



▶ TRANSPORT

Gold Coast Light Rail (Source: Department of Transport and Main Roads)



TRANSPORT

OVERVIEW

How we move, and how efficiently we can do it, is key to ensuring productivity and quality of life.

Queensland's transport network spans 33,367 km of state-controlled roads, over 6,560 km of state managed heavy rail, 21 ports, over 20 km of light rail and 29 km of busways.⁴³ Our network has developed as our cities and regional areas have grown. Passengers and freight are now able to move via railways, busways, ports, airports, ferry connections, cycleways and many other connections.

Emerging technologies and new service models will enable us to further shape our transport system and meet growth in service demand. Innovations such as on-demand transport, cooperative and automated vehicles and Mobility as a Service can enhance the state's established modes and help us embrace new ways of transporting people and goods. Digitisation of infrastructure and utilisation of smart transport systems will also provide opportunities to enhance the delivery, management and operations of the transport network.

These innovations complement how transport infrastructure can reduce emissions. Facilitating the shift to zero emission vehicles and promoting more efficient modes for people and goods, including greater use of buses and rail networks is underpinned by transport infrastructure. We will do this while ensuring our freight systems are resilient, safe and better integrated. The COVID-19 pandemic highlighted the importance of the supply chain and free-flowing movements, as the industry supported emergency responses. Integrated road, rail, air and port systems adjacent to economic development areas support industry expansion and Queensland's economic performance.

Queensland's transport network is vast and supports expansive regions and cities. Maintaining our transport infrastructure assets is a challenge, particularly given this scale as well as increasing user demands and disruptive weather impacts across the state. Investing in the maintenance of our existing transport infrastructure is essential, not only to provide safe and efficient travel today, but to ensure the future economic sustainability of our state. This includes assets such as shipping channels, which are vital to the successful operation of our ports. The growing impact of climate change means that maintenance of our assets becomes even more critical.

Building-in resilient infrastructure assets can provide a greater level of protection so they remain accessible for transport networks in response to more frequent and extreme climate events.

Providing access to employment and training, education, health, and essential services underpins the function of Queensland's passenger transport system. We work with our delivery partners to provide an accessible, integrated, and efficient network across rail, bus, tram, and ferry services, for all users, including people with disability and seniors.

The Cross River Rail project is the Queensland Government's highest priority infrastructure project. Together with new high-capacity signalling, Cross River Rail will revolutionise the SEQ rail network, paving the way for future rail and creating opportunities for increased bus network integration to improve the passenger transport network.

As Queensland's population grows, the increased demand on our transport network will need to be balanced with placemaking and the everyday activities that occur in and around our road network and infrastructure. This balance is essential for creating attractive, sustainable, and healthy places, where neighbourhoods are not isolated or disconnected from the services that enable them to flourish. The Queensland Government is working to support placemaking and to integrate land-use and transport planning.

Queenslanders are utilising active forms of transport such as walking and cycling more than ever before, in response to population growth pressures, a desire to reduce emissions and the health impacts of physical inactivity.⁴⁴ The Queensland Government is working with other levels of government and industry partners to ensure our communities are green, livable and walkable.

Transport has a unique role in the state's ongoing economic recovery from the COVID-19 pandemic as it supports almost all social and economic activities. An accessible, sustainable, and efficient transport sector reduces the cost of doing business, which supports a stronger Queensland economy.

CURRENT KEY INITIATIVES

- ▼ **Transport Coordination Plan 2017–2027**
Provides a framework for the coordinated planning and management of transport in Queensland.
- ▼ **Queensland Transport Strategy**
Harnesses emerging transport trends to move people and products safely and efficiently.
- ▼ **Queensland Road Safety Strategy**
Delivers innovative initiatives and new technology focused on a whole-of-life approach to road safety.
- ▼ **Regional Transport Plans**
Defines priorities and actions for developing Queensland’s transport system that will guide future investment over the next 15 years.
- ▼ **Queensland Freight Strategy**
Sets a shared vision for the state’s freight system, outlining commitments to guide policy, planning and investment decisions.
- ▼ **Accessibility and Inclusion Strategy**
Articulates the Department of Transport and Main Roads’ (DTMR’s) commitment to become a world leader in the provision of accessible and inclusive transport services.
- ▼ **Queensland Cycling Strategy 2017–2027**
Sets the direction for encouraging more people to ride bikes, more often throughout Queensland.
- ▼ **Queensland Walking Strategy**
Recognises the critical role that walking plays as part of a single integrated transport system accessible to everyone and as part of a healthy, active lifestyle for all Queenslanders.
- ▼ **Bruce Highway Upgrade Program**
Delivering \$13 billion of works over a 15-year period from 2013–14 to 2027–28 to improve safety, flood resilience, and capacity between Brisbane and Cairns.
- ▼ **Pacific Motorway M1 Upgrade Program**
The upgrade and widening of the Pacific Motorway M1 is being delivered in strategic priority stages as funding becomes available, based on traffic volumes and best value for money.
- ▼ **Creating Better Connections for Queenslanders**
A draft 10-year plan for passenger transport in Queensland, ensuring passenger transport remains reliable, safe, accessible and relevant to customers, through delivering infrastructure, services and technology improvements.
- ▼ **Environmental Sustainability Policy**
Sets the direction and focus for protecting and enhancing our environment for transport investments.



North Brisbane Bikeway (Source: Transport and Main Roads)

TRENDS



By 2050, internal combustion engines powered by fossil fuels will be in the minority, as people shift to more affordable and

SUSTAINABLE VEHICLES



In the future drones could handle an increasing amount of

FIRST – AND LAST– MILE FREIGHT



ELECTRIC SCOOTERS AND BIKES

can make active transport more attractive and improve livability



TRANSPORT

CHALLENGES

Network security and resilience

Queensland is Australia's most disaster-affected state exposed to the impacts of extreme weather and climate change. As the climate continues to warm, extreme weather events are likely to be more damaging and create greater disruption across the transport system. Queensland's transport network also needs to be secure and resilient to human induced threats, addressing disruptions and damage quickly and thoroughly. The transport system, like all areas of the Queensland economy, must plan, prepare and build in resilience so that when events do occur it can reopen faster and at least cost.



Freight on rail

Maximising rail freight use along strategic corridors can deliver improved economic, social and environmental benefits. The Queensland Government recognises that the freight task operates in a competitive and complex environment. Modal choice is determined by a variety of factors including reliability, price, timeliness, type of goods, geographic circumstance and other economic and social factors. Investing in efficient and effective rail access is particularly important in Queensland's regional areas – the source of our resource and agricultural products. Increasing rail's modal share of freight also reduces heavy vehicles on Queensland's roads, decreasing congestion in urban areas and reducing conflict between heavy vehicles and other motorists.



Road safety



Road safety is a public health issue and continues to be a complex challenge in Queensland. Every crash, serious injury, and fatality on the network has a ripple effect that impacts individuals, families and communities. The Queensland Government has a strong history of taking action to improve road safety. Over time, progress has been made through interventions such as the introduction of seatbelts, enforcement initiatives including the rollout of Australia-first cameras that detect if a driver is using their phone or not wearing a seatbelt, behavioural and cultural change programs, and improving roads and roadsides. However, to achieve our vision of zero road deaths and serious injuries we need to build on these foundations to implement a holistic approach to reducing road trauma. The challenge is to identify infrastructure and service solutions that can help us realise the vision of zero deaths and serious injuries across the road network.



Journey times and transport costs

As our cities and regional centres grow, journey times and reliability can be affected. This impacts the entire network and the wider economy through increased transport costs and livability as commuting times grow. The Queensland Government continues to proactively manage congestion and integrate the operations of the transport network to improve journey reliability for customers. Knowledge-sharing about current and future system requirements across the freight supply chain could also provide insights into the day-to-day working of the freight system to better identify potential issues, innovative solutions and ensure investments are driven by need.



OPPORTUNITIES



Environmental sustainability

Transport infrastructure can directly reduce emissions through the use of low or zero carbon material, the increased use of recycled material, and the sourcing of renewable energy to power our transport system. Supporting low and zero emission vehicles and vessels for personal, commercial and freight use, encouraging greater adoption of passenger transport services and active transport options, such as riding bicycles or e-bikes and walking, will help reduce transport emissions. As technology and new services such as shared connected and automated vehicles develop, the potential for a reduced number of vehicles on our roads and efficiency gains in service delivery can also help lower emissions. Long-term master-planning, which incorporates environmental sustainability measures and improved environmental practices at ports, are also assisting in securing the long-term health and resilience of the maritime environment, including the Great Barrier Reef.



Brisbane 2032

Brisbane 2032 provides a unique opportunity to accelerate the delivery of sustainable, accessible and inclusive transport infrastructure across the state through innovative partnerships with the Australian Government, local government and the private sector.

Opportunities exist to build on the benefits of Cross River Rail's legacy of increasing the region's rail capacity, reducing travel times for commuters and visitors, and improving the passenger experience to promote the benefits and convenience of the SEQ public transport system.



Increased connectivity and accessibility

Delivery of an integrated, accessible and inclusive transport network (products, services, information and infrastructure) demonstrates Queensland's commitment to upholding everyone's human rights, creating a legacy of dignity for all. Inclusive, active and healthy communities need employment and everyday services to be accessible for all.

Improving digital connectivity can minimise the need to travel, while improving our integrated transport and land-use planning to support placemaking and applying universal design principles to our public spaces provides more opportunities for people to continue to use more active modes in their local neighbourhood. Enabling integrated journey planning, information and payments makes using public transport easier, while more on-demand, convenient and seamless interchanging will result in a world-class network that helps Queenslanders access services when and where they want.



Use technology to improve mobility

Introducing new services and technology will improve access and connectivity in our regional centres and cities. More efficient-running and new technologies, such as drones, delivery bots and automated vehicles, can help make better use of existing road capacity, improve access, and reduce first and last-mile freight costs by up to 40 per cent.⁴⁵





TRANSPORT

PRIORITY ACTIONS

1 Planning for Brisbane 2032 (DTMR, DSDILGP)



Plan to deliver sustainable transport infrastructure across the state which provides improved access across SEQ and other host cities providing an ongoing legacy for the community.

2 SEQ rail network and faster rail (DTMR, QR)



Continue to enhance and optimise the SEQ rail network to deliver faster, more efficient and reliable journeys throughout the region, with a focus on the strategic corridors between Brisbane and the Gold Coast and Sunshine Coast. Planning for the region's network will maximise the benefits of Cross River Rail and evaluate opportunities for network expansion including passenger rail services from Ipswich to Springfield, Varsity Lakes to the Gold Coast Airport, Salisbury to Beaudesert, and between Toowoomba and Brisbane.

3 Improved freight reliability and efficiency (DTMR)



Continue to implement the *Queensland Freight Strategy and Action Plan* and work collaboratively to deliver an integrated, resilient, and safe freight system that supports the Queensland economy, links communities, local industry, regions and Queensland to the rest of Australia and internationally. Optimise the use of existing freight infrastructure and targeted investment to create economic opportunities which advance customer, industry and government interests, now and into the future.

4 Queensland Electric Super Highway (DTMR, DEPW)



Continue to expand the Queensland Electric Super Highway across the state in partnership with local governments and industry to ensure increased access for Queenslanders to electric vehicle (EV) charging infrastructure. Investigate the potential to update relevant codes and regulations for new homes and buildings to have charging capability to be EV-ready.

5 Reduce transport infrastructure's environmental impact (DTMR, QR, Ports)



To reduce transport infrastructure's environmental impact and whole-of-life greenhouse gas emissions:

- Embed sustainability into decision making for project planning, design, construction and operation
- Explore opportunities to re-use waste materials, such as for earthworks and drainage construction, as well as crumbed rubber in road construction.

6 Incentivising low and zero emission transport solutions (DTMR, DEPW)



Provide appropriate policy and infrastructure to support greater uptake of zero-emission vehicles and shift to more efficient modes through *Queensland's Zero Emission Vehicle Strategy 2022–2032* and *Action Plan 2022–2024*. Embrace innovative and new transport technologies, and combine research and development to build, strengthen and integrate Queensland's transport system. Reducing emissions in the transport sector will support new industries, skill development, and create more sustainable jobs.

7 Movement and place framework (DTMR, DEPW)



Develop a movement and place framework in partnership with the Queensland Architect and local governments to guide a 'place-based' approach to the planning, design and operation of Queensland's transport network, alongside informing the delivery of transport precinct development outcomes.

8 Coordinated transport and land use (DTMR, DSDILGP)



Leverage significant transport infrastructure projects such as Cross River Rail to develop transit-oriented developments around stations or road infrastructure that support housing diversity, social inclusion, enhanced environmental outcomes and ensure that such projects can grow and adapt to evolving needs.

9 Corridor planning and preservation (DTMR)



Continue planning for transport corridors considering future land use and growth, to ensure protection of key infrastructure corridors.

10 Road operational efficiency (DTMR)



Use technologies such as the next generation traffic signal controllers (NGTSC), Smart Motorways, and LED lighting to enhance operational efficiency, improve network capacity and reduce operating costs.

11 Regional rail performance (DTMR, QR)



Continue to upgrade the North Coast Line to improve regional rail performance and enhance passenger and rail freight movements.

12 Inland Freight Route Investment Strategy (DTMR)



Develop a long-term investment strategy that will inform the delivery of projects on Queensland's inland freight route.

13 Port network management (DTMR, Ports)



Further optimise the Queensland port network, facilitate trade and drive economic growth by:

- ▶ increasing the efficiency and effectiveness of port services and infrastructure
- ▶ improving connectivity and access to help our regions connect with the world
- ▶ driving safety, environmental best practice and sustainability of port operations and development to create a positive change in the communities where they operate.

14 Cooperative and Automated Vehicles (DTMR)



Continue to prepare the technical foundations for the next generation of smart transport infrastructure to provide safety, mobility and environmental benefits to the transport network. Ensuring planning for new infrastructure includes the ability to cater for new connected vehicles and opportunities to expand trials to key corridors statewide.

15 Convenient and attractive active transport (DTMR)



To encourage active transport and other sustainable travel choices, deliver:

- ▶ safe and connected cycle paths and footpaths
- ▶ integrated public transport, walking, cycling and other networks that are accessible for people of all ages and abilities
- ▶ appropriate end of trip facilities
- ▶ more inclusive, active and healthy communities.

16 Seamless personalised journeys (DTMR)



Continue to partner with industry and other levels of government to investigate opportunities for seamless personalised travel using Mobility as a Service (MaaS), increasing access to on-demand transport and improving transfers between different forms of transport across Queensland.

17 Rail network safety and efficiency (DTMR, QR, CRRDA)



Progressively deliver the European Train Control System (ETCS) to improve safety, capacity and efficiency of the rail network. The ETCS is an advanced signalling system that relays continuous information between the train and central Rail Management Centre via a radio system, trackside technology and onboard equipment.

18 Reliable, safe and accessible passenger transport (DTMR)



Continue to deliver passenger transport outcomes across Queensland focusing on reliable, safe, accessible and frequent services, and infrastructure and technology improvements to move people quickly and easily in our towns and cities.

19 Inland Rail (DTMR, QR)



Connect producers to market and create new opportunities to deliver freight to markets between Melbourne and Brisbane and beyond to global markets by continuing to work with the Australian Government to maximise the benefits of Inland Rail for Queensland.

20 Network security, resilience and sustainability (DTMR, QR, Ports)



Improve transport network security and resilience to the impacts of climate change and disruptions from all hazards, including natural disasters and human-induced threats, to enable the safe movement of people and goods. Research and invest in sustainable materials to improve recovery and reconstruction activities. Improve planning, design, delivery and operations to incorporate risk related to natural disasters and climate change impacts.

21 Supporting tourism (DTMR, DTIS)



Continue to incorporate evidence-based tourism priorities in the planning and investment of transport infrastructure and services to improve access and drive real growth in tourism opportunities and jobs.

22 Freight Rail (DTMR, QR)



Work with rail and supply chain stakeholders to encourage the use of regional rail corridors (South West, Central West, Mt Isa and North Coast Lines) to improve road safety, reduce road transport emissions and reduce the road maintenance burden.

23 Decision making in an uncertain future (DTMR)



Continue to undertake and improve policy development and transport modelling capacity and capability to assess how new transport service models, such as shared vehicle use, can help achieve the desired strategic transport outcomes as new technologies such as autonomous vehicles become a reality.

24 Improved road safety (DTMR, QPS)



Deliver innovative initiatives focused on the whole-of-life approach to transport safety to improve overall transport network safety. Employ new technologies that can improve safety including connected and automated vehicles or 'Hold the Red' an active collision prevention system.

INFRASTRUCTURE OBJECTIVES



Encourage jobs, growth and productivity



Develop regions, places and precincts



Enhance sustainability and resilience



Adopt smarter approaches



TRANSPORT

▼ CASE STUDY

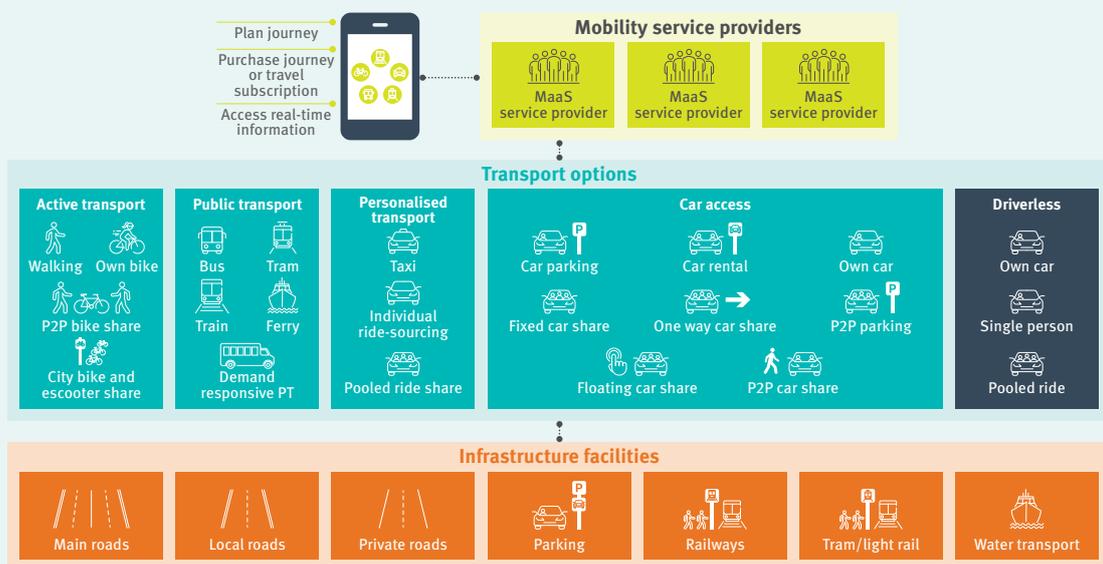
Mobility as a Service

New services and technologies provide exciting possibilities for innovative transport services and modes. DTMR is exploring opportunities to harness emerging technologies and new service models to improve the use of existing roads and transport systems. Personalised transport services have grown in popularity due to the proliferation of smartphones and ready access to data. Mobility as a Service (MaaS) schemes that integrate public and private transport services into a single fare often as part of a subscription service are increasing in popularity and demand.⁴⁶

DTMR and the University of Queensland (UQ), as part of an iMove Cooperative Research Centre program, have commenced a joint proof of concept to explore how MaaS schemes can enhance personal mobility locally. The trial uses emerging technology to test elements of MaaS with a group of UQ staff and students.

The application of MaaS schemes has the potential to make certain modes more attractive for users in the face of competition from new and future transport modes that may adversely affect the transport system, primarily through increased congestion.

Modal options, such as on-demand transport, can be included in a MaaS model. DTMR is currently trialling a number of on-demand public transport models, including on the Gold Coast, where residents of Nerang West, Highland Park, and Pacific Pines will have access to new flexible, shared services designed to connect customers to the wider TransLink public transport network and key locations in the community. As well as providing flexible services, new technology is also being introduced by DTMR as part of some of the on-demand trials. This will allow customers to book, plan and pay for an on-demand public transport service easily and in different ways. Subject to the outcomes of the trials, future on demand services may be rolled out across the state where regular public transport is not available or possible.



Overview of Mobility as a Service (Source: Modified from MaaS Australia)