

Connecting Brisbane



Dedicated to a better Brisbane



**Queensland
Government**

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**The Honourable Jackie Trad, MP,
Deputy Premier, Minister for Transport and
Minister for Infrastructure and Planning**



Graham Quirk, Lord Mayor of Brisbane

Connecting Brisbane

A joint statement from Queensland Deputy Premier Jackie Trad and Brisbane Lord Mayor Graham Quirk

A transformation of the public transport system in South East Queensland (SEQ) is vital to unblock the bottlenecks that threaten our economic growth, and to enable people to get to work and play in safety and comfort while boosting the region's overall liveability.

Within these pages is our shared integrated new vision for public transport in SEQ, and for Brisbane as a New World City that is smart, prosperous, well-designed, accessible and connected.

As we face the future, the Queensland Government, in collaboration with local governments, is transforming our transportation and services network and to prepare for future growth.

In addressing two principal reform tasks, Connecting Brisbane firstly outlines how to provide infrastructure, particularly at the core of our transportation system, to unlock existing capacity and overcome current constraints and avoid congestion.

Secondly, and building on infrastructure investment, Connecting Brisbane sets out how services will be improved through a network providing more frequent, integrated services on a 'turn up and go' high-frequency trunk network supported by feeder services.

These reforms will pave the way for future extension and improvement of the network in Brisbane and throughout the SEQ region, particularly in linking the identified growth corridors and areas.

And as far as the future goes, the strategy outlined in Connecting Brisbane provides flexibility for the use of emerging technologies including connected autonomous vehicles, demand responsive transport and mobility-as-a-service.

It also ensures strategic infrastructure, land use and transport planning at all three levels of government will be flexible and future ready.

Connecting Brisbane's plan is consistent with the Australian Government's Smart Cities Plan to support productive, accessible, liveable cities that attract talent, encourage innovation, and create jobs and growth.

Connecting Brisbane underpins these vital goals.

Brisbane is long overdue for a transformation of its public transport network – including the creation of the vital and complementary Cross River Rail and the Brisbane Metro – to prevent critical bottlenecks to our economy.

The proposed modern, high-frequency mass transit system will prevent the city from becoming choked with congestion as our economy and population grows, and will connect people to where they want to go at the times they want to travel. We will continue to work together on achieving our vision for Brisbane and SEQ.

Summary

As we face the future, the Queensland Government, in collaboration with local governments, is addressing two main reform tasks: to provide infrastructure, particularly at the core of our transportation system, to overcome current constraints and allow future extension and improvement of the network in the SEQ region; and to transform and redesign the way we provide services on the public transport network to address future growth and help tackle congestion.

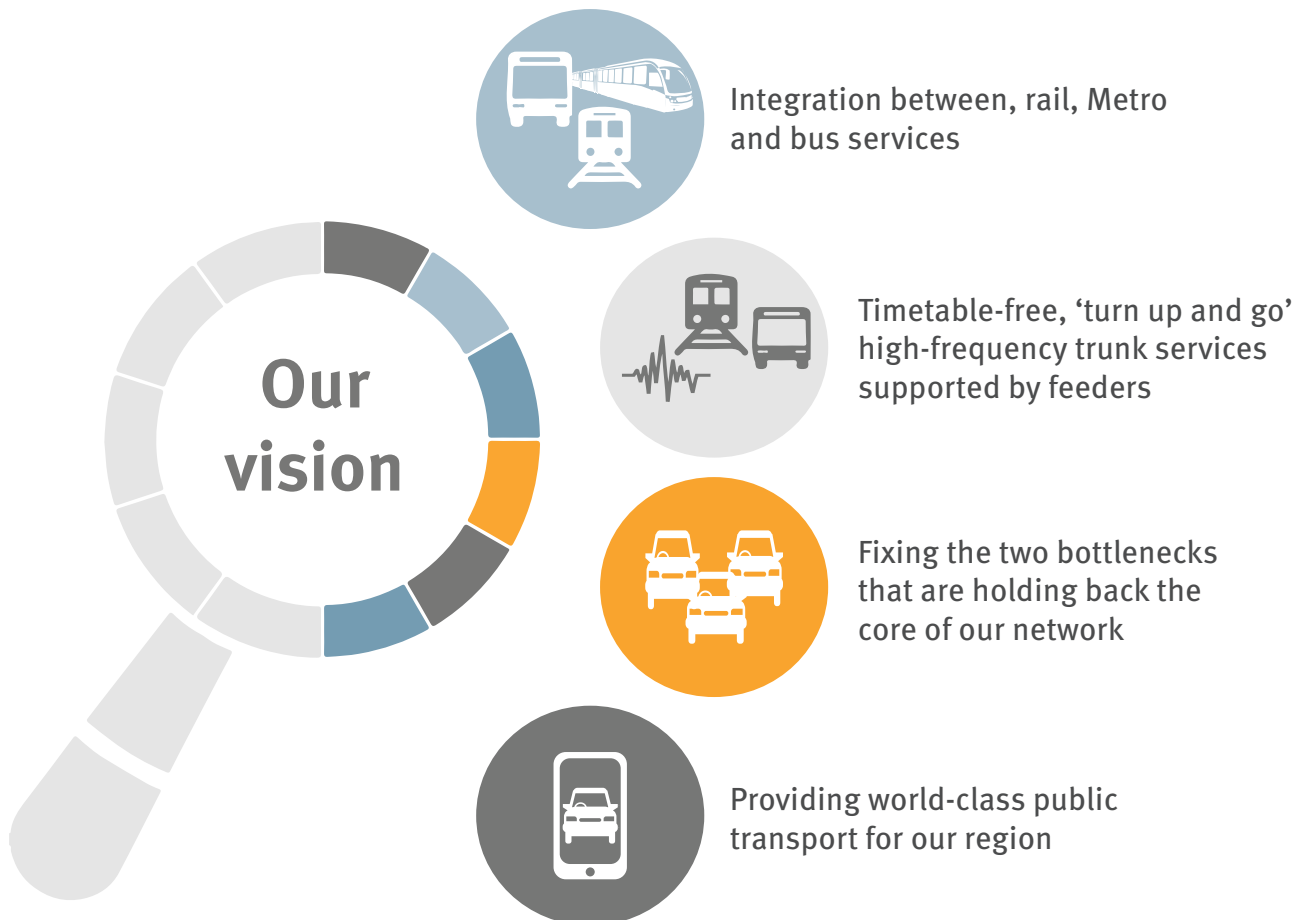
The holistic approach outlined in this document focuses on these two reform tasks and sets up the public transport system of Brisbane and SEQ for the state capital's future as Australia's New World City.

The system will connect people to where they want to go at the times they want to travel. It will transform from a radial network, with buses and trains making journeys into the city centre, to an integrated 'turn up and go' high-frequency trunk network with feeders, improving service and connections and reducing duplication. The system will be flexible and future ready.

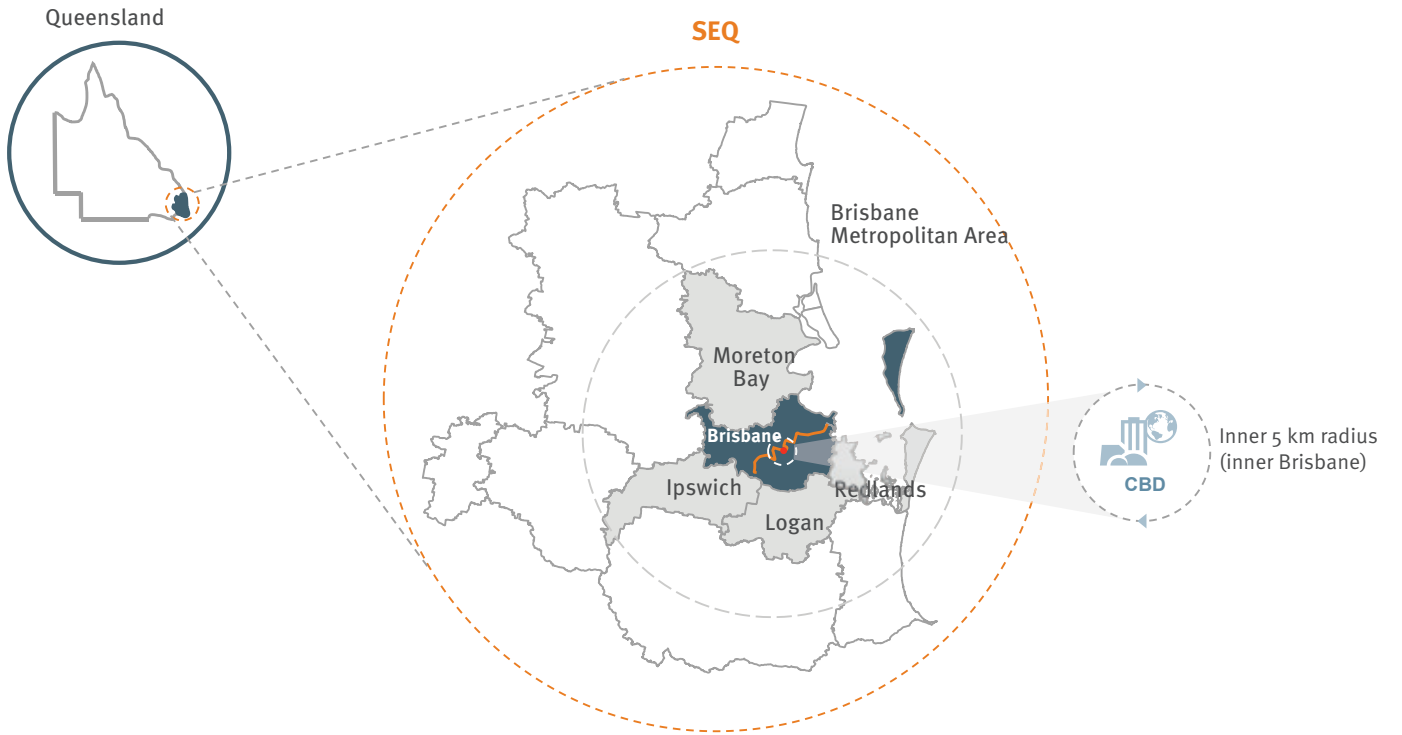
Here, we present the shared vision and integrated strategy of the Queensland Government and Brisbane City Council for the future of Brisbane's public transport system, with reference to SEQ and neighbouring local government areas

(LGAs). It brings together strategic infrastructure, land use and transport planning at all three levels of government and focuses on the public transport component of passenger transport, including heavy rail, bus, metro and ferry. It will outline how the Cross River Rail (CRR) and Brisbane Metro projects will improve the customer experience.

These projects are the next step change in proactively transforming the Brisbane public transport network and services for the future by unlocking the capacity of the existing system. Further, addressing the capacity and constraint issues in the core will facilitate the extension and improvement of the public transport system throughout SEQ.



Focus on Brisbane within SEQ



Vision

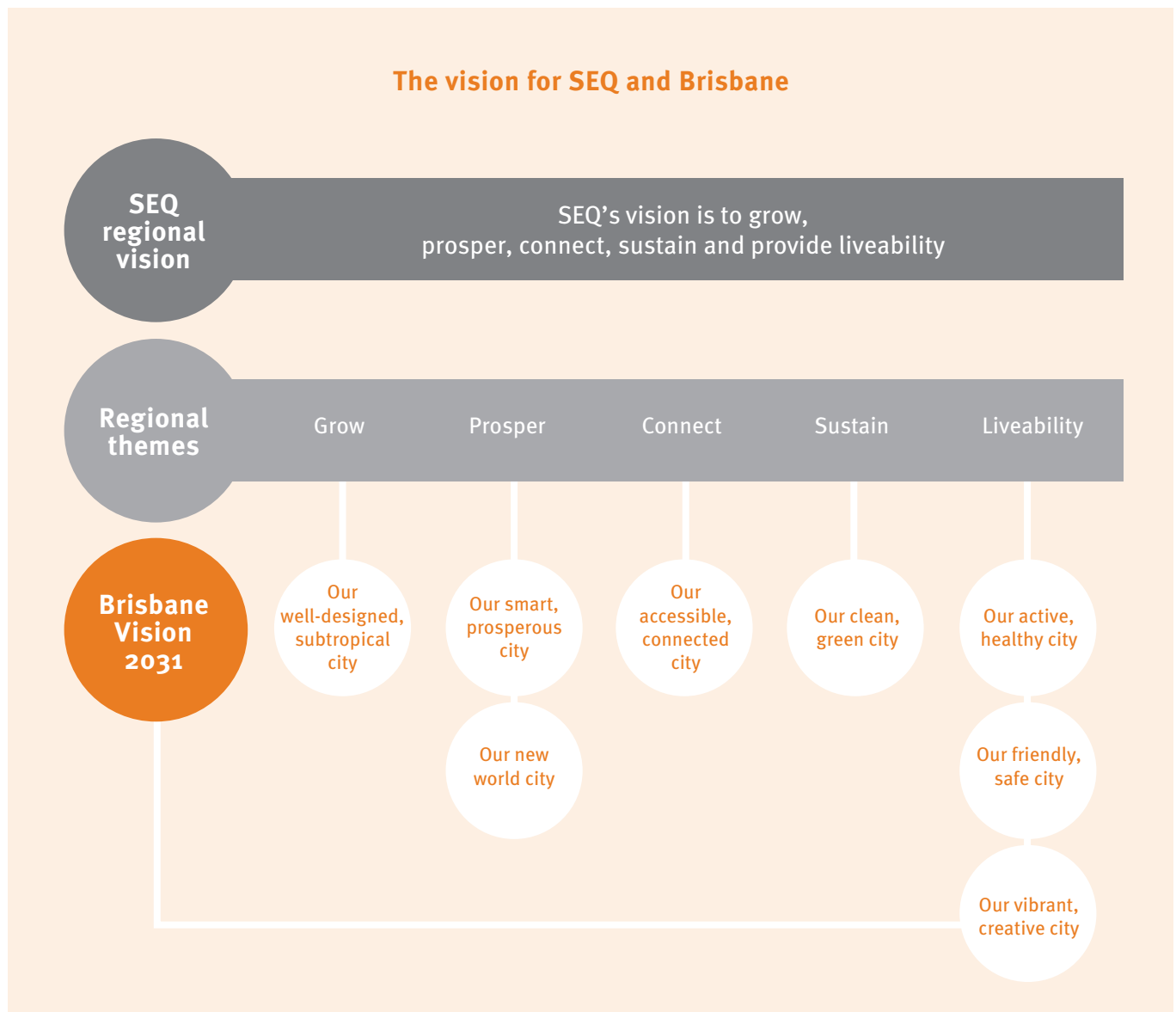
The shared vision for the future of public transport in Brisbane is to create a customer-friendly, efficient, integrated and reliable system that promotes connectivity and provides a foundation for future growth and innovation.

Brisbane’s emergence as a New World City has been coupled with unprecedented levels of development and economic activity. The 5 kilometre radius around the centre of Brisbane (inner Brisbane) will expand from a single central business district (CBD) to a connected network of business districts, hospitals, universities and other education services and residential precincts. Regional centres and Brisbane’s suburbs

are increasingly a location of choice to do business and are desirable locations to live as a lifestyle choice. Regional knowledge-based business precincts with high-tech industries, such as the Boggo Road ecosciences precinct will continue to flourish.

Effective and efficient transport, particularly public transport, will enable Brisbane to achieve its vision of being a New World City that is smart, prosperous, well-designed, accessible and connected.

Transformation of public transport in Brisbane will contribute towards SEQ evolving from a region of cities to a planned and integrated city region.



Brisbane's shared public transport vision

Public transport vision

Create a customer-friendly, efficient, integrated and reliable public transport system which promotes connectivity and future growth

Themes



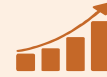
Attractive customer experience



Efficient, reliable and modern network and services



Connecting people, businesses and places



Foundation for future growth and innovation

Objectives

Provide safe and reliable mobility that caters for a variety of demographics

Enhance and extend the customer experience so that it is competitive with other travel modes

Engage with customers to be responsive and relevant to their needs

Support active transport

Leverage and build on existing assets and services

Adopt new technology to help improve the efficiency and reliability of the network

Enable high-frequency services across the network, limiting duplication

Deliver consistent and reliable services

Connect population growth in neighbouring regions, and the outer suburbs of Brisbane, to employment in inner Brisbane

Connect and foster business productivity through improving connectivity

Create a sense of place including social, entertainment, health, education and commercial dimensions

Support land use intent

Build a solid foundation that enables SEQ to develop an integrated, multi-modal transport network

Ensure public transport supports economic development and growth

Ensure the system is open and flexible to cater for new, disruptive technologies and business models

Outcomes: What does success look like?

Public transport that connects people to where they want to go at the times they want to travel

High-frequency trunk network that provides 'turn up and go' services supported by appropriate feeders that respond to community needs

Public transport provides a high level of access to major facilities, services and hubs in Brisbane

A cohesive, future-flexible public transport network that can continue to grow and evolve

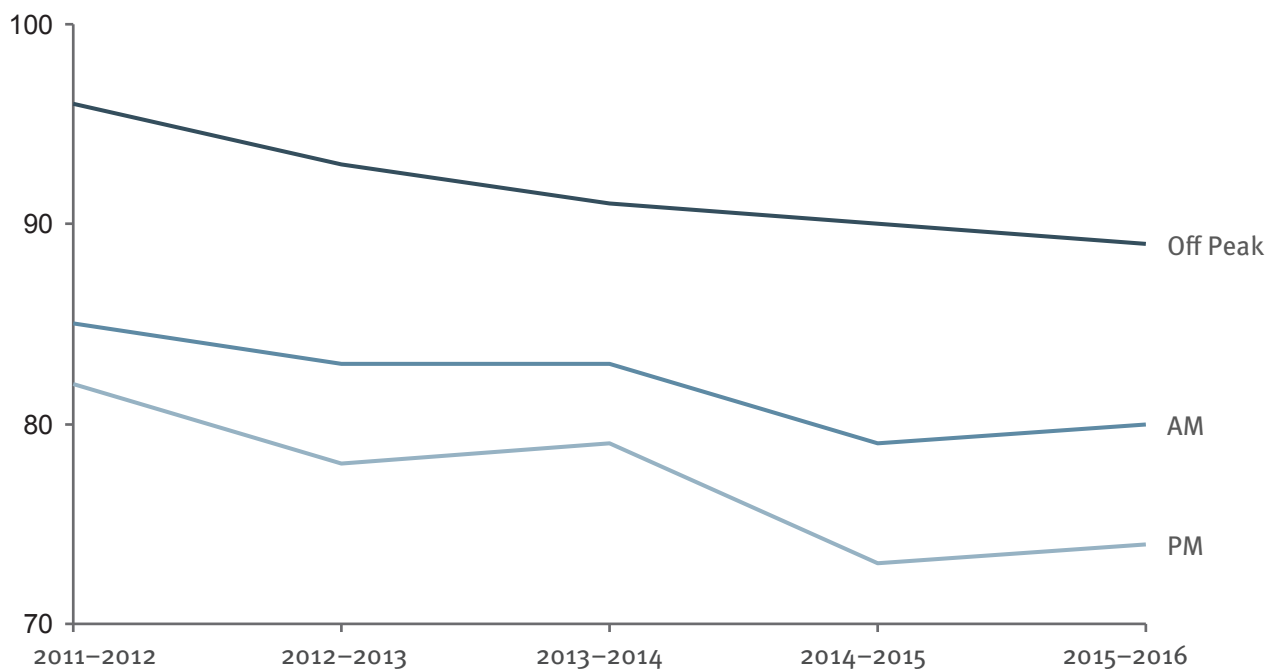
Key opportunities and challenges

Without action, the transport system will face increasing pressure from population and employment growth, coupled with dispersed residential population and changing demographics.

Roads, particularly those near to the centre of Brisbane, are already congested and close to capacity and incidents can cause significant delays. Increased congestion and reduced reliability of the road network will lengthen journey times in peak periods, affecting buses and private vehicles that use public roads.

Proportion of the state-controlled road network with good reliability* (2011–2016)

% of the network that is reliable

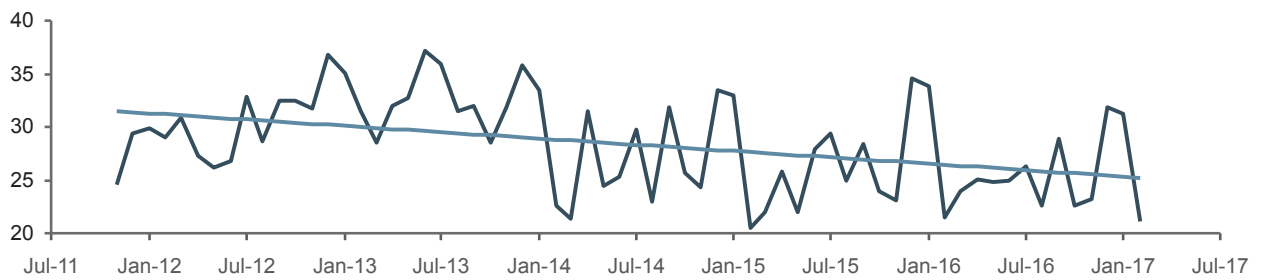


* High is good

Source: DTMR Annual Report 2015-16

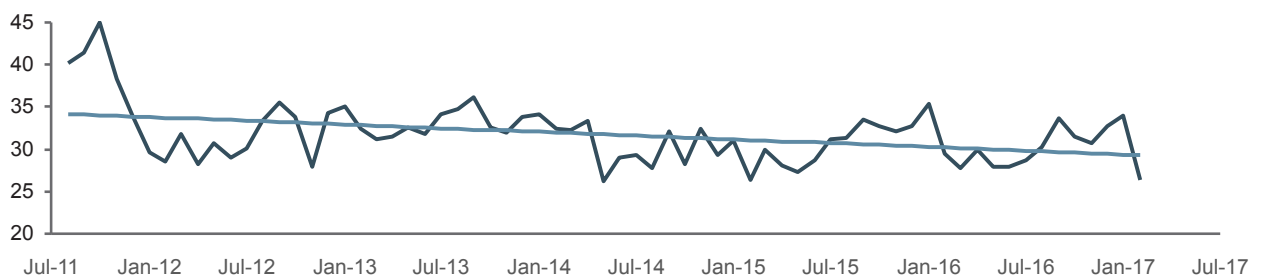
Average speed on city-controlled Wynnum Road inbound peak AM (2011–2016)

Kilometres per hour



Average speed on city-controlled Ipswich Road inbound peak AM (2011–2016)

Kilometres per hour

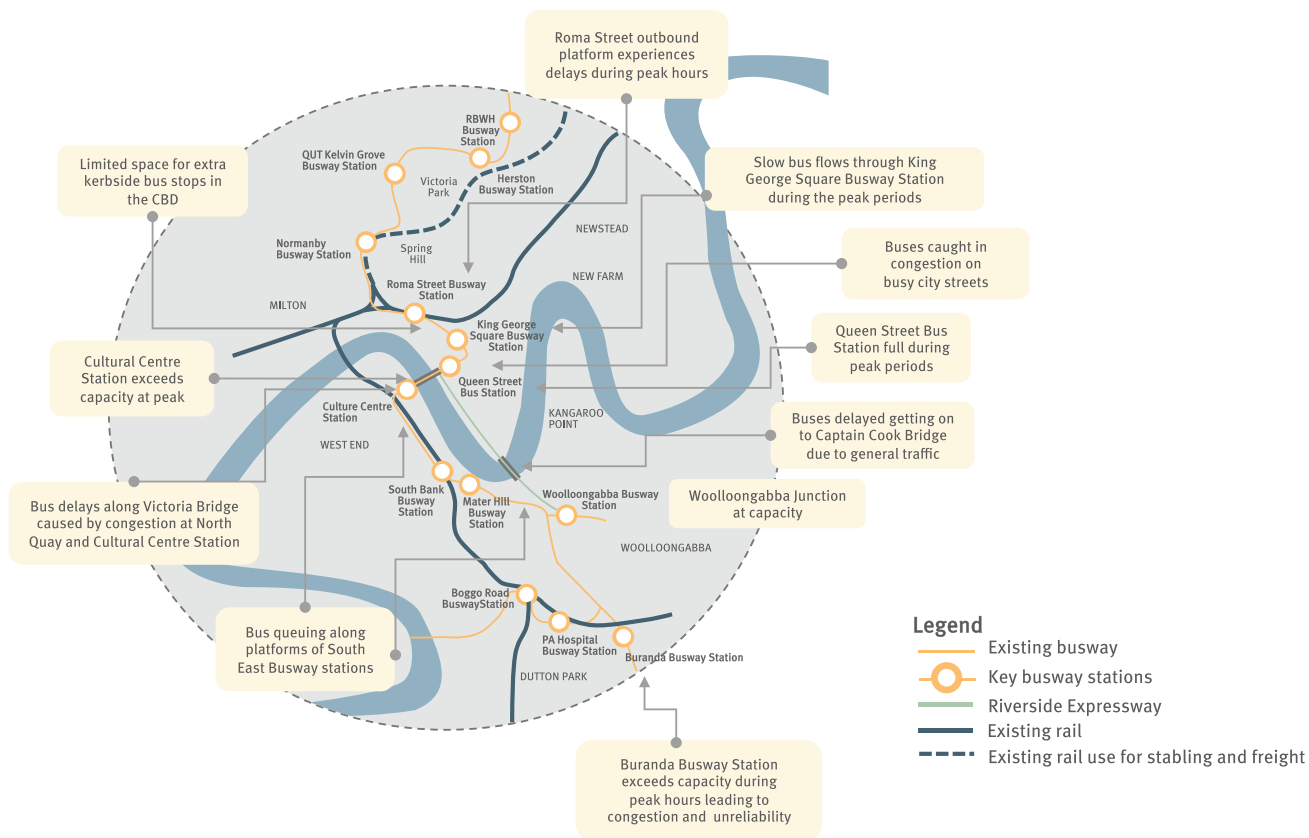


Source: Brisbane City Council



Over-reliance on suburban single-seat bus journeys will continue to exacerbate capacity constraints and congestion in the city core, slowing the entire network. While the segregated busways have been successful, they are facing capacity constraints, requiring a rethink in terms of how this valuable infrastructure can be better used. Better integration between active and public transport can not only reduce congestion but improve liveability.

Current bus system capacity constraints in inner Brisbane City

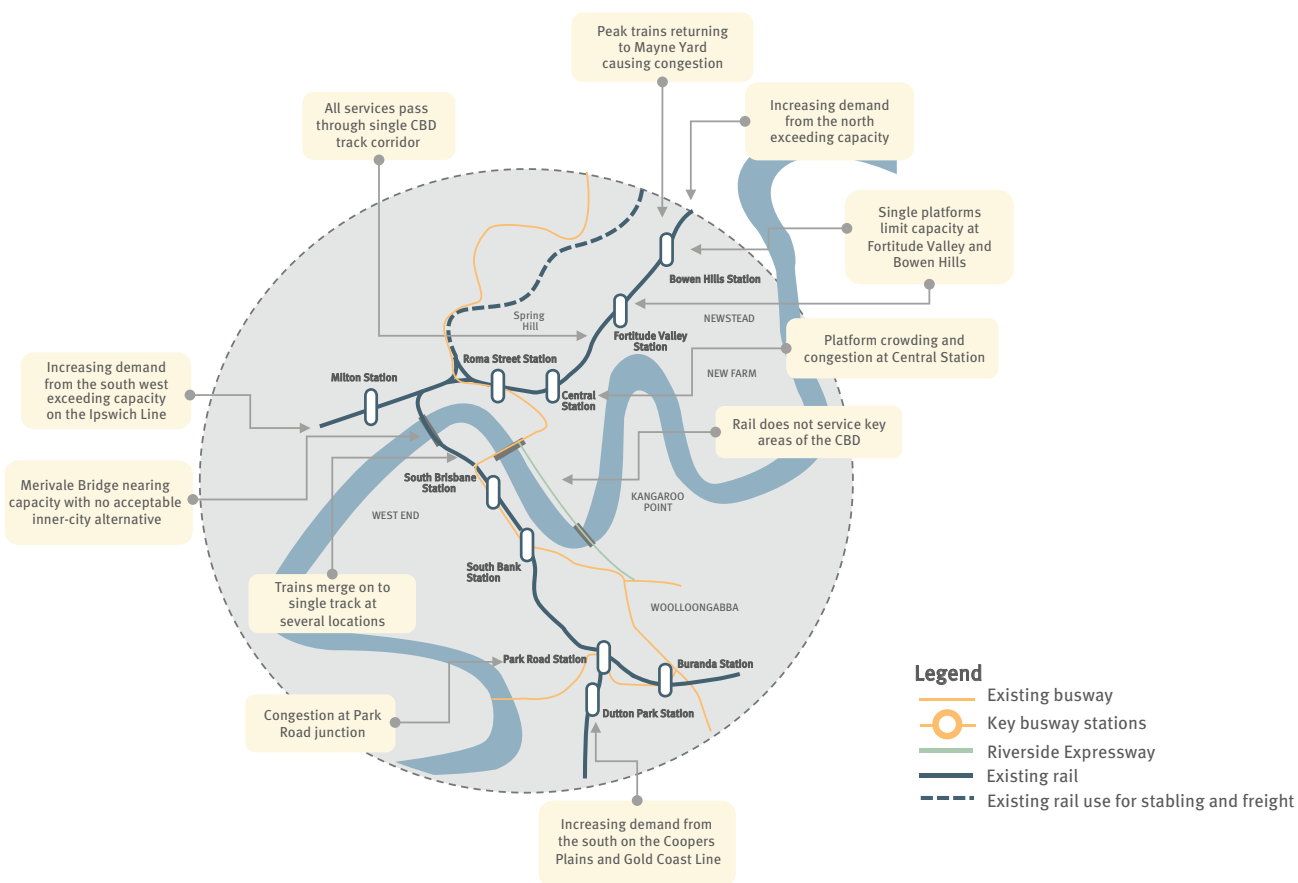


Source: Brisbane Metro Business Case, DTMR

For rail, passenger congestion at Central Station, and lack of capacity at and critical reliance on the four inner city stations and the Merivale Bridge river crossing, will inhibit the rail network's ability to meet rising demand.

While the existing infrastructure will experience significant stress, there are other challenges to be addressed in areas including customer experience, service operations and delivery, land use integration, emerging technologies, policy and contracts, funding and governance.

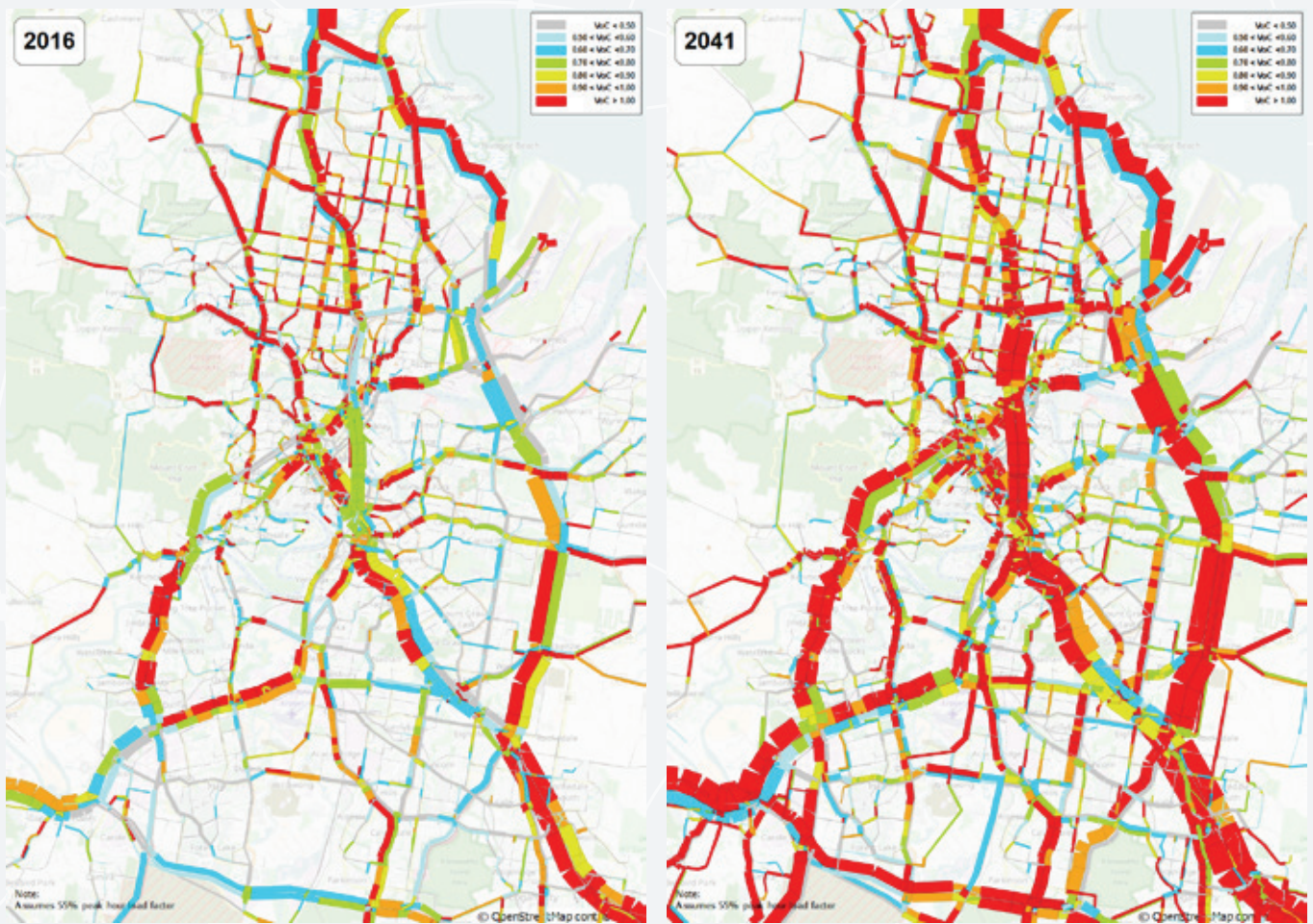
Current rail system capacity constraints



Source: DTMR, SEQ's Rail Horizon



Morning peak road network volume to capacity ratio (2016 and 2041)



Source: Brisbane Metro business case

Infrastructure Australia and the Bureau for Infrastructure, Transport and Regional Economics have forecast that the cost of road congestion will more than double to an estimated \$4.1–5.9 billion in Brisbane and rise to \$9 billion in SEQ by 2030, the greatest increase of any major capital city. This will not only negatively impact commuters, but will also prove detrimental for regional and import–export freight movements, tourism and new developments such as Queen’s Wharf Brisbane and the Howard Smith Wharves. Failure to meet these challenges will inhibit Brisbane’s ability to achieve its full economic and social potential.

Effective and accessible multi-modal transport systems that meet the needs of customers and the challenge of congestion will be key ingredients of Brisbane’s economic viability, employment growth and urban renewal – and will also shape the liveability of the surrounding region.

Increasingly creative approaches to planning land use effectively and overcoming funding constraints will be vital to delivering modern and seamless public transport. There is an opportunity, in SEQ, to leverage innovation

and advances in technology in partnership with others, in conjunction with deployment of infrastructure, technical and operational solutions.

There is a need to align the different levels of government to create more efficient public transport solutions that meet these challenges and enable and shape coordinated actions to support Brisbane’s future. This coordination is vital given the scale and time frames involved in changing such a large and complex system.



Strong population and employment growth

Public transport will enable and support more housing choice and growth in population and employment.

Public transport demand is largely driven by population and employment growth. Population is forecast to grow strongly at 4.0 per cent per year in inner Brisbane, 1.0 per cent per year in the Brisbane LGA and 1.8 per cent per year in SEQ through to 2041. Regional planning will facilitate major new 'greenfield' zones in the surrounding areas 50 to 60 kilometres from the city centre, including Flagstone, Yarrabilba, Logan and Caboolture West. These will be supported by planned improvements in public transport to provide connections to jobs and services.

Brisbane now represents nearly half of Queensland's gross state product (GSP) and will experience strong jobs growth with the economy becoming increasingly based around service and knowledge industries. In addition to the high-value local jobs created in regional clusters throughout SEQ, 431,000 jobs will be created between 2016 and 2041 in the Brisbane LGA, exceeding the expected population growth of 315,000.

But in the surrounding areas, population growth will be significantly higher than jobs growth. This will lead to a significant increase in trips from the outer areas into Brisbane for work.

The proportion of people working within the Brisbane LGA and who commute in from surrounding regions is expected to rise from 31 per cent to 42 per cent. Improving public transport and access to a skilled workforce will be key to making SEQ more connected and globally competitive. Precincts in inner Brisbane that are within 15 minutes' travel of each other by public transport will cluster and link, stimulating economic activity and development as well as improving liveability.

The plans for how the city will manage this growth and develop, particularly in transport corridors, will be enabled by public transport.

Public transport's role in economic growth

Experience at Macquarie Park in Sydney clearly demonstrated how improved public transport can stimulate economic development and jobs growth.

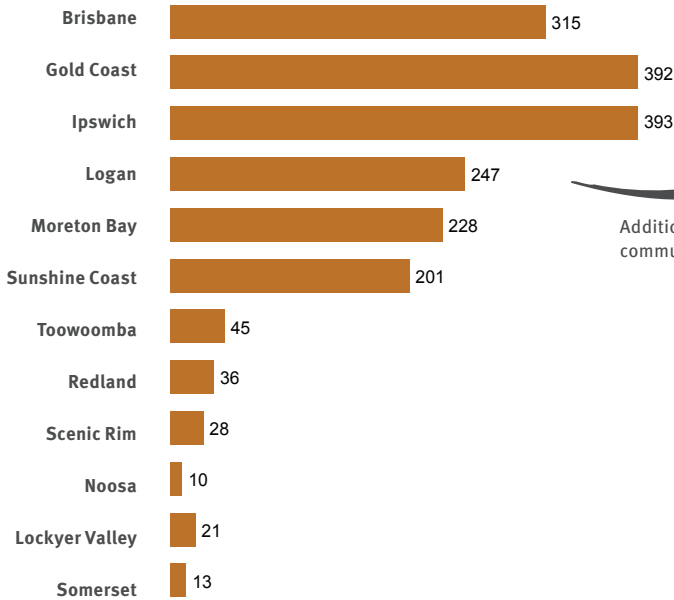
The community will experience broad benefits including closer links between healthcare and medical-research facilities, and better lifestyle amenity through improved access to sporting and entertainment precincts. Trade, health-related and tourism facilities, especially new developments like the Herston Quarter will also benefit from better public transport links.



Relationship between population and jobs growth in SEQ to 2041

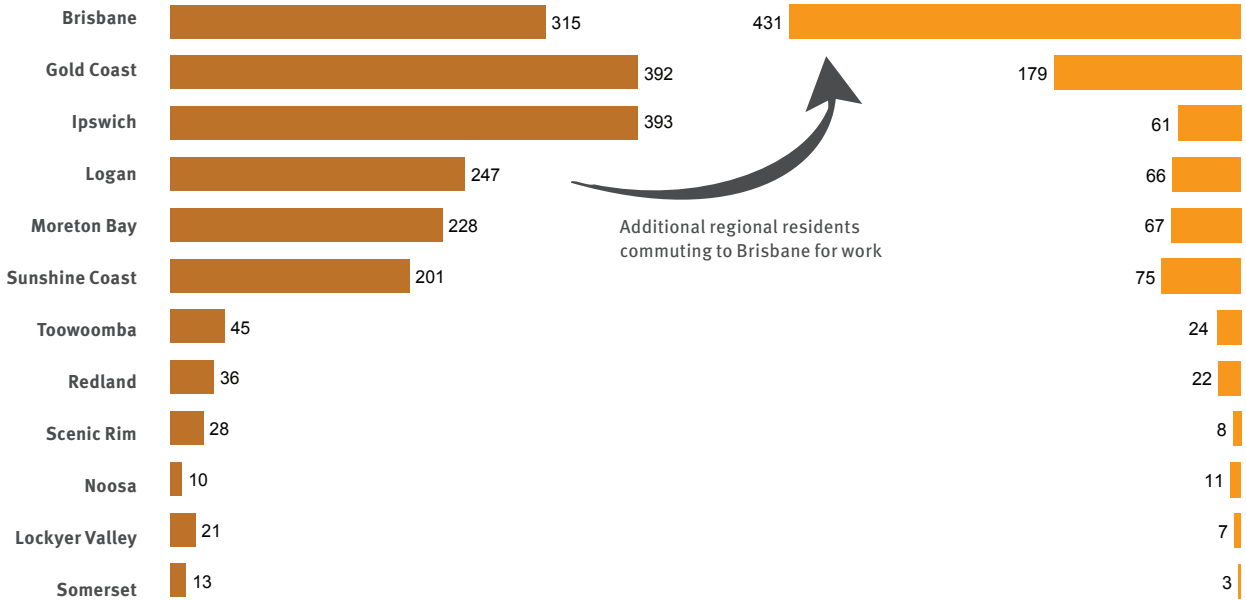
SEQ population growth by LGA (2016–2041)

Thousands of additional residents



SEQ employment growth by LGA (2016–2041)

Thousands of additional jobs

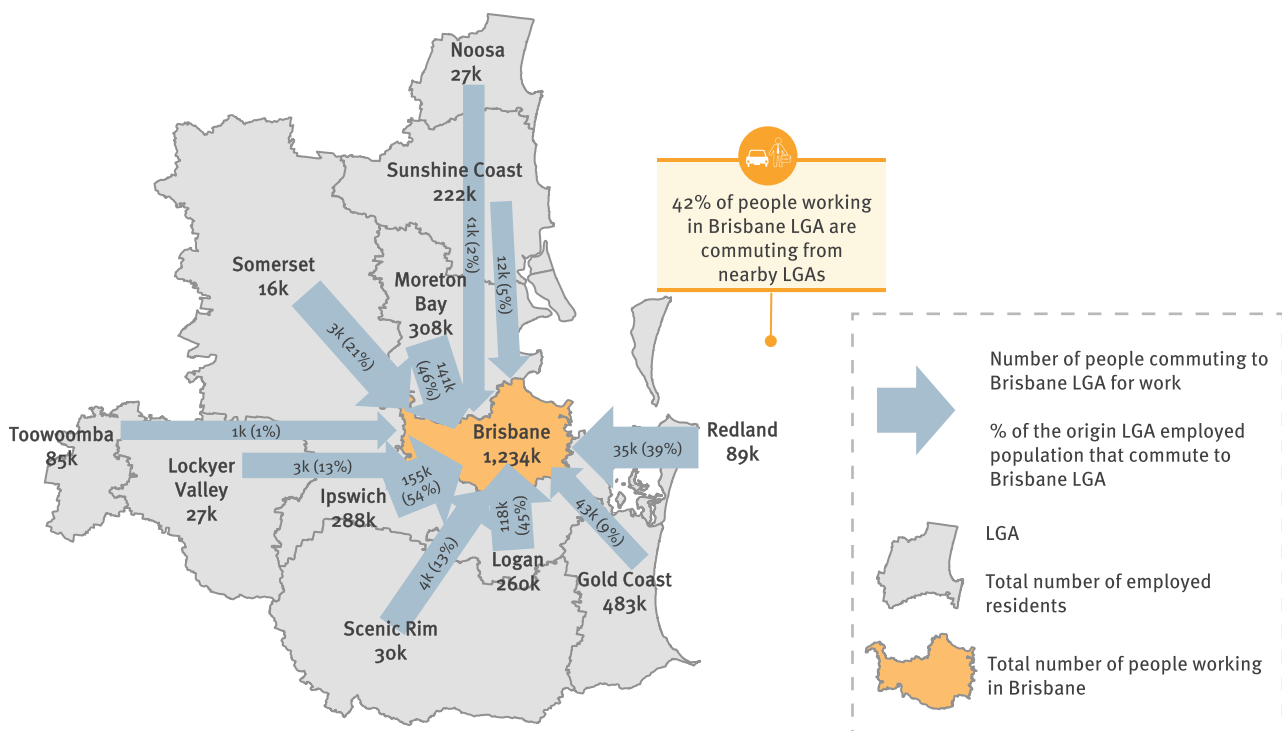


Additional regional residents commuting to Brisbane for work

Source: Queensland Treasury QGSO

Origin of people commuting to Brisbane LGA for work (2040–41)

Number of employed people in the LGA (% of employed residents commuting to Brisbane for work)



Source: Queensland Treasury QGSO, DTMR Journey to work

Transport today

SEQ now has a well-established public transport system that provides 180 million passenger trips per year on its network of buses, trains, ferries and light rail.

Private vehicles currently account for over 80 per cent of all transport journeys in SEQ. Public transport holds a share of around 7.5 per cent of all journeys in SEQ, but this increases to 58 per cent for trips into the CBD. Public transport provides a high-quality service and over time there has been significant investment in services, rolling stock and infrastructure, which has led to it representing a significant share of CBD journeys.

The factors of most importance to customers in choosing public transport, according to a Department of Transport and Main Roads survey, are safety, fair pricing and reliability. Other factors include on-time performance, frequency of

services, cleanliness, ease of use, provision of information, comfort/seating and friendly and knowledgeable staff. Strong growth in public transport patronage in the 2000s was underpinned by stable fares and the investment in busways, integrated and smart ticketing and a new bus and ferry fleet with air conditioning and improved accessibility features.

Brisbane’s public transport is currently operating with relatively few multi-modal journeys, although two-seat bus journeys are not uncommon. The radial network structure is focused on direct, single-seat journeys from suburbs to the city centre. The lack of other CBDs, such as Parramatta in Sydney, means cross-town journeys require transit through the CBD. Fulfilling the public transport vision means moving to a more mature network with ‘turn up and go’ high-frequency, high-capacity trunks supported by local feeders.

Public transport in SEQ today



- More than 800 km of rail track* in SEQ
- 152 rail stations
- 116 Citytrain stations with secure bicycle parking facilities
- Carries approximately 150,000 passengers per weekday
- Operates more than 7,800 services per week on the Citytrain network



- Extensive bus network with 29 km of busways
- High-frequency services represent 45.4% of the total bus network patronage
- Introduced 60 new buses last year
- 1,221 buses in the Brisbane City Council fleet plus private operators
- Brisbane City Council fleet 100% wheelchair accessible
- Approximately 312,630 passenger trips per weekday



- 180 million passenger trips on bus, rail, ferry and light rail within SEQ annually
- 490,000 passenger trips per weekday
- 150,000 MyTransLink app active users per month
- 2.5 million go card users in SEQ

* Rail track includes Airtrain

Source: DTMR Annual Report 2016; Brisbane City Council 2015–16 Annual Report; Queensland Rail 2015–16 Annual Report; TransLink Tracker Quarterly Reports 2015–16





In the last 20 years, there has been significant capital investment in major new road projects, which has improved access to and around the periphery of Brisbane. Given the maturity of the SEQ road network, road investment is moving from building to optimisation, with current projections showing that smaller road upgrade projects will serve the region's needs.

Major road infrastructure spending



Historical projects

Past investment in roads have been considered major projects, and were typically >\$1 B and focused on serving the inner city

Example projects

Clem 7 (2006–2010)	\$3.0 B
Airport Link** (2008–2012)	\$4.8 B
Go-Between Bridge (2008–2010)	\$338 M
Legacy Way (2011–2015)	\$1.5 B
Open level crossing removals	\$280 M

* Includes expenditure to date and future anticipated spend

** Includes Northern Busway and Airport Roundabout upgrades

Source: 2015 State Infrastructure Plan Part B; Press releases, Brisbane City Council Budgets 2013–14 to 2016–17



Future projects

NON-EXHAUSTIVE

Future road investments are primarily focused on enhancing existing road corridors

Example projects (estimated total cost*)

Bruce Highway SEQ upgrade	\$1.6 B
Other SEQ road network projects	\$739 M
Gateway upgrade north	\$1.2 B
Kingsford Smith Drive	\$650 M
Telegraph Road (Stage 2)	\$140 M
Wynnum Road (Stage 1)	\$115 M
Inner City Bypass upgrade	\$58 M

Governments pay 70 to 75 per cent of the cost of running the public transport system, with fares covering the balance. The total operating cost of providing public transport in SEQ borne by the state government amounts to some \$1.8 billion per year with an incremental \$130 million contributed from the Brisbane City Council annually. Brisbane City Council makes by far the largest contribution to public transport of any council

in Australia. In contrast to road investment, capital investment in public transport in Brisbane in the last seven years has focused more on service and operational improvements than major new infrastructure. Customer-focused improvements in SEQ's and Brisbane's public transport since 2000 have supported significant growth in patronage.

Projections for the coming four years see major infrastructure investment in the centre of the rail and busway systems unlocking capacity in the core of the city's public transport networks. These, in turn, will facilitate the extension and improvement of the public transport system throughout SEQ. The Commonwealth, in recognising this need has contributed \$10m to the establishment of the CRR delivery authority. An integrated approach to public transport investment in Brisbane and surrounding areas will help to transform the SEQ region from a region of cities to a true city region.



Major public transport infrastructure spending



Historical projects

In contrast to road, prior public transport investments have been more subdued

Example projects

Bus

South East Busway (2001)	\$0.6 B
Northern Busway Windsor to Kedron	\$0.4 B
Boggo Road Busway and Eleanor Schonell Bridge	\$0.4 B
Eastern Busway	\$0.5 B

Rail

Caboolture to Beeburum rail duplication (2009)	\$0.3 B
Duplication of Ferny Grove line (2012)	\$0.1 B
Moreton Bay Rail Link	\$1.0 B

Ferry

Terminal replacement program	\$160 M
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Future projects

NON-EXHAUSTIVE

Future public transport investments are considered major and will change the urban landscape of the region

Example projects (estimated total cost*)

Rail

Cross River Rail	\$5.4 B
New-generation rolling stock	\$4.0 B
New-generation rolling stock works**	\$0.4 B
Citytrain rolling stock	\$0.4 B
European Train Control System (ETCS)	\$0.7 B
Other ^	\$1.6 B

Rapid Transit

Brisbane Metro	\$0.94 B
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* Includes expenditure to date and future anticipated spend;

** Includes stabling facilities, maintenance service centre, connection works and operational readiness; ^ Includes Caboolture rail line upgrade (Lawnton to Petrie third track \$168 M), Gold Coast rail line (Coomera to Helensvale duplication \$163 M), SEQ bridge replacement and renewal, passenger safety and accessibility and track replacement, renewal and concrete re-sleepering

Source: State Infrastructure Plan Part B (1–4 year program); Cross River Rail business case; Brisbane Metro business case, Brisbane City Council Budgets 2013–14 to 2016–17

Customer-focused improvements in SEQ's and Brisbane's public transport since 2000

Service upgrades



Integrated Ticketing



Introduction of go card



Real-time passenger information



Improved accessibility across bus, train and light rail fleet



BUZ, CityGlider and NightLink services



100% air-conditioned bus, train and tram fleet



Increased services during peak periods through timetable adjustments



'Fairer Fares'

Infrastructure upgrades



Airtrain*



Gold Coast Light Rail



Extension and upgrade of rail network



New rolling stock



Delivery of busway network and Eleanor Schonell Bridge



Upgraded bus stops, Interchanges and rail stations



Open level crossing replacement projects



New Northshore, Hamilton and Milton CityCat terminals; upgrade of others after flood



Park 'n' ride spaces



Doubling of CityCat fleet

* Private infrastructure investment

Source: DTMR

Complementary rail and bus networks

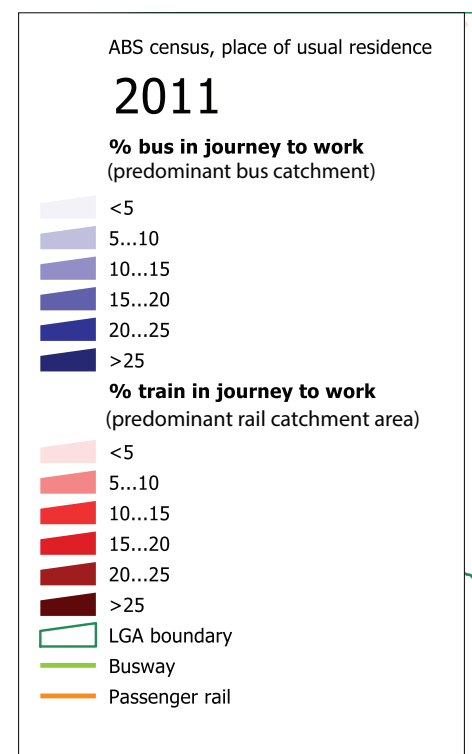
Leveraging the complementary rail and bus networks will provide greater mass transit capability supported by feeder services.

When planned effectively, rail and bus networks in Brisbane should complement each other. Rail patronage is drawn from longer distances along the rail corridors. Demand for bus services, on the other hand, tends to be more widespread and typically covers short to medium distances including inner-city distributor capability. Segregated busways provide a service similar to rail and are unaffected by road congestion. But even with segregated bus and rail networks, there is a limit to how many additional services can be added to existing infrastructure and connections.

The response lies in increasing capacity and improving and further extending the network to deliver a better, more efficient, reliable and modern public transport service. A frequent, 'turn up and go' trunk network would become the backbone of the public transport network, complemented by a range of feeder and micro-transit services that connect into the mass transit network. Upgrading the interchange points will provide a better customer experience, encouraging take-up of multi-modal journeys to a wider range of destinations, which will become more appealing relative to car or single-seat journeys.

The key elements of a good customer experience are safety, reliability and value for money. A frequent 'turn up and go' trunk network would become the backbone of the public transport network, complemented by a range of feeder and micro-transit services that connect into the mass transit network. The successful *go* card and MyTransLink app provide a good basis to leverage with increased capability. The creation of a single, integrated public transport system accessible to everyone, as envisaged in this plan, will require high-quality, legible and accessible interchange points and the integration of rail, bus and ferry services across Brisbane City Council, the Queensland Government and external providers.

How people travelled to work in 2011



Source: ABS Census 2011





Attractive customer experience



Provide safe, reliable services



Ensure value for money



Provide real-time information for whole journey, including knowledgeable staff



Ensure improved levels of amenity including comfort and seating



Offer a seamless interaction – services, booking, ticketing, payment



Offer widest feasible network coverage with maximum frequency



Improve legibility of the public transport network

Future initiatives and outcomes

Demand for mobility will rise with increasing population, demographic change and employment, and a coordinated response is being developed.

More people will commute to jobs in Brisbane, increasing travel demand. Development will lead to greater urban density, and there will be increased connectivity between businesses and residents needing access to jobs and community and social amenities. Congestion in and around the CBD will mean private vehicles alone cannot provide a cost-effective, feasible or even desirable solution to increasing travel demand. In the short term,

the community will seek increased investment in public transport services and infrastructure to allow improved access to and around the CBD, reducing car journeys.

New technologies, such as connected autonomous vehicles, growth in the sharing economy, demand-responsive transport and personalised digital customer engagement will change and disrupt transportation. Already, evidence is mounting of changes in behaviour. In Victoria, for example, licensing rates for people under 25 have dropped from 77% in 2000–01 to 66% in 2012–13.

Although it is difficult to predict the exact nature of future technology and business

models, and when they will emerge, it is expected that mass transit will continue to be essential for safely moving large numbers of people into and around inner-city areas with flexibility and reliability.

The Queensland Government and Brisbane City Council share a vision for the future of transport in Brisbane. To fulfil that vision, change travel behaviour and encourage patronage growth, public transport must offer a positive customer experience; deliver efficient, reliable and modern networks and services; connect people, businesses and places; and set a foundation for future growth and innovation.



Efficient, reliable and modern network and services



Connecting people, businesses and places



Foundation for future growth and innovation



Improve reliability



Ensure close proximity to employment and residential hubs



Provide flexibility in the existing network



Provide high-frequency trunk services with connecting feeders



Improve ease of interchange



Accommodate changes and advances in technology



Improve hours of operation



Create an integrated, connected end-to-end network



Provide future options for infrastructure, services, technology and ability to stage developments



Reduce congestion and bottlenecks



Improve walking and cycling connections to the public transport network



Partner to share knowledge and expertise



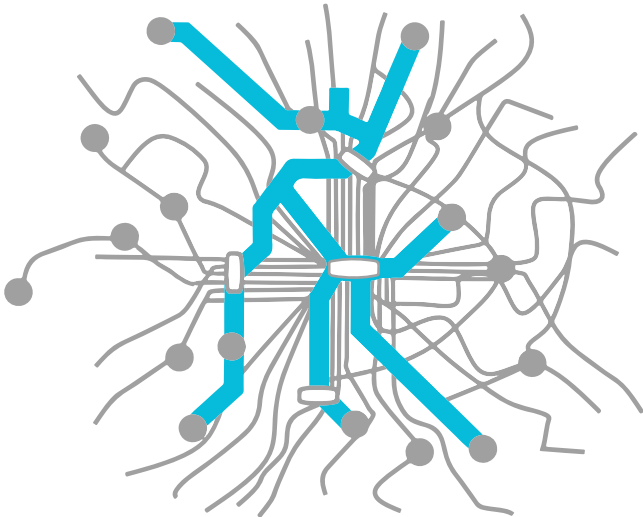
Provide well-defined and consistent services across the network

Evolution of public transport

As cities grow, travel patterns become more complex and diverse, and traffic volumes increase, the public transport network must respond. Transfers will be increasingly required to match customers with a diverse range of destinations, not just in the CBD. The public transport network must then evolve to make the journey experience effective, efficient and seamless, including transfers from a network radiating from the CBD to a connected network with high-frequency trunks supported by feeders.

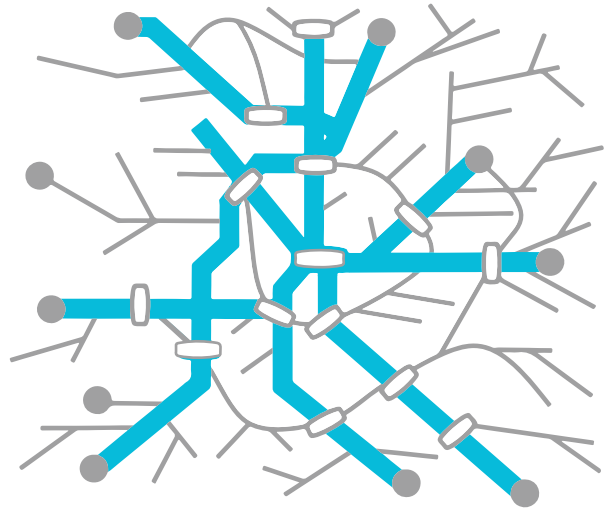
From radial network to high-frequency trunk network with feeders

Existing radial-style network centred on trips into and out of the CBD







Most services tend to go from origin to city-centre destination in a single-seat journey

Proposed network with high-frequency trunk services with feeders



The 'turn up and go' high-frequency trunks move large numbers of people into, through and around the city, supported by interchanges and feeders

-  Feeder services allowing transfer to the trunk network, for example bus
-  Trunk service (high-frequency/high-capacity, for example rail or busway)
-  Interchange
-  Station

Source: DTMR

An integrated network will require some passengers to switch from one type of transport to another, or from one service line to another, to access a more diverse range of destinations. Transfers will become more attractive as their speed, frequency and reliability increase. A ‘turn up and go’, high-frequency trunk network with complementary services including feeders provides the opportunity to create a simpler, more customer focused network and reduces duplication by consolidating service routes. It increases the use of high-capacity vehicles and provides an efficient orbital capability around the centre, supporting economic development at the nodes.

Over time, both incremental and transformational investment needs to be balanced across the transport network and modes to meet the growing demands and address emerging constraints.

The signature CRR and Brisbane Metro projects, with upgraded interchange points, will provide extra integrated capacity, a better customer experience and greater resilience in the centre in case of floods or other disruptions, while utilising existing assets.

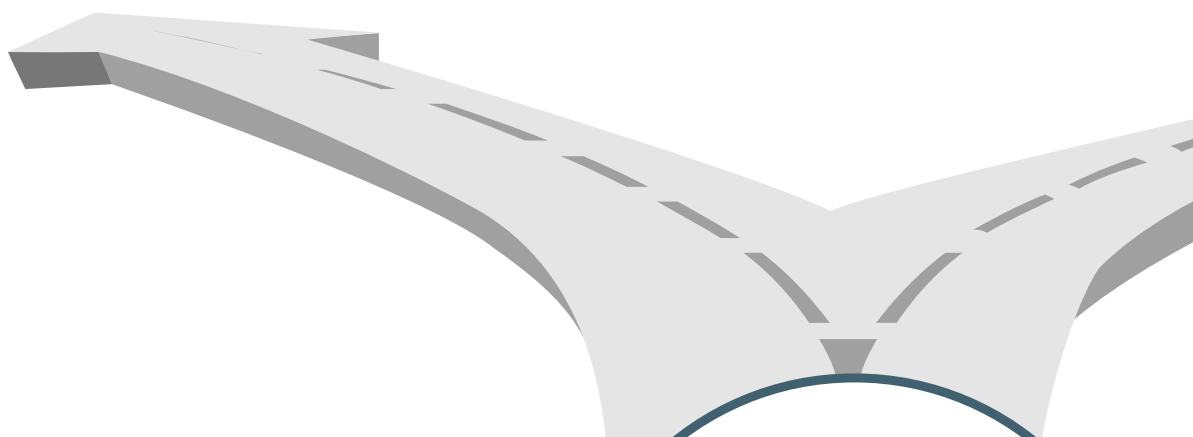


Unlocking the core



Service benefits

Faster travel times, more frequent services, higher-quality interchanges, better coverage, reduced duplication



Cross River Rail (CRR)

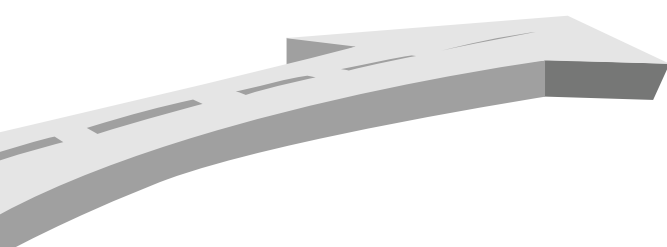


Brisbane Metro

By removing the bottlenecks of the Merivale and Victoria Bridges, public transport in South East Queensland can be transformed

Enabling infrastructure

A new wave of infrastructure to build on the CRR and Brisbane Metro foundation over the medium to long term



Complementary transport solutions for the core

The complementary nature of these projects will help connect people to where they want to go at times they want to travel in and around the city, and create options for the future. By unlocking the core, CRR and Brisbane Metro will underpin future economic, urban and social development within Brisbane, in the surrounding LGAs and beyond.

Upgrading the inner-city network core will enable and magnify the benefits of a wide range of future public transport services and infrastructure investments across the region.

With efficient CRR and Brisbane Metro interchange points at Boggo Road and Roma Street, the projects together will provide improved connectivity, interchange opportunities and a better customer experience. Additionally, there will be further interchange possibilities to high-capacity modes and inner-city distributor services at South Bank, and Cultural Centre/South Brisbane.

CRR will not only enable greater frequencies along existing rail corridors, but will also facilitate future rail extensions and upgrades. The Merivale Bridge is the only rail river crossing directly connecting to the Cleveland, Beenleigh and Gold Coast lines, and it limits the number of passenger and freight trains that can cross in an hour. Overcoming the Merivale Bridge constraint through doubling capacity will allow Gold Coast services to increase from a maximum of eight per hour

to a target of 12 per hour during the morning peak. Eventually, high-frequency services could extend as far as Gold Coast Airport at Coolangatta. Rail services to the new greenfield suburbs in the south-west would be enabled by the CRR.

The corridor is being protected for the possible introduction of rail to Greater Flagstone on the Salisbury–Beaudesert rail corridor, where a new housing development is planned for up to 80,000 people by 2041. Significant developments are being planned in the Ipswich LGA for Ripley Valley (with 88,000 residents by 2041) and in the Logan LGA for Yarrabilba, which would involve identifying priority infrastructure requirements.

The Brisbane Metro will enable development of new busways, service networks and local bus services to support infill and new greenfield residential developments, particularly in the southern and south-western corridors. Busway extensions to the north, east, and south-east, infrastructure requirements and other bus priority measures have been investigated and initial planning has been undertaken.

Local bus and other transport systems, including potentially demand-responsive transport, could link to interchanges on the trunk routes.



Cross River Rail



Brisbane Metro

Benefits of CRR and Brisbane Metro projects		
Create attractive public transport offer, increasing mode share	✓	✓
Unlock core with greater capacity, higher frequency, increased resilience	✓	✓
Connect planned new greenfield developments to city trunk	✓	
Trunk distributor capability over short to medium distances		✓
Address capacity limits of Merivale Bridge	✓	
Address congestion on Victoria Bridge, Captain Cook Bridge, inner-city bus stations		✓
Provide high-quality, legible, convenient interchange points	✓	✓
Stimulate urban regeneration, economic development	✓	✓
Connect businesses, people and places	✓	✓
Facilitate future network growth, technological flexibility, adaptability	✓	✓



The next wave of public transport infrastructure

Both the state and local governments have already been contemplating the next wave of public transport investments and service improvements over the medium to long term. The delivery of Cross River Rail and Brisbane Metro will pave the way for future rail and bus network extensions that leverage their investment and capacity.

The bus and rail network expansion initiatives will improve public transport safety, efficiency and reliability for commuters, to support increased dwelling densities, new communities and employment growth, delivering economic agglomeration benefits.

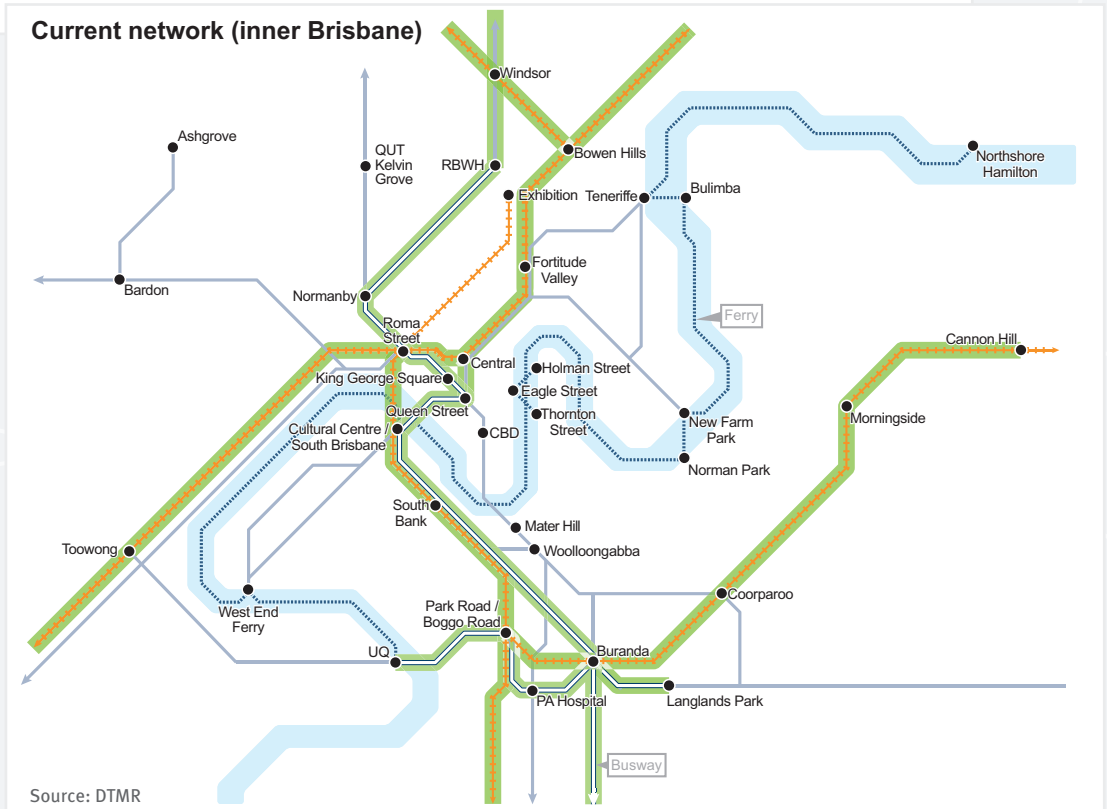
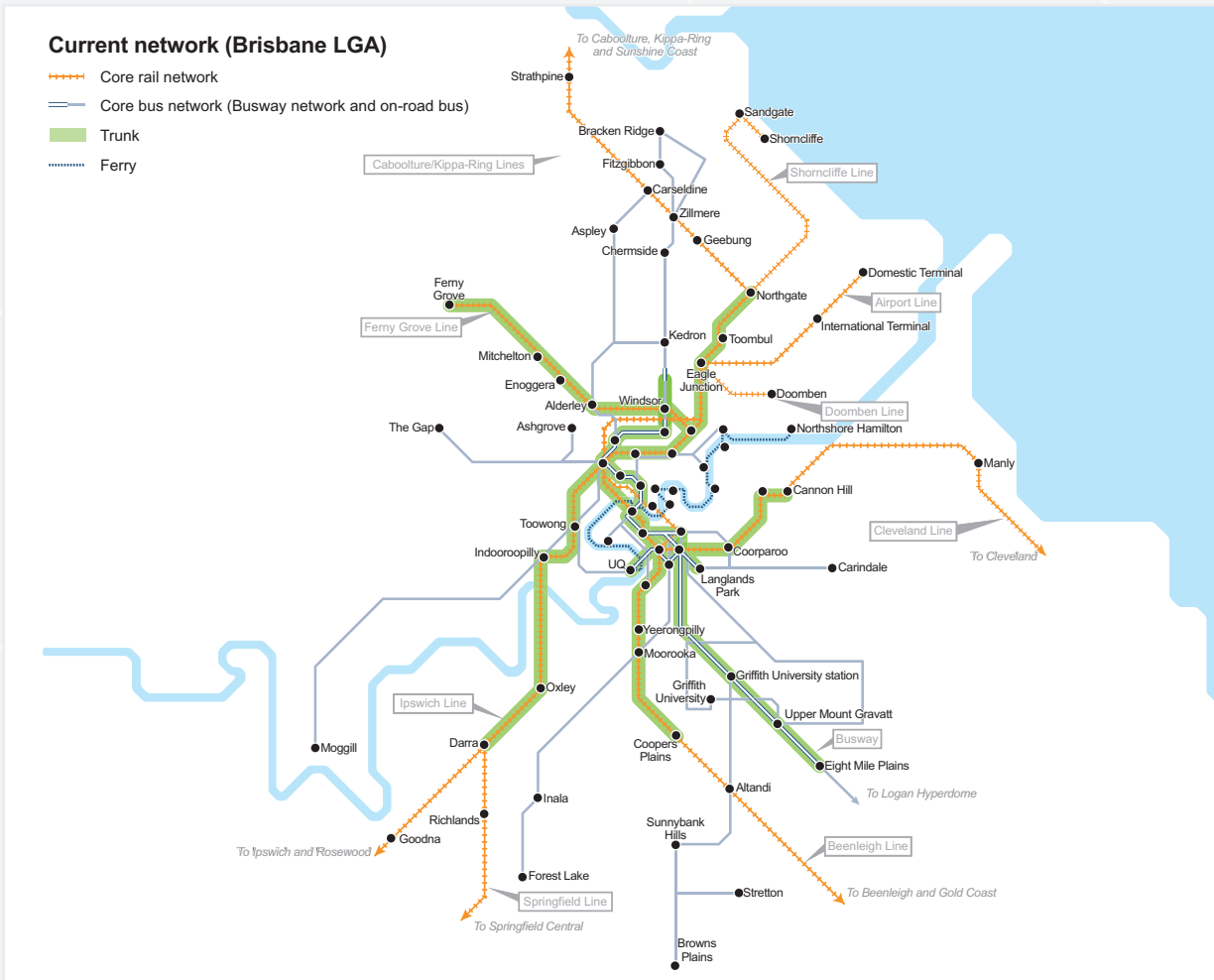
The following are some initiatives at different stages of maturity; subject to more detailed planning and funding availability, they could be considered as Brisbane and SEQ grow.

- Northern Busway extension to Chermiside (as busway or other public transport priority corridor)
- Eastern Busway extension to Carindale and Capalaba (as busway or other public transport priority corridor)
- South East Busway extension to Springwood (as busway or other public transport priority corridor)
- Bus priority infrastructure between Browns Plains and the South East Busway, improving reliability and efficiency of connections
- High-frequency public transport services from Maroochydore to Caloundra to Beerwah
- Provide frequent public transport services to planned major growth areas (including Caboolture, Yarrabilba and Greater Flagstone)
- Ipswich to Springfield Public Transport Corridor (including public transport corridor extension to Ripley Valley)
- Extension of the Gold Coast Light Rail from Broadbeach to Coolangatta (stage 3)
- Salisbury to Beaudesert Passenger Rail (following the Salisbury to Beaudesert Public Transport Corridor)










Evolution of Brisbane's public transport network

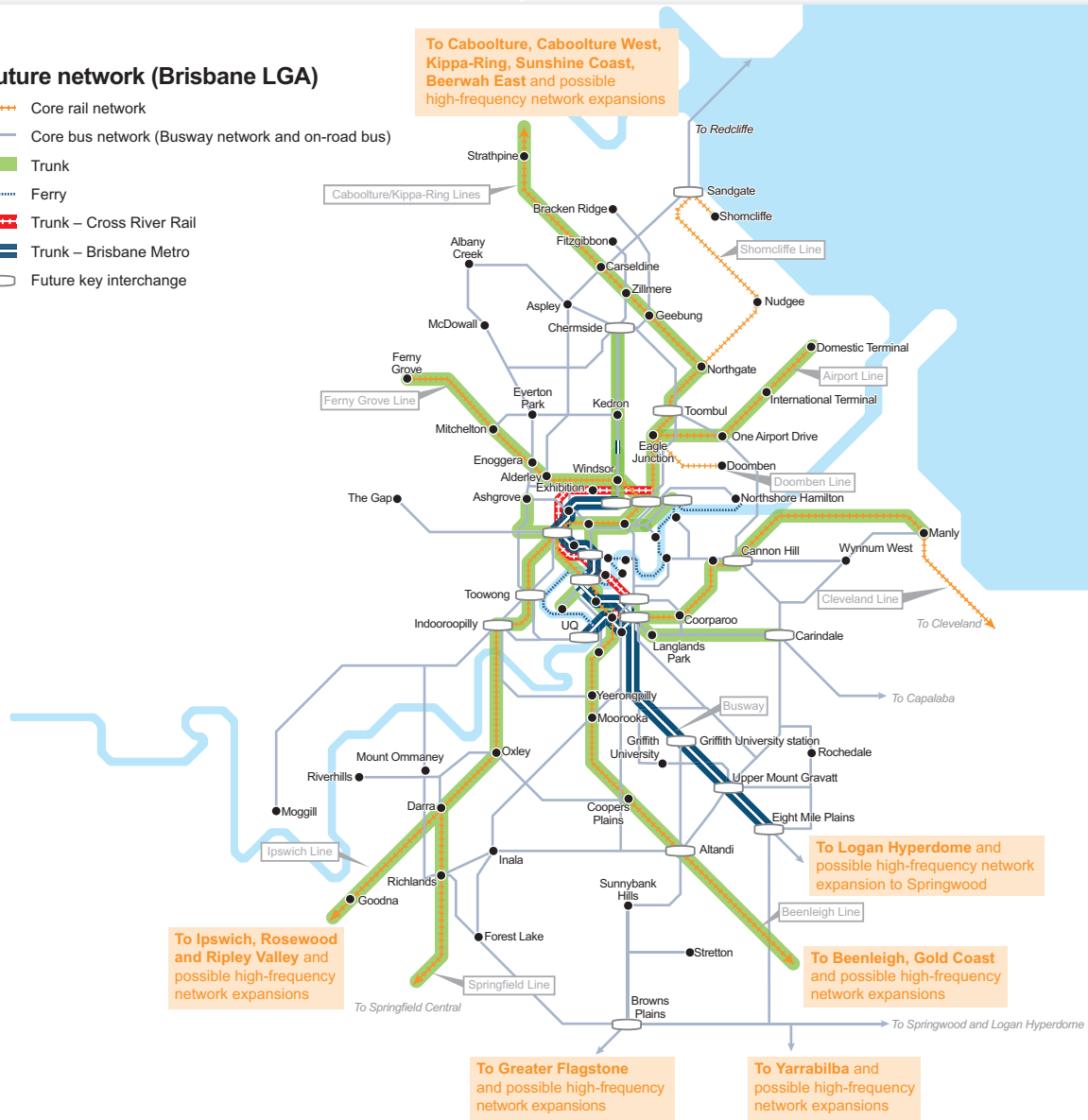
The current core bus and rail networks radiate from the CBD supported by local bus and ferry feeders, but with limited interchange points. The future network, with the addition of CRR and the Brisbane Metro in the core, will see higher-frequency trunks extended further out into the region with enhanced orbital capability and more high-quality interchange points.



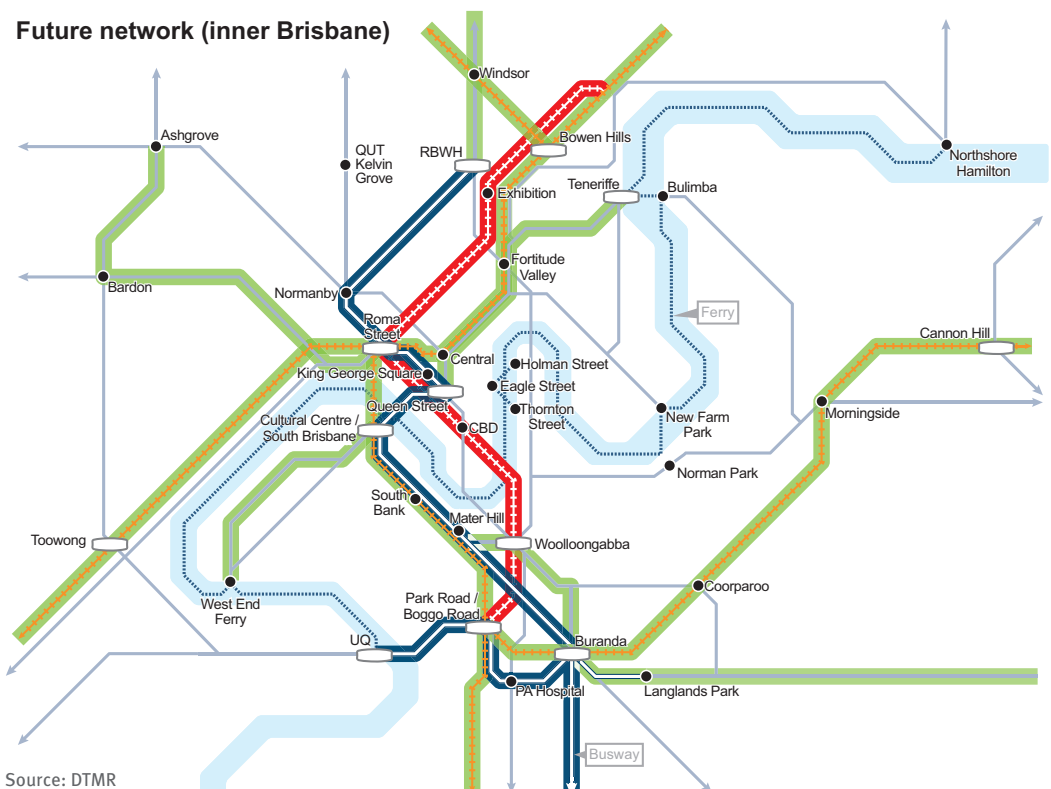
Source: DTMR

Future network (Brisbane LGA)

-  Core rail network
-  Core bus network (Busway network and on-road bus)
-  Trunk
-  Ferry
-  Trunk – Cross River Rail
-  Trunk – Brisbane Metro
-  Future key interchange



Future network (inner Brisbane)



Building connections

Connected communities are liveable communities that provide a range of social, economic and environmental benefits for residents and visitors.

They drive growth and the competitiveness of the region, enhancing business clusters. Strengthening the resilience of the regional transport network and ensuring public transport is at the heart of planning and development decisions will facilitate connected communities in SEQ.

People, businesses and places can be better connected through integrated planning of land use and transport, specifically public transport, at the community or precinct level. Better transport and land use integration will increase the success of both.

Co-locating land uses in accessible locations increases the attractiveness of the location. Emphasising the public transport aspects of major development projects in the approval process can provide community-wide benefits.





Note: Artist's impression and subject to planning approvals
Source: Destination Brisbane Corporation

A roadmap for the future

Rising government investment in public transport services and infrastructure will see the development and delivery of a range of initiatives, providing a more attractive customer offer and networks that are more efficient and reliable. This in turn will result in an increasing modal share.

Current modelling for CRR and the Brisbane Metro anticipates total journeys growing at 1.5 per cent per year from 2016 to 2041. Projected annual public transport patronage growth in the same period is 3.6 per cent per year, with public transport's share of total journeys increasing from 7.5 per cent to 12.3 per cent. The number of private vehicle journeys is expected to grow 1.3 per cent per year, with its share of the total dropping 4 per cent from 81.1 per cent to 77.1 per cent over the 25-year planning period. Importantly, in the city core, the shift in share between the two modes is 19 per cent in

favour of public transport, which will have significant positive effects on the city centre and its surrounds.

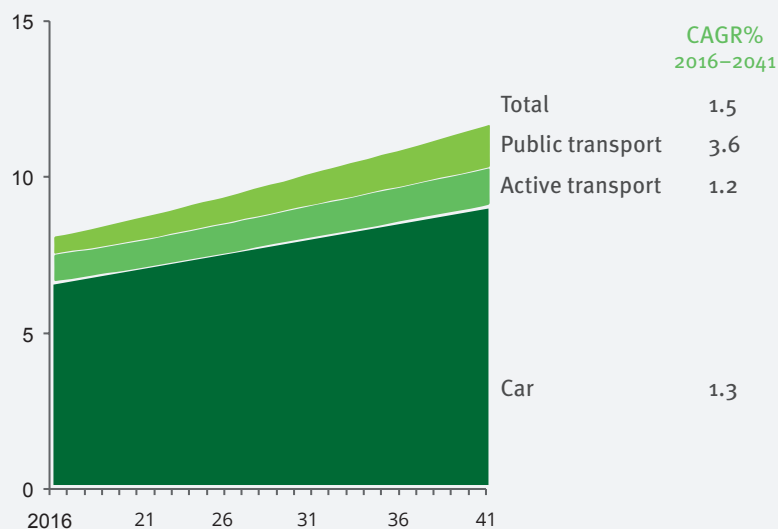
In most foreseeable technology scenarios, mass transit on trunk routes will remain the most efficient way to move large numbers of people between and within major employment, commercial, social, health and residential hubs. Connected autonomous vehicles and demand responsive transport could complement the mass transit systems by providing a cost-effective solution for the first and last mile. Personalised real-time information for the whole of the end-to-end journey will further improve the offer for customers.

The Queensland Government and the Brisbane City Council will continue joint development of plans to build and enhance public transport to and around the city. Through this work the agencies will continue to identify and implement targeted actions and initiatives in support of our shared vision and priorities for public transport in Brisbane.

Forecast public transport patronage and share (2016 and 2041)

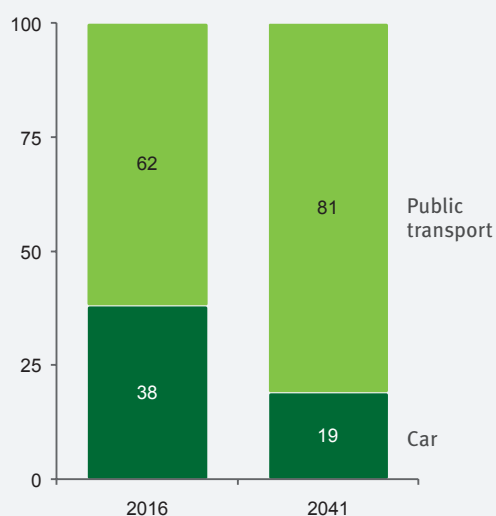
Forecast patronage demand in Brisbane study area* including CRR and Brisbane Metro (2016–2041)

Millions of daily trips



City core** mode share (2016, 2041)

Percentage of morning peak trips, excluding active transport



* Brisbane study area covers all of Brisbane City and Redland City, and parts of Moreton Bay, Ipswich, Logan and Gold Coast City local government areas

** City core includes CBD, Petrie Terrace, Spring Hill, Fortitude Valley and South Brisbane; city core mode share excludes active transport

Source: Brisbane Metro business case





Conclusion


Brisbane will realise its vision of being a strong and vibrant New World City through a high-quality, connected and supportive public transport system. It will be enhanced by investments in infrastructure and services to unlock the core of the existing system and improve the customer experience.

The Queensland Government and Brisbane City Council share a vision for the future of transport in Brisbane. To fulfil that vision, change travel behaviour and encourage patronage growth, public transport must offer a positive customer experience; deliver efficient, reliable and modern networks and services; connect people, businesses and places; and set a foundation for future growth and innovation.

Public transport will play a greater role in getting people into and around central Brisbane with a reliable, frequent and affordable service. Strengthened governance and improved collaboration between different levels of government and service providers will support delivery of better, higher-quality services and better value-for-money outcomes.

This document demonstrates the shared vision of the Brisbane City Council and the Queensland Government for Brisbane's customer-focused approach to public transport, public land use and infrastructure. It will guide the development of the public transport system into the future and lay the foundations for the city's and region's social and economic growth.





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