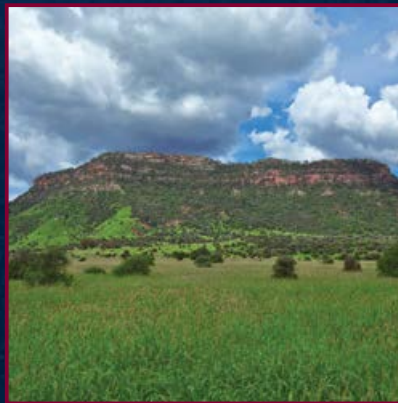


# SOUTH WEST QUEENSLAND

REGIONAL TRANSPORT PLAN

2019



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The Department of Transport and Main Roads acknowledge the Traditional Owners and Custodians of the land and waterways. We also acknowledge their ancestors and Elders both past and present. The Department of Transport and Main Roads is committed to reconciliation among all Australians. Aboriginal and Torres Strait Islander readers are warned, images in this document may contain or represent deceased persons which may cause sadness or distress.

The Department of Transport and Main Roads wishes to acknowledge the valuable input and contribution from our local government partners to develop this plan.

- Balonne Shire Council
- Bulloo Shire Council
- Maranoa Regional Council
- Murweh Shire Council
- Paroo Shire Council
- Quilpie Shire Council.

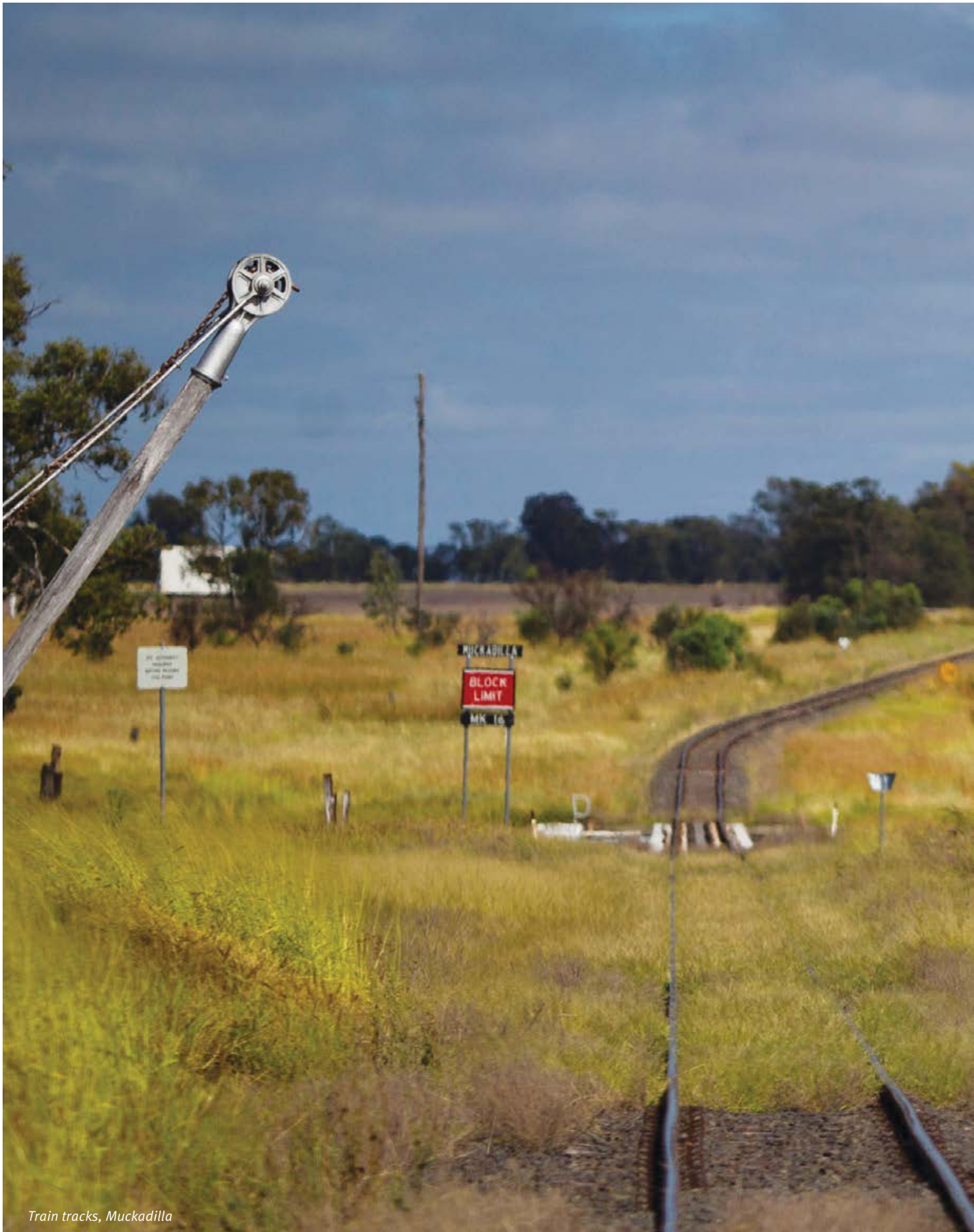
*Cover images: Warrego Highway, Roma (background); Truck on King Street, Charleville (inset, left); Mt Hutton, Injune (inset, centre); Warrego River (inset, right).*

*Internal cover image: Quilpie.*



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*Train tracks, Muckadilla*



# 1. Introduction



## 1.1 A shared direction for transport

The *South West Queensland Regional Transport Plan* (the Plan) outlines a shared direction for shaping the region's transport system over the next 15 years.

The Plan was developed in consultation with local government and key stakeholders, with input from customers and industry. The Department of Transport and Main Roads will continue to work in partnership with all levels of government, the community and industry to implement the Plan and achieve shared goals for the region.

The Plan covers all modes of transport with a focus on the networks and services in the region and the inter-regional and international connections that are vital to the region's social and economic prosperity.

The South West Queensland region is home to more than 24,000 people and includes the local government areas of Balonne, Bulloo, Maranoa, Murweh, Paroo and Quilpie.<sup>1</sup>

## 1.2 What is a Regional Transport Plan

The purpose of the *South West Queensland Regional Transport Plan* is to set out regional transport priorities and actions for developing the transport system in a way that supports regional goals for the community, economy and environment.

The Plan has been developed in accordance with the *Transport Planning and Coordination Act 1994* and meets the department's legislative responsibility to develop integrated regional transport plans that complement land use planning, and support the goals and objectives of regional plans.

Regional Transport Plans are a fundamental component in the hierarchy of integrated system planning. They have an essential role in defining local responses to wider community goals, system objectives, problems and priorities, through the development of policy choices and transport system strategies at a regional level. Regional Transport Plans have a clearly defined role in Transport and Main Road's planning process. They are not intended to specify new infrastructure solutions or funding commitments, as that is the role of the *Queensland Transport and Roads Investment Program* (QTRIP).

The approach to developing Regional Transport Plans is aligned with the *Australian Transport Assessment and Planning Guidelines* for best practice transport assessment and planning (Figure 1).

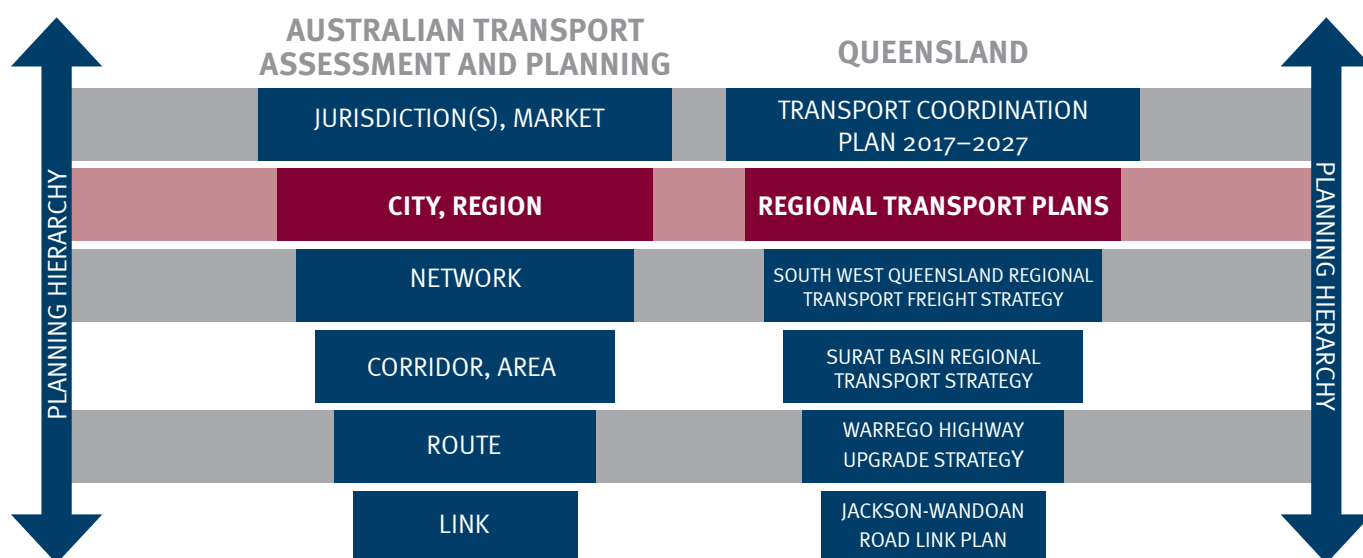


Figure 1: Examples of how Queensland responds to the Australian Transport Assessment and Planning hierarchy

<sup>1</sup> Queensland Government Statistician's Office. (April 2019). Retrieved from *Queensland Regional Profiles: Resident Profile for Custom region*. [statistics.qgso.qld.gov.au/qld-regional-profiles](https://statistics.qgso.qld.gov.au/qld-regional-profiles).



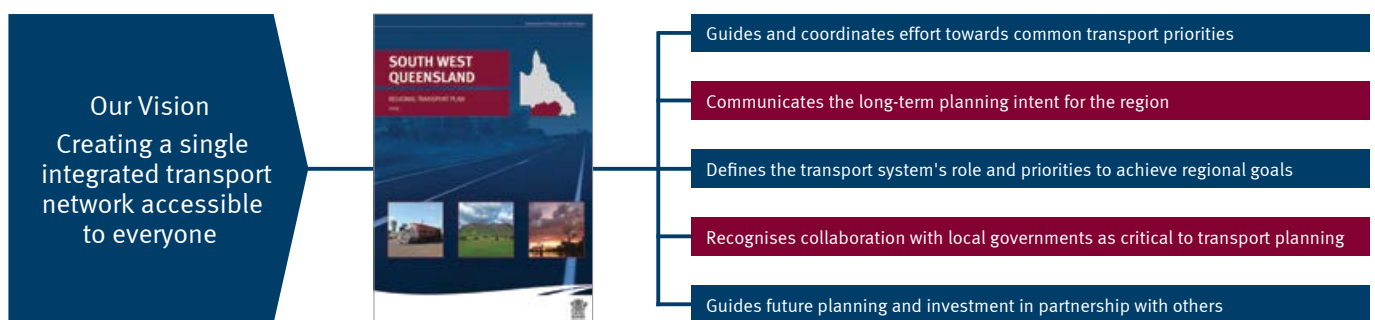
The regional policy choices and system strategies expressed in this Plan are used to:

- inform more detailed planning or investigations at a network, area, corridor, route or link level
- guide development, assessment and selection of specific investment solutions.

The Plan supports the department's vision of 'creating a single integrated transport network accessible to everyone' through:

- guiding and coordinating effort towards common transport priorities
- communicating the long-term planning intent for the region
- defining the transport system's role and priorities to achieve regional goals recognising collaboration with local governments as critical to 'one-network' transport planning
- guiding future planning and investment in partnership with others.

The Plan will be used by Transport and Main Roads to inform investment decisions to develop the regional transport network.



## 1.3 Strategic alignment

This Regional Transport Plan has been developed in the context of relevant policies, strategies, plans and investment frameworks across all levels of government. These policy and planning documents are reflected in the objectives, challenges, opportunities and priorities identified in the Plan.

The Plan aligns with:

- *State Infrastructure Plan*
- *State Planning Policy*
- *South West Regional Plan 2009*
- *Maranoa-Balonne Regional Plan 2009*
- *Darling Downs Regional Plan 2013*
- local government land use, transport plans and strategies
- economic development strategies
- the Australian Government's *Australian Infrastructure Plan* (prepared by Infrastructure Australia).

The Plan responds to customer needs, as well as the goals and directions of the community, industry and all levels of government.

Transport and Main Roads also produces statewide strategies and plans that guide coordinated outcomes for transport networks and services across Queensland. These high-level plans set the broader framework for taking action at the regional and local level.

Key planning documents include:

- *Transport Coordination Plan 2017–2027*
- 'Queensland Transport Strategy' (draft)
- *Transport and Main Roads Strategic Plan 2019–2023*
- *Queensland Freight Strategy*
- *Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015–2021*
- *Queensland Cycling Strategy 2017–2027*
- *Queensland Walking Strategy 2019–2029*
- *Queensland Tourism and Transport Strategy*.

Priorities and actions identified in the Plan align with current statewide transport policies and objectives. The department regularly reviews and updates statewide strategies and plans and future updates to the Plan will reflect these outcomes.

# The future of transport

## Queensland Transport Strategy (draft)

The draft Queensland Transport Strategy (QTS) provides a 30-year vision for Queensland's transport system that is designed to respond to, and maximise the benefits from, current and emerging trends and technologies for Queensland households, businesses and the wider community.

The draft QTS identifies five high-level customer-focused outcomes for the future transport system:

1. Accessible, convenient transport
2. Safe journeys for all
3. Seamless, personalised journeys
4. Efficient, reliable and productive transport for people and goods
5. Sustainable, resilient and liveable communities.

The draft QTS sets a high-level policy platform for the Department of Transport and Main Roads (TMR) to realise its vision of creating a single integrated transport network accessible to everyone. It complements other strategic planning documents by setting longer-term outcomes and directions for TMR which are directly aligned to the short-term priorities in the *TMR Strategic Plan 2019–2023* and the medium-term objectives of the *Transport Coordination Plan 2017–2027*.

Regional Transport Plans are consistent with and support the draft QTS and will play a key role in achieving its outcomes by setting regional priorities and identifying and coordinating key actions to develop our future transport system.

## The future of mobility

The popularity of new transport services, such as on-demand transport and car sharing, is increasing globally. Enabling the introduction of new mobility providers and technology and prioritising investment in shared transport services are two directions from the draft QTS in which Mobility-as-a-Service (MaaS) will play a key role.

**Transport and Main Roads** is exploring the concept of MaaS which embodies a shift away from personally owned modes of transportation and towards aggregated mobility solutions that are consumed as a service.

MaaS is a combination of public and private transport services accessed digitally to provide personalised journey planning, booking and payment, and offers choice and dynamic travel options to influence behaviour and better optimise the network.

MaaS will not be a 'one-size fits all' approach and will look different across the state, based on community needs, availability of transport options and infrastructure.

In rural and regional Queensland, MaaS could be used to increase travel opportunities connecting rural communities to health, education and other social services to maintain an appropriate level of service and improve transport accessibility. Specific transport solutions for rural communities could involve long haul transport services, low technology options and the repurposing of under-utilised assets in the community.

## Climate change and a low emissions future

In Queensland, the transport system has recently been impacted by extreme weather events such as cyclones, floods, severe and prolonged drought and fires - and climate change may exacerbate existing conditions, leading to even greater impact in future. Building a more resilient transport system is a priority in all Regional Transport Plans for Queensland.

A key part of taking action in response to climate change is the journey to zero net emissions. *The Pathways to a clean growth economy: Queensland Climate Transition Strategy* outlines how the Queensland Government proposes to prepare for the transition to a clean growth economy and a zero net emissions future.

The transport sector will play a significant role in this transition, including:

- enabling low carbon transport options using emerging alternative fuel technologies, to ensure Queensland is in the best position to capture the benefits and opportunities these vehicles will bring. The Queensland Government has developed *The Future is Electric: Queensland's Electric Vehicle Strategy* and is also exploring potential uses of hydrogen fuel cell vehicles.
- reflecting zero net emissions goals in infrastructure planning
- supporting low-carbon construction, infrastructure and transport systems
- improving passenger transport systems to be low emission, well-maintained, affordable, reliable, frequent and integrated.

Regional Transport Plans recognise opportunities for increased use of low carbon technology across the transport system in a way that responds to the local context and provides a pathway for an increased mode shift to sustainable transport options such as walking, cycling and passenger transport.



## 1.4 Alignment with the *State Infrastructure Plan*

The *State Infrastructure Plan* outlines the Queensland Government's strategic direction for the planning, investment and delivery of infrastructure throughout Queensland. This Regional Transport Plan applies the transport policy objectives of the *State Infrastructure Plan* at a regional level.

The Queensland Government's strategic direction for transport infrastructure is expressed by the *State Infrastructure Plan* responses (Table 1). Accordingly, many of the planning actions in this Plan respond to these with a particular focus on improving supply chains, safer connections between regional centres and better use of data and technology.

Table 1: *State Infrastructure Plan* responses (Part A, p52)

Transport				
Focus on maintenance and rehabilitation of existing infrastructure to reduce the long-term cost of repair and improve network resilience.	Unlock the potential of critical supply chains by identifying and improving the freight network.	Seek innovation and technology solutions to create a better performing and lower emissions transport system.	Digitally connected smart infrastructure to improve capacity, safety and security.	Connect regional communities with access to essential services and opportunities.

## 1.5 Alignment with the *Transport Coordination Plan 2017–2027*

The *Transport Coordination Plan 2017–2027* (TCP) provides a strategic framework for the planning and management of transport resources in Queensland over a 10-year timeframe. The TCP was developed in accordance with the requirements of the *Transport Planning and Coordination Act 1994* and identifies the high-level objectives for transport in Queensland, across five key areas:

- **Customer experience and affordability** – transport meets the needs of all Queenslanders, now and into the future.
- **Community connectivity** – transport connects communities to employment and vital services.
- **Efficiency and productivity** – transport facilitates the efficient movement of people and freight to grow Queensland's economy.
- **Safety and security** – transport is safe and secure for customers and goods.
- **Environment and sustainability** – transport contributes to a cleaner, healthier and more liveable environment and is resilient to Queensland's weather extremes.

The TCP provides a suite of transport key performance indicators (KPIs) to measure progress towards these objectives and also includes clear criteria for prioritising

spending on transport that align with the *State Infrastructure Plan*'s options assessment approach. The TCP is the overarching medium-term strategic document that provides guidance and direction for more detailed transport strategies and plans produced by Transport and Main Roads, such as Regional Transport Plans and modal strategies. The TCP is consistent with the Queensland Government's overall strategic planning for Queensland, including the government's objectives for the community and the *State Infrastructure Plan*.

The system-wide transport objectives articulated in the TCP have informed the South West region's priorities and corresponding transport objectives, actions and measures of success. The TCP's transport KPIs have provided a means to measure the impact the Regional Transport Plan has on the region's transport system and what this means for customers, the community, the economy and the environment.

## 1.6 Alignment with the *State Planning Policy*

The *State Planning Policy 2017* outlines the Queensland Government's interests in land use planning and development for Queensland. It identifies and seeks to protect through the planning framework three state transport interests: state transport infrastructure, strategic airports and aviation facilities, and strategic ports.

The *State Planning Policy* identifies the Roma Airport as a strategic airport within the South West Queensland region.

## 1.7 Alignment with regional planning

The Department of State Development, Manufacturing, Infrastructure and Planning has authority over three relevant statutory regional plans which apply to local governments across the region. These are:

- *South West Regional Plan 2009*
- *Maranoa-Balonne Regional Plan 2009*
- *Darling Downs Regional Plan 2013*.

The *South West Regional Plan* covers the local government areas of Bulloo, Murweh, Paroo and Quilpie. *Darling Downs Regional Plan* covers the local government areas of Balonne and Maranoa. It also includes Goondiwindi, Southern Downs, Toowoomba and Western Downs local government areas, which are included as part of the *Darling Downs Regional Transport Plan*. The *Maranoa–Balonne Regional Plan* covers the Maranoa and Balonne local government areas.

Recognising that local government is best placed to undertake local planning, these regional plans will not respond to all matters in the region but will play a focussed role in addressing and resolving competing state interests on a regional scale.

Collectively, this Plan and the regional plans will work together towards achieving shared goals and objectives for transport through complementary land use and transport initiatives that:

- integrate land use, transport and economic activity
- support quality lifestyle options for residents
- enhance the identity of regional communities, providing the required infrastructure and services
- protect agricultural land and regional landscapes while supporting the co-existence of other emerging opportunities, such as natural resource production
- create a more sustainable future.

### Other regionally significant plans and initiatives

Statutory regional plans are part of a suite of policies and legislative instruments that guide land use planning and development. Other regionally specific plans that have informed this Regional Transport Plan include the following:

- *Darling Downs and South West Inc: Regional Roadmap 2016-2020*; and *Darling Downs and South West Economic and Social Development Strategy – Regional Development Australia*
- *Skills and Jobs Plan: Queensland – Darling Downs and South West 2012-2014* – Australian Government Department of Education, Employment and Workplace Relations, Regional Education.



Warrego Highway, Roma



## 1.8 Achievements to date

Transport and Main Roads has reflected on the transport principles outlined in the regional plans that apply to the South West Queensland region, along with other strategic direction setting documents, and delivered the following transport network improvements in the region:

### Multi-modal freight movement

- Facilitated movement of cattle by rail from Quilpie, Charleville, Morven, Roma and Mitchell to Oakey with the upgrade of Oakey beef rail facilities.

### Warrego Highway

- Widening a 6.2 kilometre section of the Warrego Highway at Amby, as part of the upgrade of the Warrego Highway between Roma and Mitchell to allow Type 2 road train access under the Nation Building Program, jointly funded by the Australian Government and Queensland Government.
- Improvements to the Warrego Highway and Landsborough Highway intersection, including overlay and pavement rehabilitation.

### Natural Disaster Program

- Repairs to flood damaged roads across the region as part of the Natural Disaster Program, jointly funded by the Australian Government and the Queensland Government.

### Active transport

- *Downs South West Principal Cycle Network Plan* and Priority Route Map for Roma developed in collaboration with local governments.

### Infrastructure upgrades and rehabilitation

- Widening, sealing and realigning a two kilometre section of Wallumbilla South Road.
- Upgrading priority sections of Quilpie Adavale Road to a sealed standard, linking Diamantina Developmental Road to Hell Hole National Park.
- Paving and sealing a missing link of Innamincka Road, linking with the Dig Tree Heritage site, Birdsville, Innamincka National Park and the Strzelecki Track.
- Paving and sealing works on various sections of Roma–Taroona Road to complete bitumen sealing of this road.
- Realignment of sub-standard curves on the Noondoo–Thallon Road.
- Upgrading a section of the Carnarvon Highway, 40 kilometres north of Injune.

- Strengthening and widening of high priority sections of the Diamantina Developmental Road, between Charleville and Windorah. Widening priority sections of the Bulloo Developmental Road, between Cunnamulla and Thargomindah.
- Strengthening and widening of high priority sections of the Balonne Highway, between Bollon and Cunnamulla.
- Widening of high priority sections of the Mitchell Highway, between Barringun and Cunnamulla.
- Culvert replacement on the Landsborough Highway, between Augathella and Tambo.
- Strengthening the Paroo River approaches, Bulloo Channel and Bulloo River Bridges.
- Replacement of a large culvert on the Carnarvon Highway, between St George and Surat.

### Bridges

- Replacement of the Maranoa River Bridge at Mitchell, jointly funded by the Australian Government and Queensland Government.
- Replacement of a bridge at Yuleba Creek on Roma–Condamine Road.
- Replacement of the timber bridge at Snake Creek, on the Roma–Condamine Road.

### Rest areas

- Construction of two new rest areas on the Carnarvon Highway, between St George and Rolleston.
- Construction of a new rest area at the intersection of the Diamantina Developmental Road and Cooper Developmental Road.
- Construction of a new rest area on the Mitchell Highway (Barringun–Cunnamulla).



*Caravans parked at Hebel*

## 1.9 Developing Regional Transport Plans

### Planning principles

All levels of government routinely face increasing pressure to fund more public services and infrastructure in order to meet community expectations. Funding is limited, so competing priorities must be continually balanced.

Regional Transport Plans will help to achieve this in several ways:

- by establishing the region-centric planning that leads to good investment decisions—a focus at this level helps to ensure that funds are prioritised to meet regional needs and customer expectations
- by promoting consideration of non-infrastructure solutions for regional priorities which are often more cost-effective than building new infrastructure
- by helping to identify and align cross-agency priorities and actions to promote efficient and coordinated planning and investment.

In the context of constrained funding, Regional Transport Plans are being developed with the view that solutions to transport challenges and customer needs are not always about building new or expanding existing infrastructure, but include identifying new and innovative ways to do more with less. The best outcome may not be a new road or other type of transport facility. Instead, it may be modification of an existing asset, for example, reconfiguring a road to accommodate bicycle or bus lanes.

Consideration of lower cost and non-infrastructure solutions within planning and investment decision-making processes ensures we are getting the most from our existing assets and using infrastructure smarter and more efficiently than before. Identifying shared goals and partnership opportunities across government and the private sector positions the region to leverage collective expertise and resources to achieve more with available funding. The department's approach to identifying, prioritising and investing in transport system solutions aligns to the *State Infrastructure Plan's* options assessment approach as shown in Figure 2.

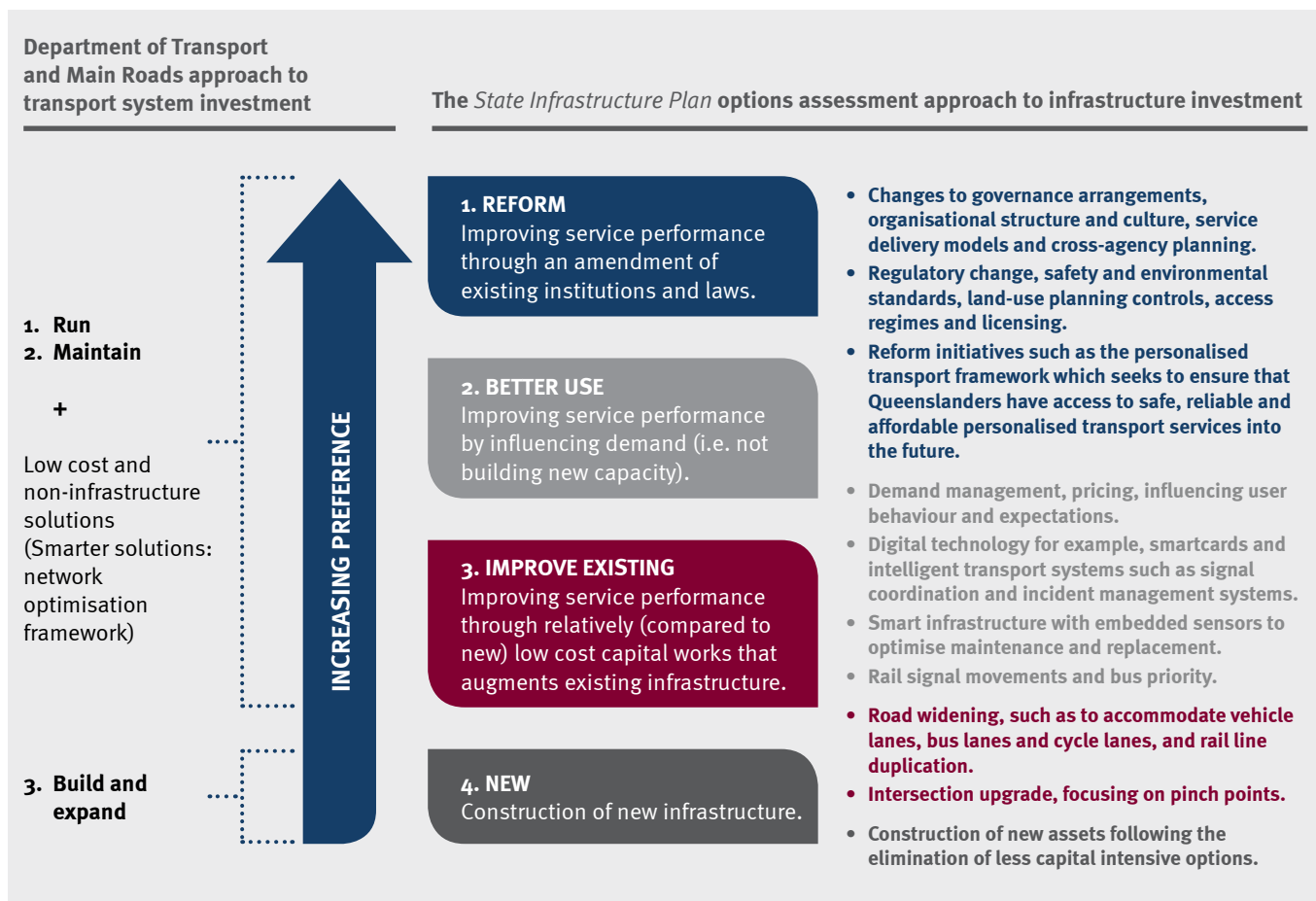
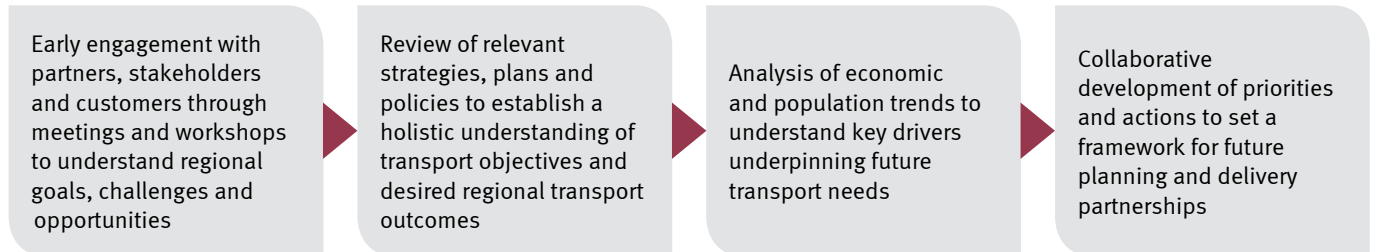


Figure 2: Alignment between the departmental and government approaches to infrastructure investment



## Process

The Plan was developed with a ‘customer-first’ and ‘one network’ approach. Early engagement with customers, stakeholders and partners was vital to identify and understand the region’s issues, challenges, opportunities, goals and priorities for taking action. Key stages in the development process are set out below.



Flood warning sign, Ashburn Road, Roma

## Customer-first approach

A 'customer-first' approach is about being conscious of how customers experience the transport system, and being willing to change the way we do things to improve that experience. It also means viewing the transport system as customers do: as 'one network', with little perceivable difference between the various parts provided or managed by the different levels of government.

Transport and Main Roads' customer-first approach is central to the way it does business. The approach is about shaping deliverables and services with customers in mind, co-designing solutions that embrace the future and communicating effectively and meaningfully.

## One network

Regional Transport Plans are developed on the basis that the transport system operates as 'one network'.

Working and collaborating with all relevant transport system stakeholders to develop this Plan ensures planning priorities for the regional transport system are considered as a whole.

Transport and Main Roads will continue to partner with local governments and transport operators to continuously improve the transport system and the experiences of our customers.

### Engaging with our customers

To achieve a 'one network' approach, the department involved customer representatives early in the development of all Regional Transport Plans and engaged and developed content in partnership with local government and other government agencies. To inform the development of this plan, representatives were selected from different locations in the region, covering a range of sectors and interests, including agriculture, mining, health, tourism to small business. To gain customer input, the department hosted workshops and facilitated a number of meetings and one-on-one interviews. Some of the key issues that emerged from this engagement included:

- the importance freight plays in support of the region's economy
- connecting the towns and people across a vast, predominantly rural region
- transport system resilience and responsiveness to weather events, including floods and drought
- the safety of people travelling across a vast region
- the importance of the tourism industry to the region.

This input from customers has informed the priorities and actions identified in this Plan.

## Structure

The document comprises five chapters covering an introduction, setting the scene, planning context, transport response and implementation. The sequence and content of chapters reflects the development and implementation stages for the Plan.

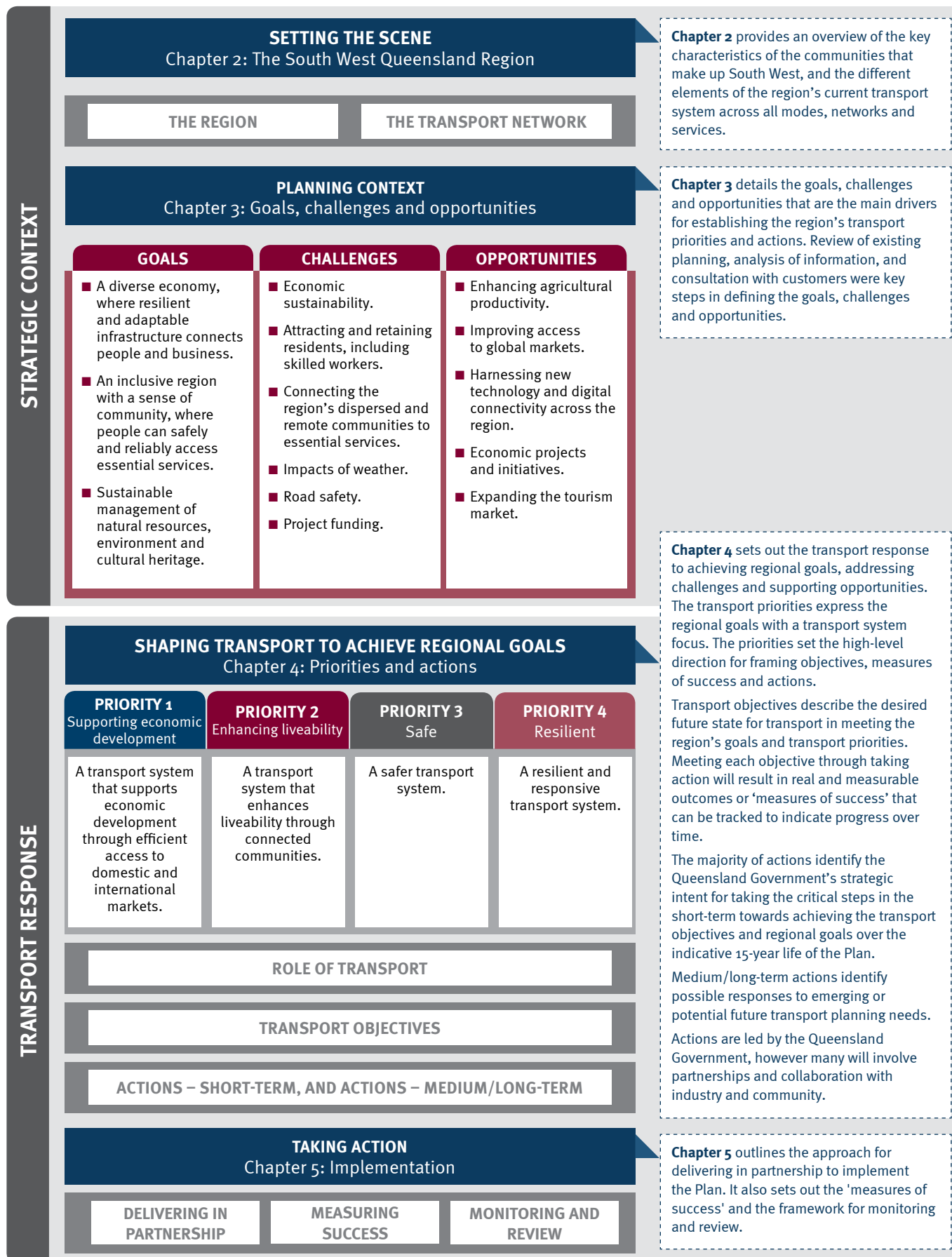
- **Chapter 1** introduces the purpose, scope and strategic alignment of the Regional Transport Plan.
- **Chapter 2** provides an overview of the region's community, economy and transport system.
- **Chapter 3** describes the region's goals, challenges and opportunities and their relationship to transport.
- **Chapter 4** sets out the priorities, objectives and actions for shaping the transport system over the next 15 years.
- **Chapter 5** outlines the Plan's implementation and review process.

Table 2 outlines the key components of the Regional Transport Plan.



Kyabra Road, Quilpie

Table 2: Structure of the South West Queensland Regional Transport Plan







*Roma Saleyards*



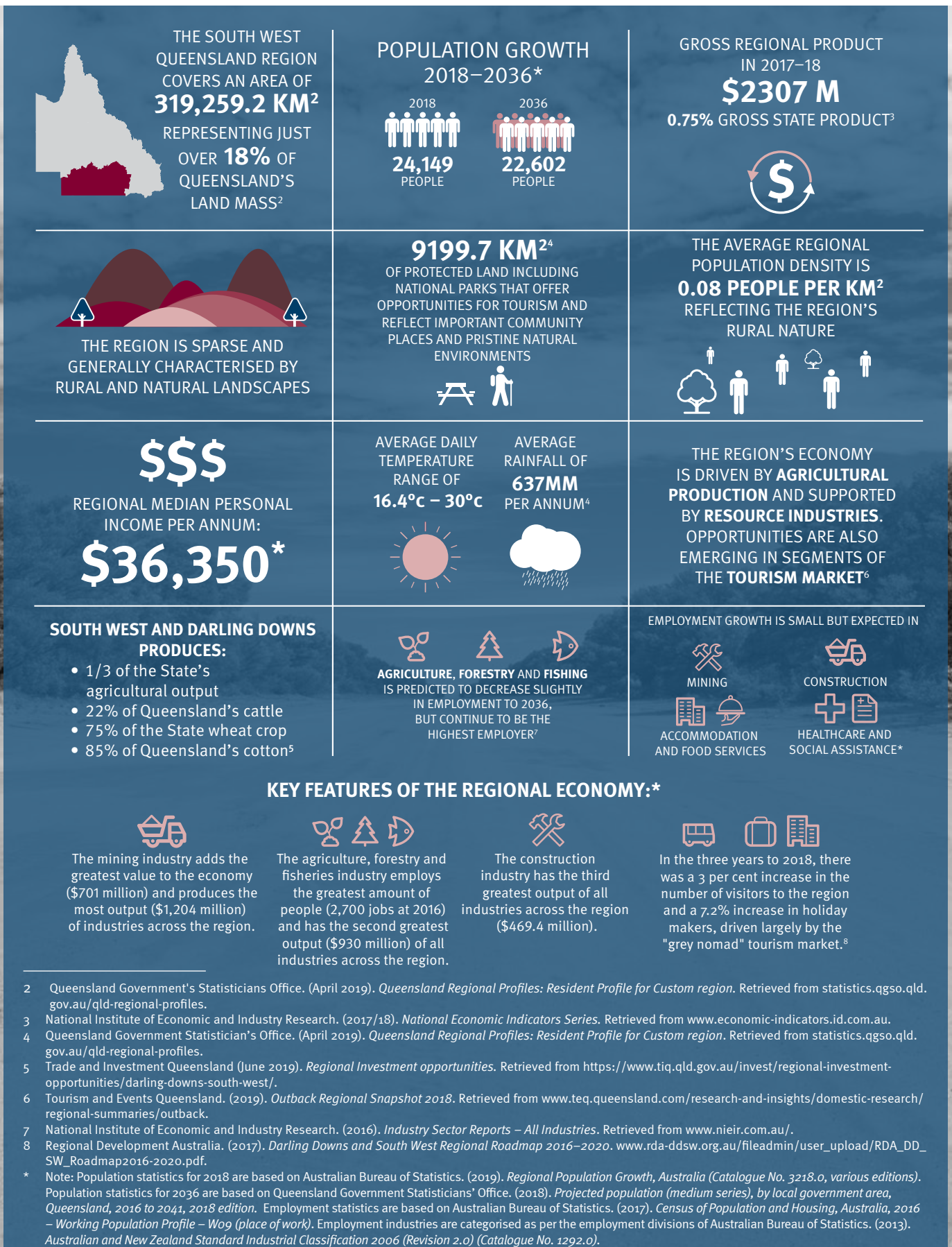
# 2.

## The South West Queensland Region





## 2.1 Region overview



2 Queensland Government's Statisticians Office. (April 2019). *Queensland Regional Profiles: Resident Profile for Custom region*. Retrieved from [statistics.qgso.qld.gov.au/qld-regional-profiles](https://statistics.qgso.qld.gov.au/qld-regional-profiles).

3 National Institute of Economic and Industry Research. (2017/18). *National Economic Indicators Series*. Retrieved from [www.economic-indicators.id.com.au](http://www.economic-indicators.id.com.au).

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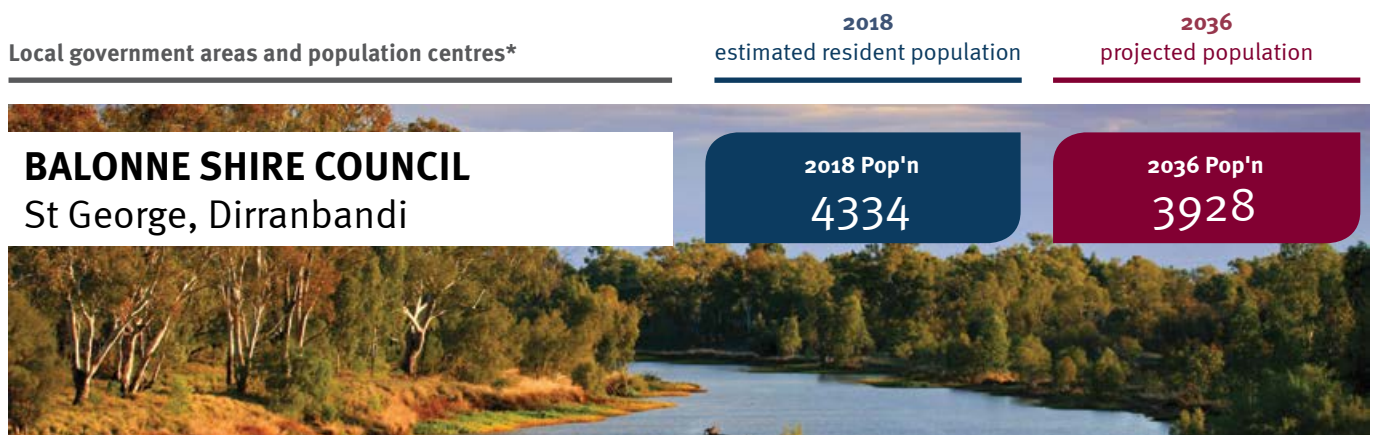
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8 Regional Development Australia. (2017). *Darling Downs and South West Regional Roadmap 2016–2020*. [www.rda-ddsw.org.au/fileadmin/user\\_upload/RDA\\_DD\\_SW\\_Roadmap2016-2020.pdf](http://www.rda-ddsw.org.au/fileadmin/user_upload/RDA_DD_SW_Roadmap2016-2020.pdf).

\* Note: Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – Working Population Profile – Wo9 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.



## Local government areas



Balonne is located in the south-east of the region, bordering the Darling Downs region. The local government area has 2408 jobs and 925 businesses and contributes \$313 million to the gross regional product.<sup>9</sup> The highest employment industry is agriculture, forestry and fishery which accounts for 34.3 per cent, followed by health care and social assistance with 12.1 per cent and retail trade at 9.2 per cent.

Key exports include cotton and grain. Cotton grown around St George and Dirranbandi is consolidated in local cotton gins, then transported east for export by road and rail.

Grain which is predominantly grown in the eastern areas of the region is consolidated in Roma and Thallon before being transported east by road and rail.

Major road connections converge in St George including the Moonie Highway (east to the Darling Downs region), Carnarvon Highway (north to Surat and Roma, south to New South Wales along the Great Inland Way), Balonne Highway (west to Cunnamulla along the Adventure Way), St George Dirranbandi Road (south to Dirranbandi) and Mitchell St George Road (north to Mitchell).



Bulloo is located in the far south-west corner of the region and borders both South Australia and New South Wales. The local government area has 264 jobs and 95 businesses and contributes \$69 million to gross regional product.<sup>10</sup>

Employment in public administration and safety accounts for 21.9 per cent of employment while mining accounts for 21.6 per cent followed by agriculture, forestry and fishery at 19.4 per cent.

Natural/coal seam gas extracted throughout the region is piped to Gladstone or South Australia.<sup>11,12</sup>

Bulloo Development Road connects Thargomindah to Cunnamulla in the east. Thargomindah is connected to Quilpie in the north via the Quilpie-Thargomindah Road, as well as via a westerly connection from Bundeena Road through to Diamantina Developmental Road via Eromanga. The Adventure Way connects the region to South Australia via the Innamincka Road.

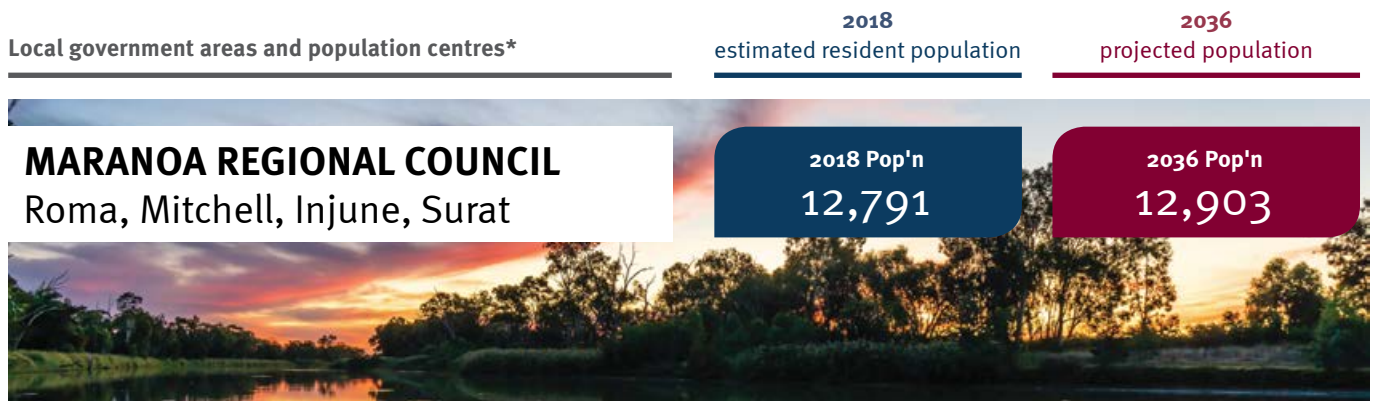
<sup>9</sup> National Institute of Economic and Industry Research. (2017/18). *Economic Indicators Series*. Retrieved from [www.economic-indicators.id.com.au](http://www.economic-indicators.id.com.au).

<sup>10</sup> *ibid.*

<sup>11</sup> Department of Agriculture and Fisheries. (2016). *Queensland Agricultural Land Audit Central West and South West*. [www.daf.qld.gov.au/\\_data/assets/pdf\\_file/0007/64654/QALA-Ch09-CW-SW.pdf](http://www.daf.qld.gov.au/_data/assets/pdf_file/0007/64654/QALA-Ch09-CW-SW.pdf).

<sup>12</sup> Department of Natural Resources, Mines and Energy. (2017). *Queensland mineral, coal and petroleum resources map*. [www.dnrm.qld.gov.au/\\_data/assets/pdf\\_file/0003/242085/qld-resources-map.pdf](http://www.dnrm.qld.gov.au/_data/assets/pdf_file/0003/242085/qld-resources-map.pdf).

\* Note: Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – Working Population Profile – Wo9 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.



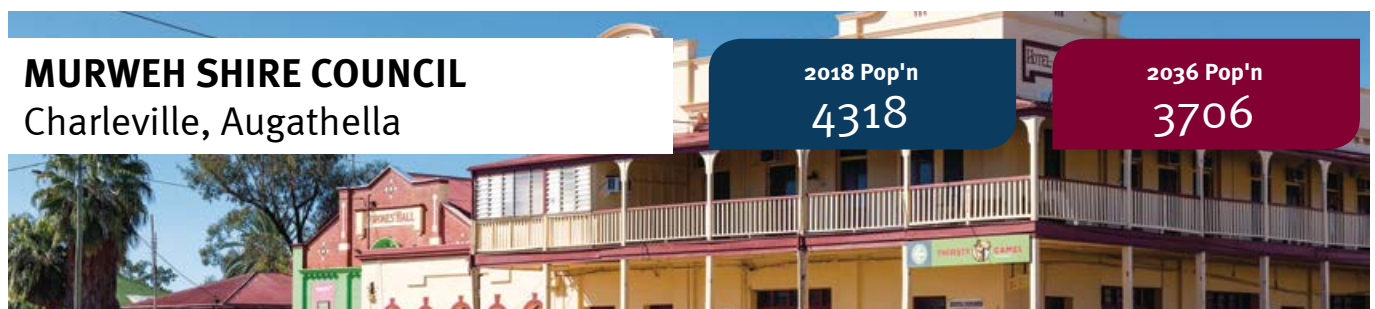
Maranoa is located in the north-east of the region, bordering the Darling Downs region. The local government area has 8130 jobs and 2477 businesses and contributes \$1.538 billion to gross regional product.<sup>13</sup>

The highest employment industry is agriculture, forestry and fishing (17.5 per cent) followed by health care and social assistance (10.1 per cent) and mining (8.6 per cent).

Cattle are transported by road to the Roma Saleyards for either consolidation or transfer to eastbound rail services or by road to local pastures. Cotton grown around Roma is transported by road to cotton gins in St George and the Darling Downs, then transported east for export by road and rail.

Grain which is predominantly grown in the eastern areas of the region is consolidated in Roma before being transported east by both road and rail. Natural/coal seam gas extracted throughout the region is piped to Gladstone or South Australia.<sup>14,15</sup>

The Warrego (east-west) and Carnarvon (north-south) highways traverse the area through Roma. The Carnarvon Highway forms part of the Great Inland Way and provides access to the Carnarvon National Park. The Mitchell St George Road is also a key state-controlled road connecting Mitchell with St George to the south. The Surat Development Road provides a connection from Surat to the Darling Downs region in the east.



Murweh is located in the centre of the region and is bordered by the Central West and Fitzroy regions to the north. The local government area has 2275 jobs and 650 businesses and contributes \$220 million to gross regional product.<sup>16</sup>

The highest employment industry is agriculture, forestry and fishing (17.5 per cent) followed by health care and social assistance (13.9 per cent) and public administration safety (10.1 per cent).

The Diamantina Developmental Road connects Charleville

with Quilpie to the west and the Warrego Highway connects to Roma in the east. The Mitchell Highway traverses the area from north to south through Charleville and forms part of the Matilda Way connecting north to Longreach and Winton. The Landsborough Highway runs from east of Morven to the north. Charleville is also connected by rail west to Quilpie transporting mostly cattle, south to Cunnamulla (currently non-operational) and east to Roma carrying both freight and passengers continuing onward to Darling Downs and South East Queensland.

<sup>13</sup> National Institute of Economic and Industry Research. (2017/18). *Economic Indicators Series*. Retrieved from [www.economic-indicators.id.com.au](http://www.economic-indicators.id.com.au).

<sup>14</sup> Department of Agriculture and Fisheries. (2016). *Queensland Agricultural Land Audit Central West and South West*. [www.daf.qld.gov.au/\\_\\_data/assets/pdf\\_file/0007/64654/QALA-Ch09-CW-SW.pdf](http://www.daf.qld.gov.au/__data/assets/pdf_file/0007/64654/QALA-Ch09-CW-SW.pdf).

<sup>15</sup> Department of Natural Resources, Mines and Energy. (2017). *Queensland mineral, coal and petroleum resources map*. [www.dnrm.qld.gov.au/\\_\\_data/assets/pdf\\_file/0003/242085/qld-resources-map.pdf](http://www.dnrm.qld.gov.au/__data/assets/pdf_file/0003/242085/qld-resources-map.pdf).

<sup>16</sup> National Institute of Economic and Industry Research. (2017/18). *Economic Indicators Series*. Retrieved from [www.economic-indicators.id.com.au](http://www.economic-indicators.id.com.au).

\* Note: Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – Working Population Profile – W09 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.



Local government areas and population centres\*

2018  
estimated resident population

2036  
projected population

**PAROO SHIRE COUNCIL**  
Cunnamulla

2018 Pop'n  
**1586**

2036 Pop'n  
**1171**



Paroo is located to the south of the region and is bordered by New South Wales. The local government area has 899 jobs and 250 businesses and contributes \$101 million to gross regional product.<sup>17</sup>

Agriculture, forestry and fishing accounts for 29.6 per cent of employment, followed by public administration and safety with 13.4 per cent and health care and social assistance with 10.2 per cent.

The area's major north-south and east-west road connections run through Cunnamulla. These are the Balonne Highway to the east, Adventure Way/Bulloo Development Road to the west, and the Mitchell Highway forming part of the Matilda Way connecting north to Charleville and south to New South Wales.

**QUILPIE SHIRE COUNCIL**  
Quilpie

2018 Pop'n  
**790**

2036 Pop'n  
**592**



Quilpie is located in the north-west of the region and is bordered by the Central West region to the north. The local government area has 537 jobs and 160 businesses and contributes \$66 million in gross regional product.<sup>18</sup>

Employment is highly specialised around agriculture, forestry and fisheries, accounting for 26 per cent of employment. Public administration and safety accounts for 12.7 per cent with education and training accounting for 9.1 per cent.

The Diamantina Developmental Road forms part of the Warrego Way and connects Quilpie to Charleville in the east and Windorah in the north-west.

Quilpie is also connected to Charleville by rail. Quilpie Road connects to Thargomindah in the south. Cattle bred in the western and eastern areas of the region are primarily transported by road, and periodically by rail, from Quilpie to eastern saleyards and processing plants. Natural/ coal seam gas is extracted in the area which is piped to Gladstone or South Australia.<sup>19,20</sup>

**SOUTH WEST QUEENSLAND  
REGION TOTAL**

2018 Pop'n  
**24,149**

2036 Projected population  
**22,602**

17 National Institute of Economic and Industry Research. (2017/18). *Economic Indicators Series*. Retrieved from [www.economic-indicators.id.com.au](http://www.economic-indicators.id.com.au).

18 *ibid.*

19 Department of Agriculture and Fisheries. (2016). *Queensland Agricultural Land Audit Central West and South West*. [www.daf.qld.gov.au/\\_data/assets/pdf\\_file/0007/64654/QALA-Chog-CW-SW.pdf](http://www.daf.qld.gov.au/_data/assets/pdf_file/0007/64654/QALA-Chog-CW-SW.pdf).

20 Department of Natural Resources, Mines and Energy (2017). *Queensland mineral, coal and petroleum resources map*. [www.dnrm.qld.gov.au/\\_data/assets/pdf\\_file/0003/242085/qld-resources-map.pdf](http://www.dnrm.qld.gov.au/_data/assets/pdf_file/0003/242085/qld-resources-map.pdf).

\* Note: Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – Working Population Profile – Wog (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.



## 2.2 Transport network

An overview of the region's transport network and location of key services is shown in Figure 3.

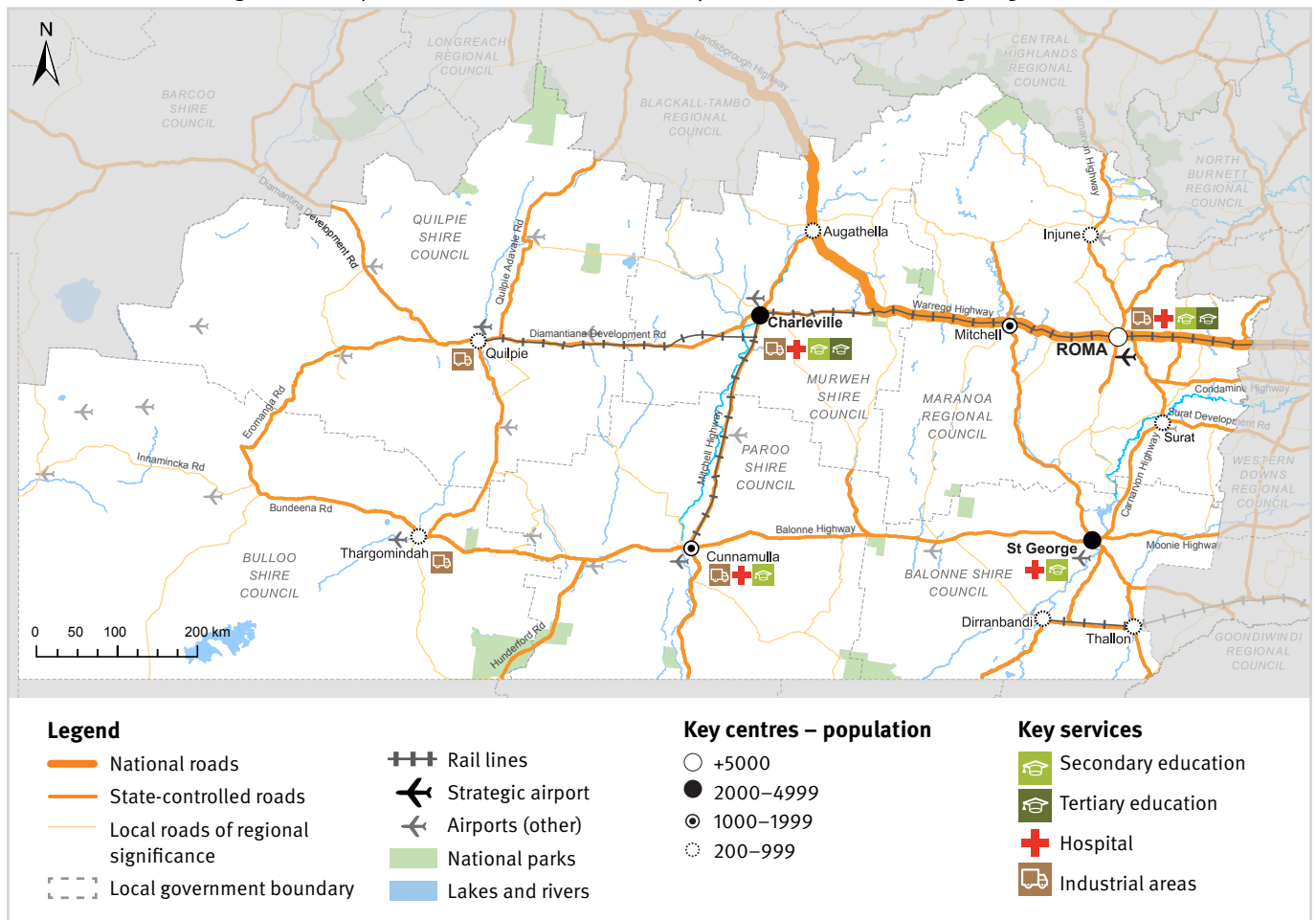


Figure 3: Overview of the South West Queensland region's transport network and key services in the region

### Roads

There are more than 3500 kilometres of state-controlled roads including 420 kilometres of the National Land Transport Network in the region.<sup>21</sup> Assets supporting the roads function include bridges, rest areas, roadside amenities and service centres.

The movement of people and goods across the region is highly dependent on the road network. Private vehicle transport is the primary mode for commuter travel for all trip purposes. Private vehicle dependence is largely due to the long distances between centres, the dispersed low-density settlement pattern across the region and lack of viable alternative transport options.

Key national, state-controlled and local roads in the region can be seen in Figure 3. The Warrego and Landsborough

highways, which connect through Roma to the east and through Augathella to the north are designated as part of the National Land Transport Network and given high maintenance priority by the Queensland Government.<sup>22</sup>

Most of the region's freight is carried by road. It is either consolidated in Roma or carried through Roma and further east. The Heavy Vehicle National Law 2012 governs the operations of all vehicles over 4.5 tonnes in gross vehicle mass.

Distance and existing road standards influence the type of freight vehicle used. Typically, more remote areas can carry larger road freight vehicles due to lower passenger vehicle traffic volumes. However, the safety and quality of the road infrastructure does affect this. As shown in Figure 5, the region has a mix of roads suitable for Type 1 and Type 2 road trains.

<sup>21</sup> Department of Transport and Main Roads. (2016). *Annual Report 2015–16*. Retrieved from [publications.qld.gov.au/dataset/annual-report-2015-2016-transport-and-main-roads](https://publications.qld.gov.au/dataset/annual-report-2015-2016-transport-and-main-roads).

<sup>22</sup> *ibid*.

MAJOR ROADS ARE KEY TO THE FREIGHT NETWORK



MAJOR RURAL CENTRES INCLUDE:  
**ST GEORGE**  
**CHARLEVILLE**  
**CUNNAMULLA**  
**THARGOMINDAH**  
**QUILPIE**



**ROMA IS THE REGION'S MAJOR REGIONAL ACTIVITY CENTRE AND KEY FREIGHT CENTRE**



THE TRANSPORT NETWORK IS KEY TO SUPPORTING AGRICULTURE

TOOWOOMBA IS THE NEAREST REFERRING HOSPITAL APPROX. **350 KM** FROM ROMA



BUS SERVICES RUN FROM **ROMA, CUNNAMULLA AND HEBEL, ST GEORGE AND CHARLEVILLE** TO MAJOR CENTRES (SERVICES VARY FROM TWO TIMES PER WEEK TO DAILY)



SCHOOL BUS SERVICES OPERATE WITHIN THE REGION



**BLUECARE** PROVIDES SOME **TRANSPORT SERVICES** TO THE ELDERLY AND DISABLED

THE **LANDSBOROUGH, WARREGO, MITCHELL AND CARNARVON HIGHWAYS** ARE STATE STRATEGIC TOURING ROUTES



THE **WESTERN AND SOUTH WESTERN RAIL SYSTEMS** CONNECT TO **KEY TRANSPORT NODES AND TOWNS**



HEAVY RAINFALL IS A DISRUPTOR OF TRANSPORT IN THE REGION. **MOONIE RIVER** SYSTEM FLOODING RESULTED IN **ROAD CLOSURES** IN EXCESS OF **20 DAYS** FOR THREE CONSECUTIVE WET SEASONS BETWEEN 2009 AND 2012<sup>23</sup>



**59%** OF WORKERS TRAVEL TO WORK BY CAR<sup>24</sup>



**22%** OF WORKERS DO NOT TRAVEL, OR NEED TO TRAVEL, TO WORK<sup>25</sup>



**9.1%** OF WORKERS WALK TO WORK<sup>26</sup>

<sup>23</sup> Department of Transport and Main Roads. (2018). *Hydraulics and Flooding Interactive Map*. Unpublished data.

<sup>24</sup> Queensland Government Statistician's Office. (April 2019). *Queensland Regional Profiles: Resident Profile for Custom region*. Retrieved from [statistics.qgso.qld.gov.au/qld-regional-profiles](https://statistics.qgso.qld.gov.au/qld-regional-profiles).

<sup>25</sup> *ibid.*

<sup>26</sup> *ibid.*

## The Roads and Transport Alliance and Regional Road and Transport Groups

The Roads and Transport Alliance (the Alliance) is a cooperative governance arrangement between Transport and Main Roads, the Local Government Association of Queensland and local governments to invest in and regionally manage the Queensland transport network.

Its objectives are to:

- maximise the economic, social and environmental benefits of joint investments
- achieve maximum efficiencies through collaboration and innovation in network planning, program development and delivery
- improve technical skills through training, technology and knowledge transfer
- optimise safety
- maximise investment on the Queensland transport network.

The Alliance includes Regional Roads and Transport Groups (RRTG) where Transport and Main Roads and local government representatives within the region work collaboratively to plan and prioritise investment on road and transport infrastructure.

In the South West region, the RRTG is a strong and active leadership group providing strategic insight, allocating funding to the highest priority projects and identifying opportunities for financial efficiencies.

## Stock Routes

Transport and Main Roads provides guidance on dealing with the management of travelling stock, agistment and stock crossings on state-controlled roads to promote a balance between safety, efficiency, environment and community access through the South West Queensland Region.

The Queensland Stock Route Network, prepared by the Department of Natural Resources, Mines and Energy, provides a classification of stock routes across the state and is supported by local management plans prepared by councils. The local government areas of Maranoa, Murweh, Paroo and Balonne include primary stock routes while all councils in the region include secondary and minor routes.

## Air transport

The region is served by state-regulated and subsidised air services to ensure affordable and sustainable passenger and freight air services. These services, depicted in Figure 4, provide remote communities with important access to economic, medical, educational and social opportunities. Regional flights connect Thargomindah, Cunnamulla and St George to Toowoomba and Brisbane as does flights from Charleville and Roma. The key regional airports of Ballera, Quilpie, Thargomindah, Charleville, Cunnamulla, Dirranbandi and Roma are maintained by regional councils.

Roma is designated as a Strategic Airport in the State Planning Policy and is the busiest airport with an annual patronage of approximately 136,000 in 2012.<sup>27</sup>

## Rail

The region is served by Queensland Rail's Western and South Western rail system. The movement of commodities and freight is the main function of the region's rail network.

The Western rail system runs between Miles and Cunnamulla via Charleville including branch lines. The system spans 1082 kilometres. A spur line, known as the Great Western Line, runs between Westgate and Quilpie. Services on the 184 kilometre section from Westgate to Cunnamulla were suspended in 2014 due to damaged rail infrastructure following a major explosion on the Mitchell Highway bridge over Angellala Creek running parallel to the rail line. The Western rail system connects with the West Moreton rail system at Miles continuing eastward to Brisbane. Thallon is served by the South Western rail system connecting Goondiwindi and Warwick to destinations east.<sup>28</sup>

Rail freight is operated by Aurizon and Watco. Major commodities transported include coal (from the Surat Basin to the Port of Brisbane), grain and livestock.<sup>29</sup> Livestock is transported by rail to the Port of Brisbane to Dinmore and Holmview in South East Queensland.

As illustrated in Figure 5, rail is a significant ancillary transport solution for cattle movements and coal further east. It connects the far western town of Quilpie to Charleville, Roma and Dalby. However, line efficiency is impacted by the need to change locomotives at Charleville due to differing axle load limits east and west of the town.

The Westlander service, operated by Queensland Rail, provides a twice weekly passenger rail service from Brisbane to Charleville via Toowoomba.

27 Maranoa Regional Council. (2013). *Roma Airport Masterplan*. [www.maranoa.qld.gov.au/roma-airport-master-plan](http://www.maranoa.qld.gov.au/roma-airport-master-plan).

28 Queensland Rail. (2016). *Western System Information Pack*. Retrieved from [www.queenslandrail.com.au/forbusiness/the-regional-network/western-system](http://www.queenslandrail.com.au/forbusiness/the-regional-network/western-system).

29 *ibid.*



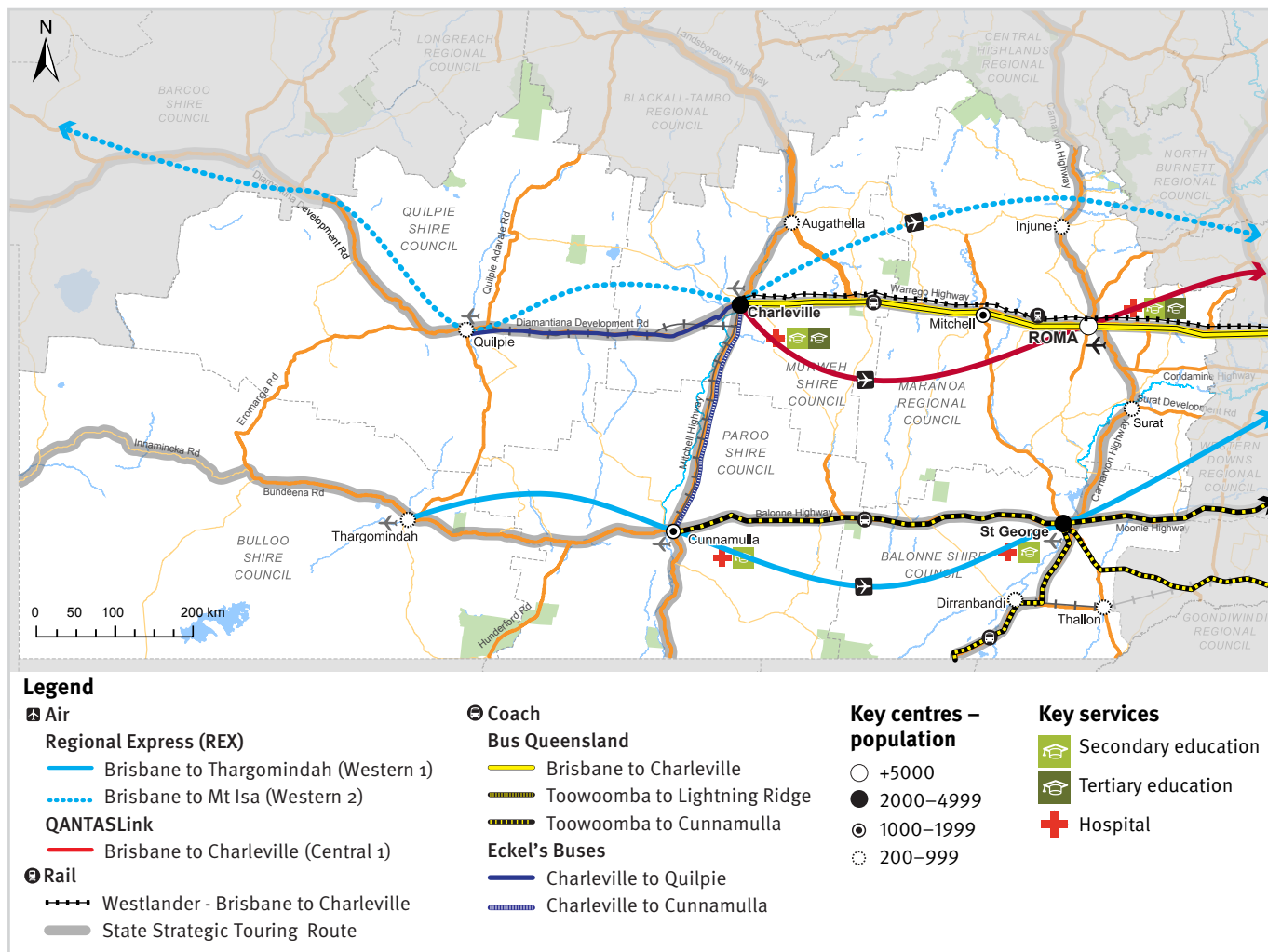


Figure 4: Long-distance passenger transport services and State strategic touring routes

## Passenger transport

Passenger transport services are limited by the remoteness and small size of communities within the region. Current services include long-distance buses, school buses, the Westlander passenger train and taxi services in Charleville and Roma.

Due to the limitations of public passenger services, all long-distance passenger bus services, connecting rail bus and passenger rail services are currently subsidised by the Queensland Government. Figure 4 depicts the long-distance passenger services and connectivity between the various modes.

Some school bus services operate across the region and are run by various local operators to various primary and secondary schools. These school transport services receive full or partial funding from the Queensland Government. School transport services are monitored and reviewed regularly, as part of a state-wide program, to ensure that school transport services meet the needs of school students in the South West Queensland region.

## Active transport

Towns in the South West generally have relatively wide roads and road reserves which provide informal spaces for walking and cycling. While some shared footpaths, on-road cycle lanes and recreational walking and cycling trails are available, the key dedicated cycling and walking facilities are as follows:

- Adungadoo Pathway along Bungil Creek in Roma
- St George Riverbank Walkway
- Warrego Riverwalk in Charleville.

Roma has a *Principal Cycle Network Plan* and Priority Route Map, which articulates the desired intent for cycling in the town.

## Boating

The South West Queensland region has several dams and weirs, which are used for recreational purposes. There are nine dedicated boating facilities owned and maintained by Transport and Main Roads.<sup>30</sup>

30 Maritime Safety Queensland. (2018). *Boating facility locations in Queensland*. Retrieved from [www.msq.qld.gov.au/Waterways/Recreational-boating-infrastructure/Boating-facilities](http://www.msq.qld.gov.au/Waterways/Recreational-boating-infrastructure/Boating-facilities).

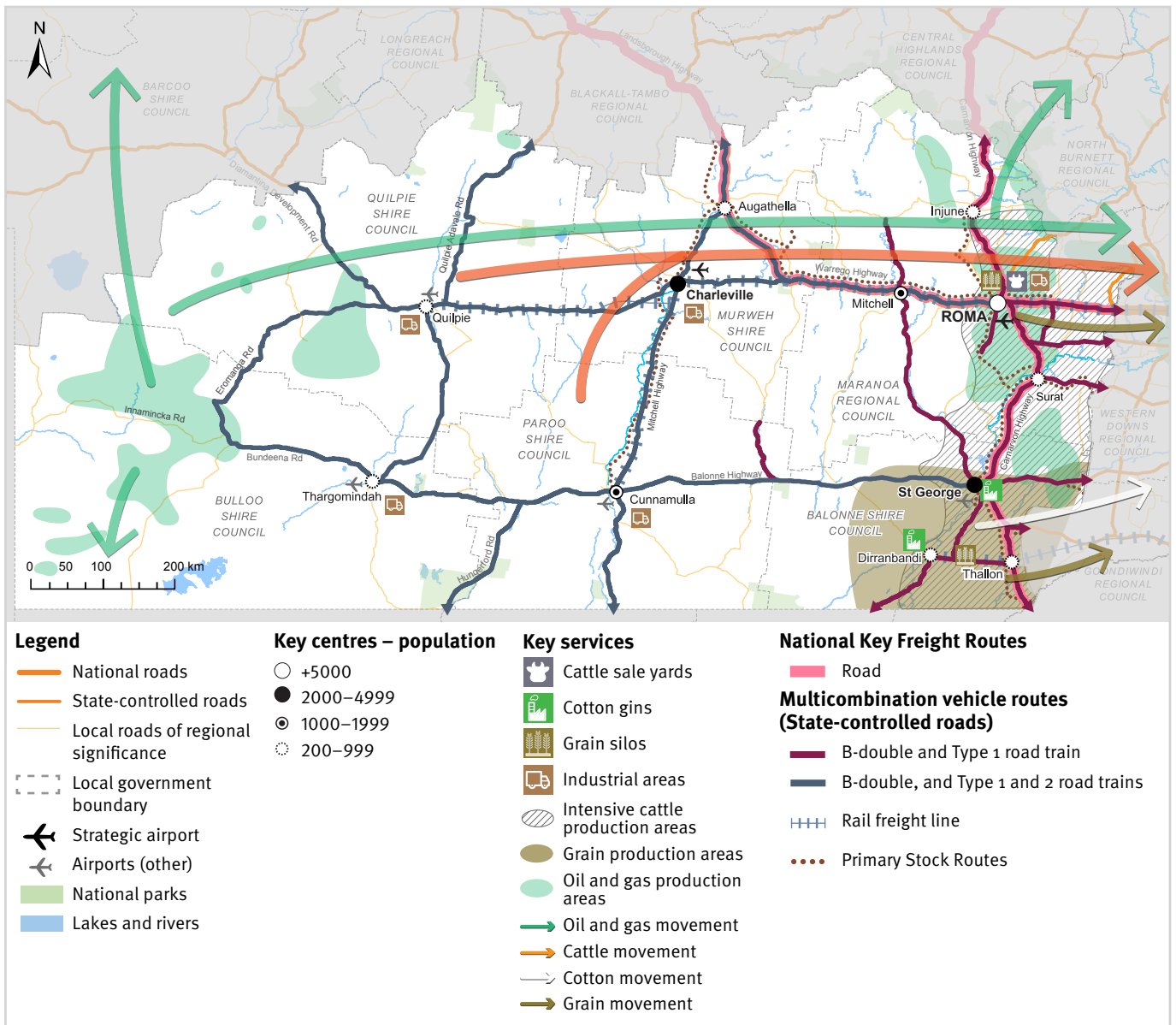


Figure 5: Key industries and freight movements in South West

**Sources:**

Department of Transport and Main Roads. (2013). *Moving Freight*. Retrieved from [www.tmr.qld.gov.au/~media/busind/Transport%20sectors/Freight/Moving%20Freight%20final/FinalMovingFreightfull.pdf](http://www.tmr.qld.gov.au/~media/busind/Transport%20sectors/Freight/Moving%20Freight%20final/FinalMovingFreightfull.pdf).

Cotton Australia. (2017). *Where is cotton grown?* Retrieved from [www.cottonaustralia.com.au/](http://www.cottonaustralia.com.au/).

Australian Government. (2019). *National Key Freight Routes Map*. Retrieved from [www.transportinfrastructurecouncil.gov.au/publications/freight\\_route\\_maps.aspx](http://www.transportinfrastructurecouncil.gov.au/publications/freight_route_maps.aspx).

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Department of Natural Resources, Mines and Energy (2016) *Queensland Stock Route Network*. Retrieved from [www.dnrme.qld.gov.au/\\_data/assets/pdf\\_file/0003/99624/stock-routes-map.pdf](http://www.dnrme.qld.gov.au/_data/assets/pdf_file/0003/99624/stock-routes-map.pdf)



*Railway crossing, Feather Street, Roma*





*Road train on Main Street, Mitchell*



# 3.

## Goals, challenges and opportunities



## 3.1 Goals

Goals describe the region's desired economic, social and environmental outcomes that set the direction for all planning activities and initiatives in the region, not just for transport. Transport and Main Roads has engaged with the region's local governments, industry representatives and other state agencies to understand the high level goals for the region's future development.

Goals were developed for the Regional Transport Plan based on a review of local, regional, state and national

planning documents, and directions set by stakeholders. Goals help frame the priorities and actions for transport towards achieving regionally specific outcomes for the community, economy and environment.

The relationship between goals and priorities is presented in Figure 6. Priorities are the transport response to the region's goals in the context of addressing challenges and supporting opportunities that present.

### SOUTH WEST QUEENSLAND REGIONAL TRANSPORT PLAN GOALS

**A diverse economy, where resilient and adaptable infrastructure connects people and business**

**An inclusive region with a sense of community, where people can safely and reliably access essential services**

**Sustainable management of natural resources, environment and cultural heritage**

**Challenges and opportunities**

### PLANNING CONTEXT

#### TRANSPORT PRIORITIES

#### PRIORITY 1

**A transport system that supports economic development through efficient access to domestic and international markets**

#### PRIORITY 2

**A transport system that enhances liveability through connected communities**

#### PRIORITY 3

**A safer transport system**

#### PRIORITY 4

**A resilient and responsive transport system**

Figure 6: Regional goals and relationship to transport priorities



Rail bridge, Quilpie



## 3.2 Challenges

### Economic sustainability

There is a strong correlation between employment growth and population growth, with regional populations heavily dependent on local employment.

Agriculture is the main economic driver, comprising almost 30 per cent of Gross Value Added\* to the regional economy in 2011,<sup>31</sup> and employing 2700 people or 21.4 per cent of the region's workforce.<sup>32</sup> However, agriculture experienced the greatest decline in employment among major industries in the region between 2001 and 2011, partially due to increased productivity and the impact of drought during the early 2000s.<sup>33</sup> This trend is forecast to continue, albeit at a more moderate pace.

Of the prospective petroleum sedimentary basins in Queensland, the Cooper and Eromanga basins form the largest conventional petroleum province in the state. Exploration is ongoing to determine the region's potential for unconventional petroleum<sup>34</sup>. While a number of oil and gas projects have been undertaken in the Cooper and the Surat basins, this has not translated into correspondingly high levels of stable employment in the region, partly due to the transition from a development to an operations phase, which requires less labour.<sup>35</sup>

Nevertheless, the petroleum and gas deposits of the Cooper and Eromanga basins represent significant opportunities in the South West due to existing pipeline infrastructure and ready access to Australia's eastern gas market, northern heavy industries and to Liquid Natural Gas (LNG) export facilities at Gladstone.<sup>36</sup>

These trends, together with the region's rural setting, make economic sustainability a key challenge. A reliable,

efficient and digitally optimised supply chain for produce to reach domestic locations and key international gateways is one way the transport system can support economic development in these sectors as well as others.<sup>37</sup>

### Attracting and retaining residents, including skilled workers

The region is anticipated to experience slow population growth over the next 20 years, and some local government area populations are anticipated to decline. At the same time, it is experiencing a faster increase in the percentage of aged residents. This suggests young residents and families may be leaving or not moving to the area.<sup>38</sup>

Slow or no population growth together with an ageing population in already small communities could reduce the size of the available workforce and have a flow-on impact to the services available in these areas.

It limits the skills and knowledge pool available in the region and the number of people who can participate in the economy, develop business opportunities and respond to future economic change.<sup>39</sup> The ageing population also places pressure on healthcare and social services.<sup>40</sup>

The region's general remoteness can also make it difficult to attract additional residents. The availability of local jobs that support the region's long-term sustainability is pivotal.

Factors such as well-designed main streets through towns and a transport system with quality digital and physical connections can help support attraction and retention of workers.

31 Queensland Government Statistician's Office. (2013). *Experimental Estimates of Gross Regional Product 2000–01, 2006–07 and 2010–11*. [www.qgso.qld.gov.au/products/reports/experimental-estimates-grp/experimental-estimates-grp-2010-11.pdf](http://www.qgso.qld.gov.au/products/reports/experimental-estimates-grp/experimental-estimates-grp-2010-11.pdf).

32 Queensland Government Statistician's Office. (April 2019). *Queensland Regional Profiles: Workforce Profile for Custom region*. Retrieved from [statistics.qgso.qld.gov.au/qld-regional-profiles](http://statistics.qgso.qld.gov.au/qld-regional-profiles).

33 Productivity Commission Initial Report. (2017). *Transitioning Regional Economies*. [www.pc.gov.au/inquiries/current/transitioning-regions/initial/transitioning-regions-initial-overview.pdf](http://www.pc.gov.au/inquiries/current/transitioning-regions/initial/transitioning-regions-initial-overview.pdf).

34 Department of Natural Resources, Mines and Energy. (2015). *Petroleum in Queensland's outback: The Cooper and Eromanga basins*. [http://apps.dnrm.qld.gov.au/mobileapp/Factsheets/petroleum\\_in\\_queenslands\\_outback\\_the\\_cooper%20and\\_eromanga\\_basins.pdf](http://apps.dnrm.qld.gov.au/mobileapp/Factsheets/petroleum_in_queenslands_outback_the_cooper%20and_eromanga_basins.pdf)

35 National Institute of Economic and Industry Research. (2013). *The Mineral Resource Boom and the Economy of South West Queensland*. Retrieved from [www.nieir.com.au/the-mineral-resource-boom-and-the-economy-of-south-west-queensland/](http://www.nieir.com.au/the-mineral-resource-boom-and-the-economy-of-south-west-queensland/).

36 Queensland Government (May 2015) *Petroleum and gas exploration opportunities Surat, Cooper and Eromanga basins*, Queensland, Australia. <http://statements.qld.gov.au/Content/MediaAttachments/2015/pdf/150530.P%20and%20G%20land%20release%20factsheet.pdf>

37 Department of State Development, Manufacturing, Infrastructure and Planning. (2016). *State Infrastructure Plan Part A: Strategy*. [www.dilgp.qld.gov.au/resources/plan/sip/sip-part-a.pdf](http://www.dilgp.qld.gov.au/resources/plan/sip/sip-part-a.pdf).

38 Queensland Government Statistician's Office. (April 2019). *Queensland Regional Profiles: Resident Profile for Custom region*. Retrieved from [statistics.qgso.qld.gov.au/qld-regional-profiles](http://statistics.qgso.qld.gov.au/qld-regional-profiles).

39 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. Retrieved from [www.rda-ddsw.org.au/rda-dd-sw](http://www.rda-ddsw.org.au/rda-dd-sw).

40 Department of State Development, Manufacturing, Infrastructure and Planning. (2016). *State Infrastructure Plan Part A: Strategy*. [www.dilgp.qld.gov.au/resources/plan/sip/sip-part-a.pdf](http://www.dilgp.qld.gov.au/resources/plan/sip/sip-part-a.pdf).

\* Note: An economic term which means how much additional economic input the sector creates for the local region, after allowing for all the industries' inputs like labour and machinery and inputs like fertilisers, water, feed and seed.

## Connecting the region's dispersed and remote communities to essential services

Long travel distances can make it difficult for people living in rural or remote areas to access the same standard of services as urban residents. For instance, the average cost per incident in the South West region to the Queensland Ambulance Service is \$2404, which is the second highest of all regions in Queensland.<sup>41</sup>

Where daily travel to school is not practical, distance education is available. However, this requires digital infrastructure such as reliable internet and telecommunications, which is not currently available in all communities.<sup>42</sup>

Service delivery methods in remote areas need to adapt to respond to the lack of supporting infrastructure, low-cost recovery and high-cost relative to more populated centres.

## Impacts of weather

Between 2011 and 2016 there have been 45 extreme weather events in Queensland, which have caused \$13 billion in damage to public assets and infrastructure.<sup>43</sup> The South West Queensland region is susceptible to extreme weather events such as drought, flooding and bushfire.<sup>44</sup>

Climate change exacerbates the effects of weather events on rural, regional and remote communities, compounding service and infrastructure accessibility difficulties, and adversely impacting the weather-dependent agricultural sector.

One of the most significant contributors to climate change is the rise in greenhouse gas emissions, including those produced by transport. Future planning for the region's transport network will play a key role in achieving the objectives of the Queensland Climate Transition Strategy.

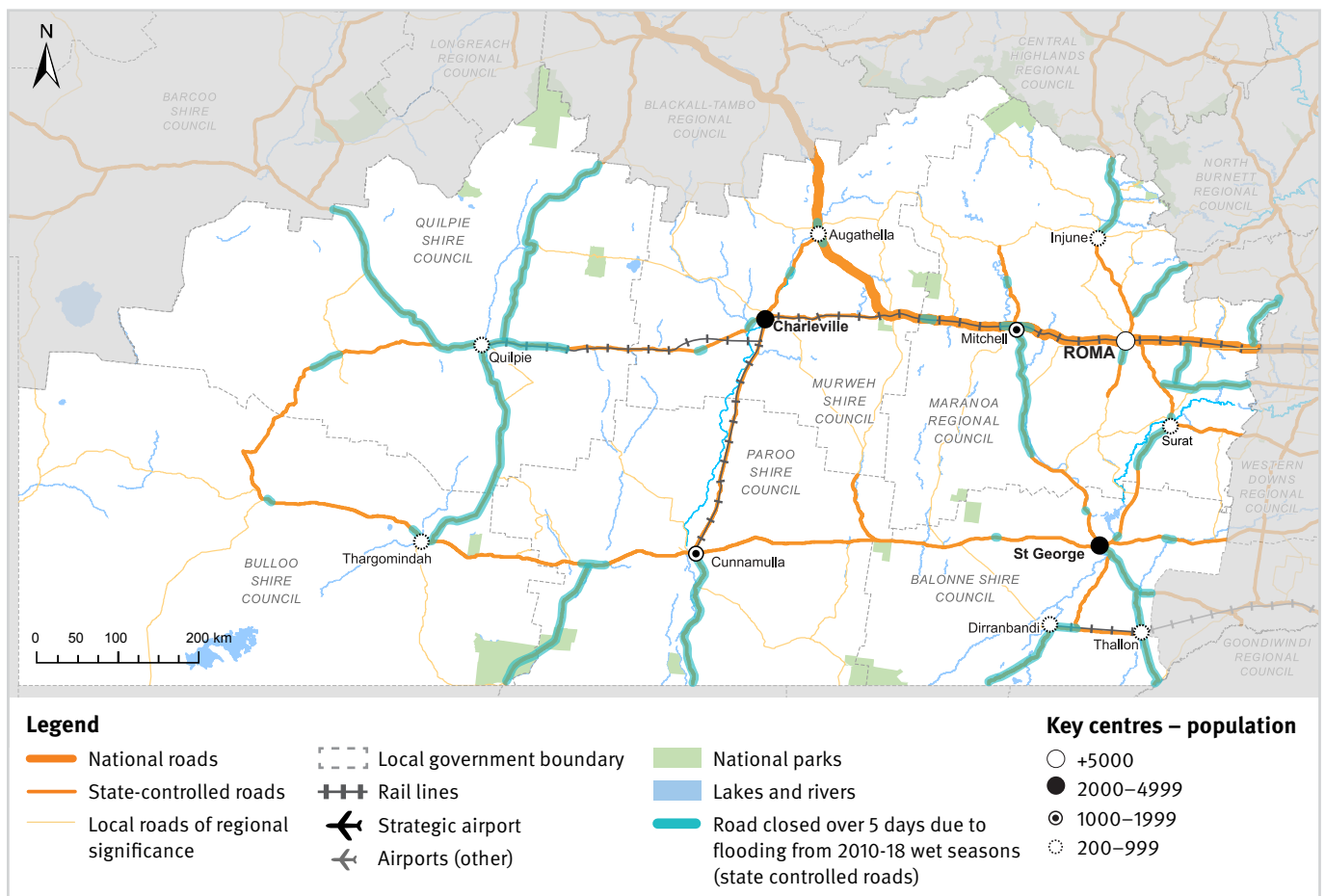


Figure 7: Road closure due to flooding 2010-2018 in the South West region

Source: Department of Transport and Main Roads. (2019). *Hydraulics and flooding interactive map*. Unpublished data.

- 41 Department of Health. (2019). *Queensland Ambulance Service Public Performance Indicators July – December 2018*. Retrieved from [www.ambulance.qld.gov.au/publications.html](http://www.ambulance.qld.gov.au/publications.html).
- 42 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. Retrieved from [www.rda-ddsw.org.au/rda-dd-sw](http://www.rda-ddsw.org.au/rda-dd-sw).
- 43 Department of Environment and Science. (2017). *Pathways to a climate resilient Queensland*. [www.ehp.qld.gov.au/assets/documents/climate/qld-climate-adaptation-strategy.pdf](http://www.ehp.qld.gov.au/assets/documents/climate/qld-climate-adaptation-strategy.pdf).
- 44 Department of Environment and Science. (2016). *Climate change in the South West Queensland Region (DRAFT)*. [www.ehp.qld.gov.au/assets/documents/climate/south-west-qld-climate-change-impact-summary.pdf](http://www.ehp.qld.gov.au/assets/documents/climate/south-west-qld-climate-change-impact-summary.pdf).

It is projected that the region will experience rising temperatures, more frequent hot days, reduced rainfall in some areas, more variability in rainfall and more intense heavy rainfall events. Flooding has a considerable effect on infrastructure, particularly in remote areas, and can make roads impassable and unsafe. This can result in lost time and poor reliability, impacting freight productivity and transport system customers generally. Flooding events can lead to delays and increased supply chain costs. Figure 7 highlights the extent of road closures caused by flooding on key routes.

Protracted periods of temperatures above a road's design specifications can lead to bitumen degradation, impacting the capacity, structural integrity and safety of the road.<sup>45</sup> This is also the case for rail lines. Such impacts can increase maintenance costs or accelerate replacement or upgrade requirements.

## Road safety

Driver safety in a large region like South West is a significant issue. In 2016, there were five fatalities in the region. This represents approximately two fatalities for every 10,000 residents compared to 0.6 fatalities for every 10,000 residents statewide.<sup>46</sup>

Driver safety is primarily an issue on the Warrego and Carnarvon highways, which have a high number of crashes relative to the other roads.<sup>47</sup>

In addition, the horticultural production season (May to December) coincides with the annual tourist season, resulting in increased caravan traffic which can lead to conflict on the road and increased incidents.

## Project funding

Funding investment in the region's transport network is essential to deliver regional transport priorities. Prioritising investment can be a challenge, particularly when comparing traffic volumes on rural and remote roads to that of urban roads. Local governments in these areas are also tasked with the management of thousands of kilometres of roads, despite having limited revenue.

It is acknowledged that the need to fund for remote and regional projects cannot be directly compared to those in metropolitan and inner regional areas because the benefits differ and are often difficult to quantify in dollar terms.

The traditional cost-benefit analysis is largely unsuitable because of the higher construction costs in remote areas (excluding land acquisition) and the lower volume of users. As a result, achieving a positive cost-benefit analysis can be challenging.



Bollon Caravan Park

45 Hornsby Shire Council. (2016). *Development Design Specification 0042- Pavement Design*. [www.hornsby.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0010/88678/0042-Pavement-Design.pdf](http://www.hornsby.nsw.gov.au/__data/assets/pdf_file/0010/88678/0042-Pavement-Design.pdf).

46 Department of Transport and Main Roads. (2016). *Road Crash Locations*. Retrieved from [data.qld.gov.au/dataset/crash-data-from-queensland-roads](http://data.qld.gov.au/dataset/crash-data-from-queensland-roads).

47 *ibid.*



## 3.3 Opportunities

### Enhancing agricultural productivity

The South West region has a strong and diverse agricultural sector which contributes significantly to the Queensland's economy. In 2015–16, the gross value of agricultural commodities produced in the region was \$1.2 billion.<sup>48</sup>

As a historic and fundamental driver of the region's economy, this sector provides direct employment and generates wider social and economic benefits across the region, through related employment in transport, value-adding, processing, and related service sectors. In 2017–18, half of all businesses in the South West region were in Agriculture, Forestry and Fishing.<sup>49</sup>

With extensive cattle and sheep grazing and access to domestic and global markets, the region will play a strategic and long-term role in meeting growing demand for quality primary production.

Increasing agricultural productivity can ensure the industry maintains its share of economic activity in the region.<sup>50</sup>

#### Precision Livestock Management

CSIRO have developed software to predict the future weight of livestock. This helps farmers predict when cattle will be ready for market. The technology can also be integrated further up the supply chain, to improve logistics and processing.<sup>54</sup> This type of technology could help value add to agriculture production in the region.

The strength of the region's agriculture sector creates productivity and leverages opportunities. These include:

- Market access channels and the integration of new farming technologies that can increase agricultural productivity and the value of its outputs.<sup>51</sup>
- Stronger regional and statewide transport links which may help develop more productive export chains.
- Productivity and supply chain improvements, including post-farm processes that can convert basic commodities into higher value products.<sup>52</sup> In particular, food manufacturing such as meat processing has potential to further contribute to the economy.
- Digital agriculture to optimise freight efficiency and minimise transit times.<sup>53</sup> By sharing production locations and volumes, logistics providers can optimise their fleet allocation and routing to bring fresh produce to market faster, increasing the export value of the region's produce.

### Improving access to international markets

The region is positioned to respond to increasing demand for high-quality agricultural products from developing markets, especially those in Asia. Asia is an important trading partner and demand will likely continue due to population growth, increasing incomes and ongoing national responses to food security and reliability.<sup>55</sup>

China has a growing middle-class that is increasingly conscious of consuming safe, high-quality produce.<sup>56</sup> Queensland, including the South West, has strengths in terms of product quality, safety and sustainability, characteristics that resonate in China.<sup>57</sup>

48 Australian Bureau of Statistics (2015-16) Value of Agricultural Commodities produced, Australia

49 Queensland Government Statisticians Office (July 2019): Workforce profile, custom region (South West)

50 Marsden Jacob Associates. (2012). Darling Downs and South West Economic and Social Development Strategy. [www.rda-ddsw.org.au/fileadmin/user\\_upload/DDSWEconomic\\_Social\\_Development\\_Strategy\\_-\\_Marsden\\_Jacobs\\_.pdf](http://www.rda-ddsw.org.au/fileadmin/user_upload/DDSWEconomic_Social_Development_Strategy_-_Marsden_Jacobs_.pdf).

51 Regional Development Australia. (2017). *Agricultural Opportunities in Southern Queensland*. [www.rda-ddsw.org.au/fileadmin/user\\_upload/Southern\\_Qld\\_-\\_Opportunities\\_in\\_Agriculture\\_MEDIUM.pdf](http://www.rda-ddsw.org.au/fileadmin/user_upload/Southern_Qld_-_Opportunities_in_Agriculture_MEDIUM.pdf).

52 Department of Agriculture and Fisheries. (2013). *Queensland's Agriculture Strategy*. [cabinet.qld.gov.au/documents/2013/Jun/Qld%20Ag%20Strat/Attachments/Attachment%20-%20Queensland%20Agriculture%20Strategy.pdf](http://cabinet.qld.gov.au/documents/2013/Jun/Qld%20Ag%20Strat/Attachments/Attachment%20-%20Queensland%20Agriculture%20Strategy.pdf).

53 CSIRO. (2017). *Digital agriculture*. Retrieved from [www.csiro.au/en/Research/AF/Areas/Digital-agriculture](http://www.csiro.au/en/Research/AF/Areas/Digital-agriculture).

54 CSIRO. (2019). *Creating a Digital Homestead*. Retrieved from [www.csiro.au/en/Research/AF/Areas/Sustainable-farming-systems/Precision-agriculture/Digital-Homestead](http://www.csiro.au/en/Research/AF/Areas/Sustainable-farming-systems/Precision-agriculture/Digital-Homestead).

55 Asian Development Bank. (2013). *Food Security in Asia and the Pacific 2013*. [www.adb.org/sites/default/files/publication/30349/food-security-asia-pacific.pdf](http://www.adb.org/sites/default/files/publication/30349/food-security-asia-pacific.pdf).

56 Department of Agriculture and Water Resources. (2012). *Food Consumption Trends in China*. Retrieved from [www.agriculture.gov.au/ag-farm-food/food/publications/food-consumption-trends-in-china](http://www.agriculture.gov.au/ag-farm-food/food/publications/food-consumption-trends-in-china).

57 Department of Agriculture and Fisheries. (2013). *Queensland's Agriculture Strategy*. [cabinet.qld.gov.au/documents/2013/Jun/Qld%20Ag%20Strat/Attachments/Attachment%20-%20Queensland%20Agriculture%20Strategy.pdf](http://cabinet.qld.gov.au/documents/2013/Jun/Qld%20Ag%20Strat/Attachments/Attachment%20-%20Queensland%20Agriculture%20Strategy.pdf).

The cattle industry in the South West Queensland region has significant export potential. The Roma Saleyards is the largest cattle selling centre in Australia, with 372,648 cattle sold through the yards in the 2014/15 financial year<sup>58</sup>. The South West and Darling Downs regions together carry approximately 22 per cent of Queensland's cattle, and two of Australia's closest neighbours (Indonesia and Vietnam) are currently the largest importers of live cattle.<sup>59</sup>

Major transport projects adjacent to the region, such as the Toowoomba Second Range Crossing, Toowoomba Wellcamp Airport and planning for Inland Rail, can improve freight productivity and supply chain efficiency, which improve access to international markets.<sup>60</sup>

## Harnessing new technology and digital connectivity across the region

Harnessing new technologies and providing reliable mobile network access can significantly improve community and business connectivity.

As digital platforms improve it may contribute to reducing long distance travel requirements of residents accessing health, education and consumer services. This provides significant time, productivity and safety benefits for South West residents.

### Transport and Main Roads asset management

Transport and Main Roads will be implementing a program of work to replace its legacy asset management information systems with a contemporary solution across all transport infrastructure assets to support integrated asset management. This will enable the department to share common asset data practices and will leverage, where practicable, other data initiatives such as Building Information Modelling (BIM) and Austroads Data Harmonisation project.

Digital connectivity between assets, service providers and customers can also improve the safety and management of the region's transport network. Investment in technologies can enable the region to make better use of its existing infrastructure and facilitate better solutions to existing problems. For example, new technologies could improve the efficiency of road network management during and after flood events.

By determining the fastest routes to market or monitoring traffic counts, incidents and faults, decision-makers can make informed decisions about the key road corridors to upgrade and travellers could be forewarned about incidents, enabling them to make alternate arrangements.

Digital transformation is also enabling vast amounts of data to be captured and analysed. Harnessing and implementing new technologies can enable more evidence-based decisions and improve business outcomes throughout the region's supply chain, from primary industry, logistics and freight, through to end-user consumption.

## Expanding the tourism market

The tourism sector in the South West region is less mature compared to other regions across Queensland due to its remoteness and lack of through-traffic.<sup>61</sup> An opportunity exists to grow this sector, particularly given its high-value scenic and natural amenity including landscapes and national parks, rural experiences, cultural and historic sites and regional events,<sup>62</sup> for instance the Natural Science's iconic driving route.<sup>63</sup>

The Outback region received a record high in domestic visitation in 2017 with 878,000 visitors. In the three years to 2018, there was a three per cent increase in the number of visitors to the region and a 7.2 per cent<sup>64</sup> increase in holiday makers, driven largely by the "grey nomad" tourism market.<sup>65</sup> This presents a strong base to increase customer reach.

Recent and ongoing improvements to economic infrastructure, including telecommunications connections, will also enhance commercial growth and investment and tourism in the region, by improving mobile phone coverage and internet connections.<sup>66</sup>

58 My Maranoa – Roma Saleyards (2019) <http://www.mymaranoa.org.au/business/saleyards/general-information-mater-plan>

59 Australian Bureau of Statistics. (2017). *Livestock Products (cat no. 7215.0)*.

60 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. Retrieved from [www.rda-ddsw.org.au/rda-dd-sw](http://www.rda-ddsw.org.au/rda-dd-sw).

61 Tourism and Events Queensland. (2019). *Outback Regional Tourism Satellite Account*. Retrieved from [teq.queensland.com/research-and-insights/domestic-research/regional-tourism-satellite-accounts](http://teq.queensland.com/research-and-insights/domestic-research/regional-tourism-satellite-accounts).

62 Tourism and Events Queensland. (2019). *Outback Regional Snapshot 2018*. Retrieved from [www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/outback](http://www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/outback).

63 Outback Queensland. (2019). *Natural Sciences Loop*. Retrieved from [www.outbackqueensland.com.au/major-drive-routes/natural-sciences-loop](http://www.outbackqueensland.com.au/major-drive-routes/natural-sciences-loop).

64 Tourism and Events Queensland. (2019). *Outback Regional Snapshot 2018*. Retrieved from [www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/outback](http://www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/outback).

65 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. Retrieved from [www.rda-ddsw.org.au/rda-dd-sw](http://www.rda-ddsw.org.au/rda-dd-sw).

66 *ibid.*

## ECONOMIC PROJECTS AND INITIATIVES

There are several economic projects which have either commenced or are proposed in the South West that may influence transport planning and provide opportunities within the region. Some of these include:

- Roma Saleyards and multi-purpose precinct upgrade, funded by the Australian Government's 'Building Better Regions Fund', Department of State Development, Manufacturing, Infrastructure and Planning and Maranoa Regional Council
- airport runway and terminal projects in St George, Roma and Thargomindah totalling \$5.9 million to increase air travel capacity for freight and passenger services partially funded by the Department of State Development, Manufacturing, Infrastructure and Planning and Maranoa Regional Council
- Charleville industrial precinct development project for 17 new industrial sites to develop a strategic base for supply chain services associated with regional natural resources activity and cattle industry. The project is funded by the Department of State Development, Manufacturing, Infrastructure and Planning and Murweh Shire Council.
- Charleville West water supply project to increase service resilience in flooding events and facilitate capacity for up to 100 new developments west of the river. The project is funded by the Department of State Development, Manufacturing, Infrastructure and Planning and Murweh Shire Council
- water treatment and supply projects in Cunnamulla funded by the Department of State Development, Manufacturing, Infrastructure and Planning and Paroo Shire Council to increase service reliability and provide capacity for expansion
- development of a \$3 million museum in Eromanga, funded by Department of State Development, Manufacturing, Infrastructure and Planning and Quilpie Shire Council, which is expected to increase business and tourism
- creation of the Natural Sciences Loop connecting Charleville, Quilpie, Eromanga, Thargomindah and Cunnamulla to support tourism
- construction of the approved Charleville Bottled Water Facility which will source and export 34,000L of 'real artesian water' (RAW) to Taiwan
- redevelopment of the Morven Rail Hub Cattle holding yard which is funded by the 'Building Better Regions Fund'. The project will include road-train and rail loading and unloading facilities, cattle yards for spelling and drafting, livestock weighing facilities, associated storage and amenities facilities.

**Source:** Department of State Development, Manufacturing, Infrastructure and Planning. (2018). *Building Our Regions*. Retrieved from [www.statedevelopment.qld.gov.au/regional-development/building-our-regions.html](http://www.statedevelopment.qld.gov.au/regional-development/building-our-regions.html)



Cattle trucks, Roma





*Lonesome National Park, Injune*





*Over size over mass vehicle*



# 4.

## Priorities and actions





The plan's priorities set the direction of the region's transport network over the next 15 years. They provide the overarching direction for the objectives and actions to achieve this. Collectively, the priorities, objectives and actions consider:

- the region's goals
- the region's challenges and opportunities
- the region's transport task, including transport specific challenges
- existing policy requirements
- customer preferences.

In addition, customers were consulted on their desired future state for transport in the region. Key customer inputs are summarised in Figure 8 and have been grouped into three overarching themes that reflect customer feedback.

These themes and the associated customer inputs have assisted to inform the corresponding priorities, objectives and actions. Collectively, they portray the desired future state for transport in the region.

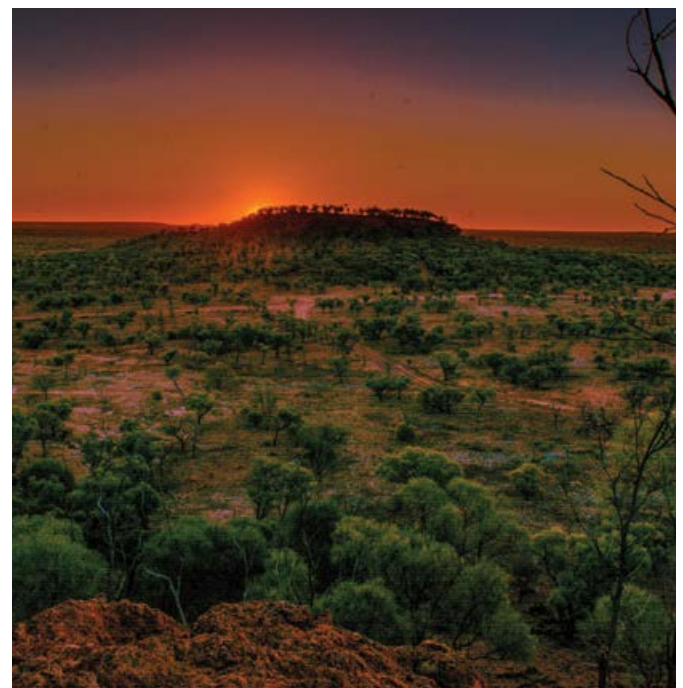
The plan's actions are grouped into short-term and medium/long-term. Short-term actions identify the first critical steps needed to achieve the desired future state over the indicative 15-year life of the Plan. Medium/long-term actions identify possible responses to emerging or potential future transport planning needs. Actions will be reviewed and updated periodically as part of the implementation, monitoring and review process described in Chapter 5.

Actions are primarily planning and partnership initiatives to be further scoped, defined and programmed in collaboration with partners and stakeholders. Transport and Main Roads through its planning, investment, management, operations and maintenance of the transport network gives priority to improving safety for our customers.

Actions, and the subsequent project recommendations that follow, will inform future updates of investment plans and programs such as the *State Infrastructure Plan*, *Queensland Transport and Roads Investment Program* (QTRIP) and other relevant service and infrastructure investment strategies across all levels of government and transport service providers.

Each action under the four priorities are linked to transport objectives and measures of success that will be used to indicate progress towards meeting the goals and priorities set out in this Plan. Transport objectives are key drivers for taking action. Actions link to achieving one or multiple objectives.

The relationship framework linking priorities, objectives and measures of success shown in Figure 9.



Baldy Top sunset

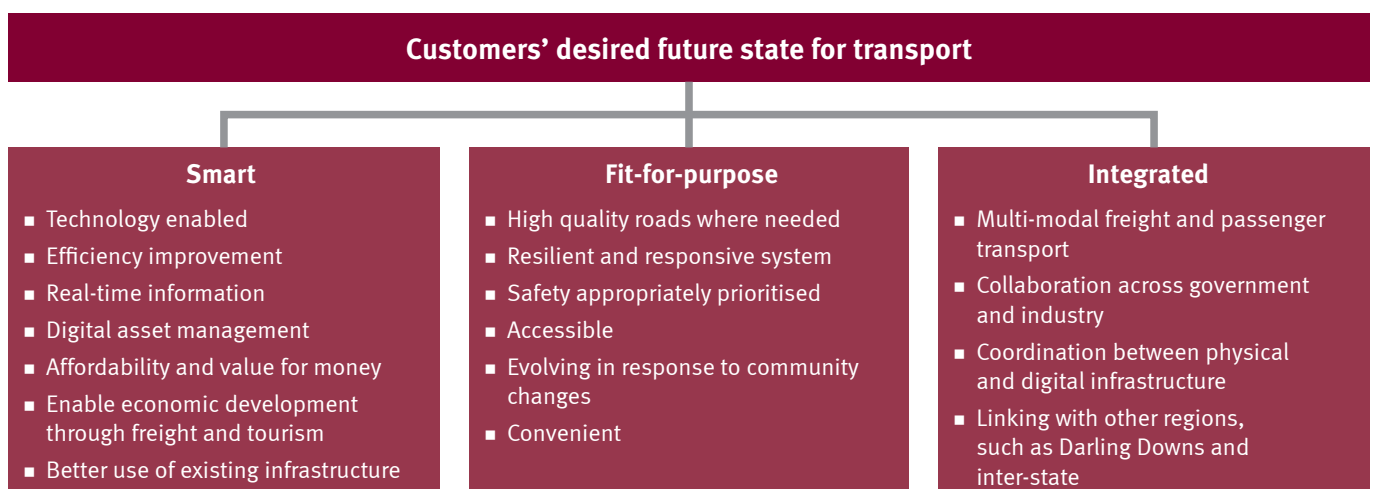


Figure 8: Customers' desired future state for transport

**TRANSPORT SYSTEM**

The safety of all transport system customers is our primary priority as we create a single integrated transport network accessible to everyone.

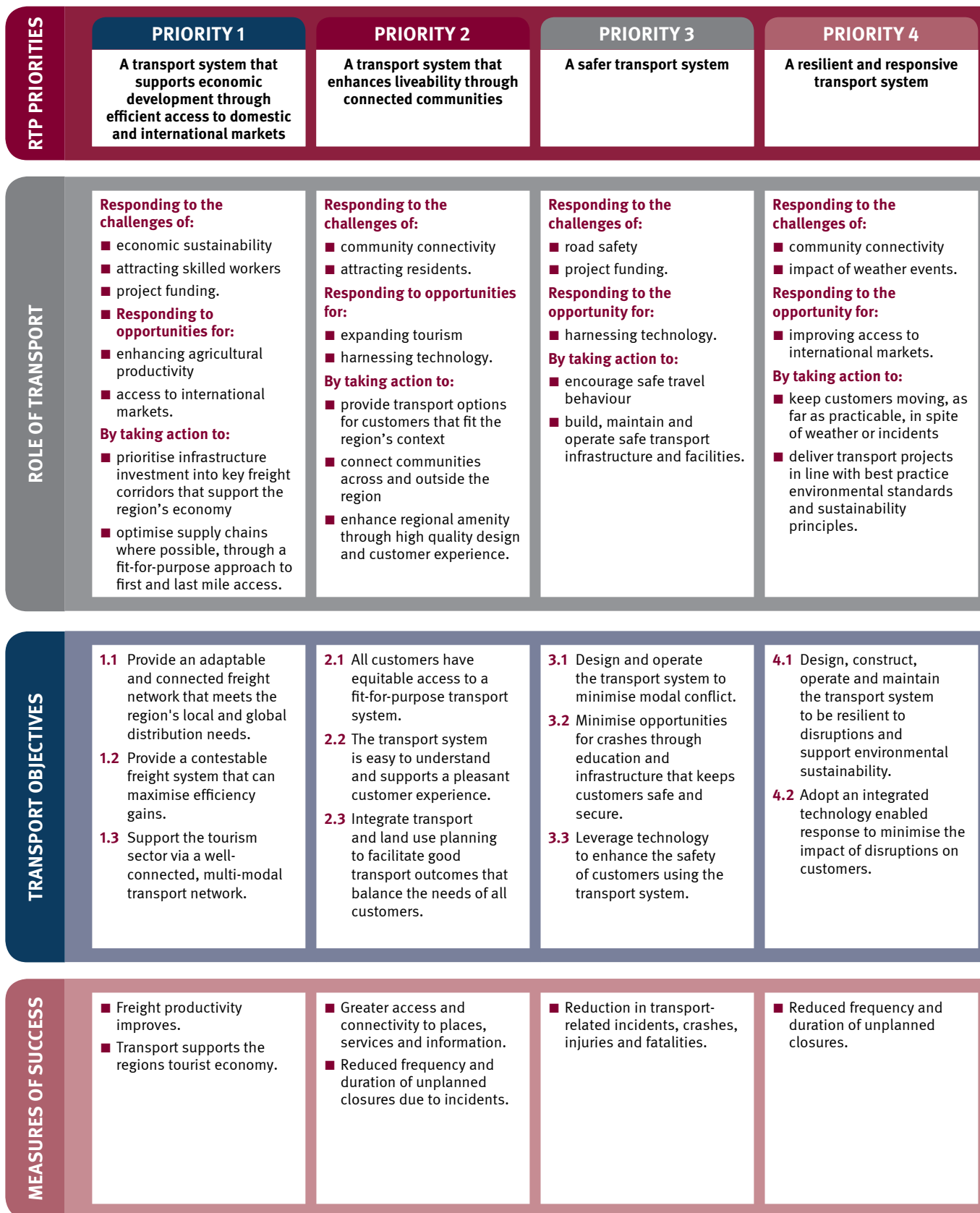


Figure 9: Regional Transport Plan relationship framework linking priorities, objectives and measures of success

## 4.1 Priority 1: Supporting economic development



Loading trucks at Roma Quarry

### A transport system that supports economic development through efficient access to domestic and international markets.

The region's long-term viability depends on supporting productivity and employment through economic development.

The South West Queensland region is a significant generator of freight activity due to the key roles agriculture and mining play in the local economy. Improved connectivity between the region's freight generators and domestic and international markets will support enhanced productivity. Supply chain efficiencies enable goods and

#### Priority 1 aligns to:

- The Transport Coordination Plan objective for Efficiency and Productivity.
- The *State Infrastructure Plan's* focus on transport infrastructure that unlocks the potential of critical supply chains by identifying and improving the freight network.
- Regional planning aims to protect agricultural land and regional landscapes while supporting the co-existence of other emerging opportunities, such as natural resource production to help create a more sustainable future.

fresh produce to be brought to local and global markets faster, increasing the value of the region's key exports.<sup>67</sup>

Tourism also relies heavily on the transport network. The Landsborough, Warrego, Mitchell and Carnarvon highways are identified as state strategic touring routes, however, they are also key freight routes. Balancing the needs of different users appropriately is key to support the co-existence of economic opportunities in the region.

This priority seeks to enhance economic development through:

- freight that can be transported on high-quality, fit-for-purpose corridors
- first- and last-mile access that supports the efficient distribution of goods. Where first- and last-mile investment is not feasible, alternate arrangements exist, such as access to consolidation centres
- producers, businesses and freight operators having a complete understanding of the multi-modal freight transport opportunities in the region
- a freight network that is contestable between modes to support overall supply chain optimisation
- growth in tourism facilitated by supporting easy access and use of the transport system by visitors
- planning for strategic transport and supply chain corridors that support regional productivity and access to markets.

<sup>67</sup> Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. Retrieved from [www.rda-ddsw.org.au/rda-dd-sw](http://www.rda-ddsw.org.au/rda-dd-sw).



## Transport objectives

### Objective 1.1: Provide an adaptable and connected freight network that meets the region's local and global distribution needs

The freight distribution needs of the region are driven by domestic and international demand for locally-produced goods. Coordinating the optimum freight system to support the region's key industries requires a broader understanding of the local, state, national and international markets that drive the demand for goods to be produced in the region. Strategic planning that holistically considers the supply chain from producers through to end consumers will be key to support distribution needs.

Providing an adaptable and connected freight network will:

- support consolidation centres (for example the St George cotton gin and Quilpie cattle spelling yards), where appropriate, to enable greater economies of scale
- recommend the right supply chain improvements, including reforms to policy, making better use of existing infrastructure and constructing new infrastructure where required
- provide appropriate inter-regional and inter-state connectivity to:
  - the north-south inland freight corridor via the Carnarvon Highway
  - inter-modal facilities and industrial precincts such as the Charlton Wellcamp Enterprise Area
  - enable access for High Productivity Vehicles and oversize overmass vehicles
  - identify opportunities to leverage technology and real-time data to support supply chain optimisation.

### Major projects committed in QTRIP for the South West include:

- complete construction of a new bridge and approaches over the Moonie River on Noondoo-Thallon Road at Thallon
- continue pavement widening, including four culvert extensions, on the Carnarvon Highway between St George and Surat, jointly funded by the Australian Government and Queensland Government
- continue pavement widening, including five culvert extensions, on the Carnarvon Highway between Injune and Rolleston, jointly funded by the Australian Government and Queensland Government
- complete pavement rehabilitation and stabilisation on the Warrego Highway between Miles and Roma
- continue pavement rehabilitation and stabilisation on the Landsborough Highway between Morven and Augathella.

### Future planning identified in QTRIP for the South West includes:

- commence planning for bridge strengthening and major culvert replacements on the Carnarvon Highway
- commence planning for pavement widening and strengthening of various sections on the Landsborough Highway, as well as installation of heavy vehicle rest areas and stopping places
- continue planning for widening of priority state-controlled roads
- commence planning to upgrade the intersection of Wallumbilla South Road with the Warrego Highway
- commence planning to upgrade the intersection of Jackson-Wandoan Road with the Warrego Highway.

## CASE STUDY: TRUCK SHARING TO IMPROVE SUPPLY CHAIN EFFICIENCY

Backed by Telstra, Australian start-up Freight Exchange uses a digital platform to connect shippers with carriers in real-time. Carriers can advertise spare capacity in their trucks from the centralised platform at no cost, creating efficiencies which enable them to offer cheaper shipping to regional and metropolitan centres.

'To date, this innovation has over 700 carriers and nearly 2000 business shippers. In the first 12 months of trading, Freight Exchange has helped to

get many hundreds of trucks off the roads, as well as reduced expenditure for key customers by 25 per cent. Importantly, it has made a significant contribution to the development of regional Australia, while at the same time improving sustainability and reducing our carbon footprint.'

**Source:** Freight Exchange. (2018). *Freight Innovation Is Improving The Sustainability and Efficiency of Regional Road Transportation*. Retrieved from [www.blog.freightexchange.com.au/developing-regional-australia-through-innovation-while-reducing-our-carbon-footprint/](http://www.blog.freightexchange.com.au/developing-regional-australia-through-innovation-while-reducing-our-carbon-footprint/).

### Objective 1.2: Provide a contestable freight system that can maximise efficiency gains

The provision and operation of the freight system within the region is complex. Regulations for road freight and managed access to rail paths potentially impact on the contestability of the overall freight system. Understanding the capacity available on the network via freight movement data could enable efficiency gains to be realised.

Providing a contestable and optimised freight system will:

- require regulation that balances community expectations with practical freight requirements
- support better understanding of the available capacity within the freight network
- incentivise cooperation and information sharing to enhance network efficiency
- seek to remove impediments to access the various modes.

### Objective 1.3: Support the tourism sector via a well-connected, multi-modal transport network

Tourism provides a growing source of income for the region and is a future opportunity for growth. Providing good connectivity and access between cultural and natural places of interest will encourage more first-time and repeat visitors to the region.

The transport network needs to respond to increasing demands of the tourism market by providing visitors with transport choice on a safe transport network.

Key considerations for facilitating the growth of the tourism sector are:

- enhanced wayfinding and route legibility
- network optimisation activities based on understanding how, when and where visitors use the existing transport network.

This may include consideration of how other modes of transport might support the tourism industry, including improved air access, passenger rail, cycling and provision of rail trails.



*Cosmos Observatory, Visitor Information Centre, Charleville*

## Actions

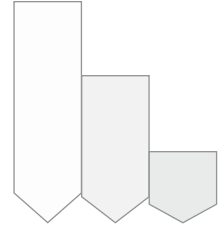
### PRIORITY 1: SUPPORTING ECONOMIC DEVELOPMENT

### OBJECTIVES

**Objective 1.1: Provide an adaptable and connected freight network that meets the region's local and global distribution needs**

**Objective 1.2: Provide a contestable freight system that can maximise efficiency gains**

**Objective 1.3: Support the tourism sector via a well-connected, multi-modal transport network**



Actions – short-term	1.1	1.2	1.3
<p><b>A1.01 Supporting active transport tourism</b> Provide advice to local government, other state government agencies and tourism bodies to support planning, design and construction of rail trails and tourism routes in the region to support active transport tourism.</p>			✓
<p><b>A1.02 Investment planning for priority widening projects</b> Investment planning to assess South West District's, State-controlled roads (Regional and District roads) of seal width <math>\leq 7</math> m and develop investment planning documents for the priority sections. Investigations to be undertaken on links such as:</p> <ul style="list-style-type: none"> <li>■ Diamantina Development Road</li> <li>■ Mitchell Highway</li> <li>■ Balonne Highway</li> <li>■ Quilpie-Thargomindah Road.</li> </ul>	✓	✓	
<p><b>A1.03 Corridor and route planning</b> Undertake planning, including investment planning, for the state strategic and state regional road network for high priority inter-regional routes such as the Carnarvon Highway and Landsborough Highway to aid strategic investment decisions.</p>	✓		✓
<p><b>A1.04 Rail barriers</b> Investigate any barriers to access for current and future rail freight systems.</p>	✓	✓	
<p><b>A1.05 Infrastructure design standards</b> In partnership with local governments, identify and update any existing transport infrastructure design standards for which greater value for money outcomes can be achieved in rural and remote areas.</p>	✓		
<p><b>A1.06 Heavy vehicle rest areas and stopping places</b> Prioritise existing heavy vehicle rest area infrastructure in the region to develop a strategy for upgrades, and undertake planning activities.</p>	✓		
<p><b>A1.07 Regional freight plan</b> Develop an integrated multi-modal freight plan to identify and prioritise freight network improvements to support supply chain efficiency across the region. The plan will consider current and emerging freight demands; access and movement requirements for oversize over-mass and high productivity vehicles; first and last mile links (particularly accessibility in Roma and Charleville); supply chain coordination models, and the role of the of the region's airports, rail terminals, and key freight routes.</p>	✓	✓	



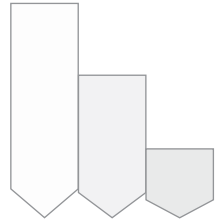
## PRIORITY 1: SUPPORTING ECONOMIC DEVELOPMENT (cont.)

## OBJECTIVES

**Objective 1.1: Provide an adaptable and connected freight network that meets the region's local and global distribution needs**

**Objective 1.2: Provide a contestable freight system that can maximise efficiency gains**

**Objective 1.3: Support the tourism sector via a well-connected, multi-modal transport network**



### Actions – medium/long-term

#### A1.08 Freight consolidation

Investigate regional opportunities for intermodal and freight consolidation facilities that link the Western and Southern Western rail systems to the strategic road network to support the transport of intermodal freight, cattle and agricultural produce.

#### A1.09 Transport for tourism

Undertake planning required to implement the *Queensland Tourism and Transport Strategy* across all regions. Undertake analysis and engagement to inform consideration of tourism in transport planning across the region.

#### A1.10 Real-time freight information

Investigate the application of real-time freight transport information that shows where vehicles, including trains, are located across the network.

	1.1	1.2	1.3
A1.08 Freight consolidation	✓	✓	
A1.09 Transport for tourism			✓
A1.10 Real-time freight information	✓		

	1.1	1.2	1.3
A1.08 Freight consolidation	✓	✓	
A1.09 Transport for tourism			✓
A1.10 Real-time freight information	✓		

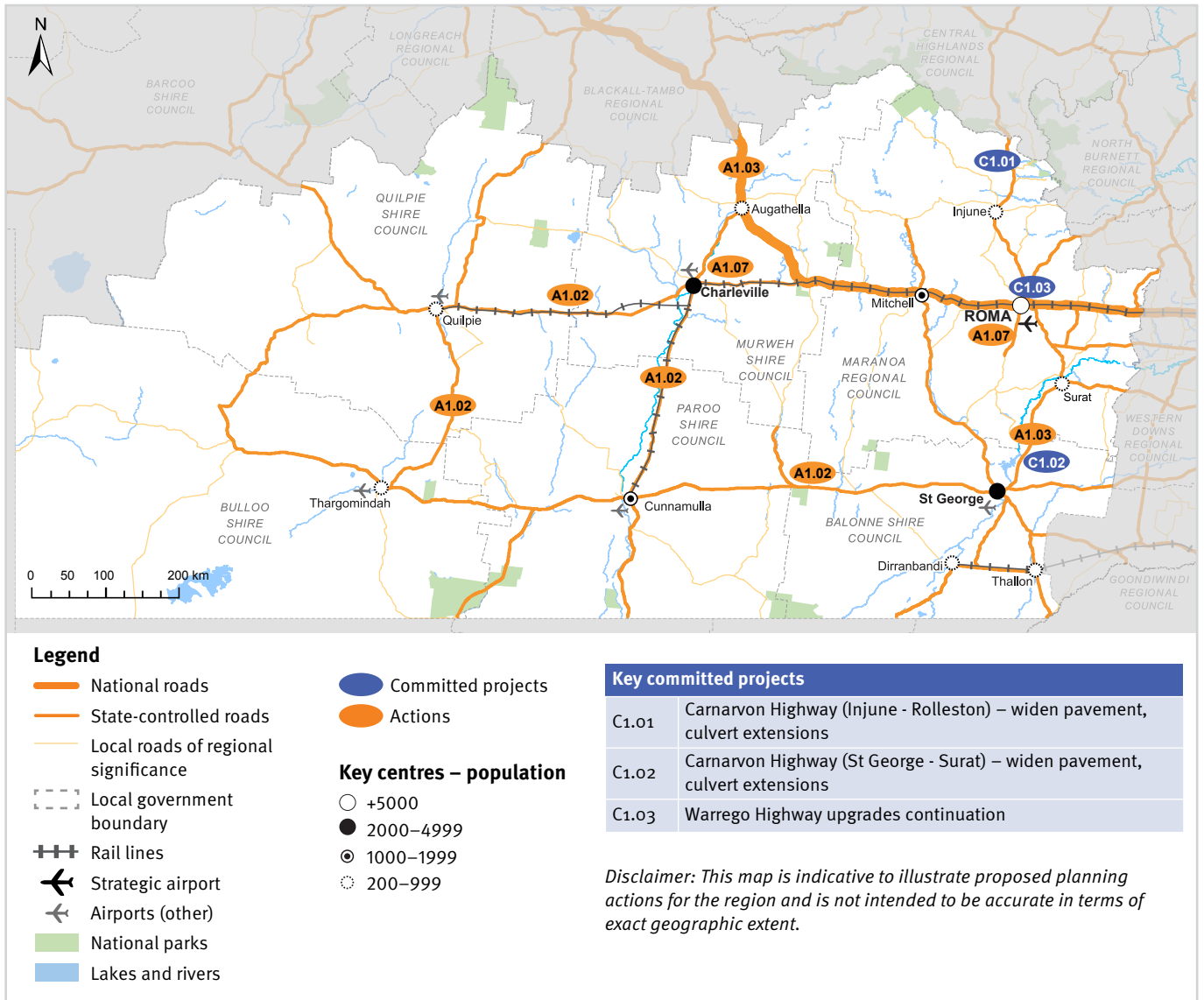


Figure 10: Priority 1 region map

## 4.2 Priority 2: Enhancing liveability



Bus shelter, Bollon

### A transport system that enhances liveability through connected communities.

#### Priority 2 aligns to:

- The Transport Coordination Plan's objectives for Customer Experience and Affordability, Community Connectivity and Environment and Sustainability.
- The *State Infrastructure Plan*'s focus on connecting regional communities with access to essential services and opportunities.
- Regional planning aims to integrate land use, transport and economic activity, support quality lifestyle options for residents and enhance the identity of regional communities by providing the required infrastructure and services.

'Liveability is 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.'<sup>68</sup>

To improve liveability, it is important to consider how residents in rural and remote areas can be sufficiently connected to essential services such as healthcare, education and recreation.

For customers who cannot drive or do not have access to a private vehicle, travelling around the region can be difficult due to a lack of alternative transport options. Roma, St George and Charleville have scheduled bus services with connections to major centres, such as Toowoomba, but outside of this, few options exist other than travelling by private car.

Air travel provides important access to a range of services. For example, the Royal Flying Doctor Service of Australia provides access to emergency healthcare from bases in Roma, Charleville and Ballera.

A transport system that connects people with services will help sustain vibrant local communities and support access for visitors.

This priority seeks to enhance liveability through:

- a fit-for-purpose road network that takes account of land use to balance freight distribution and local community needs
- a pleasant experience for customers on main streets in towns through high-quality design where the street relates to surrounding land uses
- provision of safe and equitable transport for customers to connect to family, friends and essential services
- enabling access to recreation and essential services supported by digital connectivity.

68 Partners for Liveable Communities. (2017). *What is Liveability?* Retrieved from [www.livable.org/about-us/what-is-livability](http://www.livable.org/about-us/what-is-livability).



## Transport objectives

### Objective 2.1: All customers have equitable access to a fit-for-purpose transport system

Private vehicles will continue to play a key role in personal mobility across the region. Therefore, safe physical connections between communities and amenities will continue to be a priority. Provision of the Principal Cycle Network and designing appropriate pedestrian and disabled access caters to all users including children, elderly, recreational users and commuters.

Providing mobility options for customers who cannot or choose not to drive is important for local and long-distance inter-regional trips. Alternative service delivery models that blend public and private transport can create passenger transport options. This includes peer-to-peer type arrangements, community transport and school services that could be matched appropriately with demand.

The digital environment will also create opportunities for customers to personalise their transport preferences, while supporting data collection and analytics for service providers.

Into the future, cooperative and automated vehicles may provide greater mobility for passenger and freight movements, improving connectivity and access to essential services.

Providing a fit-for-purpose transport system will:

- allow all customers in the region to be mobile, even if they cannot drive
- improve accessibility to employment, recreation and essential services
- reduce isolation and improve community welfare.

## CASE STUDY: LIBERTY MOBILITY NOW – PEER-TO-PEER REGIONAL TRANSPORT

Liberty Mobility Now is a rural and small urban peer-to-peer transport service provider in the United States. Liberty engages with local service providers to identify a community's transportation gaps and assist to service them. Using a smart phone application and a central call centre, volunteer drivers from the community are deployed to assist vulnerable members looking to access essential services. Where appropriate, taxis and other transportation services are used. Liberty charges customers \$1.10 to book and \$1 dollar per mile on average.

Liberty launched as a start-up in 2016. Their rural strategy has already rolled out to three states (Nebraska, Ohio, and South Dakota) with a total of seven expected by the end of 2017.

**Source:** Liberty. (2016). *Mobility as a service*. Retrieved from [www.libertymobilitynow.com/about-us/](http://www.libertymobilitynow.com/about-us/)



Wills St, Charleville

### Objective 2.2: The transport system is easy to understand and supports a pleasant customer experience

The transport system itself contributes to amenity and the customer experience of both residents and visitors. It provides the means for people to be mobile, but also an opportunity for positive experiences, regardless of mode. Improving the pedestrian and cycling environment contributes to better health outcomes and fosters creating a sense of community and connection. Functional road design and good legibility are important for easy navigation through the region, particularly for visitors. Combining legibility with visitor attractions can enhance customers' travel experiences and support tourism growth.

A data-enabled road network allows better wayfinding for travellers as well as advice on road hazards, network incidents and interruptions.

Providing a pleasant customer experience also requires an understanding of their mobility needs. Engaging with customers and harnessing data informs planning for the system to ensure it is easy to use and meets customers needs.

A transport system that is easy to understand will:

- support economic growth and diversification, particularly in tourism
- facilitate a transport environment that is as enjoyable and seamless as possible.

### Objective 2.3: Integrate transport and land use planning to facilitate good transport outcomes that balance the needs of all customers

Local amenity can be impacted by the transport system. Freight and passenger vehicles travelling through towns can impact safety for vulnerable road users. In addition, the design of streets influences whether people want to use them.

Well-designed streetscapes in towns, particularly on appropriate main streets, can encourage those passing through to stop and use local businesses and create an attractive environment for residents.

Strategic planning to facilitate land use and transport integration, combined with high-quality urban design will:

- facilitate efficient freight movements that minimise impacts on towns
- enhance amenity and accessibility, particularly in the region's towns
- reduce modal conflicts to improve safety.

### Queensland Walking Strategy

The *Queensland Walking Strategy 2019–2029* provides a framework for promoting walking as an accessible, active transport mode across Queensland, delivering health benefits for Queenslanders and access to important destinations such as schools, shops, and public transport.

The strategy sets out the vision for the next 10 years and directly contributes to the vision for a single integrated transport network accessible to everyone. The strategy is accompanied by an action plan that identifies areas for further investment over the next two years.



Wills Street and Alfred Street, Charleville

## Actions

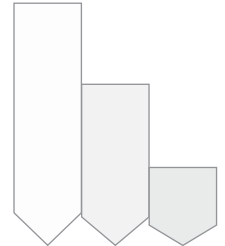
### PRIORITY 2: ENHANCING LIVEABILITY

### OBJECTIVES

**Objective 2.1: All customers have equitable access to a fit-for-purpose transport system**

**Objective 2.2: The transport system is easy to understand and supports a pleasant customer experience**

**Objective 2.3: Integrate transport and land use planning to facilitate good transport outcomes that balance the needs of all customers**



Actions – short-term	2.1	2.2	2.3
<p><b>A2.01 Long distance passenger services</b> Continue to review long distance bus, rail and air services to establish fit-for-purpose long distance mobility options.</p>	✓		
<p><b>A2.02 Household travel survey</b> Undertake household travel surveys and investigate mechanisms to engage with customers to collect transport data.</p>		✓	
<p><b>A2.03 Strategic road network planning</b> Plan for the long-term strategic road network to facilitate mobility and improve amenity and accessibility in towns such as Roma and Charleville.</p>			✓
<p><b>A2.04 Cycle network plan review</b> In collaboration with local government, review and update the <i>Downs South West Principal Cycle Network Plan</i> every five years and every two years update the addendum <i>Priority Route Maps</i>. As part of regular review, consider expanding the principal network to other towns in the region beyond Roma.</p>	✓		✓
<p><b>A2.05 Access for people with disabilities</b> Improve the end-to-end journey for people with a disability by working in collaboration with key stakeholders to achieve the objectives of the <i>Disability Action Plan 2018–2022</i>.</p>	✓	✓	
<p><b>A2.06 Vision standards</b> Work in collaboration with the Regional Roads and Transport Groups to review network vision standards, road hierarchy and road ownership in the region, to ensure road maintenance and management sits with the appropriate jurisdiction.</p>		✓	
<p><b>A2.07 Principle cycle network implementation</b> Undertake planning to deliver the principal cycle network to support more cycling, more often on safe, direct and connected routes via:</p> <ul style="list-style-type: none"> <li>■ Standalone options analysis and business case development for cycling infrastructure on highest priority routes</li> <li>■ Explicit provision for cycling infrastructure as part of planning for other TMR funded projects on all principal routes, in accordance with the department's Cycle Infrastructure Policy.</li> </ul>	✓		✓
<p><b>A2.08 Boating infrastructure</b> Continue to prioritise investment in boating infrastructure across the region based on an assessment of demand and input from the community and stakeholders.</p>	✓	✓	
<p><b>A2.09 Improved walkability and amenity</b> Work with local governments to investigate and prioritise opportunities to improve the pedestrian environment in town centres throughout the region to strengthen walkability and local amenity.</p>	✓		✓



## Actions

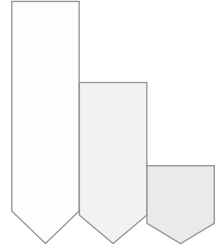
### PRIORITY 2: ENHANCING LIVEABILITY (cont.)

### OBJECTIVES

**Objective 2.1: All customers have equitable access to a fit-for-purpose transport system**

**Objective 2.2: The transport system is easy to understand and supports a pleasant customer experience**

**Objective 2.3: Integrate transport and land use planning to facilitate good transport outcomes that balance the needs of all customers**



#### Actions – medium/long-term

2.1 2.2 2.3

##### **A2.10 Community based transport**

Support local government in identifying opportunities to improve access to transport services suited to their communities. This may include investigating new and existing shared transport services and community-based transport options, and how these may be supported through technology and tools that allow coordination between transport providers as well as the integration of end-to-end journey planning, booking and payment options.

✓

✓

##### **A2.11 Cross-border connections**

Continue to work with Transport for NSW to prioritise planning for cross-border connections such as the Warry Gate Road.

✓

##### **A2.12 Cooperative and automated vehicles**

Understand and prepare for the role cooperative and automated vehicles will play in passenger and freight movement across the region in the future considering the low density population and geographic extents.

✓



Sturt Street, Charleville

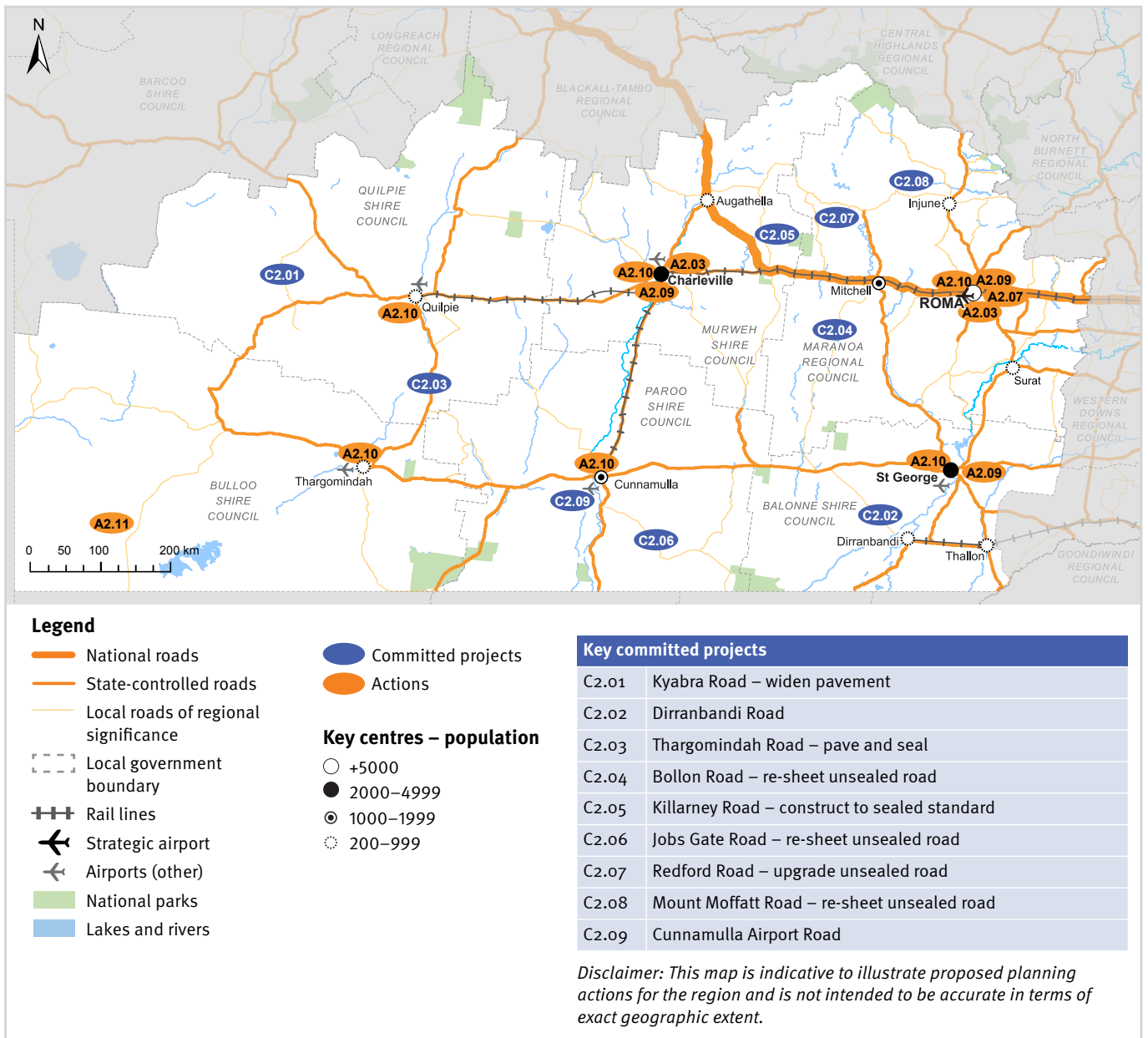


Figure 11: Priority 2 region map

## 4.3 Priority 3: Transport Safety



Roadworks, Maranoa

### Priority 3 aligns to:

- The Transport Coordination Plan's objective for Safety and Security.
- The *State Infrastructure Plan's* focus on continually addressing identified safety deficiencies on the transport network to improve safety of vulnerable road users, and using the latest and most efficient asset management approaches to improve transport network safety.
- Regional planning, which aims to support quality lifestyle options for residents through a safer transport system.

### A safer transport system.

Providing a safer transport system is an important priority, particularly given the impact it can have on the lives of the region's residents and customers.

Long distances between destinations are a factor contributing to driver fatigue and can increase the risk of crashes. Rural and remote regions expose drivers to hazards such as wildlife and network interruptions which, due to fewer alternate routes, can lead to risk-taking behaviour.

Given the scale of the region and the remoteness of many of its transport assets, it is not always feasible to achieve a common standard of infrastructure across the whole network.

A pragmatic approach to safety and maintenance is needed which will include:

- provision of a safe transport environment, where driver fatigue and the chance of human error is minimised as much as possible
- education and awareness of high risk crash locations and the need to rest frequently.



## Transport objectives

### Objective 3.1: Design and operate the transport system to minimise modal conflict

Holistically, Transport and Main Roads aims to achieve a zero death toll on Queensland's transport system. Achieving a zero death toll requires a safe transport network and a safe approach to the use of roads, rail, air and waterways. This requires consideration of safety on individual modes, as well as safety in locations where modes interact.

Minimising modal conflicts through safe design and operation will:

- incorporate engineering solutions to create a safer travel environment on the physical network
- improve safety at level crossings to reduce danger for both pedestrians and vehicles and allow for efficient rail and traffic movements
- protect the safety, efficiency and operational integrity of strategic airports by ensuring development and associated activities avoid increasing risk to the public in public safety areas.

### Objective 3.2: Minimise opportunities for accidents through education and infrastructure that keeps customers safe and secure

Freight, tourism, local traffic and active transport need to co-exist so that transport infrastructure caters for all users' needs. Capturing transport network data will enable governments to make targeted improvements to infrastructure to improve safety in the areas of highest risk.

Safety programs to encourage safe travel behaviour on roads and waterways, combined with disaster management planning, contribute to a safer transport system, reducing the number of deaths and serious injuries. A safer system will create a more forgiving road environment by reducing opportunities for human error, fatigue, collisions with wildlife and address safety hazards that particularly affect rural and remote locations.

Minimising opportunities for crashes through targeted infrastructure will:

- reduce the number of crashes on the region's road network
- reduce fatalities and hospitalisations.

## CASE STUDY: WIDE CENTRELINES

Transport and Main Roads has been continuing to implement Wide Centre Line Treatments (WCLT) with Audio Tactile Line Markings (ATLMs), with a focus on the Bruce Highway.

The installation of WCLT with ATLM provides a one-metre separation between two opposing flows of traffic and helps to reduce the risk of high severity head-on crashes. It improves road safety by alerting the driver if they have strayed over the centreline and allowing a correction margin so they can return to their lane.

Work undertaken in 2015–16 increased the length of WCLT in Queensland to a total of 901 kilometres, with 711 kilometres along the Bruce Highway and 190 kilometres elsewhere. This contributes to Transport and Main Roads' goal to have 85 per cent of travel on national highways in Queensland on three-star roads or higher by 2020.

Studies of WCLT along the Bruce Highway estimate there has been a 43 per cent reduction in head-on crashes (ARRB, 2015), with a predicted maximum reduction of between 60 per cent (TMR, 2016) and 80 per cent (Austroads, 2016). Head-on crashes are one of the most severe crash types and as such, these reduction factors are very promising for decreasing the Queensland road toll.

**Source:** Department of Transport and Main Roads. (2015). *Annual Report 2015–2016*. Retrieved from [www.publications.qld.gov.au/dataset/annual-report-2015-2016-transport-and-main-roads](http://www.publications.qld.gov.au/dataset/annual-report-2015-2016-transport-and-main-roads)

### Objective 3.3: Leverage technology to enhance the safety of customers using the transport system

Effective use of technology will play a key role in improving safety. Safety mechanisms such as phone apps and collision avoidance technology that detects driver inactivity can provide driver alerts. Using live monitoring systems to detect faults on transport vehicles and infrastructure can also improve transport safety.

In the longer term, cooperative and automated vehicles may significantly improve safety, by removing the opportunity for human error when travelling.

A safe transport environment enhanced through technology will:

- reduce the risk of human error when travelling
- reduce the number of crashes on the network including with wildlife
- reduce fatalities and hospitalisations.

## Actions

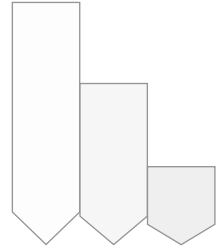
### PRIORITY 3: TRANSPORT SAFETY

### OBJECTIVES

**Objective 3.1: Design and operate the transport system to minimise modal conflict**

**Objective 3.2: Minimise opportunities for accidents through education and infrastructure that keeps customers safe and secure**

**Objective 3.3: Leverage technology to enhance the safety of customers using the transport system**



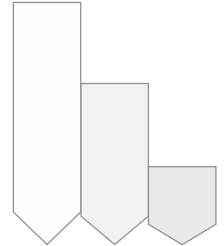
#### Actions – short-term

	3.1	3.2	3.3
<p><b>A3.01 Road safety treatments</b> Continue to identify, prioritise and nominate candidate sites for road safety treatments as part of Safer Roads Sooner and black spot programs and through other opportunities such as planned upgrades. This will include investigating safety improvements for the Carnarvon Highway (Roma–Injune and Mungindi–Rolleston), Landsborough Highway (Morven to Tambo) and Warrego Highway (Jackson–Wandoan intersection).</p>		✓	✓
<p><b>A3.02 Rail crossings</b> Continue to improve safety at rail level crossings by reducing the number of level crossings, improving infrastructure and exploring new technology to align with the <i>Queensland Level Crossing Safety Strategy 2012–2021</i>.</p>	✓		
<p><b>A3.03 Reducing crashes</b> Explore measures to minimise crashes by determining investment priorities for new or upgraded rest areas, particularly along the Carnarvon and Landsborough Highways, to address driver fatigue risks, encourage safe travel, and provision of sufficient capacity and amenities.</p>	✓	✓	✓
<p><b>A3.04 Road safety packages</b> Develop safety improvement packages for state-controlled roads including Warrego Highway (Mitchell to Toowoomba) considering engineering solutions.</p>	✓		
<p><b>A3.05 Aviation–public safety areas</b> Reflect and address any land use and transport planning constraints that result from future review of public safety areas for Roma Airport. The airport is protected as a strategic airport under the <i>State Planning Policy</i>.</p>	✓		
<p><b>A3.06 Safety promotion</b> Continue to develop region specific education, promotion and communication campaigns in partnership with community, industry and other authorities to encourage safe travel behaviour on roads, pathways, public transport and waterways in the region.</p>		✓	✓
<p><b>A3.07 Improving mobile coverage</b> Investigate potential solutions to improve mobile communication coverage across the region’s transport network, for example at recognised rest stops.</p>			✓

**PRIORITY 3: TRANSPORT SAFETY (cont.)**

**OBJECTIVES**

- Objective 3.1: Design and operate the transport system to minimise modal conflict
- Objective 3.2: Minimise opportunities for accidents through education and infrastructure that keeps customers safe and secure
- Objective 3.3: Leverage technology to enhance the safety of customers using the transport system



Actions – medium/long-term	3.1	3.2	3.3
<b>A3.08 Wildlife collision avoidance</b> Identify wildlife-to-vehicle crash hotspots to prioritise mitigation and interventions strategies.			✓
<b>A3.09 Stock routes</b> Continue to review and make recommendations to the Department of Natural Resources, Mines and Energy for primary stock routes throughout the South West region to improve road safety and the efficiency of agricultural practices.	✓		
<b>A3.10 Boating safety</b> Undertake boating safety initiatives for inland waterways and waterbodies.		✓	✓



Roadworks, Maranoa



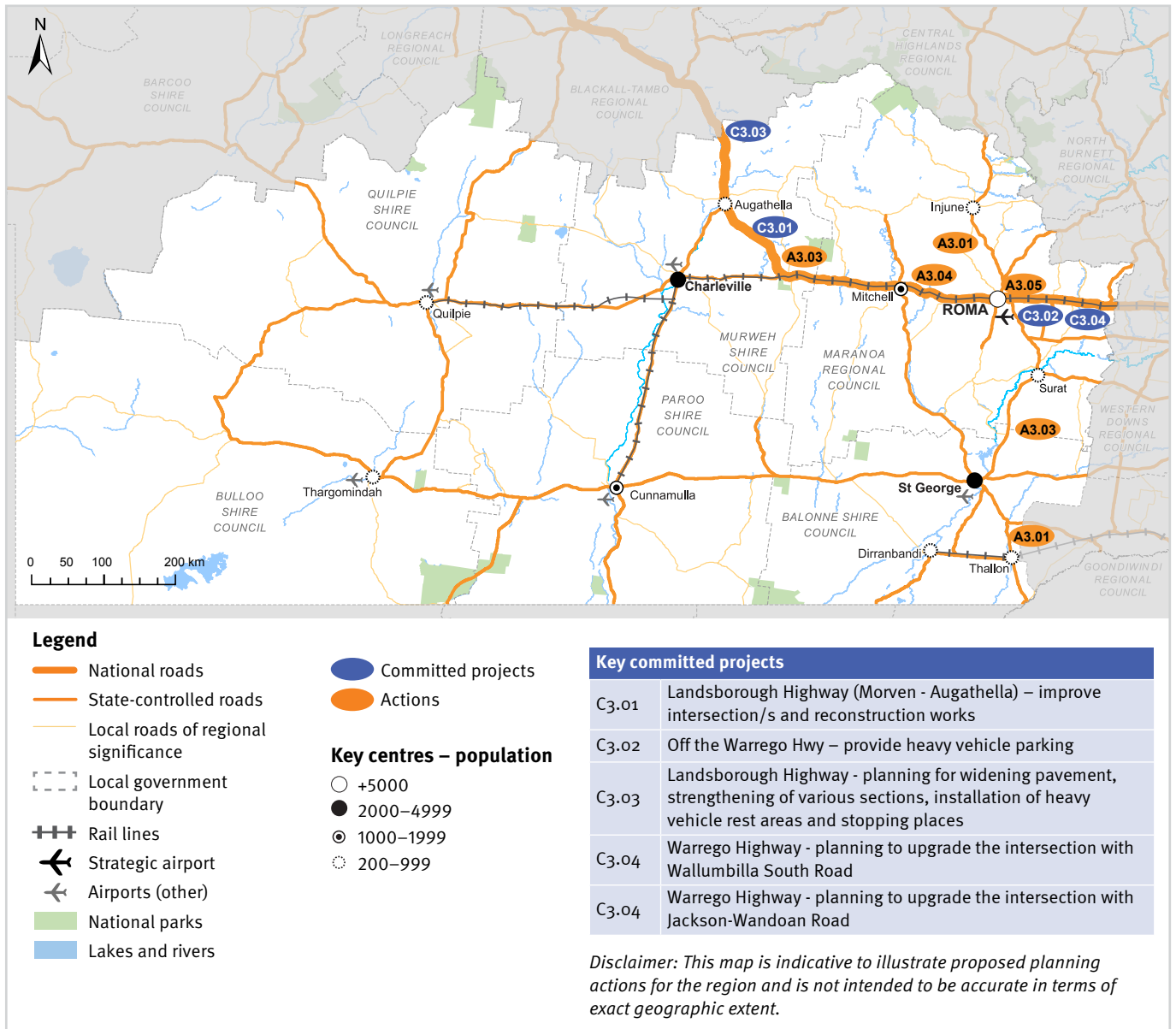


Figure 12: Priority 3 region map

## 4.4 Priority 4: Network resilience



St George

### Priority 4 aligns to:

- The Transport Coordination Plan's objective for Environment and Sustainability.
- The *State Infrastructure Plan*'s focus on maintenance and rehabilitation of existing infrastructure to reduce the long-term cost of repair and improve network resilience and security.
- Regional planning aims to protect regional landscapes and create a more sustainable future.

### A resilient and responsive transport system.

Disruptions to the transport system in the region are often caused by weather events, such as flooding or major accidents, sometimes making roads and rail impassable and unsafe. A changing climate may see more intense heavy rainfall events,<sup>69</sup> contributing to more frequent transport system disruptions, which may:

- have detrimental impacts on people, property and industry
- compound existing service and freight access and distribution challenges<sup>70</sup>

- increase road safety issues
- impede growth in freight productivity and tourist travel
- impose expensive maintenance requirements on government.

A resilient and responsive transport system will minimise the impact of disruptions. Targeted infrastructure upgrades should occur in areas where most needed, with technology used to fill the gaps. Responsiveness, both in incident management and resolution, also contributes to minimising impacts.

The transport system itself impacts the natural environment through emissions and potential loss of habitat. Climate change is projected to increase average annual temperatures, change average rainfall and lead to sea level rises. More severe weather events are expected including more extreme rainfall events.<sup>71</sup> Therefore, the South West Queensland region's transport system should be designed to minimise the impact it has on the natural environment.

A resilient and responsive transport system will ensure:

- customers can keep moving on a road and rail network that is resilient to flooding and incidents as far as practicable
- the transport system minimises negative impacts on the natural environment, including vehicle emissions.

<sup>69</sup> Department of Environment and Science. (2016). *Climate change in the South West Queensland Region (DRAFT)*. [www.ehp.qld.gov.au/assets/documents/climate/south-west-qld-climate-change-impact-summary.pdf](http://www.ehp.qld.gov.au/assets/documents/climate/south-west-qld-climate-change-impact-summary.pdf).

<sup>70</sup> *ibid.*

<sup>71</sup> Griffith University. (2017). *South East Queensland Climate Adaptation Research Initiative*. Retrieved from <https://publications.csiro.au/rpr/pub?pid=csiro:EP123336>.



## Transport objectives

### Objective 4.1: Design, construct, operate and maintain the transport system to be resilient to disruptions and support environmental sustainability

Enhancing the resilience of the transport network enables customers to access the region's essential services, especially during severe weather events. Careful consideration of the design, construction, operation and maintenance of the transport system can minimise disruptions by reducing the impacts of weather on strategic transport infrastructure to maintain connectivity.

Environmental sustainability is also vital to the region, not just in reducing emissions and impacts towards climate change, but also in supporting the quality of life.

Developing a more resilient and responsive transport system while achieving greater environmental sustainability considers:

- contribution to the state's overall emissions reduction targets
- disaster management and access to essential services during and following extreme weather events
- network safety
- flood immunity upgrades at affected sections of the road and rail network
- bridge renewal
- infrastructure design standards to maximise functionality and asset life.

### Objective 4.2: Adopt an integrated technology enabled response to minimise the impact of disruptions on customers

Data and accurate real-time information is critical for keeping customers informed about network conditions, incidents and timeframes for resolution. Connecting residents and tourists with this information can facilitate improved road safety while providing peace of mind. Journeys will be able to be automatically re-routed according to the fastest route and users can make more informed travel choices and contingency plans. Leveraging this information and the data collected from it, infrastructure upgrades can occur on key routes, where they are most needed, which is particularly important in a constrained fiscal environment.

Smart infrastructure approaches will allow for more effective management of assets. Where practical, smart infrastructure will provide real-time data for system operators to maintain the network.

Minimising disruptions through an integrated approach will:

- allow customers using transport corridors to access phone reception at all times of day and in all weather conditions to keep informed in real-time of what is occurring across the system
- enable automated re-routing
- support efficient and affordable monitoring of assets.

## CASE STUDY: USING DRONES TO SUPPORT NETWORK MAINTENANCE

In 2016, Transport and Main Roads undertook a trial using drone technology to conduct a bridge inspection on the Riverside Expressway, Brisbane. Automating elements of bridge inspections has the potential to provide significant cost savings as well as reduce safety concerns. Through this trial the opportunities of using drones to provide detailed images of bridge components were identified. This information is now being used to develop guidelines for when drones can and should be used for bridge inspections. The application of drone technology to bridge inspections

has the potential to reduce the need for lane closures, reduce inspection times, and allow for more efficient working hours, including during peak traffic times. Ultimately, a reduction in network disruptions will improve efficiency and network resilience.

**Source:** Department of Transport and Main Roads. (2016). *Annual Report 2016–2017*. Retrieved from [www.data.qld.gov.au/dataset/department-of-transport-and-main-roads-annual-report-data-2016-2017](http://www.data.qld.gov.au/dataset/department-of-transport-and-main-roads-annual-report-data-2016-2017).

## Actions

### PRIORITY 4: NETWORK RESILIENCE

### OBJECTIVES

**Objective 4.1: Design, construct, operate and maintain the transport system to be resilient to disruptions and support environmental sustainability**

**Objective 4.2: Adopt an integrated technology enabled response to minimise the impact of disruptions on customers**

#### Actions – short-term

4.1 4.2

##### **A4.01 Flood immunity priorities**

Undertake planning, design and business case development to upgrade flood affected sections of the road network such as the Warrego Highway between Mitchell and Roma, Bulloo Development Road at Eulo and Carnarvon Highway.

✓

##### **A4.02 Bridge renewal**

Undertake planning for bridge renewal on the Warrego Highway at Bungil Creek and Carnarvon Highway at the Moonie River; and using the outputs from regional bridge renewal investigations commence planning for necessary bridge replacements or structural enhancements across the state-controlled road network for high priority structures in the region. Priorities include timber bridge and single lane/intervention level bridge widths replacement projects such as Womalilla Creek along the Mitchell St George Road.

✓

##### **A4.03 Flood immunity strategy**

Develop a strategy which identifies affordable flood immunity targets for key links in the state-controlled road network, and a high-level program of prioritised flood immunity upgrades to key links and flood-prone locations for inclusion in future infrastructure investment programs.

✓

##### **A4.04 Disaster management**

Consider the effect of climate change in planning the transport network and in refining responsive and adaptive disaster management strategies. This includes considering emergency access, and access to essential goods and services following disruptive events, including extreme weather.

✓

##### **A4.05 Structure Management**

Undertake planning and prioritisation for necessary minor and major culvert replacements on the state and federal network for strategic roads such as the Carnarvon Highway.

✓



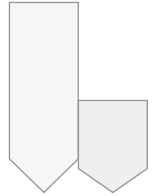
## Actions

### PRIORITY 4: NETWORK RESILIENCE (cont.)

### OBJECTIVES

**Objective 4.1: Design, construct, operate and maintain the transport system to be resilient to disruptions and support environmental sustainability**

**Objective 4.2: Adopt an integrated technology enabled response to minimise the impact of disruptions on customers**



#### Actions – medium/long-term

##### A4.06 Low and zero emission vehicles

Plan for the future roll out and integration of low and zero emission vehicles (plug-in electric and hydrogen fuel-cell) in regional and remote Queensland, aligning with *The Future is Electric – Queensland’s Electric Vehicle Strategy*, and other relevant State-wide strategies and plans, to ensure integration and connectivity.

4.1 4.2

✓

✓

##### A4.07 Digital communications and connectivity

Identify opportunities to improve communications infrastructure and increase the use of innovative technology (e.g. drones) for traffic monitoring, road condition monitoring and the provision of real-time information about network closures and disruptions.

✓

##### A4.08 Real-time messaging

Identify any gaps in the regional provision of information such as signage and Intelligent Transport Systems, to enable better real-time messaging to travellers throughout the region.

✓



Warrego River Walk, Charleville

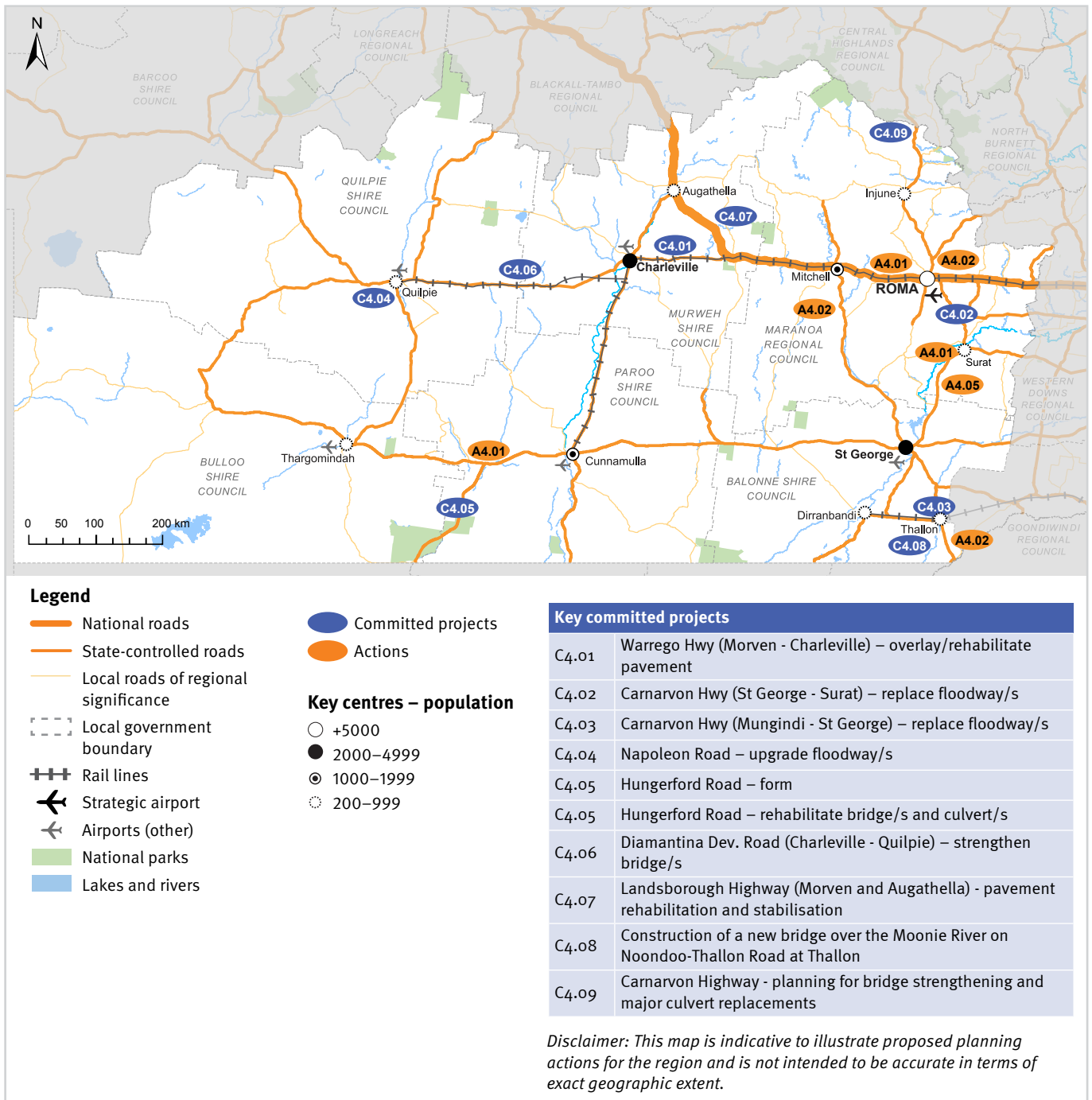


Figure 13: Priority 4 region map





*Bulloo Park, Quilpie*



# 5. Implementation





## 5.1 Taking action

Delivering the *South West Queensland Regional Transport Plan* will require:

- further integration with the strategic direction of the region’s local governments
- continued engagement with our stakeholders and customers
- collaborative and considered decision making
- a drive from all partners to deliver a safer, more efficient, reliable and integrated transport network.

This Plan will be used to inform transport planning priorities and investment decision making for the region. The Plan will ensure that future investments address priorities that matter to customers, stakeholders and the community.

Figure 14 shows the importance of Regional Transport Plans in the Transport and Main Roads' investment lifecycle.

Transport and Main Roads provides opportunities for customers to provide input into planning actions outlined in this Plan via the department's website. Information on our projects including planning, studies and construction projects can be found at: [www.tmr.qld.gov.au/Projects](http://www.tmr.qld.gov.au/Projects).

Transport and Main Roads and its planning partners are responsible for ensuring the priorities and actions in this Plan are realised. They will be delivered by:

### ■ Informing the Queensland Transport and Roads Investment Program (QTRIP)

QTRIP is released annually. It is a funded program of work that will be delivered over the upcoming four years. Projects are listed on QTRIP after having gone through an investment prioritisation process that will be informed by this Plan.

### Aligning with the *State Infrastructure Plan*

Regional Transport Plans will inform the program of work within the *State Infrastructure Plan*. QTRIP informs the *State Infrastructure Plan's* construction pipeline. Regional Transport Plans align planning and investment frameworks with the region’s challenges and opportunities.

### ■ Being considered in local and federal government investment decisions and plans

This Plan has been prepared in consultation with other levels of government and considers their strategic planning and policy documents.

### ■ Delivering the Transport System Planning Program (TSPP)

The TSPP is a rolling program of planning projects across all modes and all regions with projects ranging from network to link level and investment proposal activities. Demonstrated alignment with Regional Transport Plans is essential for planning projects to be eligible for funding under the TSPP.

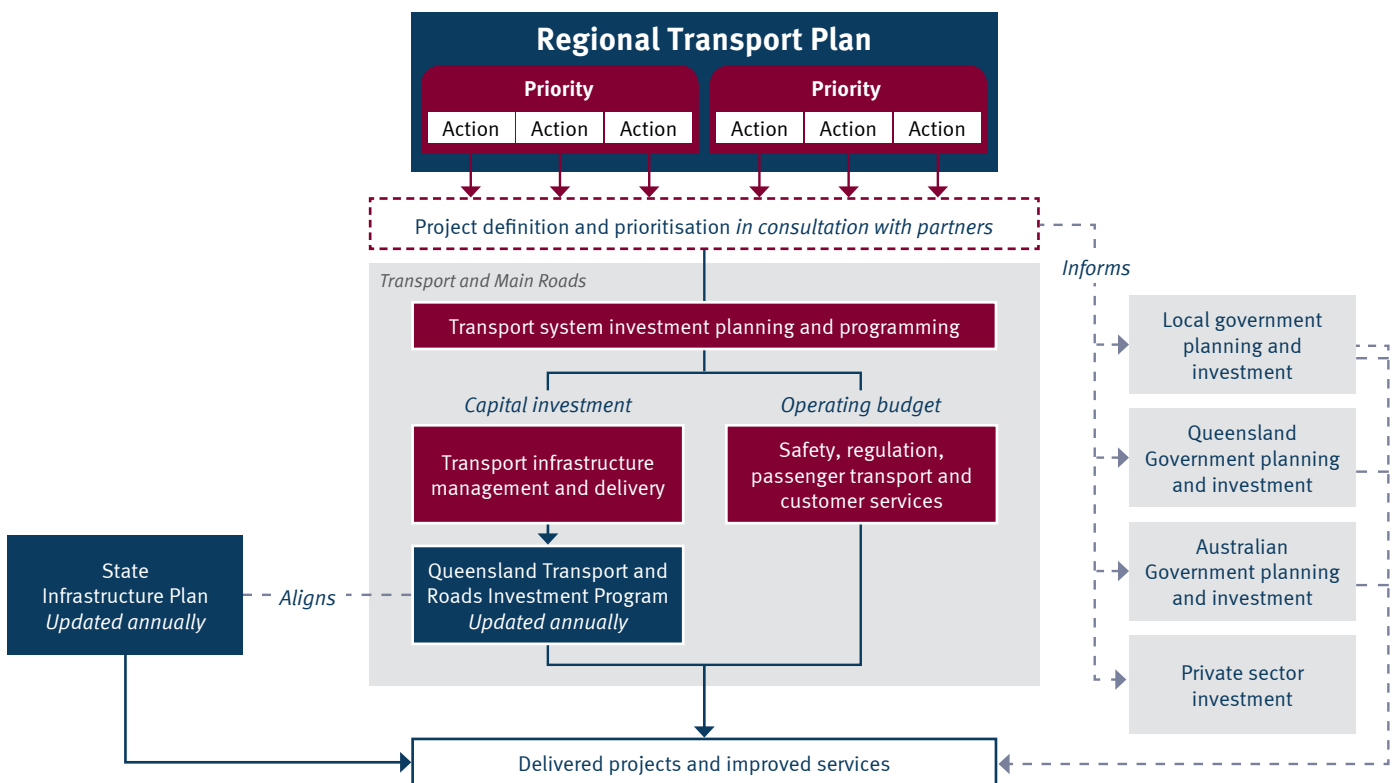


Figure 14: Regional Transport Plans are a critical step in Transport and Main Roads investment lifecycle

## 5.2 Delivering in partnership

More can be achieved when partnering with stakeholders to deliver shared goals using collective expertise and resources. Throughout the development of the *South West Queensland Regional Transport Plan*, Transport and Main Roads has built relationships with stakeholders from all levels of government, business and industry. These relationships will be further developed in delivering the actions outlined in this Plan. Opportunities for partnering include:

- collaborative planning leveraging knowledge from researchers, universities and education providers
- inviting project development support from individuals or organisations with an interest in the implementation of an initiative or action
- supporting and encouraging private sector investment through project facilitation to accelerate action delivery and realise economic or commercial benefits, for example, through investment facilitation or public-private partnerships
- providing resource support such as human resources, equipment or material.

Cooperative transport planning is the foundation for delivery of Regional Transport Plans. Each Plan will be delivered with a focus on cooperation, coordination and collaboration. This approach builds on the framework for inter-agency cooperation established within the Roads and Transport Alliance (RTA). The RTA is a partnership between Transport and Main Roads and the Local Government Association of Queensland, on behalf of local governments, for the stewardship of Queensland's regional road and transport network.

Local governments together with Transport and Main Roads form Regional Roads and Transport Groups (RRTGs). Moving forward RRTGs will work collaboratively to prioritise investment on road and transport infrastructure and should evolve further to influence the strategic planning and management of regional transport networks. This includes reviewing and identifying specific economic drivers, opportunities and challenges as they change over time to inform project identification and prioritisation.

The priorities and actions outlined in the Regional Transport Plans will help focus RRTGs in their approach to strategic transport planning and local transport infrastructure investments.



Quilpie

## 5.3 Measuring success

Overall, the effectiveness of this Plan within the region will be measured against the measures of success outlined for each priority (Figure 15). These align to the Transport and Main Roads' *Transport Coordination Plan 2017–2027* and will allow the department to track if Regional Transport Plans are meeting transport system objectives.

It is important to note that some of the measures of success may be updated as required to ensure they continue to provide an effective measurement of performance.

### PRIORITY 1: SUPPORTING ECONOMIC DEVELOPMENT

MEASURE OF SUCCESS	PROPOSED INDICATOR	SOURCE
Freight productivity improves.	Heavy vehicle operating costs.	Transport and Main Roads
Transport supports the region's tourism economy.	Percentage variation from posted speed limit on state-controlled roads. <sup>^</sup>	Transport and Main Roads

### PRIORITY 2: ENHANCING LIVEABILITY

MEASURE OF SUCCESS	PROPOSED INDICATOR	SOURCE
Greater access and connectivity to places, services and information.	Proportion of the state-controlled transport network (rail and road) with mobile reception coverage.	Transport and Main Roads
	Proportion of people choosing to walk, cycle and take public transport to work. <sup>^^</sup>	Australian Bureau of Statistics
Reduced frequency and duration of unplanned closures due to incidents.	Frequency and duration of unplanned closures on the state-controlled transport network (other than flooding).	Transport and Main Roads

### PRIORITY 3: SAFETY

MEASURE OF SUCCESS	PROPOSED INDICATOR	SOURCE
Reduction in transport-related incidents, crashes, injuries and fatalities.	Number of road crashes resulting in fatalities or hospitalisation.	Transport and Main Roads
	Road crashes (resulting in fatalities and hospitalisation casualties) per 100 million vehicles kilometres travelled on state-controlled roads.	Transport and Main Roads
	Road crashes (resulting in fatalities and hospitalisation casualties) per kilometre on state-controlled roads.	Transport and Main Roads

### PRIORITY 4: ENVIRONMENT AND SUSTAINABILITY

MEASURE OF SUCCESS	PROPOSED INDICATOR	SOURCE
Reduced frequency and duration of unplanned closures due to flooding.	Frequency and duration of unplanned closures on the state-controlled transport network due to flooding.	Transport and Main Roads

Figure 15: Measures of success and proposed indicators

<sup>^</sup> Proxy measure for improving reliability to access the region's tourism destinations via road.

<sup>^^</sup> Proxy measure for a more accessible transport system through an increased use of a greater range of transport options.



## 5.4 Monitoring and review

This Plan will be monitored, periodically reviewed and updated to ensure it remains current and relevant.

In the short-term, monitoring will focus on ensuring the actions put forward are prioritised and progressed through departmental and local planning programs. As the Plan matures and planning and delivery is completed, monitoring will focus on tracking progress against objectives and measures of success (see Figure 16).

It is intended that a review of this Plan will be carried out every three to five years to maintain its alignment with

other government and non-government plans, programs and initiatives.

This review will also consider changes to land use, the region’s economy, environmental considerations, demography, technological innovations, the progress of significant infrastructure projects and any other factors which may require a shift in the priorities or objectives for the region.

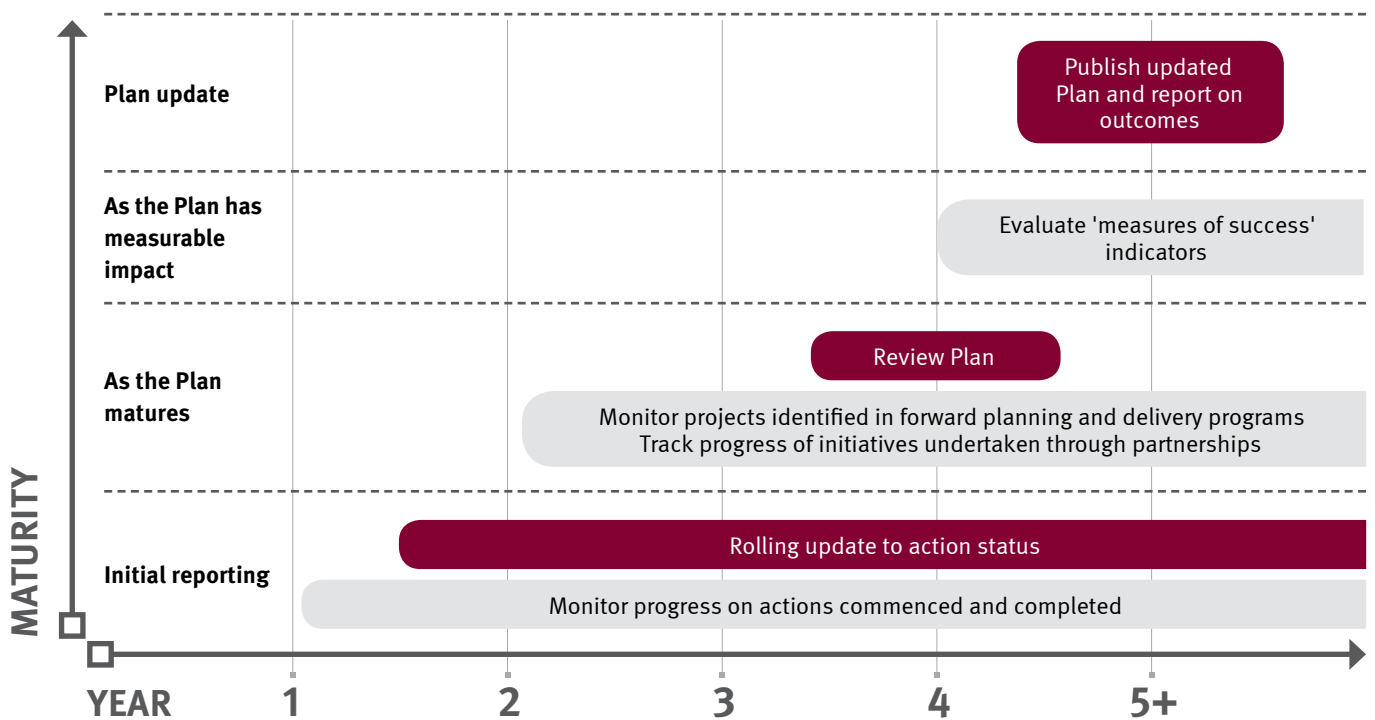


Figure 16: Monitoring, reporting and review as the Plans mature

### Further information

Please email [TMR\\_Regional\\_Transport\\_Plans@tmr.qld.gov.au](mailto:TMR_Regional_Transport_Plans@tmr.qld.gov.au) for further details on this or other Regional Transport Plans.



St George Cultural Centre, St George



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