

All levels of government and the private sector contribute to the regulation, planning, funding, delivery, operation and maintenance of Brisbane's and SEQ transport networks.

The Australian Government is generally responsible for legislation, standards, taxes, overarching policy, the national road and rail network and national key freight routes. In Brisbane, this includes funding of the National Highway network, Black Spot and Roads to Recovery programs and management of freight movements through the National Heavy Vehicle Regulator (NHVR).

The Queensland Government has a major role in the planning, development, funding, regulation and operation of a wide range of transport networks and services. The Queensland Government's role in transport is predominantly administered through TMR, but it is also supported by other agencies such as the Queensland Police Service and Department of State Development, Manufacturing, Infrastructure and Planning.

Transport legislation and regulation for vehicles, roads, public transport and personal transport are generally developed and administered by the Queensland Government. TMR is also responsible for the planning, development and operation of the state road network and regional cycling infrastructure.

TransLink, a division of TMR, is responsible for managing and operating public transport services in Brisbane and SEQ.

Council owns, operates and manages the largest local government transport network and services in Australia. Council is responsible for the operation and maintenance of more than 5700km of roads in Brisbane. This includes management of an extensive citywide signalised intersection network.

Council provides pedestrian and cycling infrastructure and the CityCycle scheme as well as behaviour change programs to encourage sustainable transport choices.

Council's extensive public transport network includes the majority of Brisbane's bus services and the CityCat and ferry services on the Brisbane River.

The Brisbane Airport, Archerfield Airport, Airtrain and the Port are major city transport facilities managed by non-government authorities in accordance with national legislation. These authorities are also responsible for land use, roads and other transport infrastructure within their jurisdictions.

Transurban manages and operates the major tolled motorways in SEQ.

The private sector is also a major contributor of transport services including personalised transport services such as taxis, car and ride sharing schemes, and community transport.

Interrelationships between transport networks highlight the need for all levels of government and other organisations to work collaboratively to ensure the best outcomes for Brisbane and to provide one network to the community.

Implementation

The success of the plan will depend on how well it is implemented, monitored, reviewed and maintained.

The Transport Directions and Transport Network sections of the plan set the intended principles, goals, outcomes and directions for meeting Brisbane's future transport demands in an efficient, sustainable and integrated manner.

The outcomes and transport directions need to be accepted and adopted by stakeholders as partners in the plan's implementation.

Implementation is the process that turns the strategic directions and network strategies of the plan into real actions and measurable results. The plan will be used to inform future transport planning and investment priorities for the city.

The strategic directions will lead to the development of more detailed policies, strategies and plans leading in turn to specific programs and projects across a wide range of government and private organisations and business. The outputs and results of these activities are intended to contribute to the plan outcomes.

Many of the implementation activities will relate and contribute to achieving a number of outcomes of the plan. Activities will be undertaken over time, not all at once. Many rely on the completion of other activities. Opportunities like funding or partnerships may bring forward some activities.

Council's implementation plan

As part of its commitment to implementing the plan, Council has prepared a stand-alone implementation plan.

The *Transport Plan for Brisbane — Implementation Plan 2018* outlines the actions that Council is currently and will undertake to support the achievement of the liveability, economic benefits, innovation and network outcomes sought by the plan.

The implementation plan will incorporate :

- planning, delivery and operation to achieve the plan outcomes
- a set of key initiatives to change the way we deliver and use transport to move towards the sustainable outcomes in the plan
- current activities requiring minor or significant realignment to meet the expectations of the plan
- new initiatives to achieve the plan's outcomes, transport directions and network intents.

The implementation plan is intended to be monitored and updated on a regular basis to accommodate future changes and opportunities and to ensure the successful implementation of the plan's outcomes and transport directions.

Council's role

As custodian of the plan, Council will lead by example, developing and implementing actions. Council will also work with other levels of government, the private sector and the community in a range of roles to help achieve the desired outcomes of the plan. These roles are outlined below.

Council has many roles to play:

Provider	Partner
Council will continue to plan and provide infrastructure and programs, and manage and maintain the transport networks in a sustainable way that maximises productivity of existing resources.	Council will continue to collaborate with other stakeholders to plan, fund, deliver and manage aspects of the network consistent with supporting innovation and the evolution of the transport networks to achieve Brisbane's liveability and economic performance outcomes.
Regulator	**Facilitator**
Council will continue to regulate to ensure safe, fair and appropriate access to Council's transport assets and services. Council will respond and adapt to changes in legislation and statutory responsibilities.	Council will continue to encourage government and industry proposals for smart and innovative solutions consistent with the intent of the plan. Council will demonstrate a preparedness to lead and seek positive change, and be at the forefront of fostering new ideas and different approaches including cooperative and productive relationships.
Funder	**Advocate**
Council will continue to fund the provision of infrastructure, services and programs in a balanced, transparent and measured way. In addition to maximising benefits from its investment in current resources, Council will pursue alternative financing opportunities.	Council will continue to advocate for more effective, efficient and affordable transport options for Brisbane. Council will seek to influence government plans, investment and regulation, and leverage off and promote our unique qualities to deliver the best options for Brisbane's transport future.

It will be Council's responsibility to:

- promote and coordinate activities that achieve the outcomes of the plan
- encourage involvement of government, industry, private sector and the community in providing for Brisbane's future transport needs
- review and align Council policies, strategies, plans and programs, to contribute to achieving the outcomes of the plan
- develop innovative Council-led initiatives aligned with the plan
- monitor and track progress towards achieving the outcomes of the plan.

Partnerships and engagement

Evolving Brisbane's transport network to meet the needs of our growing city and region is reliant on strong partnerships and engagement at all levels, including other SEQ local governments, the Queensland Government, private industry and the community.

Strategic partnerships

Council will continue to explore and develop strategic partnerships with business, non-government agencies, community groups and individuals to develop and manage Brisbane's transport network. This includes collaboration with universities and research institutions to improve our knowledge and gain access to research, advancements and developments in behavioural sciences, engineering and urban and transport planning and design. Similarly, Council will continue to collaborate and strengthen partnerships with industry sectors and other partners to develop smart, innovative and creative solutions.

Government partnerships

Federal, state and local governments contribute significantly to the planning, funding, development and operation of Brisbane's transport network. Building sustainable long-term cooperative partnerships between all levels of government will be critical to achieving a sustainable and world-class transport network.

Council will work to strengthen the existing relationship with the Queensland Government and to develop cooperative and integrated transport planning and management actions with adjacent SEQ local governments.

Community engagement

Education, awareness and engagement will help Council to involve stakeholders and the wider community in developing initiatives to support the plan. It is essential that engagement activities offer the opportunity for all community members to be involved. Everyone has a part to play in the evolution of Brisbane's transport network. Education and awareness of the true cost of car dependence, travel behaviour change and improved access to active and public transport options will help Council to deliver a sustainable transport network for Brisbane.

Private sector innovation

The private sector is becoming increasingly responsible for the delivery of transport innovations and alternative solutions, particularly in the area of new technologies. Transport maps, route planning and status of freight deliveries are now available via internet sites and apps developed by the private sector. Innovative transport options such as drones and car sharing are the result of private industry initiatives. Expanding opportunities to embrace and work with private industry will provide a competitive edge in managing future transport demands for the city.

Working with the freight and logistics industry

Moving freight, goods and services contributes significantly to traffic movements on our road network. Demand is driven by the needs of business and industry within and external to Brisbane as well as customer expectations of timely delivery of goods and services.

A holistic approach to managing the delivery of goods and services, as demonstrated through research and industry experience at a city and company level, can reduce the impacts of traffic congestion and provide financial benefits to industry. This includes the consideration of the location and management of freight distribution centres, timing deliveries to occur outside of peak traffic periods and use of low-noise vehicles in sensitive areas.

Urban freight tasks are also changing with more direct door-to-door deliveries and innovations such as collection hubs and drones.

Fostering an environment where transport authorities and industry can work in partnership and collaboration with research organisations will deliver a more robust and productive transport network.

Measuring success

Monitoring and analysing the impact of the plan in achieving desirable improvements to Brisbane's environment, lifestyle and economy will be critical in achieving a sustainable city and prosperous community.

A comprehensive monitoring program will evaluate citywide outcomes including:

- changes in Brisbane's environment, lifestyle values and economy — particularly those values impacted by transport network and community travel choices
- the desirable outcomes expressed under the plan's themes and sub-themes
- the network intent outcomes.

Appropriate performance indicators and qualitative and quantitative monitoring processes will be needed to evaluate changes in the values over time.

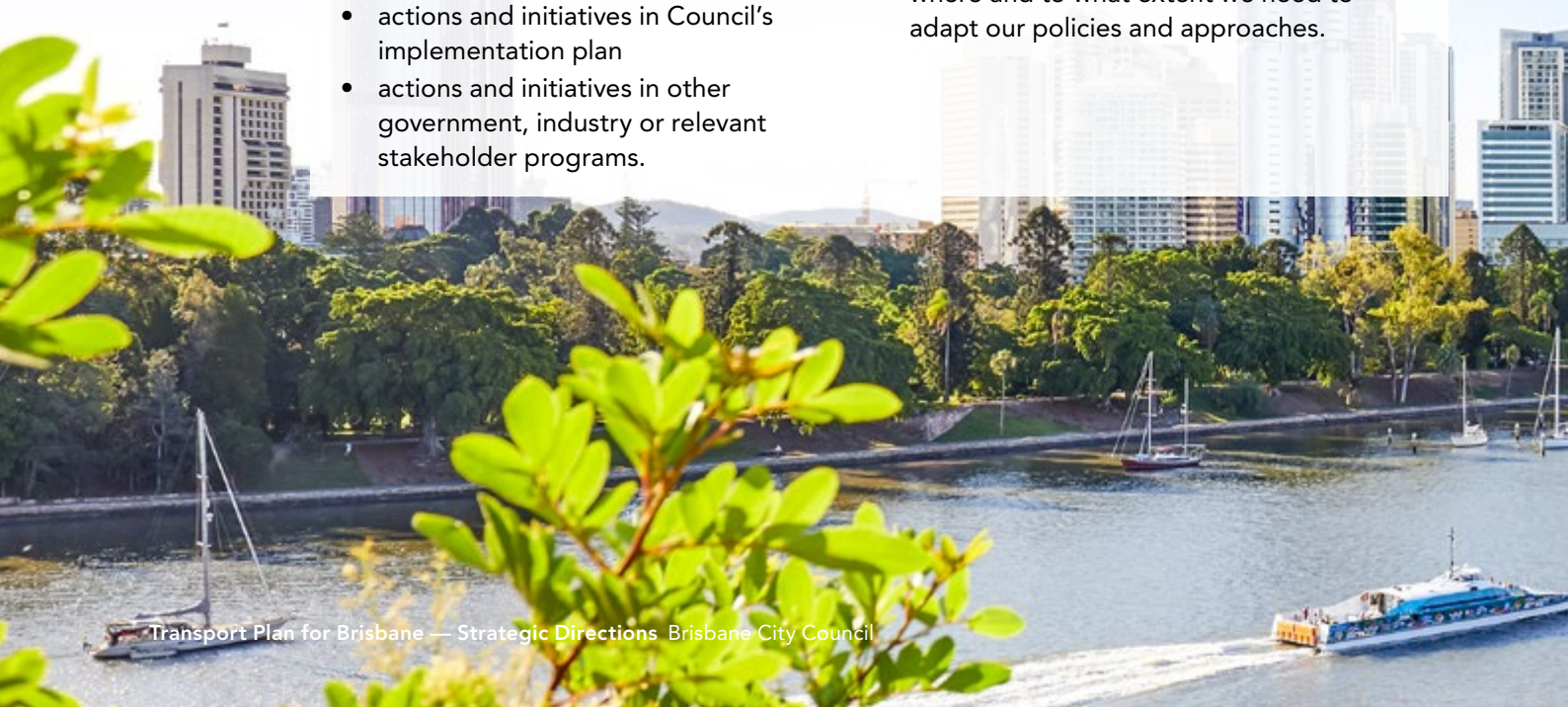
The monitoring program can also report on the implementation and impact of specific activities, projects and programs related to:

- individual transport directions
- transport network development tasks
- actions and initiatives in Council's implementation plan
- actions and initiatives in other government, industry or relevant stakeholder programs.

Council will establish robust arrangements to monitor the progress of activities in the implementation plan.

The ability to monitor the success of the plan will rely heavily on the contribution and collaboration all stakeholders to collect, analyse, share and maintain reliable data. Council will continue to forge partnerships to maximise the benefits from data in monitoring success and planning new initiatives. Established mechanisms such as the national census, traffic counts, public transport patronage and customer satisfaction surveys will also be used to monitor performance.

The monitoring and review phases will help determine how the efforts of all stakeholders are tracking, where the gaps are and what we need to do differently. This will give us the information we need to learn from our experiences and where and to what extent we need to adapt our policies and approaches.



Key performance indicators

We need to know if the plan is having the desired effect and contributing to Brisbane's liveability and economic performance. Developing key performance indicators that can be easily monitored against outcomes of the plan will help Council determine what impact the plan is making.

Measuring the success of the plan will be challenging. Identifying, capturing, analysing and managing data that aligns with what we are trying to measure is time and resource intensive. Also, the outcomes Council is seeking to achieve will not be apparent for some time and are the result of the cumulative effect of the sum of the many activities and external influences.

Over time Council will improve the way we collect, analyse and manage data and information, and this will give us a better understanding of how to measure the plan's performance and the most effective measuring methods and mechanisms.

The implementation plan establishes the framework for the development of key performance indicators relevant to the long-term monitoring of Brisbane's transport outcomes. A concise, meaningful and measurable set of performance indicators will be developed in consultation with other levels of government, transport authorities, industry and community stakeholders.

Transport Plan for Brisbane —

Strategic Directions

brisbane
australia's new world city

BRISBANE CITY

Dedicated to a better Brisbane

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Paper from responsible sources

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