DARLING DOWNS

DRAFT REGIONAL TRANSPORT PLAN

2018

Queensland Government

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The Department of Transport and Main Roads acknowledges the Traditional Owners and Custodians of the landand 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.

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

- Goondiwindi Regional Council
- Lockyer Valley Regional Council
- Southern Downs Regional Council
- Toowoomba Regional Council
- Western Downs Regional Council.

Cover images: Rail line near Yelarbon ((background); Warwick Town Hall (inset, left); Farming, Lockyer Valley (inset, centre); Fuel tanks, Dalby (inset, right).

Inside cover image: Clock tower, Toowoomba.

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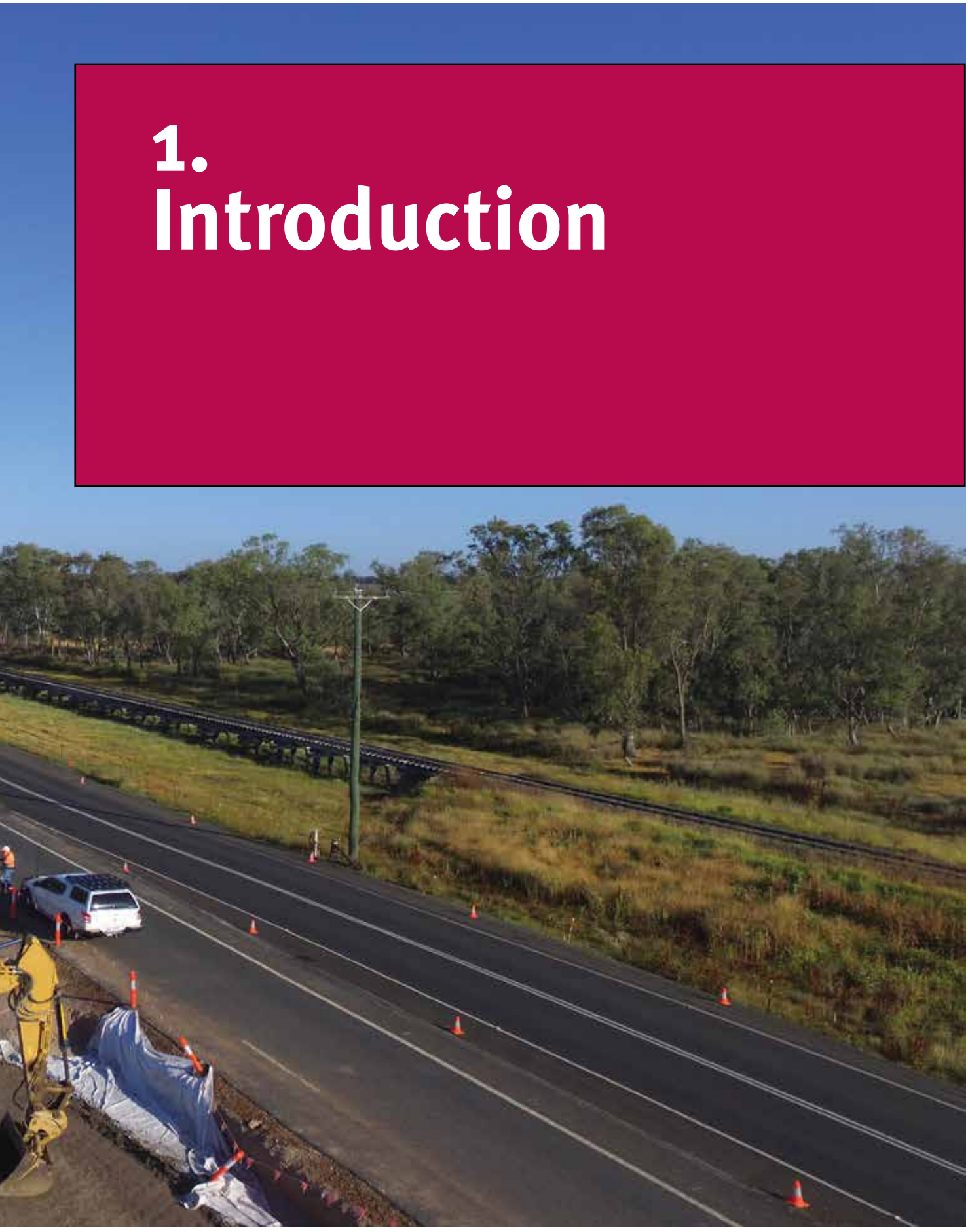
Warrego Highway road works

1. Introduction



1.1 A shared direction for transport

The *Darling Downs 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 Darling Downs region is home to more than 284,000 people and includes the local government areas of Goondiwindi, Lockyer Valley, Southern Downs, Toowoomba and Western Downs.[1]

1.2 What is a Regional Transport Plan

The purpose of the *Darling Downs 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.

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).

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.

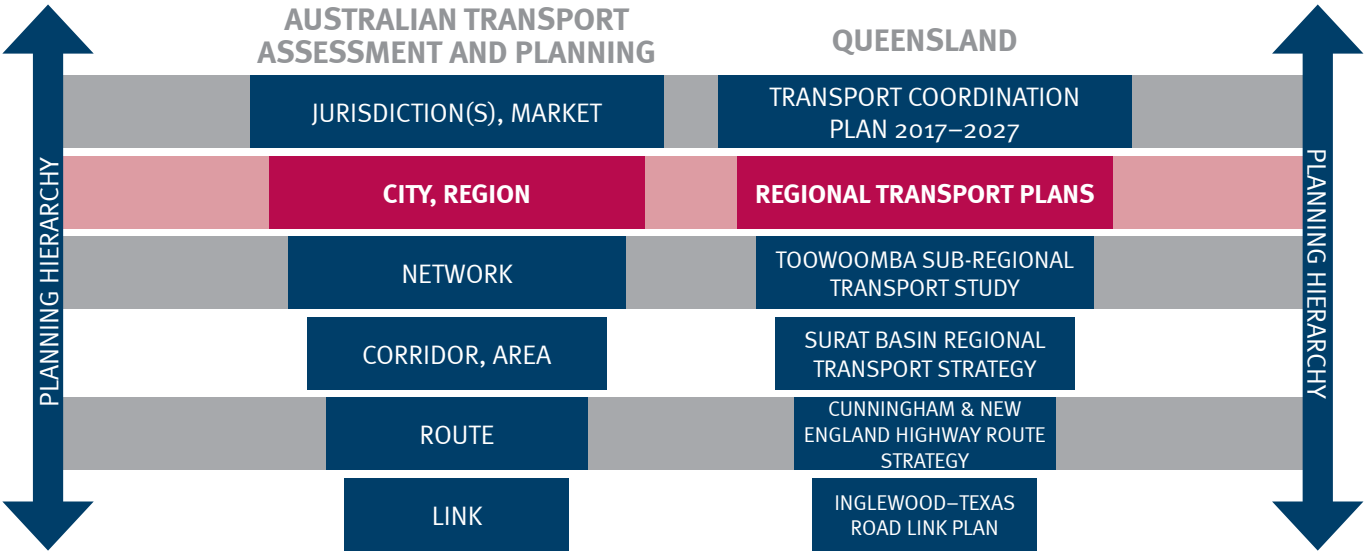


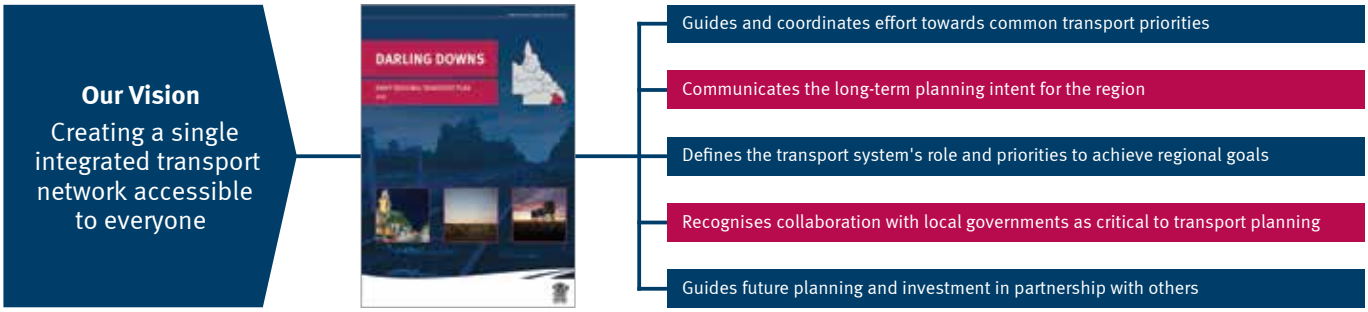
Figure 1: Examples of how Queensland responds to the Australian Transport Assessment and Planning hierarchy

1 Queensland Government Statistician's Office. (2018). *Queensland Regional Profiles: Resident Profile for Custom region*. www.statistics.qgso.qld.gov.au/qld-regional-profiles.

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 policies, strategies, plans and investment frameworks across all levels of government (see Table 1 on page 8). 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*
- *Darling Downs Regional Plan 2013*
- *South East Queensland Regional Plan (ShapingSEQ)*
- 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 2016–2020*
- 'Queensland Freight Strategy' (draft)
- *Moving People Connecting Communities*
- *Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015–2021*
- *Queensland Cycling Strategy 2017–2027*
- *Queensland Road System Performance Plan*
- 'Heavy Vehicle Network Plan' (draft).

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. Future updates to the Plan will reflect any additional or amended statewide plans and strategies as part of the update.

Table 1: The strategic fit of Regional Transport Plans

FRAMEWORK ELEMENT	DIRECTION SETTING	STRATEGIC PLANNING	PROGRAMMING (including investment)	DELIVERING
	Establish broad, high level strategic intent or policy positions	Develop plans or strategies to focus on key themes or areas	Identify, evaluate, prioritise and program initiatives including addressing funding/ investment requirements, competing needs and timeframes	Provide services and infrastructure such as public transport, bridges and tunnels, maintenance, regulation and compliance/ monitoring activities
National	▪ Australian Infrastructure Plan	▪ Australian Transport and Assessment Planning Guidelines ▪ Infrastructure Australia's Infrastructure Priority List ▪ National Land Freight Strategy ▪ Regional, Education, Skills and Jobs Plan, Darling Downs and South West ▪ Infrastructure Australia's Urban Transport Strategy	▪ Infrastructure Investment Program ▪ Australian Infrastructure Audit ▪ National Land Transport Network investment strategies ▪ Building Better Regions Fund	▪ Toowoomba to Oakey Duplication Stages 1 and 2 ▪ Toowoomba Second Range Crossing
Queensland Government	▪ Objectives for the community ▪ Advance Queensland ▪ State Planning Policy	▪ Regional Plans – Darling Downs Regional Plan 2013 – *ShapingSEQ* ▪ State Infrastructure Plan Part A ▪ Building Queensland's Infrastructure Pipeline ▪ Queensland Cycling Strategy 2017–2027	▪ Project Assessment Framework ▪ State Infrastructure Plan Part B ▪ Building Queensland Business Case Assessment ▪ Warrego Highway Upgrade Program	▪ Royalties for the Regions ▪ Bridges Renewal Program ▪ Various intersection improvements on Gatton–Esk Road ▪ Construction of a new concrete bridge at Jingi Jingi Creek ▪ Upgrading the Toowoomba–Cecil Plains Road
Departmental	▪ Transport Coordination Plan 2017–2027 ▪ 'Queensland Transport Strategy' (draft) ▪ Transport and Main Roads Strategic Plan 2016–2020	▪ **Regional Transport Plans** ▪ System strategies and plans (e.g. rail, ports, freight, passenger, road safety) ▪ Area and corridor transport strategies ▪ Route and link plans ▪ Principle cycle network plans	▪ 10-year transport infrastructure portfolio investment planning ▪ Queensland Transport and Roads Investment Program (QTRIP) ▪ Highway investment strategies ▪ Transport System Planning Program	▪ Transport service contracts ▪ Transport Infrastructure Development Scheme ▪ Safer Roads Sooner ▪ Public transport infrastructure upgrades
Local	▪ Vision statements ▪ Strategic/corporate plans	▪ Planning schemes ▪ Local area plans ▪ Local transport plans	▪ Local government infrastructure plans ▪ Local government investment and works programs	▪ Local roads projects ▪ Bikeway and footpath projects ▪ Local bus infrastructure projects

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 2). 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 2: State Infrastructure Plan responses (Part A, p 52)

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*

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 Darling Downs 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 Toowoomba (formerly Brisbane West) Wellcamp Airport and Army Aviation Centre Oakey as strategic airports.

1.7 Alignment with regional planning

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

- *South East Queensland Regional Plan 2017 (ShapingSEQ)*
- *Darling Downs Regional Plan 2013*.

ShapingSEQ covers the local government areas of Lockyer Valley and Toowoomba's urban area. Darling Downs Regional Plan covers the local government areas of Goondiwindi, Southern Downs, Toowoomba and Western Downs.

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:

- sustainably accommodate a growing population
- contribute to developing a globally competitive economic powerhouse, including the protection of agricultural land while supporting the co-existence of other economic opportunities
- help move people, products and information efficiently
- promote ecological and social sustainability, including certainty for the future of towns
- support living in better designed communities.

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:

- Department of State Development, Manufacturing, Infrastructure and Planning's *Regional priorities and economic development initiatives* (as at 10 August 2017), *Darling Downs Economic and Infrastructure Framework 2013* and *Surat Basin Regional Planning Framework* (July 2011)
- Regional Development Australia's *Darling Downs Regional Roadmap 2016–2020* and *Darling Downs and South West Economic and Social Development Strategy (*April 2012*)*
- Australian Government Department of Education, Employment and Workforce Relations' *Regional Education, Skills and Jobs Plan: Queensland – Darling Downs 2012–2014* (July 2013).

Clifton Train Station

1.8 Achievements to date

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

Warrego Highway Upgrade Program

This program is jointly funded by the Australian Government and Queensland Government and includes:

- construction of a four-lane section of the Warrego Highway from Nugent Pinch Road west through Charlton to Kingsthorpe
- pavement widening of an 11.3 kilometre section of the Warrego Highway between Brigalow and Chinchilla
- intersection improvements on the Warrego Highway at the Acland–Sabine Road intersection, as part of the construction of a new concrete bridge at Jingi Jingi Creek near Brigalow, including the replacement of deteriorated culverts on the existing bridge
- construction of new overtaking lanes on the Warrego Highway at Auchmar and Malu, east of Dalby.

Roads

- Upgrading the Toowoomba–Cecil Plains Road, west of Toowoomba, including widening of the existing pavement, jointly funded by the Australian Government and Queensland Government.
- Various intersection improvements on Gatton–Esk Road, north of Gatton.
- Investigations into flooding issues on James Street in Toowoomba, at East and West Creek.
- The final stage of the New England Highway Upgrade project between Hampton and Geham, including: road widening, intersection improvements and construction of a southbound overtaking lane.
- Construction of a heavy vehicle rest area at Cunningham's Gap, on the Cunningham Highway, four kilometres east of Tregony.

Public transport

- Implementation of the new Toowoomba urban bus network increasing route frequencies, span of hours, service coverage and introduction of Sunday services.
- Rerouting of three urban services in Warwick to improve operational efficiency and safety.

Active transport

In collaboration with local governments:

- *Downs South West Principal Cycle Network Plan*
- Priority Route Maps for Miles, Chinchilla, Dalby, Goondiwindi, Oakey, Pittsworth, Toowoomba, Gatton, Laidley, Warwick and Stanthorpe
- grant project for Old Cunningham Highway Link Stage 1 design and construction.

Bridges

- Replacement of bridges over Braemar Creek on Dalby–Kogan Road and Bum Bum Creek on the New England Highway.
- Replacement of the Kogan Creek Bridge in Kogan on the Dalby-Kogan Road, as part of the Bridge Renewal Program, jointly funded by the Australian Government and Queensland Government.

Warrego Highway, Lockyer Valley

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 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 with 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.

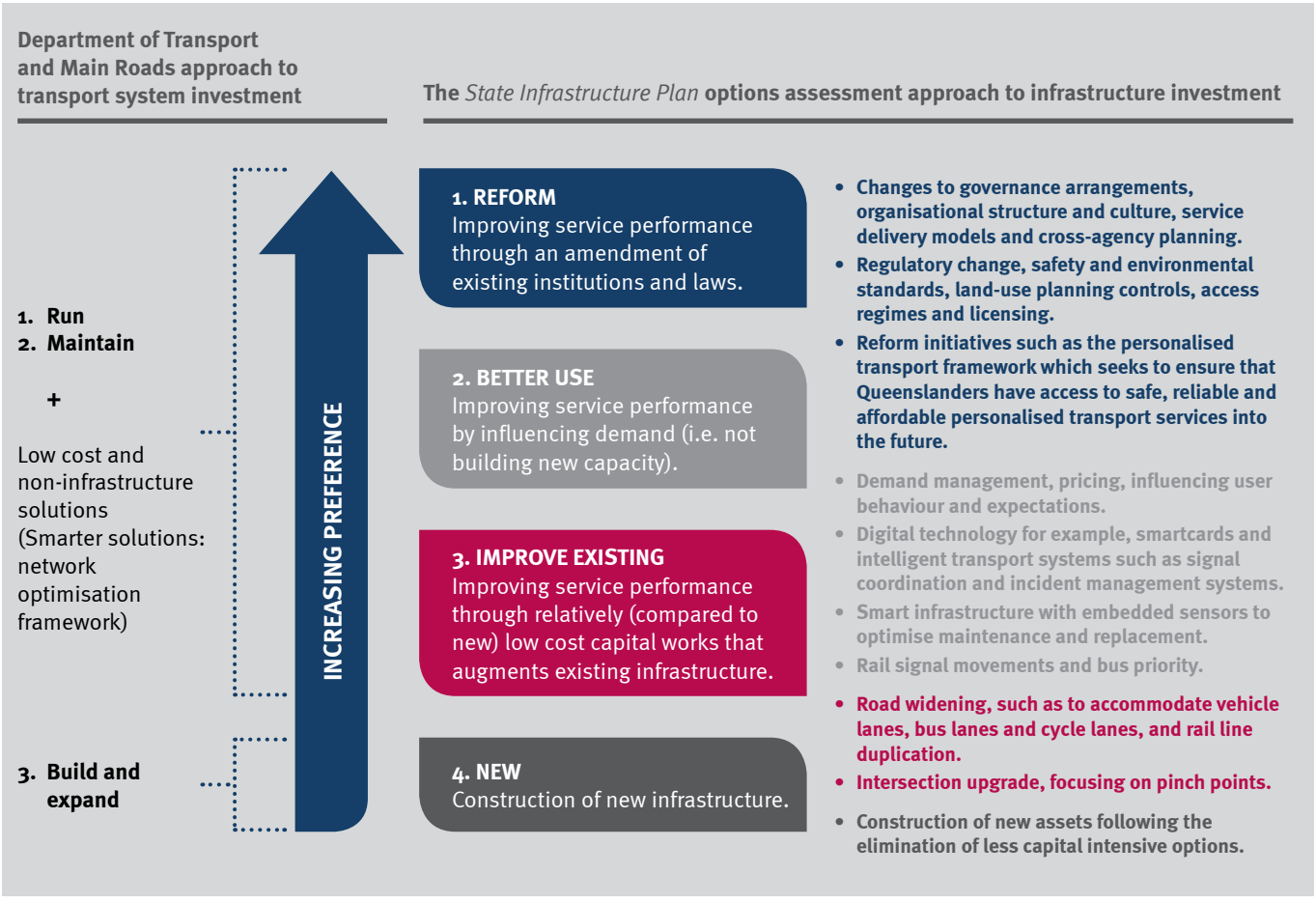


Figure 2: Alignment between the departmental and government approaches to infrastructure investment

Process

The *Darling Downs Regional Transport 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.

Early engagement with partners, stakeholders and customers through meetings and workshops to understand regional goals, challenges and opportunities

Review of relevant strategies, plans and policies to establish a holistic understanding of transport objectives and desired regional transport outcomes

Analysis of economic and population trends to understand key drivers underpinning future transport needs

Collaborative development of priorities and actions to set a framework for future planning and delivery partnerships

Condamine River, Warwick

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-centric 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.

Engaging with our customers

To achieve a 'one network' approach, the department involved customer representatives early in the creation 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 and small business. To gain customer input, the department hosted workshops and facilitated a number of one-on-one interviews. Some of the key issues that emerged from this engagement included:

- opportunities to improve efficiencies across the freight rail and road networks
- last-mile accessibility to freight generators, particularly agriculture and animal husbandry
- opportunities to streamline freight regulations
- ensuring integration between economic, land use and transport planning
- improving town safety and amenity by managing heavy vehicle movement through towns
- scope to improve passenger transport options, other than private vehicles
- transport system resilience and responsiveness to weather events, including floods and drought
- leveraging technology and innovation for real-time data and transport information
- limiting emissions from land transport
- the safety of people travelling across a vast region.

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

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.

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 3 outlines the key components of the Regional Transport Plan.

Withcott, Lockyer Valley

Table 3: Structure of the draft Darling Downs Regional Transport Plan

STRATEGIC CONTEXT

SETTING THE SCENE
Chapter 2: The Darling Downs Region

THE REGION | THE TRANSPORT NETWORK

Chapter 2 provides an overview of the key characteristics of the communities that make up the Darling Downs region, and the different elements of the region's current transport system across all modes, networks and services.

PLANNING CONTEXT
Chapter 3: Goals, challenges and opportunities

GOALS

- A diverse and modern economy that produces high-value products and services, and where the rural and urban economies are connected through resilient infrastructure.
- A region of active and healthy neighbourhoods, where people are safely connected to their community, its culture, lifestyle, employment and essential services.
- A region that sustains its natural environment through responsible development and values its critical role in supporting agriculture, tourism and liveability for residents.

CHALLENGES

- Exposure to volatility and variability in agriculture and mining.
- Servicing the region's dispersed settlement pattern and remote towns.
- Impacts of weather.
- Supporting an ageing population.
- Road safety.

OPPORTUNITIES

- Proximity to high-value natural resources and export gateways.
- Taking advantage of a high performing agricultural sector.
- Harnessing new technology and digital connectivity across the region.
- Expanding the tourism market.
- Transitioning to a more skilled workforce as the region grows.
- Major infrastructure, planning and delivery.

Chapter 3 details the goals, challenges and opportunities that are the main drivers for establishing the region's transport priorities and actions. Review of existing planning, analysis of information, and consultation with customers were key steps in defining the goals, challenges and opportunities.

TRANSPORT RESPONSE

SHAPING TRANSPORT TO ACHIEVE REGIONAL GOALS
Chapter 4: Priorities and actions

PRIORITY 1 Supporting economic growth	PRIORITY 2 Enhancing liveability	PRIORITY 3 Transport safety	PRIORITY 4 Network resilience
A transport system that supports economic growth through efficient access to local and global markets.	A transport system that supports connected and liveable communities.	A safer transport system.	A resilient and responsive transport system.

ROLE OF TRANSPORT

OBJECTIVES AND MEASURES OF SUCCESS

ACTIONS – SHORT-TERM, AND ACTIONS – MEDIUM/LONG-TERM

Chapter 4 sets out the transport response to achieving regional goals, addressing challenges and supporting opportunities. The transport priorities express the regional goals with a transport system focus. The priorities set the high-level direction for framing objectives, measures of success and actions.

Transport objectives describe the desired future state for transport in meeting the region's goals and transport priorities. Meeting each objective through taking action will result in real and measurable outcomes or 'measures of success' that can be tracked to indicate progress over time.

The majority of actions identify the Queensland Government's strategic intent for taking the critical steps in the short term towards achieving the transport objectives and regional goals over the indicative 15-year life of the Plan.

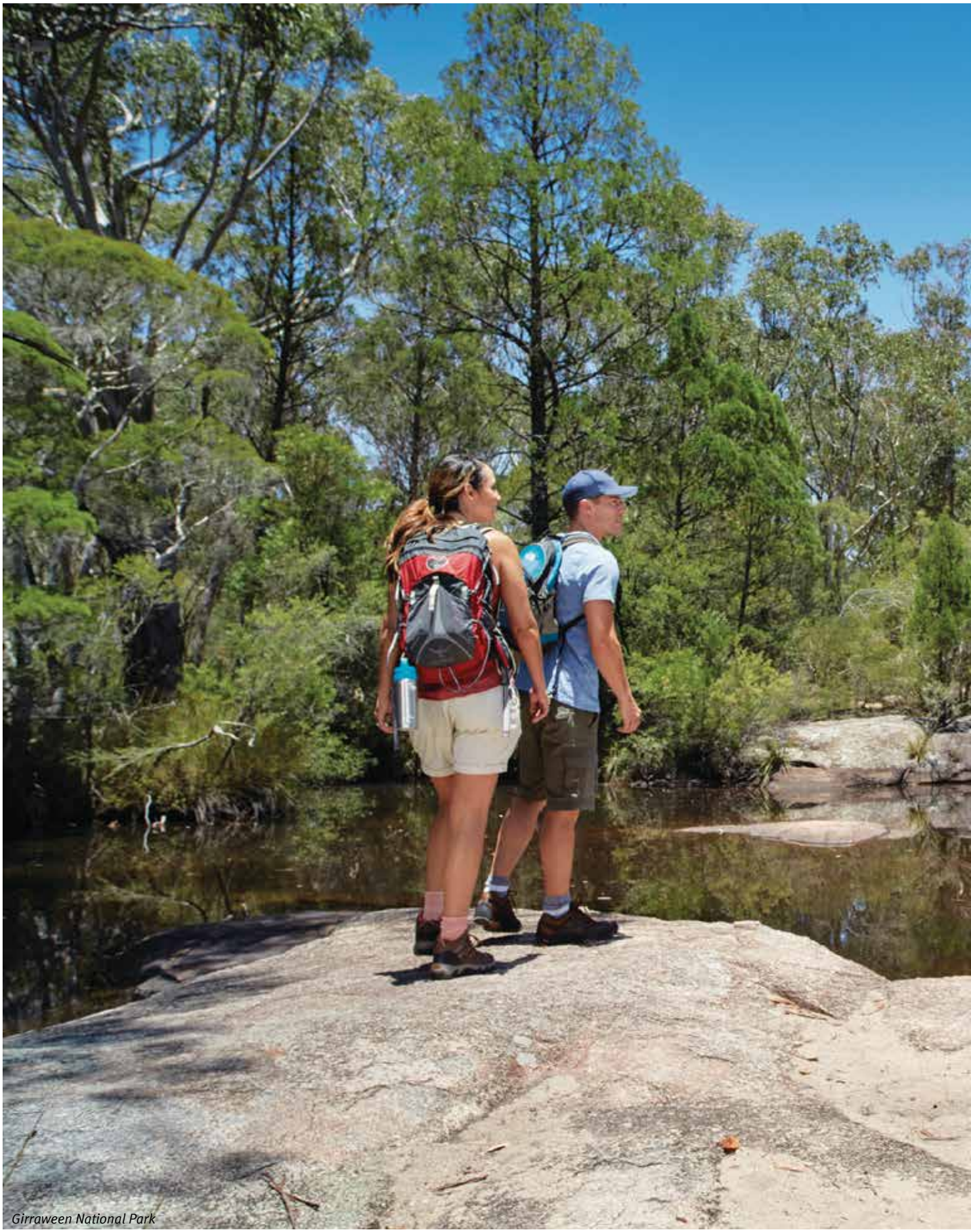
Medium/long-term actions identify possible responses to emerging or potential future transport planning needs.

Actions are led by the Queensland Government, however many will involve partnerships and collaboration with industry and community.

TAKING ACTION
Chapter 5: Implementation

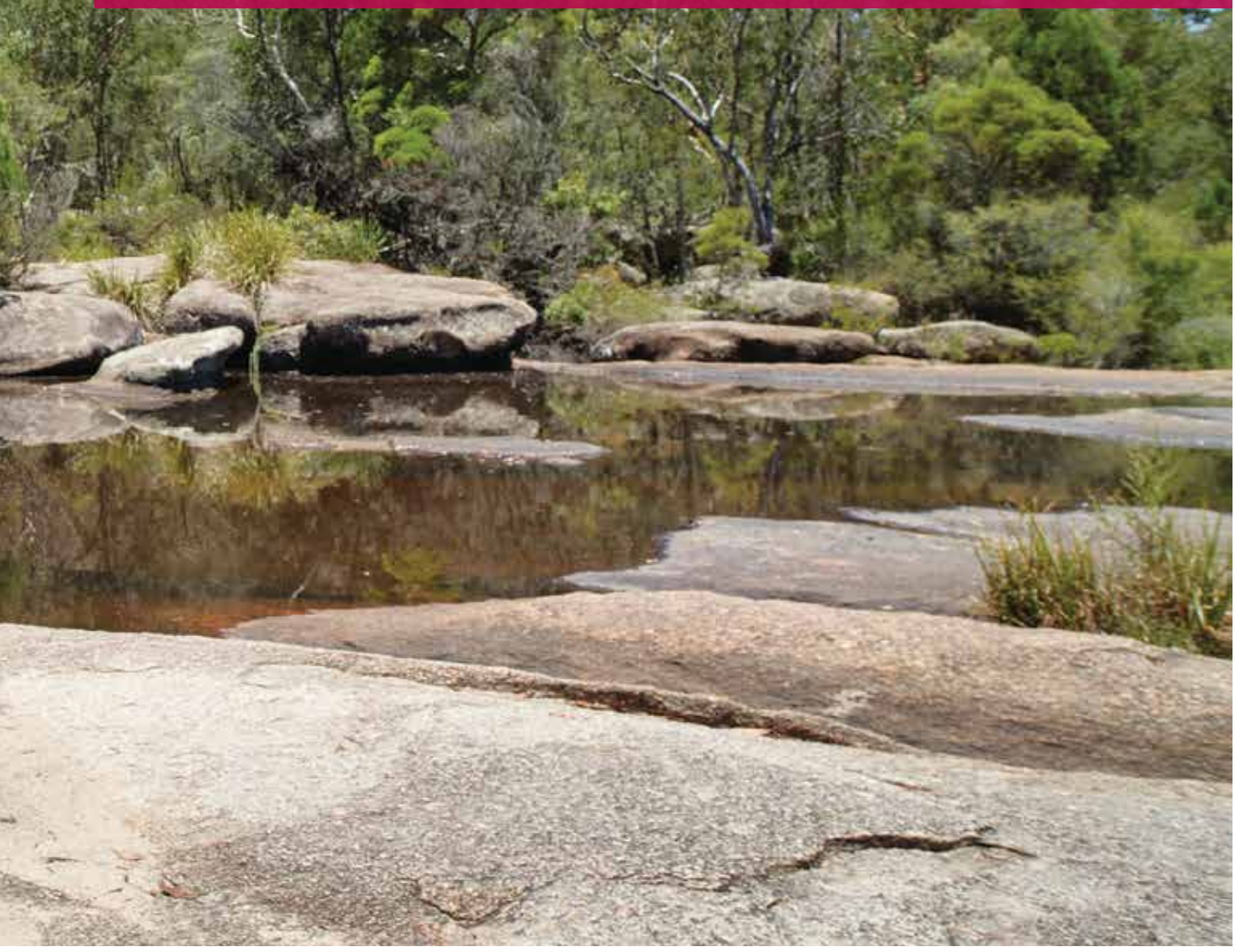
DELIVERING IN PARTNERSHIP | MONITORING AND REVIEW

Chapter 5 outlines the approach for delivering in partnership to implement the Plan. It also sets out the framework for monitoring and review.



Girraween National Park

2.
The Darling Downs Region



2.1 Region overview

THE DARLING DOWNS REGION COVERS AN AREA OF **79,661 KM²**

WHICH IS JUST OVER **4.6%** OF QUEENSLAND'S LAND MASS[2]

POPULATION GROWTH 2016–2036*

2016 **284,737** PEOPLE

2036 **354,997** PEOPLE

58% of people live in Toowoomba. The region's population is forecast to grow 1.1% from 2011 to 2036

IN 2016–2017, GROSS REGIONAL PRODUCT WAS $16.2 BILLION AND GREW **43%** FROM 2001 TO 2016[3]

9,791 KM² OF PROTECTED LAND INCLUDING NATIONAL PARKS THAT OFFER OPPORTUNITIES FOR TOURISM AND REFLECT IMPORTANT COMMUNITY PLACES AND PRISTINE NATURAL ENVIRONMENTS

11,974 INDIVIDUALS IN THE DARLING DOWNS WITH ABORIGINAL OR TORRES STRAIT ISLANDER HERITAGE, COMPRISING **4.3%** OF THE POPULATION*

REGION'S MEDIAN TOTAL FAMILY INCOME PER ANNUM **$75,603**

QUEENSLAND'S MEDIAN TOTAL FAMILY INCOME OF **$86,372** PER YEAR*

AVERAGE DAILY TEMPERATURE RANGE OF **12.0C – 26.1C**

AVERAGE RAINFALL OF **658MM** PER ANNUM[4]

17.3% OF THE REGION'S POPULATION AGED **65+**, **22.2%** IN SOUTHERN DOWNS, **14.7%** IN QLD*

CATTLE IS A MAJOR EXPORT FOR THE REGION

KEY FEATURES OF THE REGIONAL ECONOMY:*

The greatest employer across the region is **health care** and **social assistance** with **12.9%** of the total employed persons, followed by **agriculture, forestry** and **fishing** with **11%**

Projections to 2036 indicate employment growth in the following industries:

- healthcare and social assistance
- manufacturing
- mining
- accommodation and food services
- professional, scientific and technical services

Tourism generated **$780 million** in sales and contributed **$385.7 million** to the economy of the Darling Downs region in 2015–2016[5]

2 Queensland Government Statistician's Office. (2017). *Queensland Regional Profiles: Resident Profile for Custom region*. www.statistics.qgso.qld.gov.au/qld-regional-profiles.

3 National Institute of Economic and Industry Research. (2017). *Gross Product Economic Indicators*. www.economy.id.com.au/.

4 Department of State Development, Manufacturing, Infrastructure and Planning. (2013). *Darling Downs Regional Plan*. www.statedevelopment.qld.gov.au/resources/plan/darling-downs/darling-downs-regional-plan.pdf.

5 National Institute of Economic and Industry Research. (2015/16). *Tourism Value*. www.economy.id.com.au/.

* Note: Population and employment statistics are sourced from Australian Bureau of Statistics. (2018). *Census of Population and Housing (Catalogue No. 3218.0)*, and *Queensland Government Population Projections (medium series)* cited in Queensland Government Statistician's Office. (2018). Queensland Regional Profiles for local government areas current as at Feb 2018. Queensland Government Statisticians Office. (2011). *Queensland Regional Employment Projections Data Tables*. www.qgso.qld.gov.au/products/tables/reg-employment-proj/index.php.

Local government areas

Local government areas and population centres*

2016 estimated resident population

2036 projected population

GOONDIWINDI REGIONAL COUNCIL
Goondiwindi, Inglewood

2016 Pop'n 10,837

2036 Pop'n 11,474

Goondiwindi is located in the south-west of the region, bordered by New South Wales to the south. The local government area has 5518 jobs and 1827 businesses and contributes $704 million to Gross Regional Product.[6]

The primary industry is agriculture, forestry and fishing which accounts for 27 per cent of employment, followed by retail (10.8 per cent) and health care and social assistance (9.8 per cent). Rural production in Goondiwindi includes cotton, wheat and livestock.

The area features the Macintyre River, heritage buildings and country landscapes, as well as a number of state forests such as the Yelarbon State Forest and Bringalily State Forest.[7]

Major roads which run through the local government area include the Gore Highway, which runs south-west to north-east between Goondiwindi and Toowoomba, and the Cunningham Highway connecting Goondiwindi to Warwick and on to Brisbane. The South Western rail system runs through Goondiwindi and links to Millmerran, Warwick, Stanthorpe and Toowoomba.

LOCKYER VALLEY REGIONAL COUNCIL
Gatton, Laidley

2016 Pop'n 39,486

2036 Pop'n 57,225

Lockyer Valley is located in the far east of the region. The local government area has 12,081 jobs and 2914 businesses and contributes $1.32 billion to Gross Regional Product.[8]

The major industries are agriculture, forestry and fishing which employs 21.1 per cent of people, followed by education and training (13.9 per cent) and retail trade (9.2 per cent). Lockyer Valley has fertile farmland and produces the most diverse range of commercial fruit and vegetables in Australia.[9]

The area offers a range of rural and outback experiences for visitors as well as those centred around food production. It also features many tourist drives and annual events and festivals.[10]

The major road connection through the Lockyer Valley is the Warrego Highway running east-west and connecting Miles to Brisbane. The Gatton Clifton Road is a key north-south connection linking the New England Highway and the Warrego Highway. The West Moreton rail system runs through the area connecting Rosewood to Miles with passenger stops in Helidon, Gatton and Laidley.[11,12]

6 National Institute of Economic and Industry Research. (2015–16). *Gross Regional Product and Local Jobs*.
7 Tourism and Events Queensland. (2017). *Destination information: Goondiwindi*. www.queensland.com/en-ca/destination%20information/goondiwindi.
8 National Institute of Economic and Industry Research. (2015–16). *Gross Regional Product and Local Jobs*.
9 Department of Infrastructure, Local Government and Planning. (2017). *South East Queensland Regional Plan (ShapingSEQ)*.
10 Lockyer Valley Regional Council. (2016). *Lockyer Valley Tourism Guide*. www.lockyervalley.qld.gov.au/our-region/tourism-and-events/destinations/Pages/default.aspx.
11 Queensland Rail (2017) West Moreton system. www.queenslandrail.com.au/forbusiness/the-regional-network/west-moreton-system.
12 Queensland Rail (2017) Westlander. www.queenslandrailtravel.com.au/Planyourtrip/timetable.
* Note: Population and employment statistics are sourced from Australian Bureau of Statistics. *Census of Population and Housing (Catalogue No. 3218.0)*, and *Queensland Government Population Projections (medium series)* cited in Queensland Government Statistician's Office. *Queensland Regional Profiles for local government areas* current as at February 2018.

Local government areas and population centres*	**2016** estimated resident population	**2036** projected population

SOUTHERN DOWNS REGIONAL COUNCIL
Stanthorpe, Warwick

2016 Pop'n 35,622

2036 Pop'n 40,924

Southern Downs is located in the south of the region, bordering New South Wales to the south and South East Queensland to the east. The local government area has 15,701 jobs and 3998 businesses and contributes $1.69 billion to Gross Regional Product.[13]

The major industries with the highest employment rates are agriculture, forestry and fishing (14.3 per cent), health care and social assistance (11.7 per cent) and retail (11.6 per cent).

The area is renowned for its natural attractions including Girraween National Park and boutique Granite Belt wineries.[14]

The New England Highway runs north-south from Allora to the New South Wales border. The Cunningham Highway runs from the South Coast region, through Warwick and west to the Goondiwindi. The Stanthorpe-Texas Road, in the south of the area, provides a link between Stanthorpe and Texas.

TOOWOOMBA REGIONAL COUNCIL
Highfields, Oakey, Toowoomba

2016 Pop'n 164,595

2036 Pop'n 205,025

Toowoomba is located in the east of the region. It is a regional city and the primary activity centre in the region. The local government area has 74,072 jobs and 14,472 businesses and contributes $9.3 billion to Gross Regional Product.[15]

The primary employment industries in the region are health care and social assistance (15.6 per cent), education and training (11.2 per cent) and retail (10 per cent). Toowoomba is known as Queensland's Garden City and hosts the annual Carnival of Flowers each spring as well as a range of other events and festivals. It is also home to historical attractions including the Cobb+Co Museum.[16]

The Toowoomba Wellcamp Airport and the Army Aviation Centre Oakey are strategic airports in the region.

Major roads and highways intersect in Toowoomba city including the Warrego Highway, Gore Highway and New England Highway.

The Toowoomba Second Range Crossing will improve freight and cross-region transit, particularly by diverting heavy vehicles and through-traffic out of the Toowoomba city centre. The West Moreton rail system passes from east to west through Toowoomba.

13 National Institute of Economic and Industry Research. (2015–16). *Gross Regional Product and Local Jobs*.
14 Tourism and Events Queensland. (TEQ) (2017). *Southern Queensland Country*. www.teq.queensland.com/destinations/southern-queensland-country.
15 National Institute of Economic and Industry Research. (2015–16). *Gross Regional Product and Local Jobs*.
16 Tourism and Events Queensland. (2018). *Destination information: Toowoomba*. www.southernqueenslandcountry.com.au/destinations/toowoomba.
* Note: Population and employment statistics are sourced from Australian Bureau of Statistics. *Census of Population and Housing (Catalogue No. 3218.0)*, and *Queensland Government Population Projections (medium series)* cited in Queensland Government Statistician's Office. (2018). *Queensland Regional Profiles for local government areas* current as at February 2018.

Local government areas and population centres*	2016 estimated resident population	2036 projected population

WESTERN DOWNS REGIONAL COUNCIL
Chinchilla, Dalby, Miles, Wandoan

2016 Pop'n 34,197

2036 Pop'n 40,349

The Western Downs is the northern-most part of the Darling Downs region. The local government area has 18,614 jobs and 4865 businesses and contributes $3.346 billion to Gross Regional Product.[17]

The largest industry is agriculture, forestry and fishing employing 17 per cent of people, followed by construction with 11.2 per cent and retail with 8.8 per cent. The area offers a range of natural and cultural experiences. It features many rivers and lakes that are popular for water sports and fishing including the Condamine River.[18]

The Warrego Highway runs north-west from Dalby to Miles and on to the South West region. The Leichhardt Highway runs north-south across the area through Miles, Condamine and Moonie. The Moonie Highway connects from the south-west corner of the local government area, through Moonie to Dalby. Other major roads in the local government area include Surat Developmental Road and Meandarra Talwood Road. The Western and West Moreton rail systems connect the region west to Quilpie and east to Brisbane supporting both passenger and freight movements. [19,20]

Local government areas and population centres*	2016 estimated resident population	2036 projected population
DARLING DOWNS REGION TOTAL	**284,737**	**354,997**

17 National Institute of Economic and Industry Research. (2015–16). *Gross Regional Product and Local Jobs*.
18 Western Downs Regional Council. (2018). *Our Western Downs*. www.wdrc.qld.gov.au/visiting-western-downs/exploring-western-downs/.
19 Queensland Rail. (2017). *The regional network*. www.queenslandrail.com.au/forbusiness/the-regional-network.
20 Queensland Rail. (2017). *Network Map*. www.queenslandrailtravel.com.au/Planyourtrip/networkmap.
* Note: Population and employment statistics are sourced from Australian Bureau of Statistics. *Census of Population and Housing (Catalogue No. 3218.0)*, and *Queensland Government Population Projections (medium series)* cited in Queensland Government Statistician's Office. (2018). *Queensland Regional Profiles for local government* areas current as at February 2018.

2.2 Transport network

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

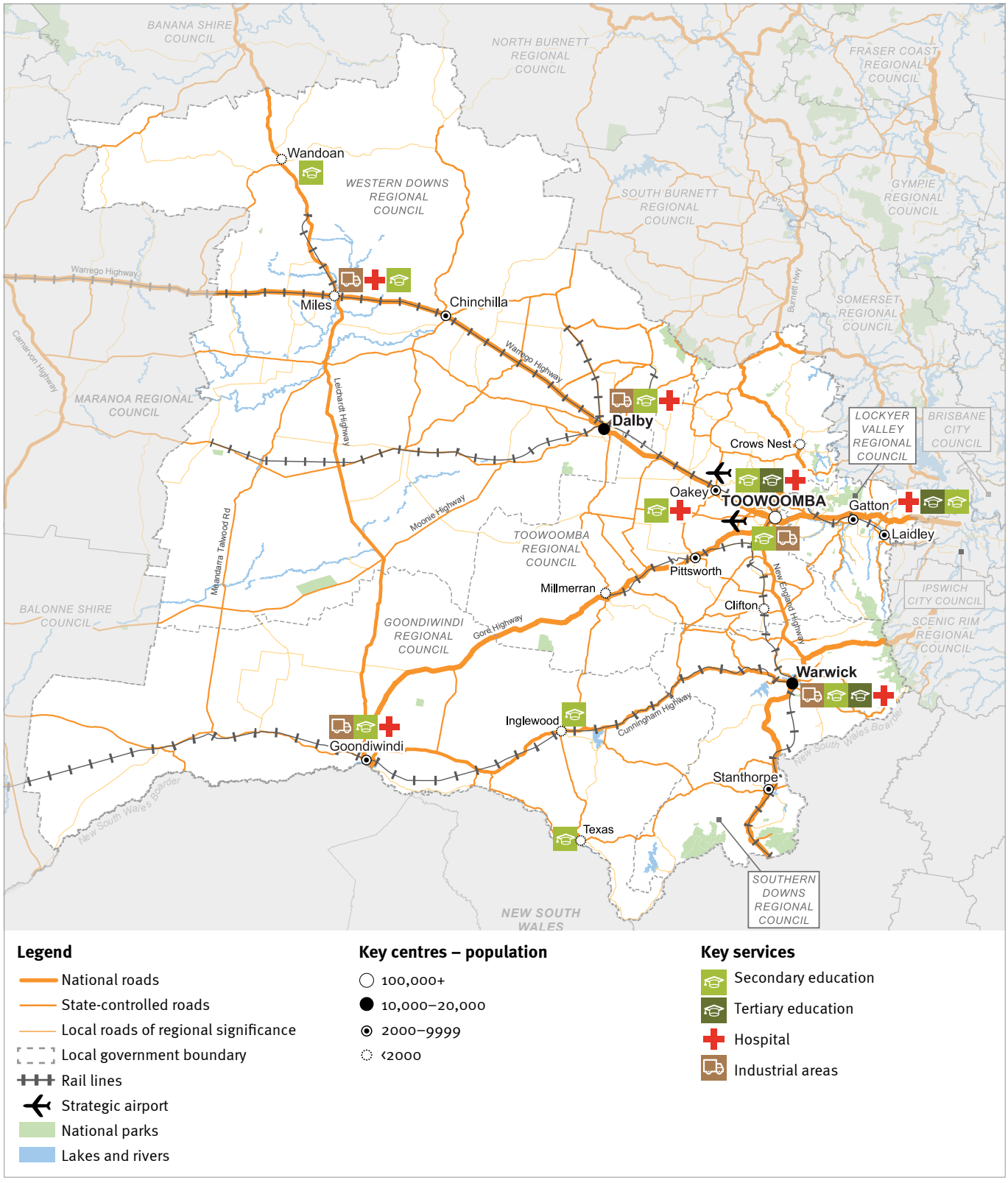
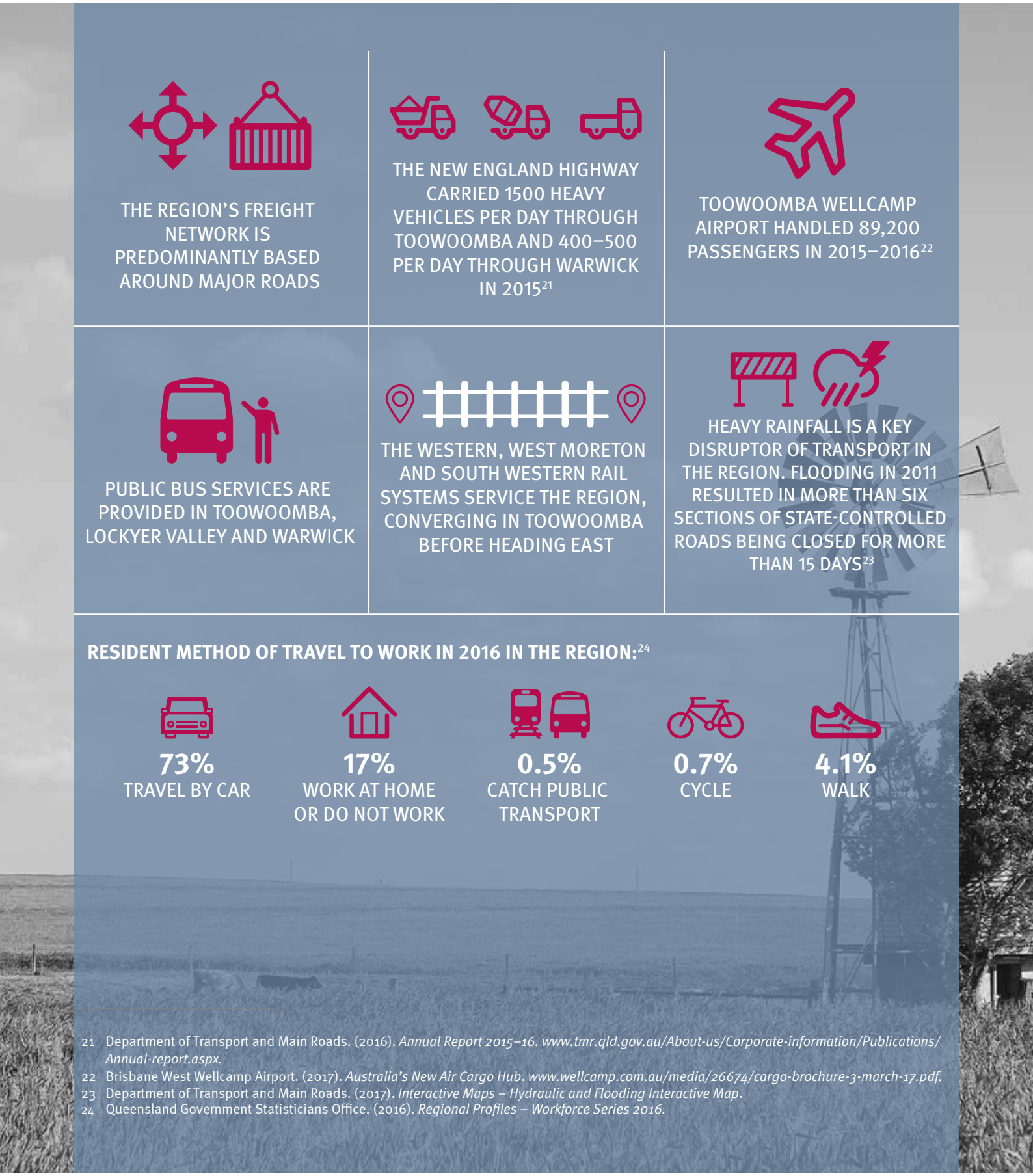


Figure 3: Overview of the Darling Downs region's transport network and key services in the region



THE REGION'S FREIGHT NETWORK IS PREDOMINANTLY BASED AROUND MAJOR ROADS

THE NEW ENGLAND HIGHWAY CARRIED 1500 HEAVY VEHICLES PER DAY THROUGH TOOWOOMBA AND 400–500 PER DAY THROUGH WARWICK IN 2015[21]

TOOWOOMBA WELLCAMP AIRPORT HANDLED 89,200 PASSENGERS IN 2015–2016[22]

PUBLIC BUS SERVICES ARE PROVIDED IN TOOWOOMBA, LOCKYER VALLEY AND WARWICK

THE WESTERN, WEST MORETON AND SOUTH WESTERN RAIL SYSTEMS SERVICE THE REGION, CONVERGING IN TOOWOOMBA BEFORE HEADING EAST

HEAVY RAINFALL IS A KEY DISRUPTOR OF TRANSPORT IN THE REGION. FLOODING IN 2011 RESULTED IN MORE THAN SIX SECTIONS OF STATE-CONTROLLED ROADS BEING CLOSED FOR MORE THAN 15 DAYS[23]

RESIDENT METHOD OF TRAVEL TO WORK IN 2016 IN THE REGION:[24]

73% TRAVEL BY CAR

17% WORK AT HOME OR DO NOT WORK

0.5% CATCH PUBLIC TRANSPORT

0.7% CYCLE

4.1% WALK

21 Department of Transport and Main Roads. (2016). *Annual Report 2015–16. www.tmr.qld.gov.au/About-us/Corporate-information/Publications/Annual-report.aspx.*
22 Brisbane West Wellcamp Airport. (2017). *Australia's New Air Cargo Hub. www.wellcamp.com.au/media/26674/cargo-brochure-3-march-17.pdf.*
23 Department of Transport and Main Roads. (2017). *Interactive Maps – Hydraulic and Flooding Interactive Map.*
24 Queensland Government Statisticians Office. (2016). *Regional Profiles – Workforce Series 2016.*

Roads

There are more than 3800 kilometres of state-controlled roads, including 687 kilometres of the National Land Transport Network in the region. The road network is supported by assets such as bridges, rest areas, roadside amenities and service centres.

Four highways in the region are designated as part of the National Land Transport Network and given high maintenance priority by the Queensland Government—the Warrego, Gore, New England and Cunningham Highways.[25]

There are a number of identified State Strategic Touring Routes in the region as outlined in the *Queensland Tourism and Transport Strategy*.

Distance and existing road standards influence the type of freight vehicle that is used in the region. As shown in Figure 4 (on page 27), the region has a mix of roads suitable for heavy vehicles. The *Heavy Vehicle National Law 2012* governs the operations of all vehicles over 4.5 tonnes in gross vehicle mass.

The movement of people and goods across the region is highly dependent on the road network. Private vehicle transport is the primary mode of travel for all trip purposes across the region. 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.

Rail

The Darling Downs region is served by Queensland Rail's narrow gauge West Moreton (national key freight route), South Western and Western rail systems. The main function of the region's rail network is freight, with only limited long-distance passenger services. Queensland Rail owns the rail lines and freight services on these lines are operated by Aurizon.

Major commodities transported by rail include coal from the Clarence–Moreton and Surat Basin to the Port of Brisbane, as well as grain and cotton.[26] Livestock is transported from the west to major abattoirs in Oakey, Grantham, Warwick and on to Brisbane.

The Surat Basin Infrastructure Corridor State Development Area (SDA) is a 214-kilometre rail corridor protected by the SDA development scheme. It is proposed between the towns of Wandoan and Banana to connect the existing Western and Moura railway systems.

The characteristics of the rail system make it well suited to high volume, point-to-point pick up and delivery over long distances. Commodity movements by rail are influenced by access, flexibility, the seasonal nature of agricultural demand, existing axle load restriction across the network and differing rail gauge when crossing the state border.

Toowoomba Second Range Crossing

The Toowoomba Second Range Crossing is a bypass route to the north of Toowoomba, approximately 41 kilometres in length, running from the Warrego Highway at Helidon in the east to the Gore Highway at Athol in the west via Charlton. At $1.6 billion, it is one of Queensland's highest priority road infrastructure projects and is funded on an 80:20 basis by the Australian and Queensland governments.

Construction commenced in 2015 and, once completed, will have numerous benefits including:

- improved road and driver safety
- reduced travel time across the range by up to 40 minutes for heavy commercial vehicles
- relieved pressure on local roads by redirecting trucks and hazardous freight away from Toowoomba's city centre
- increased freight efficiencies and overall enhance the liveability of the Toowoomba and Lockyer Valley areas.

Aerial view of Toowoomba Second Range Crossing construction

25 Department of Transport and Main. (2016). *Annual Report 2015–2016*. www.publications.qld.gov.au/dataset/annual-report-2015-2016-transport-and-main-roads.

26 Queensland Rail. (2017). *West Moreton and South-Western System Information Packs: Issue 3.1*. www.queenslandrail.com.au/forbusiness/the-regional-network/west-moreton-system.

Passenger transport

The 'Westlander' scheduled passenger rail service runs from Brisbane to Charleville via Toowoomba twice a week.

Public bus services are provided in Toowoomba, Lockyer Valley and Warwick. Public transport in other areas is limited to school buses, and inter- and intra-state coach services.

In Toowoomba, there are nine bus routes covering outer residential areas such as Westbrook and Glenvale, as well as key destinations including Toowoomba Bus Station, Toowoomba Hospital, the University of Southern Queensland, Grand Central Shopping Centre and Clifford Gardens Shopping Centre.

The urban bus network in the Southern Downs consists of four daytime off-peak bus routes in Warwick, with no Sunday timetable. TransLink bus services provide connections between Helidon, Gatton, Laidley and Rosewood enabling interchange to the South East Queensland passenger rail network.

Public transport currently accounts for 0.5 per cent of commuter trips in Toowoomba and 0.4 per cent of commuter trips across the region.[27] These mode shares are consistent with regional areas and highlight the extent of car dependency in the Darling Downs region.

Active transport

Within the region's towns, wide, low-trafficked roads and surrounding road reserves can create pleasant environments conducive to walking and cycling. Dedicated walking and cycling infrastructure, such as on-road cycle lanes, shared footpaths and recreational walking and cycling trails are being implemented over time.

Outside of towns, due to the larger distances between households and services, cars are generally the preferred travel option. Walking is used for 4.7 per cent of journeys to work and cycling for 0.8 per cent of journeys to work.[28]

To help guide further investment in the active transport network, Transport and Main Road's *Downs South West Principle Cycle Network Plan* has been prepared in collaboration with local governments identifying core routes needed to get more people cycling more often.

Air transport

The region is served by state regulated and subsidised air services. These passenger and freight services provide remote communities with important access to economic, medical, educational and social opportunities.

Cyclists in rural area

27 Queensland Government Statistician's Office. (2017). *Queensland Government Population Projections (2015 edition (medium series)*. www.qgso.qld.gov.au/subjects/demography/population-projections/index.php.

28 Ibid.

The key regional airports of Toowoomba City, Chinchilla and Miles are maintained by regional councils. Toowoomba Wellcamp Airport (previously Brisbane West Wellcamp Airport) is privately owned.

Toowoomba Wellcamp Airport is identified as a strategic airport in the *State Planning Policy 2017*. It is the only regional facility capable of providing access for large aircraft, such as the Boeing 747, and the only airport within the region providing regular inter- and intra-state services. While it provides passenger services, it primarily provides freight access to Asia for the region's exports. Expansion plans are currently underway, with a world-class stage two cargo terminal under design and an expansion of its existing 36,000m² apron.[29]

A further 13 aerodromes are available for use by charter flights, the Royal Flying Doctor Service and local and agricultural aircraft. Military aircraft use the Oakey Army Aviation Centre, the region's other designated strategic airport in the *State Planning Policy 2017*.

Boating

The Darling Downs region has numerous rivers, dams and weirs, which are used for recreational purposes. There are several public boating facilities in the region owned by Transport and Main Roads.[30]

Freight

The freight system is central to the economy of the region, transporting goods for key industries including agriculture, manufacturing and mining via road, rail and pipeline.

Timely and cost-effective access to export gateways are vital for the region's exports to remain internationally competitive (see Figure 5 on page 29). These include the Port of Brisbane, processing and distribution facilities in South East Queensland and international freight airports at Toowoomba and Brisbane.

Cattle property, Toowoomba

29 Brisbane West Wellcamp Airport. (2017). *Australia's New Air Cargo Hub. www.wellcamp.com.au/media/26674/cargo-brochure-3-march-17.pdf.*

30 Department of Transport and Main Roads. (2017). *Boating facility locations in Queensland. www.msq.qld.gov.au/Waterways/Recreational-boating-infrastructure/Boating-facilities.*

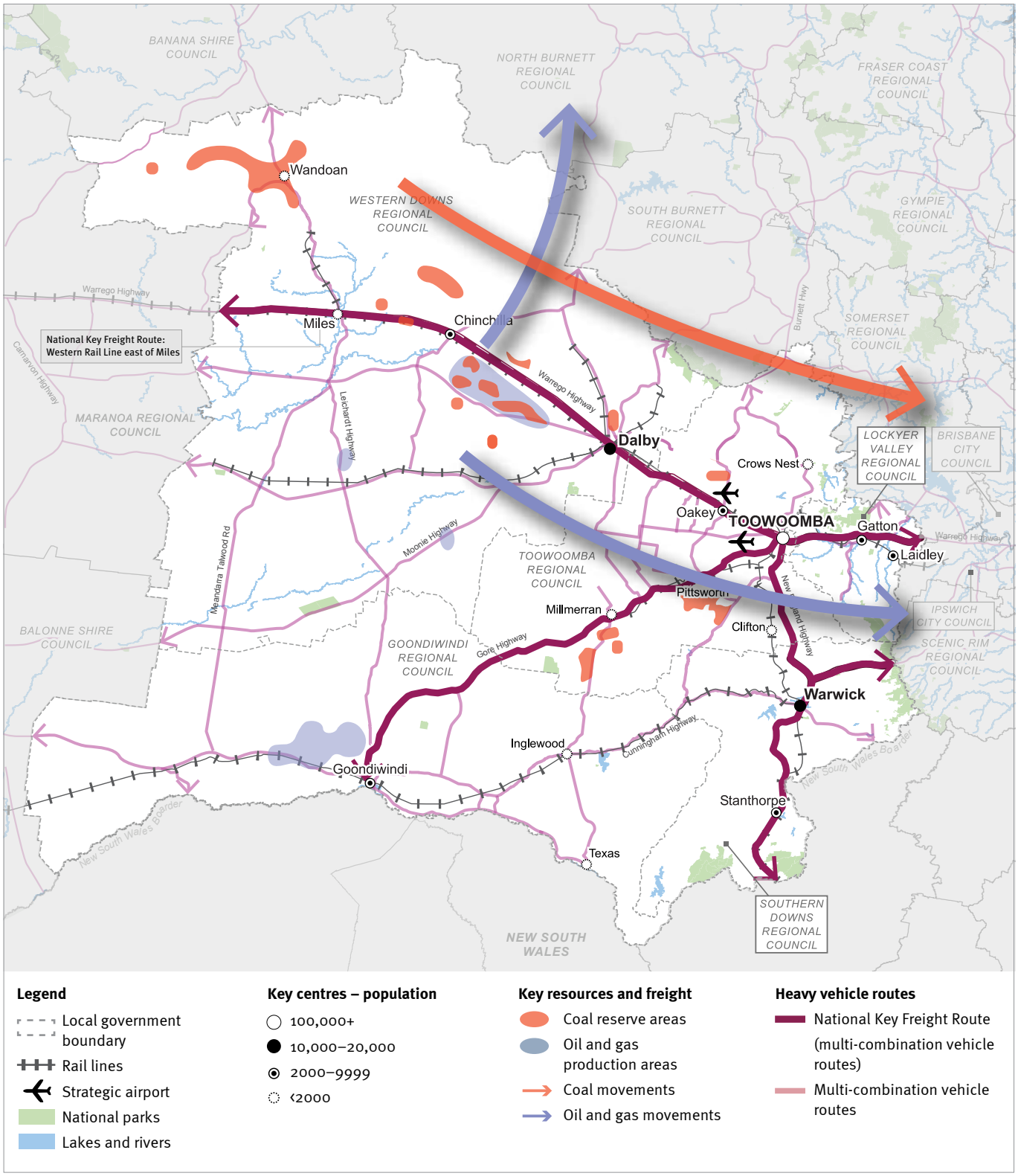


Figure 4: Heavy vehicle routes and freight movement for key mining exports

Sources:
Department of Transport and Main Roads. (2013). *Moving Freight.*
Australian Government. (2017). *National Key Freight Routes Map.* www.maps.infrastructure.gov.au/KeyFreightRoute/.
Department of Transport and Main Roads. (2017). *Multi-combination routes in Queensland.* www.tmr.qld.gov.au/business-industry/Heavy-vehicles/Multi-combination-vehicles/Maps/Map-of-south-Queensland/Section-5-maps.

Regional freight movements

Key exports and freight movements in the region include:

- Beef cattle production from grazing systems which takes place throughout the region. A major sale yard complex at Dalby and abattoirs/processing plants at Oakey and south-west Toowoomba are significant elements of the beef industry.
- Approximately three million tonnes of grain is produced annually in the region (including Maranoa), with production varying depending on seasonal conditions. While much of the grain produced is consumed locally through feedlots, piggeries and poultry operations, significant volumes are transported to the Port of Brisbane for export.[31]
- The region (including Maranoa) produces approximately 270 million kilograms of cotton annually, depending on irrigation water supplies and seasonal conditions. Cotton is transported by road from farms to cotton gins located in the major production areas for initial processing, and then in bales, by road to the Port of Brisbane.[32]
- Horticulture is a rapidly growing industry in the region, with the traditional production area of the Granite Belt (Stanthorpe) extending to the Eastern Downs and the Border Rivers areas. Toowoomba also hosts the largest pecan and macadamia processing facility in the southern hemisphere.
- There are around 120 registered piggeries in the region with registered capacity of 694,642 standard pig units, representing around 60 per cent of the state's pig production.[33] Currently most pigs produced in the region are transported to an abattoir and processing facility outside of the region at Kingaroy.
- Poultry and egg production, which is mostly consumed domestically with only a small percentage being exported. The region produces 80 per cent of Queensland's egg supply, as well as an increasing proportion of chicken meat production which requires transport routes to processing facilities in the south-east corner.[34]
- Due to a increasing international demand there is a resurgence in milk and milk products. A major export focused milk processing facility is planned for construction near Toowoomba Wellcamp Airport.
- Sheep meat, wool and goat industries are smaller, though important industries, in the region with the bulk of production occurring in the southern and western areas. The industry requires road and rail access to processing facilities and markets within the region, in the south-east corner and in southern states.
- The region produces over 10 per cent of Queensland's coal deposits and an estimated 65 per cent of Queensland's known coal seam gas reserves.[35] In 2015, 7.2 million tonnes of coal was delivered to the Port of Brisbane via the West Moreton rail system, implying a capacity utilisation of 64 per cent. The system capacity is challenged due to the need for freight to share rail capacity with the Brisbane Metropolitan rail system.[36] A significant amount of coal seam gas and oil is also piped east to Brisbane.

Freight train, Toowoomba

31 Australian Bureau of Statistics. (2017). *Agricultural Commodities, Australia – 2015–16, 71210DO002_201516*.
32 Ibid.
33 Department of Agriculture and Fisheries. (2017). *Intensive animal industries licensing database*.
34 Ibid.
35 Department of State Development. (2013). *Darling Downs Economic and Infrastructure Framework*.
36 Department of Infrastructure and Regional Development. (2016). *Freightline 4 – Australian coal freight transport*.

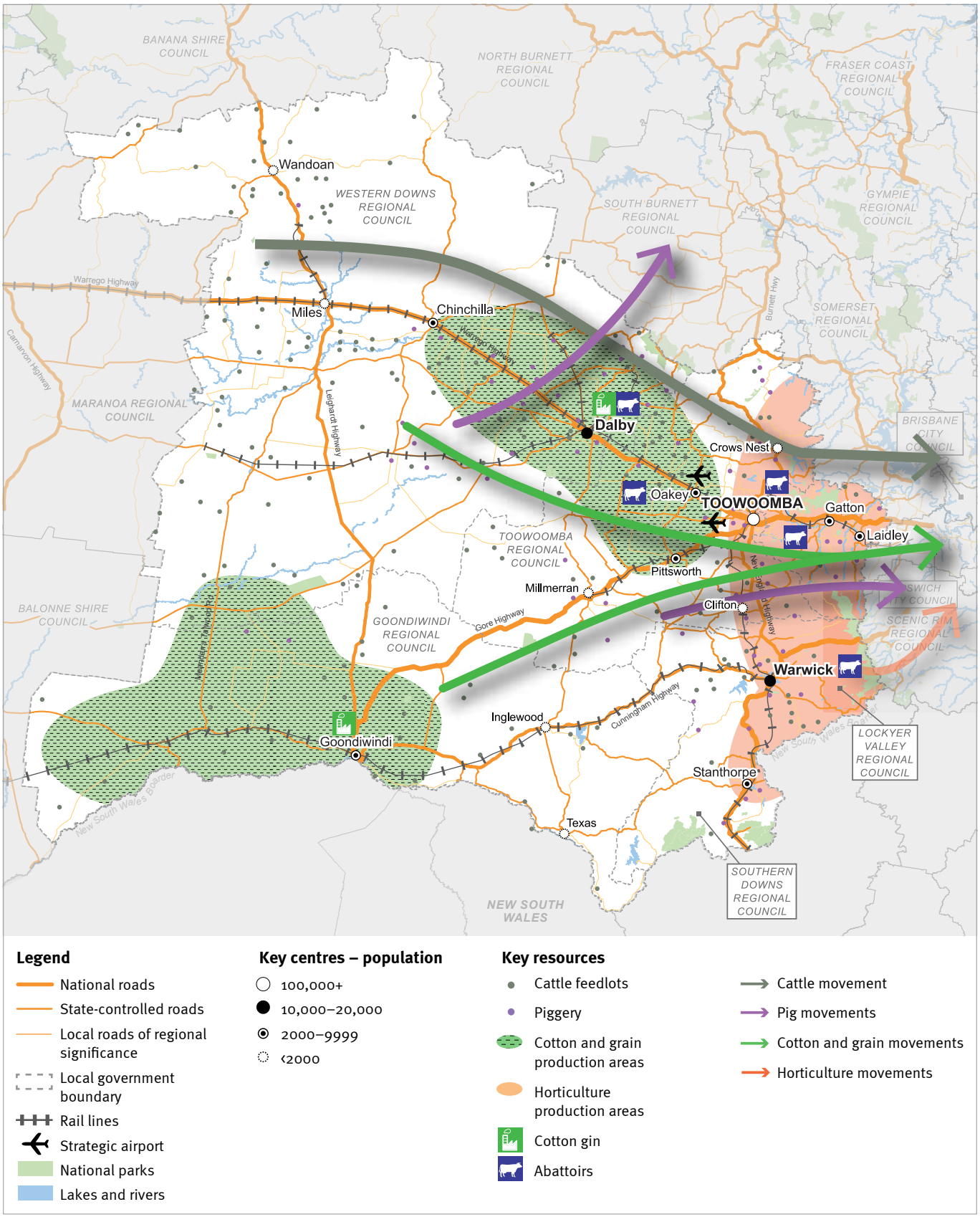


Figure 5: Freight movement for key agricultural exports

Sources:
Department of Transport and Main Roads. (2013). *Moving Freight.*
Cotton Australia. (2017). *Where is cotton grown? www.cottonaustralia.com.au/.*

Transport and Main Roads employee

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 *Darling Downs 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 the opportunities that present.

Mount Whitestone, Gatton-Clifton Road, Lockyer Valley

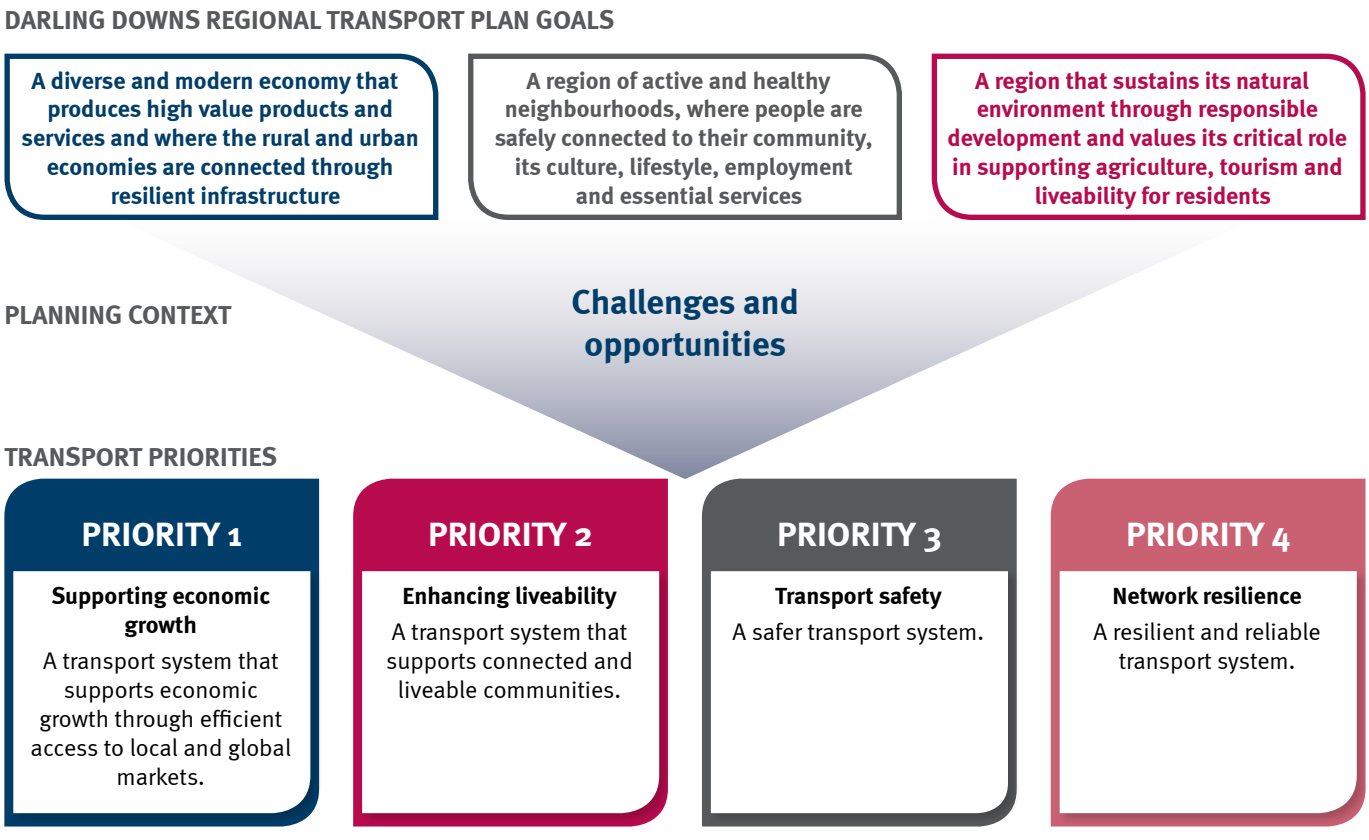


Figure 6: Regional goals and relationship to transport priorities

3.2 Challenges

Exposure to volatility and variability in agriculture and mining

The resource and agriculture sectors together contribute approximately 15.7 per cent of the Darling Downs Gross Regional Product and collectively employ 12.5 per cent of the region's workers.[37,38] Changes in these sectors impact on business confidence, community sustainability and other industries such as manufacturing, health care and retail.[39]

Coal's proportion of the overall domestic energy mix peaked in 2008–2009.[40]

Agricultural commodities are subject to global price movements impacting on demand with local weather variability impacting on production.[41]

The continued strength of these industries remains important to the region's economy. Overcoming uncertainty in the economic cycle and maintaining a cost competitive freight system remain key challenges.

Servicing the region's dispersed settlement pattern and remote towns

The Darling Downs region contains a major regional city, several towns and remote centres. Outside of the city of Toowoomba, most towns and communities have low populations.

Residents are dispersed across the region with many living large distances from their nearest regional centre and essential services. This poses service accessibility challenges, particularly for more remote communities. For example, the distance between the local primary school in Westmar and the nearest high school is more than 120 kilometres, posing a challenge for students, and their families, transitioning to secondary schooling.

Impacts of weather

The Darling Downs region has experienced weather conditions ranging from periods of drought through to significant flooding.[42] Adverse weather events impact people, property and the ongoing viability of some sectors.

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 travel time reliability, impacting freight productivity and customers generally. With the Darling Downs region being one of Australia's largest freight destinations by volume,and freight connectivity with remote communities relying on the road network, flooding events can lead to significant delays and added costs. [43]

It is projected that in the long term the region will experience rising temperatures and reduced rainfall, due to the impacts of climate change. While rainfall is expected to decline, rainfall events are predicted to be more intense and likely to cause flooding which will continue to impact the transport network.[44]

Wyaga Creek, Gore Highway

37 Queensland Government Statistician's Office. (2018). *Experimental Estimates of Gross Regional Product 2000–01, 2006–07 and 2010–11*. www.qgso.qld.gov.au/products/reports/experimental-estimates-grp.
38 Queensland Government Statistician's Office. (2017). *Queensland Regional Profiles*. www.statistics.qgso.qld.gov.au/qld-regional-profiles.
39 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. www.rda-ddsw.org.au/rda-dd-sw.
40 Department of Industry and Innovation. (2016). *Australian Energy Update 2016*. www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Documents/aes/2016-australian-energy-statistics.pdf.
41 Australian Government. (2011). *Economic Roundup Issue 1, 2011, Commodity Price Volatility*. www.treasury.gov.au/publication/economic-roundup-issue-1-2011/economic-roundup-issue-1-2011/commodity-price-volatility.
42 Department of Environment and Heritage Protection. (2016). *Climate Change in the Eastern Downs Region (DRAFT)*. www.ehp.qld.gov.au/assets/documents/climate/eastern-downs-climate-change-impact-summary.pdf.
43 Bureau of Infrastructure, Transport and Regional Economics. (2014). *Road Freight Movement Survey 2014*. www.bitre.gov.au/statistics/alert/files/stats_brief_road_fms_2014.pdf.
44 Department of Environment and Heritage Protection. (2017). *Agricultural climate risk information*. www.daf.qld.gov.au/environment/ag-land-audit/agricultural-climate-risk-information/darling-downs.

Supporting an ageing population

An ageing population in already small communities could reduce the workforce and, in turn, the services available in these areas.[45] As the population ages there is a natural decline in the working population, resulting in fewer people who participate in the local economy and community. This can reduce productivity and innovation as there are fewer people with the skills, outlook and adaptive capacity to develop business opportunities and respond to future economic change.[46] The ageing population also places pressure on health care and social services as more support is typically required.[47]

For transport, an ageing population requires consideration of fit-for-purpose transport options that can suitably serve people of all abilities.

Road safety

In 2016, there were 26 fatalities on the region's roads. This represents 0.91 fatalities for every 10,000 residents in the region. The comparative number of fatalities statewide is 0.6 fatalities for every 10,000 residents.[48]

Driver safety is particularly an issue on the Warrego, Gore and New England Highways, which have a relatively high number of crashes compared to other roads.[49]

The horticultural production season (May to December) also coincides with the annual tourist season, resulting in increased mixing of freight, private vehicles and caravan traffic.[50]

In addition, long distances and variable road standards increase the chance for human error and the likelihood of crashes occurring.

Road safety signage

45 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020.* www.rda-ddsw.org.au/rda-dd-sw.
46 Ibid.
47 Department of Infrastructure, Planning and Local Government. (2016). *State Infrastructure Plan - Part A: Strategy.* www.dilgp.qld.gov.au/resources/plan/sip/sip-part-a.pdf.
48 Department of Transport and Main Roads. (2017). *Road casualties API.* www.data.qld.gov.au/dataset/crash-data-from-queensland-roads.
49 Ibid.
50 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020.* www.rda-ddsw.org.au/rda-dd-sw

3.3 Opportunities

Proximity to high-value natural resources and export gateways

The Darling Downs region benefits from proximity to Brisbane and, in particular, the Port of Brisbane. The manufacturing sector is also a significant employer for residents and is anticipated to grow in the future.[51]

Access to export gateways will be enhanced by the delivery of Toowoomba Second Range Crossing and the proposed Inland Rail which is currently in the planning phase. The continued development of Toowooomba Wellcamp Airport precinct provides a substantial local base for facilitating international export of coal commodities.

These investments enable improvements in supply chains and freight productivity, and are expected to enhance the movement of people and goods and further trade development in the region. [52,53]

This affords the region the opportunity to be the gateway for southern Queensland and north-western New South Wales to local, national and international markets.

Taking advantage of a high-performing agricultural sector

The region has a high-performing agricultural sector with opportunity for outputs to be increased through further productivity and supply chain improvements.[54] Improving market access channels and applying new technologies could increase both agricultural productivity and the value of its outputs.[55,56]

New technologies include opportunities such as using drones for crop monitoring and spraying or improving soil analysis techniques, which could promote better decision-making and resource allocation.[57] The introduction of automated processes in agriculture may also provide a shift in the region's employment base toward higher-skilled, knowledge-based jobs.[58]

Harnessing new technology and digital connectivity across the region

Technology and digital connectivity creates significant opportunities for both supply chain optimisation and improving accessibility to essential services. Technology advances allow for real-time data accessibility and the ability to track the movement of goods. Providing digital access to essential services, such as health, education and retail, supports regional and remote communities by increasing residents' options while simultaneously reducing their need to travel long distances.

Digital connectivity between assets, service providers and customers can also enable real-time monitoring of fleet and physical infrastructure resulting in the optimisation of transit times, for example during flood events. It can be used to direct maintenance crews to check on asset conditions, in turn reducing asset degradation and enabling a more efficient response to maintenance requirements.

In the long term, technological advancements such as autonomous vehicles are anticipated to support the region through further efficiency gains in the movement of goods and safer roads by reducing human error in driving.

Major infrastructure, planning and delivery

The Toowoomba Second Range Crossing is a major road infrastructure project which will divert heavy vehicles and through-traffic out of the Toowoomba city centre, improving safety and freight access.

The Inland Rail project, a national rail project, is proposed to cross through the region, improving safety and resilience of the rail network.

These infrastructure projects provide opportunities for more efficient freight movement as well as easing passenger traffic flows across the network.

51 Australian Bureau of Statistics. (2011). *Census or population and housing, Time series profile 2011.* www.abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles.
52 Bureau of infrastructure transport and regional economics. (2014). *Infrastructure, Transport and Productivity.* www.bitre.gov.au/publications/2014/files/is_055.pdf.
53 Toowoomba Wellcamp Airport. (2017). *Australia's New Air Cargo Hub.* www.wellcamp.com.au/media/26674/cargo-brochure-3-march-17.pdf.
54 Mike Boland. (2009). *How is value-added agriculture explained? Agricultural Marketing Resource Centre.* www.agmrc.org/business-development/getting-prepared/valueadded-agriculture/articles/.
55 Regional Development Australia. (2017). *Agricultural Opportunities in Southern Queensland.* www.rda-ddsw.org.au/reports-publications/.
56 Kim Bryceson. (2016). *Technology and Food Security.* www.gci.uq.edu.au/filething/get/12150/Bryceson-GCI%20Technology%20%20Food%20Security_Nov%202016.pdf.
57 Landcare Australia. (2017). *Landcare in focus 2017 Annual Special Publication.* www.landcareaustralia.org.au/EDM/LiF/march2017/LiF-March2017.pdf.
58 Australian Government. (2015). *Agricultural Competitiveness White Paper.* www.agwhitepaper.agriculture.gov.au/SiteCollectionDocuments/ag-competitiveness-white-paper.pdf.

Expanding the tourism market

Tourism directly contributes 2.6 per cent to the Darling Downs' Gross Regional Product, compared to an average of 4.9 per cent for regional Queensland.[59] Domestic overnight visitation grew in the year ending March 2017, with strong growth in business and holiday visitation, however international visitation decreased in the same period.[60] Employment in accommodation and food services industries is projected to grow by 48.17 per cent between 2016 and 2041.[61]

Most domestic visitation is to see friends or relatives.[62] There are opportunities to expand the tourism market abroad by capitalising on the direct access provided by the Toowoomba Wellcamp Airport and by promoting the area's assets such as national parks, local history and cultural heritage sites, regional festivals and events, rural experiences and access to high quality local produce through Tourism Events Queensland's Regional Tourism Organisation.[63] These features, combined with a unique rural experience, are an attractive proposition for tourists.[64]

Given the strong growth in business visitation, there are opportunities to encourage longer stays by ensuring appropriate accommodation options and facilities are available.[65]

Transitioning to a more skilled workforce as the region grows

Historically, health care, agriculture (including forestry and fishing), manufacturing and retail have been significant employment sectors. Health, manufacturing and retail employment have been primarily centred around Toowoomba.[66]

While it is projected that agriculture, forestry and fishing will continue to employ the highest numbers of people in the region, as the region grows, the projected number of jobs in more skilled-based employment is also expected to grow.[67]

There will be an increase in demand for health care services as the population ages. The health care industry is anticipated to be the second biggest employment sector.[68]

Employment in manufacturing is expected to grow significantly, with projections indicating it could be the third highest employment industry in the region.[69]

Overall, employment diversity across sectors is anticipated to intensify, which helps support the region's long-term sustainability. [70]

Percy Street, Warwick

59 Tourism and Events Queensland. (2013). *Regional Tourism Satellite Account Darling Downs (SQC) 2013–14*. www.teq.queensland.com/research-and-insights/domestic-research/regional-tourism-satellite-accounts.
60 Tourism and Events Queensland. (2017). *Southern Queensland Country Regional Snapshot, Year ending March 2017*. www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/southern-queensland-country.
61 Queensland Government Statistician's Office. (2017). *Regional Employment Projections Data Tables – 2010-11 to 2040–41*. www.qgso.qld.gov.au/products/tables/reg-employment-proj/index.php.
62 Tourism and Events Queensland. (2017). *Southern Queensland Country Regional Snapshot, Year ending March 2017*. www.teq.queensland.com/research-and-insights/domestic-research/regional-summaries/southern-queensland-country.
63 Tourism Events Queensland. (2017). *Southern Queensland Country*. www.teq.queensland.com/destinations/southern-queensland-country.
64 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. www.rda-ddsw.org.au/rda-dd-sw.
65 Ibid.
66 Australian Bureau of Statistics. (2011). C*ensus or population and housing, Time series profile 2011*. www.abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles.
67 Queensland Government Statistician's Office. (2017). *Regional Employment Projections Data Tables – 2010–11 to 2040–41*. www.qgso.qld.gov.au/products/tables/reg-employment-proj/index.php.
68 Ibid.
69 Ibid.
70 Ibid.

Economic projects and initiatives

There are several economic projects which have either commenced or are proposed in the Darling Downs that may influence transport planning and provide opportunities within the region. These include:

- Coopers Gap Wind Farm—a $500 million project which will connect 115 wind turbines with 460 megawatts of generating capacity to the national electricity network, to be operational in 2020.
- The $113.6 million Emu Swamp Dam, west of Stanthorpe, which will deliver increased urban and irrigation water supplies to residents in the region.
- The Wandoan Coal Project—a thermal coal mine with approval to produce up to 22 million tonnes of coal per annum.
- Enabling infrastructure for the Pittsworth Industrial Precinct, including new road and sewerage infrastructure, creating up to 28 hectares of new land for industrial growth.
- Chinchilla's $21 million potable water treatment upgrade, replacing the existing outdated infrastructure to support future population growth.
- Enabling works for the Toowoomba Enterprise Hub, including new transport and utilities corridors and providing connectivity for the planned inter-modal inland port to the enterprise hub. Once completed, the Toowoomba Enterprise Hub is expected to be a significant employment generator for the region.
- Ongoing expansion of the aviation park and freight facilities at Toowoomba Wellcamp Airport.
- Progression of planning for Inland rail that will be standard gauge rail, capable of hauling larger tonnages across the system to the Port of Brisbane and south to Melbourne.
- The Toowoomba Railway Parklands Priority Development Area is a 50-hectare site north of the central business district. It includes a central parkland on an operational railyard site and Gowrie Creek, surrounded by a mixture of commercial, industrial, retail and residential land. The site is a key urban renewal and economic opportunity.
- The West Toowoomba Land Use Investigation is a 9000-hectare area with a series of local planning investigations being undertaken by Toowoomba Regional Council. The growth area would provide new homes, jobs, services and recreational opportunities.

Inland Rail

Inland Rail is an Australian Government led project that proposes to build a new 1700 kilometre freight railway from Melbourne to Brisbane via regional Victoria, New South Wales and Queensland. Upon completion, freight could be moved at up to 10 hours faster than the existing coastal route via Sydney. It is the largest freight rail infrastructure project in Australia and is anticipated to be operational in 2024–2025.

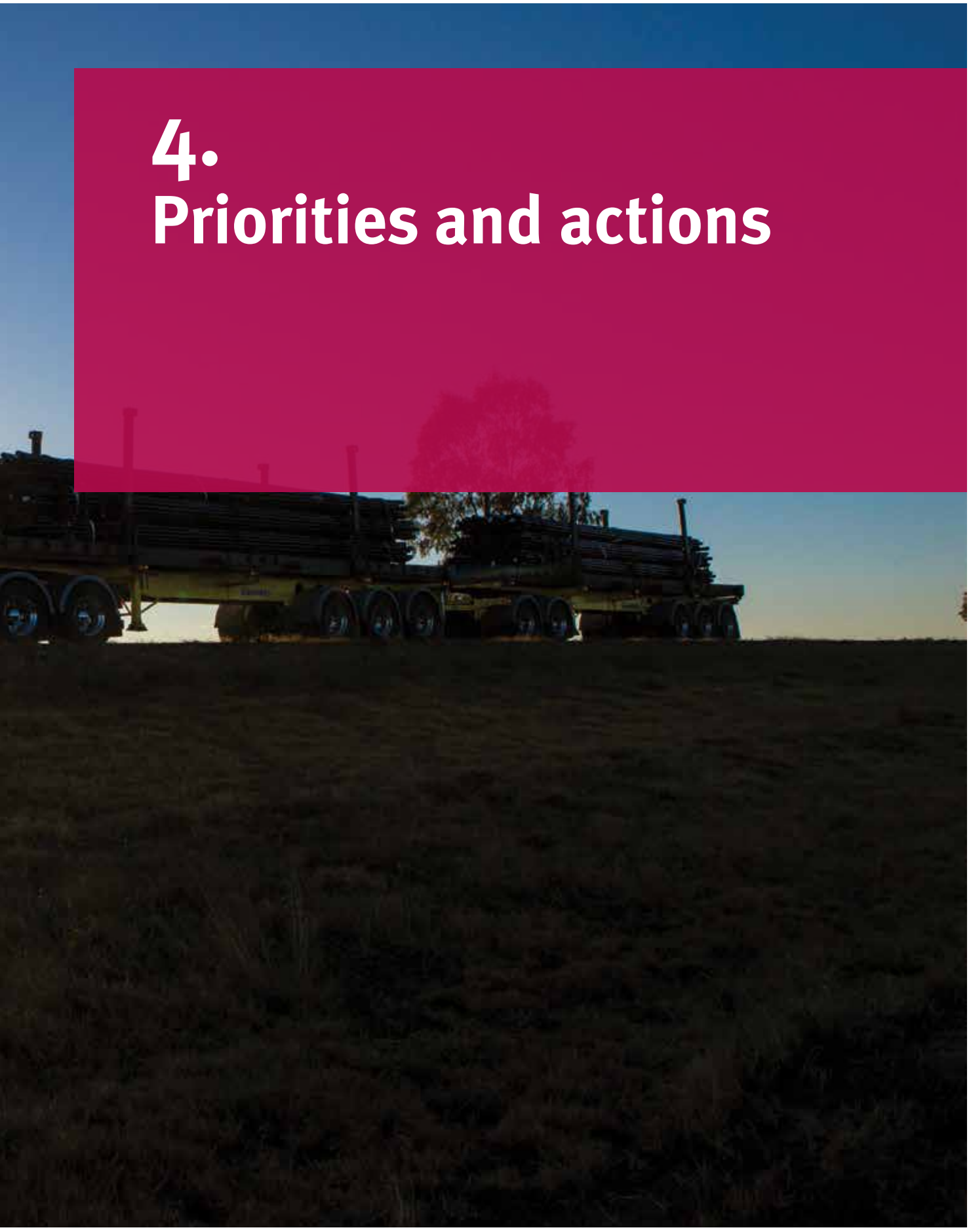
While the specific alignment is still being developed, formal planning approval processes for four coordinated projects in Queensland have now commenced: Border to Gowrie, Gowrie to Helidon, Helidon to Calvert and Calvert to Kagaru.

Source:
Australian Government. (2017). *Budget 2014–15, Infrastructure, Cross-jurisdictional, Inland Rail. www.budget.gov.au/2014-15/.*

Inland Rail route

Source: Australian Government.

Logging truck travelling in Chinchilla



4. Priorities and actions

Priorities set the direction for the region's transport network over the next 15 years. The four priorities established through the *Darling Downs Regional Transport Plan* development process are:

- **Priority 1:** Supporting economic growth—A transport system that supports economic growth through efficient access to local and global markets.
- **Priority 2:** Enhancing liveability—A transport system that supports connected and liveable communities.
- **Priority 3:** Transport safety—A safer transport system.
- **Priority 4:** Network resilience—A resilient and responsive transport system.

Key customer inputs are summarised in Figure 7 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

Actions are identified under each of the priorities. These are grouped into short-term and medium/long-term. Short-term actions identify the first steps needed to achieve the transport objectives and regional goals 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. Transport objectives are key drivers for taking action. Measures of success have been selected where data to track performance is readily available. Base line data and performance metrics will be developed and used to indicate progress towards meeting the goals and priorities set out in this Plan.

Table 4 shows the relationship linking priorities, objectives and measures of success.

Quart Pot Creek, Stanthorpe

Customers' desired future state for transport

Smart

- Technology enabled
- Futuristic – thinking long-term
- Affordable, for both customer and government
- Live updates of transport conditions
- Driver alerts for fatigue
- Mobile coverage
- Enhance customer experience

Fit-for-purpose

- Infrastructure for different types of vehicles
- Incorporation of demand-responsive transit
- Consider diverse travel requirements
- Transport that is flexible and meets the needs to people
- Infrastructure upgrades that suit the region's context

Multi-modal

- Diverse transport options available
- Accessibility
- Integrated transport and land use planning
- Capacity that supports centres of activity
- Integration across all modes
- Integrated approach to safety

Figure 7: Customers' desired future state for transport

Table 4: Relationship between priorities, transport objectives and measures of success

TRANSPORT SYSTEM

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

RTP PRIORITIES

PRIORITY 1 Supporting economic growth	PRIORITY 2 Enhancing liveabilty	PRIORITY 3 Transport safety	PRIORITY 4 Network resilience
A transport system that supports economic growth through efficient access to local and global markets.	A transport system that supports connected and liveable communities.	A safer transport system.	A resilient and responsive transport system.

ROLE OF TRANSPORT

Responding to the challenge of: ■ exposure to economic volatility. **Responding to opportunities for:** ■ proximity to resources and export gateways ■ a high-performing agricultural sector. **By taking action to:** ■ prioritise infrastructure investment into key freight corridors that support the region's economy ■ optimise supply chains, where possible, through a fit-for-purpose approach to first and last mile access ■ capitalise on export gateways and new infrastructure.	**Responding to the challenges of:** ■ servicing dispersed settlements ■ an ageing population. **Responding to opportunities for:** ■ expanding tourism ■ harness new technology and digital connectivity across the region. **By taking action to:** ■ provide diverse transport options for customers that fit the context of the region's different localities ■ enhance the customer experience ■ enhance regional amenity through high-quality design and customer experience infrastructure.	**Responding to the challenge of:** ■ road safety. **Responding to opportunity for:** ■ major infrastructure, planning and delivery. **By taking action to:** ■ encourage safe travel behaviour ■ build, maintain and operate safe transport infrastructure and facilites.	**Responding to the challenge of:** ■ impacts of weather. **Responding to opportunities for:** ■ harnessing new technology ■ major infrastructure planning and delivery. **By taking action to:** ■ leverage technology as a key enabler of positive customerexperiences and transport outcomes that support economic, social and environmental sustainability ■ collaborate across government and with industry to build, run and maintain an integrated transport network.

TRANSPORT OBJECTIVES

1.1 Provide safe, efficient and reliable freight movements to industrial areas, intermodal facilities and export gateways. **1.2** Provide a contestable freight system that is able to maximise efficiency gains. **1.3** Support the tourism sector via a well-connected, multi-modal transport network.	**2.1** Provide all customers with reliable and efficient passenger transport options that meet the diverse requirements of the region. **2.2** Enable a seamless and legible transport system that provides a pleasant customer experience. **2.3** Integrate land use and transport planning to improve liveability, amenity and network efficiency.	**3.1** Minimise opportunities for crashes in the region through infrastructure that keeps customers safe and secure. **3.2** Safe transport behaviour is enabled and supported through a coordinated approach to transport safety. **3.3** Leverage technology to enhance the safety of customers using the transport system.	**4.1** Design and operate the transport system to minimise the impact on customers during incidences of disruption. **4.2** The impact of transport on the environment is minimised. **4.3** Adopt an integrated technology enabled response to minimise the impact of disruptions on customers.

MEASURES OF SUCCESS

■ Freight productivity improves. ■ Transport supports the region's tourism economy.	■ Greater access and connectivity to places, services and information. ■ Improved customer satisfaction ratings of transport facilities and quality of experience. ■ Proportion of people choosing to walk, cycle and take public transport increases.	■ Reduction in transport-related incidents, crashes, injuries and fatalities. ■ Improvements in safety of the road network. ■ Greater access and conmnectivity to places, services and information.	■ Reduced requency and duration of unplanned closures. ■ Reduction of transport-related greenhouse gas emissions. ■ Customers are able to access digital information on their journey.

4.1 Priority 1: Supporting economic growth

A transport system that supports economic growth through efficient access to local and global markets.

Priority 1 aligns to:

- the *Transport Coordination Plan*'s objective for transport that facilitates the efficient movement of people and freight to grow Queensland's economy
- 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 contribute to developing a globally competitive economic powerhouse, including the protection of agricultural land while supporting the co-existence of other economic opportunities, moving products efficiently and providing certainty for the future of towns.

The transport system supports economic growth through:

- enabling goods and services to move as efficiently as possible, responding to the demands of existing and emerging industries
- connecting people to jobs and work
- facilitating access for visitors to the region's tourism destinations.

Improved connectivity between the region's freight generators and local and global markets will support enhanced productivity. This is particularly the case for the region's significant horticulture sector, which needs rapid access to local and global markets.[71]

A holistic, strategic approach that seeks to connect the region with other regions and the broader freight system will be central for future planning. This requires consideration of key freight routes, but also how freight is distributed from key routes into the towns and centres.

The region is also an attractive tourist destination, with domestic and international visitors. The transport network needs to support easy access through an efficient and legible network.

Cotton bales, Dalby

71 Regional Development Australia. (2016). *Darling Downs and South West Regional Roadmap 2016–2020*. www.rda-ddsw.org.au/rda-dd-sw/.

The priority seeks to support economic growth through:

- high-quality, fit-for-purpose corridors to transport freight
- first and last-mile access that is fit-for-purpose and supports the efficient distribution of goods (key to this will be the consideration of localised distribution that fits the scale of the area and supports high-quality public spaces)
- producers, business and freight operators understanding the multi-modal freight transport opportunities
- the freight network being contestable between modes to support overall supply chain optimisation
- ongoing planning to improve the Priority Road Network and the Warrego, Gore and Cunningham Highways as key inter-regional corridors to enable cross-border connectivity
- corridor planning for strategic transport and supply chain corridors that support regional productivity and access to markets
- growth in tourism supported by a legible, safe and accessible network connecting key centres and locations.

Major projects committed in QTRIP for Darling Downs include:

- the continued construction of the Toowoomba Second Range Crossing, providing a 41-kilometre bypass route to the north of Toowoomba
- duplication of the Warrego Highway west of Toowoomba to Kingsthorpe, alongside multiple safety upgrades of the Warrego Highway around Dalby, Oakey and Miles, and various overtaking lanes
- safety upgrades for the New England Highway between Yarraman and Toowoomba.

Future planning identified in QTRIP for Darling Downs includes:

- continued planning for the upgrade of the Gore Highway at Wyaga Creek to improve flood immunity and pavement width and condition
- continued planning of a heavy vehicle bypass for Warwick
- continued options analysis for safety upgrades on the Warrego Highway between Withcott and Minden
- continued planning of the Toowoomba Western Arterial Corridor
- completion of planning of the Accommodation Creek Bridge Project on the New England Highway near Stanthorpe
- new bridges over the Tchanning, Woleebee and One Arm Man creeks.

Transport objectives and measures of success

Objective 1.1: Provide safe, efficient and reliable freight movements to industrial areas, intermodal facilities and export gateways.

Connecting producers to markets requires efficient, high-capacity transport corridors to export gateways, such as Port of Brisbane, and freight distribution precincts. To inform network planning for these corridors, consideration of the freight supply chain and the role of different modes is required. There must also be consideration for the local context, how best to facilitate connections and opportunities for intermodal facilities.

Providing safe, efficient and reliable freight movement will:

- work to remove current impediments in the supply chain
- support consolidation centres in appropriate locations to help localise distribution and support greater economies of scale
- encourage and facilitate appropriate intermodal connections
- require planning for future infrastructure upgrades that support supply chain optimisation
- connect key inter-regional and interstate intermodal facilities and significant industrial precincts such as Charlton Wellcamp Industrial Precinct and the Port of Brisbane
- enable access for high productivity vehicles and the oversize overmass network.

Objective 1.2: Provide a contestable freight system that is able to maximise efficiency gains.

The provision and operation of the freight system is complex. Regulations applicable to road freight and managed access to rail can impact the contestability of the overall freight system. Understanding the availability of freight capacity on the network via access to data relating to road and rail freight movements could enable efficiency gains to be realised.

Providing a contestable and optimised freight system will:

- need 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.

The region contains, or connects to, iconic rural driving experiences. Such road trips, along with outback experiences, are an attractive proposition for road tourers, including the growing 'grey nomad' market. Additionally, the region hosts events such as the Toowoomba Carnival of Flowers and other places of interest such as the wineries of Stanthorpe, which attract visitors.

Supporting the visitor economy requires transport services and infrastructure that provide general connectivity between activity centres, services and attractions, but are also tailored to provide a holistic tourist experience. Key considerations in support of the tourism sector are:

- enhanced wayfinding and route legibility
- planning for tourist routes and travel experiences, including cycle tourism and rail trails
- network optimisation activities based on understanding how, when and where visitors use the existing transport network
- providing fit-for-purpose passenger transport options that support positive tourist experiences.

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 centres. (The platform also services 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.* www.blog.freightexchange.com.au/developing-regional-australia-through-innovation-while-reducing-our-carbon-footprint/

Tourists visiting a Granite Belt winery

Measures of success

Measure of success	Proposed indicator	Source	Objectives		
			1.1	1.2	1.3
Freight productivity improves.	Vehicle operating cost per vehicle kilometres travelled.	Transport and Main Roads	✓	✓	
Transport supports the region's tourism economy.	Evolving measure, to be further developed.	To be confirmed			✓

Actions

PRIORITY 1: SUPPORTING ECONOMIC GROWTH

	OBJECTIVES
Objective 1.1: Provide safe, efficient and reliable freight movements to industrial areas, intermodal facilities and export gateways.	1.1
Objective 1.2: Provide a contestable freight system that is able to maximise efficiency gains.	1.2
Objective 1.3: Support the tourism sector via a well-connected, multi-modal transport network.	1.3

Actions – short-term	1.1	1.2	1.3
A1.01 Multi-modal freight connectivity Investigate appropriate inter-regional and multi-modal freight connectivity to Charlton Wellcamp Industrial Precinct, Port of Brisbane and future transport infrastructure upgrades.	✓	✓	
A1.02 Corridor and route planning Undertake planning for the state strategic and state regional road network for high priority inter-regional routes such as the: ■ Leichardt Highway, Drayton–Connection Road, Moonie Highway, New England Highway, Cunningham Highway and Warrego Highway, to aid strategic investment decisions ■ options analysis for a heavy vehicle bypass of Charlton.	✓	✓	
A1.03 Multi-modal freight terminals Collaborate with industry and stakeholders to develop an agreed multi-modal freight terminal strategy for South East Queensland and Toowoomba.	✓	✓	
A1.04 Inland Rail Protect the state's interests in planning for Inland Rail, including future proofing for passenger services between Brisbane and Toowoomba.	✓	✓	✓

PRIORITY 1: SUPPORTING ECONOMIC GROWTH

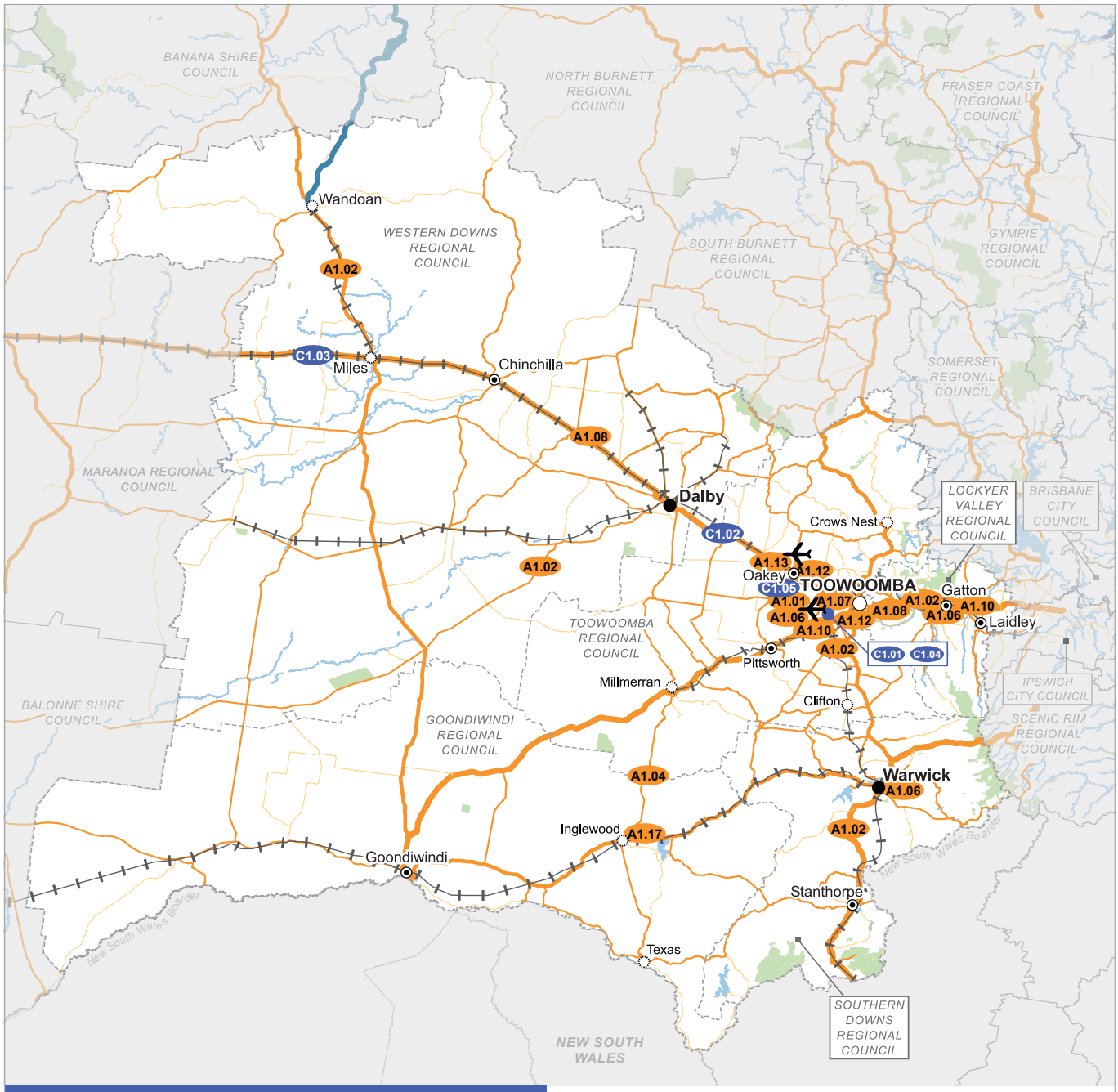
OBJECTIVES	1.1	1.2	1.3
Objective 1.1: Provide safe, efficient and reliable freight movements to industrial areas, intermodal facilities and export gateways.			
Objective 1.2: Provide a contestable freight system that is able to maximise efficiency gains.			
Objective 1.3: Support the tourism sector via a well-connected, multi-modal transport network.			

Actions – short-term	1.1	1.2	1.3
A1.05 Oversize overmass (OSOM) network plan Develop a strategy which identifies the OSOM network, defines the optimum short, medium and long-term OSOM dimensions and loads for each link in the OSOM network. Develop a high-level program of prioritised upgrades for key OSOM links for inclusion in future infrastructure investment programs.	✓	✓	
A1.06 Multi-modal freight access Investigate appropriate local multi-modal access to major freight generators such as: ■ Charlton/Wellcamp Enterprise Area ■ Warwick Industrial Precinct ■ Gatton West Industrial Park ■ abattoirs, feedlots and agricultural facilities ■ renewable energy precincts for wind and solar industries.	✓	✓	
A1.07 Supporting major projects Undertake planning on the state and national road network to accommodate issues raised by the Toowoomba Second Range Crossing and proposed Inland Rail.	✓	✓	✓
A1.08 Warrego Highway upgrades Continue to progress planning for the Warrego Highway Upgrade Strategy.	✓	✓	✓
A1.09 Heavy Vehicle Network Plan Develop a strategy for increasing access for high productivity vehicles in a safe, affordable and prioritised manner.	✓	✓	
A1.10 Road corridor protection Corridor protection activities for links under imminent development pressure. Priority to be given to links in Lockyer Valley Regional Council and Toowoomba Regional Council including Withcott, Eastern Drive in Gatton and the future Toowoomba–Athol Road (Gore Highway).	✓		✓
A1.11 Heavy vehicle regulations Transport and Main Roads and local government will identify opportunities to improve heavy vehicle regulations in collaboration with the National Heavy Vehicle Regulator and National Transport Commission.	✓	✓	
A1.12 Heavy vehicle freight access Investigate heavy vehicle freight access in Toowoomba city and Oakey with surrounding intra-regional connections.	✓		
A1.13 Rail barriers Investigate any barriers to access for current and future rail freight systems.	✓	✓	
A1.14 Real-time messaging Identify any gaps in the regional provision of information such as signage and information technology systems, to enable better real-time messaging to travellers throughout the region.			✓
A1.15 Rail trails and iconic cycle routes Identify and undertake planning to progress delivery of rail trails and iconic cycle routes to support cycling tourism.			✓

PRIORITY 1: SUPPORTING ECONOMIC GROWTH

OBJECTIVES	1.1	1.2	1.3
Objective 1.1: Provide safe, efficient and reliable freight movements to industrial areas, intermodal facilities and export gateways.			
Objective 1.2: Provide a contestable freight system that is able to 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
A1.16 Data collection improvements Improve data collection and sharing to support supply chain optimisation.	✓	✓	
A1.17 Rail network efficiency Investigate interconnectivity / interoperability opportunities for the South West and Western lines with the proposed Inland Rail project.	✓	✓	
Actions – medium/long-term			
A1.18 Regional freight strategy Develop a multi-modal regional freight strategy that considers productivity priorities and contestability, in response to statewide freight and heavy vehicle network strategies.	✓	✓	
A1.19 Infrastructure design standards 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.	✓	✓	✓
A1.20 Regional freight hubs Investigate how best to connect Queensland industry to the proposed Inland Rail including for agricultural and mining businesses.	✓	✓	
A1.21 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.			✓
A1.22 Real-time freight information Investigate the application of real-time freight transport information that shows where vehicles, including rail, are located across the network.	✓	✓	



Committed projects	
C1.01	Warrego Hwy (Ipswich – Toowoomba) construct Toowoomba Second Range Crossing (TSRC) to new sealed four lane standard
C1.02	Warrego Hwy (Toowoomba – Dalby) Oakey to Dalby additional lane/s
C1.03	Warrego Hwy (Miles - Roma) Drillham to Jackson pavement widening
C1.04	Capacity and clearance upgrades (rail) Toowoomba Range new track and tunnel upgrades
C1.05	Steger Road – construct additional lane/s

Disclaimer: This map is indicative to illustrate proposed planning actions and is not intended to be accurate in terms of exact geographic extent.

Legend

- National roads
- State-controlled roads
- Local roads of regional significance
- Local government boundary
- Rail lines
- Strategic airport
- National Parks
- Lakes and rivers
- Surat Basin Infrastructure Corridor SDA
- Committed projects
- Actions

Key centres – population

- 100,000+
- 10,000–20,000
- 2000–9999
- <2000

Figure 8: Priority 1 region map

4.2 Priority 2: Enhancing liveability

A transport system that supports connected and liveable communities.

> "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."[72]

Priority 2 aligns to:

- the *Transport Coordination Plan*'s objectives for transport that meets the needs of all Queenslanders, now and into the future, connects communities to employment and vital services, and contributes to a cleaner, healthier and more liveable environment
- the *State Infrastructure Plan*'s focus on connecting regional communities with access to essential services and opportunities
- regional planning aims to sustainably accommodate a growing population, help move people and information efficiently and support living in better designed communities.

Transport has a key role to play in the liveability of the Darling Downs region, particularly in connecting residents and visitors to essential services, employment, education and recreational opportunities. Transport planning also supports high-quality living environments through integration with land use planning, where growth and development considers amenity, streetscape and mobility.

Catering for the region's large size and diverse communities requires a pragmatic approach, which includes a variety of transport options.

In urban areas, such as Toowoomba, density and passenger demand can support a range of public and private passenger transport options. Growth is forecast in larger centres of Toowoomba and Warwick as well as concentrated greenfield and brownfield growth areas such as Plainlands, Meringandan West and Toowoomba railway parkland Priority Development Area. The strength of these centres and surrounding agricultural production has been a catalyst for growth and is expected to support future growth.

Main Street, Warwick

72 Partners for Liveable Communities. (2017). *What is Liveability?* www.livable.org/about-us/what-is-livability.

In rural areas, many customers travel by car on roads of varying standards which can impact safety and travel times.

Technological development will have a fundamental impact on transport infrastructure, and regional connectivity. The transport network will be more data-enabled, allowing better wayfinding for travellers as well as advice on road hazards, network incidents and interruptions.

The digital environment will also enable residents to connect with essential services without necessarily having to leave their home. This changes the dynamic of transport accessibility as customers will be provided with more choice.

Given the region's population is ageing, equitable and appropriate transport options need to be provided. The transport system will support connectivity and liveability through:

- design, planning and operation of a road network that connects the region's customers to essential services, employment, education and recreation
- pragmatic and fit-for-purpose transport options that provide for everyone including the region's non-resident workforce and skilled labour workforce
- consideration of sustainable transport options that support population growth and increased density in urban areas, such as Toowoomba.

Transport objectives and measures of success

Objective 2.1: Provide all customers with reliable and efficient passenger transport options that meet the diverse requirements of the region.

Responding to the specific needs of the region's transport customers requires an integrated approach to transport delivery, with fit-for-purpose options. This means exploring mobility options that can be reliable, efficient, and where practicable, personalised to customer needs.

Private vehicles will continue to play a key role in personal mobility across the region, particularly in rural areas. Road upgrades will occur as appropriate to enable this. However, peer-to-peer, demand-responsive transit, community transport and active transport can provide alternate transport options, where suitable. School bus services can also play a role not only in allowing children to access education, but providing alternatives, where appropriate, to private vehicles for other transport customers.

In urban areas, and particularly Toowoomba, diverse transport options are provided. Public transport will be provided in some areas, including to connect to other regions, such as South East Queensland. In other areas, alternate transport options may be tested and encouraged to support an integrated, multi-modal transport system.

A frequent and reliable public transport network is proposed to connect the Toowoomba Wellcamp Airport, Toowoomba and Brisbane.

Providing reliable and efficient passenger transport options for everyone that supports liveable communities will:

- allow all customers in the region to be mobile, even if they cannot drive
- improve accessibility to employment, recreation, education and essential services
- reduce isolation and improve community welfare
- help to shift the reliance on private vehicles for mobility, particularly in the urban areas of Toowoomba.

Objective 2.2: Enable a seamless and legible transport system that provides 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 provides opportunities for positive experiences. Appropriate road design, that suits its function, and good legibility are important to make it easy to navigate through the region, particularly for visitors. Integrating multi-modal transport options allows for seamless movement and transitions where required.

Part of providing a pleasant customer experience is understanding the mobility needs of customers. Engaging with customers and harnessing data informs system planning to ensure it is easy to use and meets the needs of the region's customers.

Lake Apex, Gatton

A transport system that provides a pleasant customer experience will:

- engage with and respond to the needs and preferences of the region's customers
- cater to diverse travel needs, including visitors
- consider wayfinding and the overall legibility of the network
- facilitate seamless transitions between different modes.

Objective 2.3: Integrate land use and transport planning to improve liveability, amenity and network efficiency.

The transport system can positively influence the amenity of the region, particularly in towns. Effective transport network planning responds to the specific requirements of the customers, while being appropriate to the surrounding environment. For example, freight vehicles travelling through towns can impact on pedestrian safety and amenity. Integrating transport and land use planning requires the consideration of the purpose of a transport route or corridor and how best it will serve the region.

New infrastructure and upgrades should consider movement, microclimate, accessibility, amenity and interaction with existing land uses.

In centres, this will encourage people to stop and access local businesses and create an attractive environment. In areas where efficient movement is most important, these approaches will enable network efficiency, while also considering factors such as pedestrian accessibility, cyclist safety and landscape design.

Integrating land use and transport planning will:

- support Toowoomba's plans for both consolidated growth and expansion in urban areas
- encourage high-quality design principles as part of all transport corridors, routes and links
- enhance amenity and accessibility, particularly in the region's towns
- support the provision of diverse transport options for the region's customers and reduce locational disadvantage
- balance the efficient movement of freight through the region's towns and city with the provision of high-quality streetscapes
- integrate the digital environment, including reducing the need for some customers to travel
- consider emerging technologies, such as autonomous vehicles, and the key role they will play in the region's transport system.

Measures of success

Measure of success	Proposed indicator	Source	Objectives		
			2.1	2.2	2.3
Greater access and connectivity to places, services and information.	Availability of 'mobility as a service' options.	Operators	✓		
	Proportion of population with good accessibility to a range of essential services in urban areas (by walking or public transport).	Transport and Main Roads	✓	✓	✓
Improved customer satisfaction ratings of transport facilities and quality of experience.	Evolving measure, to be further developed.	To be confirmed		✓	
Proportion of people choosing to walk, cycle and take public transport increases.	Journey to work mode share.	Australian Bureau of Statistics (Census)			✓
	Proportion of people choosing to walk, cycle and take public transport.	Transport and Main Roads			✓

Actions

PRIORITY 2: ENHANCING LIVEABILITY

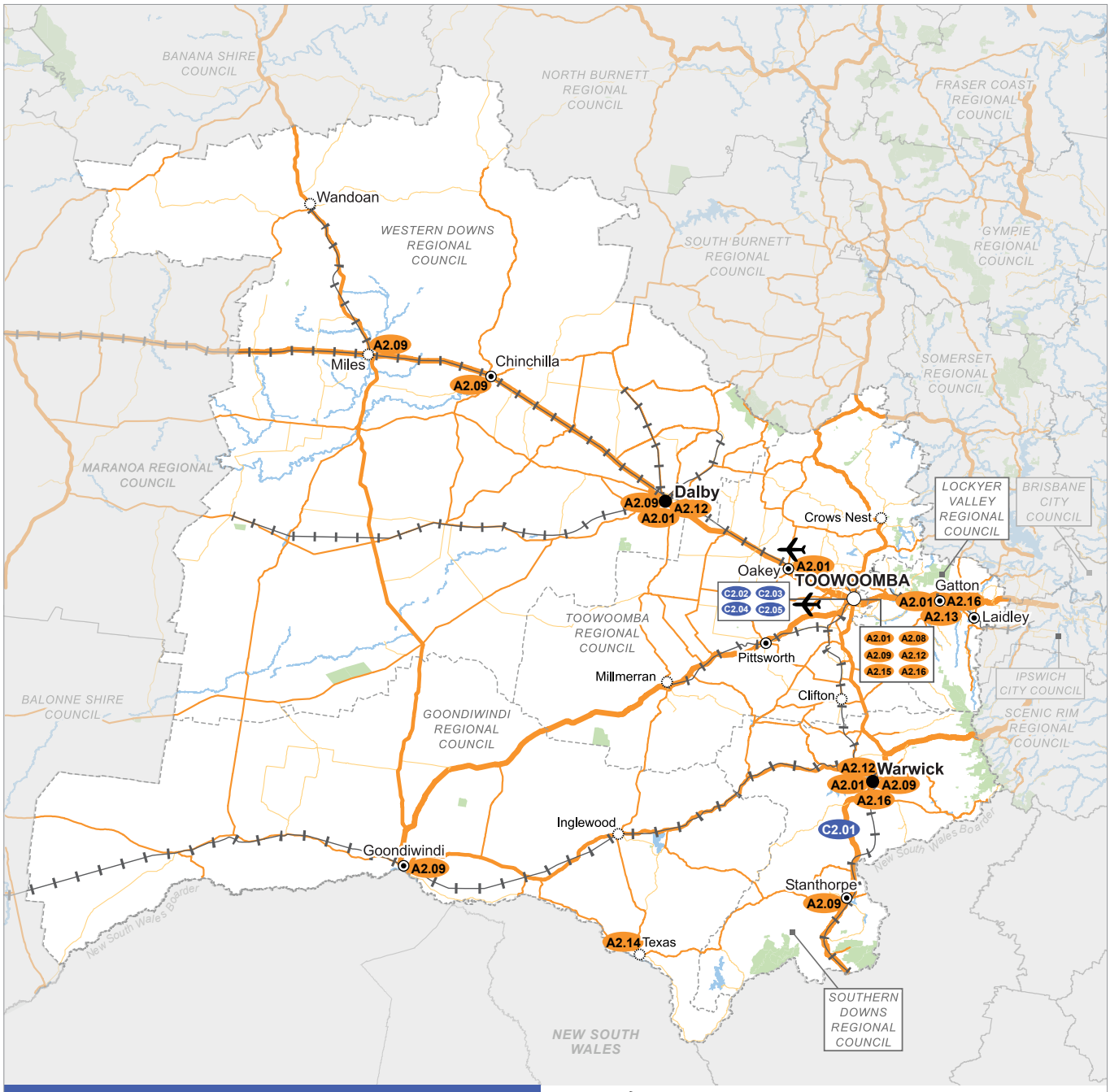
OBJECTIVES	
Objective 2.1: Provide all customers with reliable and efficient passenger transport options that meet the diverse requirements of the region.	2.1
Objective 2.2: Enable a seamless and legible transport system that provides a pleasant customer experience.	2.2
Objective 2.3: Integrate land use and transport planning to improve liveability, amenity and network efficiency.	2.3

Actions – short-term	2.1	2.2	2.3
A2.01 Multi-modal strategies Plan the long-term, functional strategic network to facilitate efficient multi-modal movements and improve access and amenity in key areas such as Toowoomba, Lockyer Valley, Warwick, Dalby and Oakey.	✓	✓	✓
A2.02 School travel assistance Review the School Travel Assistance scheme to identify aspects that do not meet the needs of school students in the Darling Downs region.	✓	✓	
A2.03 Disability access Work in collaboration with partners and stakeholders to identify capability gaps and improve the end-to-end journey for people with a disability using passenger transport services in the region in accordance with the *Disability Action Plan 2017*.	✓	✓	
A2.04 Long-distance passenger services Continue to review long-distance bus, rail and air services to establish fit-for-purpose long-distance mobility options.	✓	✓	
A2.05 Household travel survey Undertake household travel surveys and investigate mechanisms to engage with customers to collect transport data.	✓	✓	
A2.06 Cycle network plans In collaboration with local government, review and update Principal Cycle Network Plans every five years and every two years for priority route maps.	✓	✓	✓
A2.07 Priority cycle routes Undertake options analysis and business case development for highest priority routes on the principal cycle network to support more cycling, more often on safe, direct and connected routes.	✓	✓	✓
A2.08 Withcott Undertake place-based planning at Withcott considering functional changes post Toowoomba Second Range Crossing.	✓		✓
A2.09 Pedestrian environment Transport and Main Roads will work with the region's local councils to investigate and prioritise opportunities to improve the pedestrian environment at key activity nodes throughout the region to strengthen walkability and local amenity.		✓	✓
A2.10 Boating infrastructure Continue to prioritise investment in boating infrastructure across the region based on an assessment of demand and input from the community and stakeholders.		✓	

PRIORITY 2: ENHANCING LIVEABILITY

OBJECTIVES	2.1	2.2	2.3
Objective 2.1: Provide all customers with reliable and efficient passenger transport options that meet the diverse requirements of the region.			
Objective 2.2: Enable a seamless and legible transport system that provides a pleasant customer experience.			
Objective 2.3: Integrate land use and transport planning to improve liveability, amenity and network efficiency.			

Actions – short-term	2.1	2.2	2.3
A2.11 Infrastructure vision standards Work in collaboration with the Regional Roads and Transport Group to review network vision standards, road hierarchy and road ownership in the region, to ensure road maintenance and management sits with the appropriate jurisdiction.			✓
A2.12 Fit-for-purpose transport Investigate the viability of fit-for-purpose community transport options in the region's major centres. These can follow a demand-responsive transport approach, peer-to-peer transport and utilisation of spare capacity on school bus services (when not in use).	✓	✓	✓
Actions – medium/long-term	**2.1**	**2.2**	**2.3**
A2.13 Toowoomba to Brisbane public transport Investigate passenger rail service needs between Brisbane and Toowoomba.	✓	✓	✓
A2.14 Cross-border connections Continue to work with Transport for NSW to prioritise planning for cross-border connections.	✓		✓
A2.15 High-frequency public transport Investigate provision of high-frequency public transport connections between Toowoomba city centre, the Toowoomba Wellcamp Airport and the Toowoomba knowledge and technology precinct.	✓	✓	✓
A2.16 Public transport system improvements Work with key stakeholders to investigate and determine appropriate public transport system improvements in Toowoomba, Warwick and Lockyer Valley that suits the needs of customers. The investigation should consider public and/or private service delivery models such as demand-responsive transit, ride sharing and mini-buses.	✓	✓	✓
A2.17 Autonomous vehicles Understand and prepare for the role autonomous vehicles will play in passenger and freight movement across the region in the future considering the low density population and geographic extents.	✓	✓	✓



Committed projects	
C2.01	New England Highway Cycleway – construction
C2.02	Boundary Street (TSRC to Bridge Street) construct to sealed standard
C2.03	Crows Nest–Blackbutt Road (Nukku Road) construct to new sealed two lane standard
C2.04	Crows Nest–Blackbutt Road (Pierces Creek Road) construct to new sealed two lane standard
C2.05	Mort Street (TSRC to Jellicoe/West Street) duplicate from two to four lanes

Disclaimer: This map is indicative to illustrate proposed planning actions and is not intended to be accurate in terms of exact geographic extent.

Legend

- National roads
- State-controlled roads
- Local roads of regional significance
- Local government boundary
- Rail lines
- Strategic airport
- National Parks
- Lakes and rivers
- Committed projects
- Actions

Key centres – population

- 100,000+
- 10,000–20,000
- 2000–9999
- <2000

Figure 9: Priority 2 region map

4.3 Priority 3: Transport safety

A safer transport system.

A safe transport system is a fundamental priority for the region. The region has a number of road sections with the highest per capita crash record in Queensland.[73] Long distances between destinations contribute to this through fatigue and increased risk of driver error. Rural and remote regions also have specific hazards, such as wildlife, and roads of varying quality. It is not always feasible to achieve a common standard of infrastructure across the whole region due to its large geographic area.

In towns and urban areas, safety for pedestrians, cyclists, vehicles and other modes is important.

A pragmatic approach to safety is needed which will include:

- provision of a safe transport environment, where the propensity for human error is minimised as much as possible
- education and awareness of high-risk crash locations and the need to rest frequently
- consideration of pedestrian and cyclist safety, particularly in towns and urban areas
- ongoing planning for safety improvements along key routes such as the Warrego, Cunningham, New England and Gore Highways as the key inter-regional corridors.

Priority 3 aligns to:

- the *Transport Coordination Plan*'s objective for a transport network that is safe for customers and goods
- the *State Infrastructure Plan*'s intent that the safety and reliability of Queensland's transport system is progressively improved so there are fewer fatal and serious injury crashes
- regional planning aims to support living in better designed communities through a safe transport system.

Safe cycling signage, Toowoomba

73 Australian Road Assessment Program. (2016). *Rating Australia's National Network for Risk*. www.ausrap.aaa.asn.au.

Transport objectives and measures of success

Objective 3.1: Minimise opportunities for crashes in the region through infrastructure that keeps customers safe and secure.

Reducing transport network incidents requires a safe physical network and, in particular, a safe approach to the use of roads. New infrastructure will seek to minimise the propensity for accidents.

Minimising conflicts between different transport modes will assist in keeping customers safe when travelling.

In urban communities, the safety of customers using different modes, including walking and cycling, will need to inform network design.

Infrastructure that keeps customers safe and secure will be achieved through:

- road safety packages that investigate provision of engineering solutions for the road network
- safety improvements at level crossings to reduce danger for both pedestrians and vehicles while allowing efficient rail and traffic movements
- provision of safe pedestrian crossings and accessibility to activity centres
- provision of safe cycling options such as separated cycling lanes where appropriate
- ensuring the safety, efficiency and operational integrity of strategic airports is protected and that development and associated activities avoid increasing risk to public safety.

Objective 3.2: Safe transport behaviour is enabled and supported through a coordinated approach to transport safety.

Programs to encourage safe travel behaviour on roads and waterways, combined with disaster management planning, contribute to a safer transport system.

In addition to existing initiatives, opportunities exist for more targeted measures specific to the Darling Downs region. This may include community engagement and education for tourists and young people in schools to inform them of the risks inherent on regional roads.

Closer engagement with local councils, communities and developers during planning and design phases, for all modes of transport will also improve safety outcomes. This includes consideration of how new and existing land uses will interact with the existing or planned transport network, and the interaction of transport modes such as active transport with road and rail.

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, road condition and infrastructure can also be used to improve transport safety. In the longer term, autonomous vehicles will significantly improve safety, by removing the propensity for human error when travelling.

A safe transport environment enhanced through technology will:

- provide a more forgiving transport system that minimises the human cost of crashes
- reduce the risk of human error when travelling
- reduce the number of crashes on the network
- reduce fatalities and hospitalisations.

Rail level crossing, near Yelarbon

Measures of success

Measure of success	Proposed indicator	Source	Objectives		
			3.1	3.2	3.3
Reduction in transport-related incidents, crashes, injuries and fatalities.	Number of road fatalities and hospitalised casualties.	Transport and Main Roads	✓		
	Number of road fatalities and hospitalised casualties per 100,000 million vehicle kilometres travelled (state-controlled roads).	Transport and Main Roads	✓		
Improvements in safety of the road network.	Percentage of state-controlled roads in the region with a medium or low risk score.	To be confirmed		✓	✓
Greater access and connectivity to places services and information.	Mobile communications coverage.	To be confirmed			✓

Actions

PRIORITY 3: TRANSPORT SAFETY

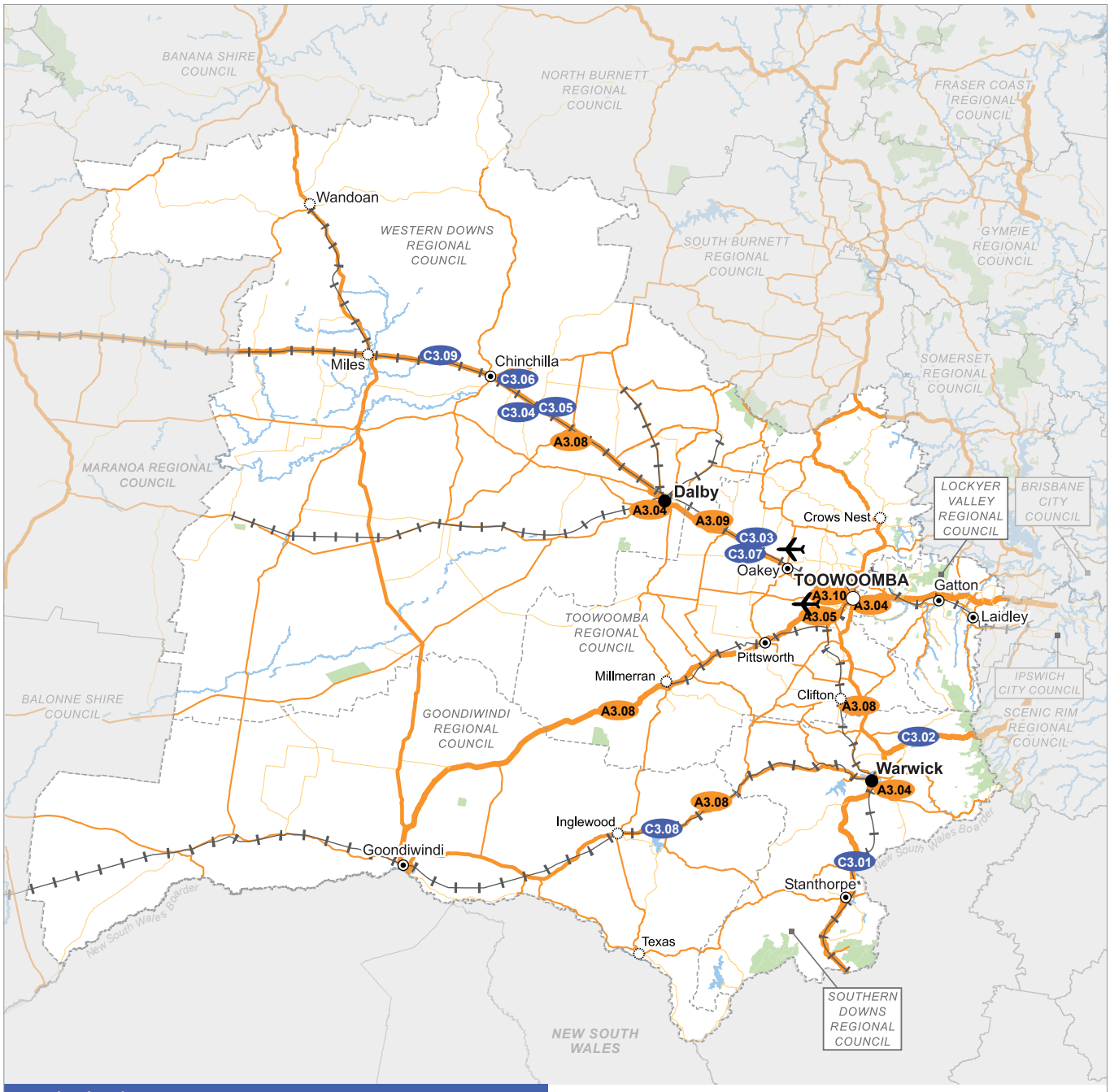
OBJECTIVES	
Objective 3.1: Minimise opportunities for crashes in the region through infrastructure that keeps customers safe and secure.	3.1
Objective 3.2: Safe transport behaviour is enabled and supported through a coordinated approach to transport safety.	3.2
Objective 3.3: Leverage technology to enhance the safety of customers using the transport system.	3.3

Actions – short-term	3.1	3.2	3.3
A3.01 Road safety treatments 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.		✓	✓
A3.02 Rail crossings 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 *Queensland Level Crossing Safety Strategy 2012–2021*.	✓		
A3.03 Reducing crashes Explore measures to minimise crashes by determining investment priorities for new or upgraded rest areas to address driver fatigue risks, encourage safe travel, and provision of sufficient capacity and amenities.	✓	✓	✓

PRIORITY 3: TRANSPORT SAFETY

OBJECTIVES	3.1	3.2	3.3
Objective 3.1: Minimise opportunities for crashes in the region through infrastructure that keeps customers safe and secure.			
Objective 3.2: Safe transport behaviour is enabled and supported through a coordinated approach to transport safety.			
Objective 3.3: Leverage technology to enhance the safety of customers using the transport system.			

Actions – short-term	3.1	3.2	3.3
A3.04 Priority intersection safety improvements Identify and prioritise intersections for safety improvements in major towns and Toowoomba.	✓		
A3.05 Aviation–public safety areas Reflect and address land use and transport planning constraints that result from review of public safety areas for Toowoomba Wellcamp Airport. The airport is protected as a strategic airport under the *State Planning Policy*.	✓		
A3.06 Boating safety Undertake boating safety initiatives for inland waterways and waterbodies.		✓	✓
A3.07 Safety promotion 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.		✓	✓
A3.08 Road safety packages Develop safety packages to address corridor deficiencies for the Warrego (Toowoomba to Roma), Gore, Cunningham and New England Highways considering engineering solutions.			✓
Actions – medium/long-term	**3.1**	**3.2**	**3.3**
A3.09 Warrego Highway (Oakey to Dalby) Undertake planning for upgrades of the Warrego Highway between Oakey and Dalby as per the Warrego Highway Upgrade Strategy.	✓		
A3.10 New England Highway Undertake planning for the New England Highway considering: ■ widening/strengthening of Back Creek on the New England Highway (Yarraman–Toowoomba) ■ upgrade options between Nelson Street and Drayton Connection Road.	✓		
A3.11 Wireless blackspots Seek market-led proposals to reduce wireless blackspots along key transport corridors.			✓
A3.12 Wildlife crashes Identify wildlife-to-vehicle crash hotspots to prioritise mitigation and intervention strategies.			✓



Committed projects	
C3.01	New England Hwy (Warwick – Wallangarra) widen pavement
C3.02	Cunningham Hwy (Ipswich – Warwick) Eight Mile intersection grade separation
C3.03	Warrego Hwy (Toowoomba – Dalby) Charlton to Kingsthorpe duplication to four lanes
C3.04	Warrego Hwy (Dalby – Miles) construct additional lane/s
C3.05	Warrego Hwy – Oakey to Miles safety treatments
C3.06	Warrego Hwy (Dalby – Miles) Chinchilla rail crossing intersection/s improvements
C3.07	Warrego Hwy (Toowoomba – Dalby) Dalby eastern access duplication to four lanes
C3.08	Cunningham Hwy (Warwick – Inglewood) install, upgrade or replace roadside delineation
C3.09	Warrego Hwy (Dalby – Miles) Dalby western access additional lane/s

Legend

- National roads
- State-controlled roads
- Local roads of regional significance
- Local government boundary
- Rail lines
- Strategic airport
- National Parks
- Lakes and rivers
- Committed projects
- Actions

Key centres – population

- 100,000+
- 10,000–20,000
- 2000–9999
- <2000

Disclaimer: This map is indicative to illustrate proposed planning actions and is not intended to be accurate in terms of exact geographic extent.

Figure 10: Priority 3 region map

4.4 Priority 4: Network resilience

A resilient and responsive transport system.

Priority 4 aligns to:

- the *Transport Coordination Plan*'s objective that transport contributes to a cleaner, healthier and more liveable environment and is resilient to Queensland's weather extremes
- 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
- *ShapingSEQ*'s intent for communities to be safe, fair, sustainable, resilient and prepared for climate change.

A resilient transport system enables people and goods to continue moving as safely and efficiently as possible despite incidents or weather events. A resilient transport system is able to adapt to change responding through incident management and resolution to minimise network disruption.

The resilience of the transport system and the natural environment are intrinsically linked.

The transport sector is a significant contributor to greenhouse gas emissions and new transport infrastructure can result in the loss of natural habitats. Targeted infrastructure upgrades should occur in areas of most need, with technology used to fill the gaps to minimise impact on the natural environment.

A resilient and responsive transport system will:

- keep customers moving as safely and efficiently as possible despite disruptions from weather and incidents
- minimise impacts on the region's natural environment.

Condamine River flooding

Transport objectives and measures of success

Objective 4.1: Design and operate the transport system to minimise the impact on customers during incidences of disruption.

Freight and passenger customers both need consistent, safe access to the transport network. The planning, design, construction, operation and maintenance of the network can help minimise disruption caused by unplanned events. This includes planning for the best placement of infrastructure to minimise risk and keep people and goods moving.

Building infrastructure to withstand events and providing alternative routes for customers will help maintain connectivity. The upgrading of key routes should also be supported with additional wayfinding and signage to direct customers during these disruptions

Design and operation of the transport system to minimise disruptions to customers will:

- incorporate planning for the most effective infrastructure upgrades to keep people and goods moving
- consider disaster management and access to essential services during and following extreme weather events
- keep people safe at all times
- maximise functionality and asset life.

Objective 4.2: The impact of transport on the environment is minimised.

Transport is the second largest contributor of greenhouse gas emissions in Queensland and equated to 14.3 per cent of greenhouse gas emissions in 2014.[74] Promoting more environmentally sustainable transport options can reduce greenhouse gas emissions due to transport, minimising impacts on climate change.

An integrated and multi-modal approach to minimise environmental impacts from transport considers planning for sustainable transport options, including walking and cycling, and using renewable fuel sources such as electric vehicles. Electric vehicles can also be considered for freight as well as planning for an increase of rail to transport goods.

Minimising the impacts of transport on the environment will be achieved by:

- incorporating planning for additional walking and cycling throughout the region, particularly in the Toowoomba urban area
- supporting the adoption of electric vehicles by customers
- minimising transport's impact on natural habitats
- implementing sustainable infrastructure principles when planning, designing, constructing and operating transport infrastructure.

Objective 4.3: Adopt an integrated technology enabled response to minimise the impact of disruptions on customers.

Data and accurate real-time information keeps our 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 access to phone reception at all times and in all weather conditions to keep informed in real-time
- enable automated rerouting support and efficient and affordable monitoring of assets
- support future network planning, where key infrastructure can be upgraded, supported by accurate data and real-time information
- support efficient and affordable monitoring of assets.

Sustainability assessments

Transport and Main Roads (TMR) is implementing government policy by obtaining formal Infrastructure Sustainability rating through the Infrastructure Sustainability Council of Australia for TMR projects with a business case estimate of $100 million or over, or undertaking sustainability assessments on projects between $50–$100 million. TMR's approach complements Building Queensland business case framework, policies of other state agencies and addresses the sustainability action point of the *State Infrastructure Plan 2016*.

74 Queensland Government. (2017). *State of the Environment – Total annual greenhouse gas emissions*. www.ehp.qld.gov.au/state-of-the-environment/finding/?id=3.4.0.1.

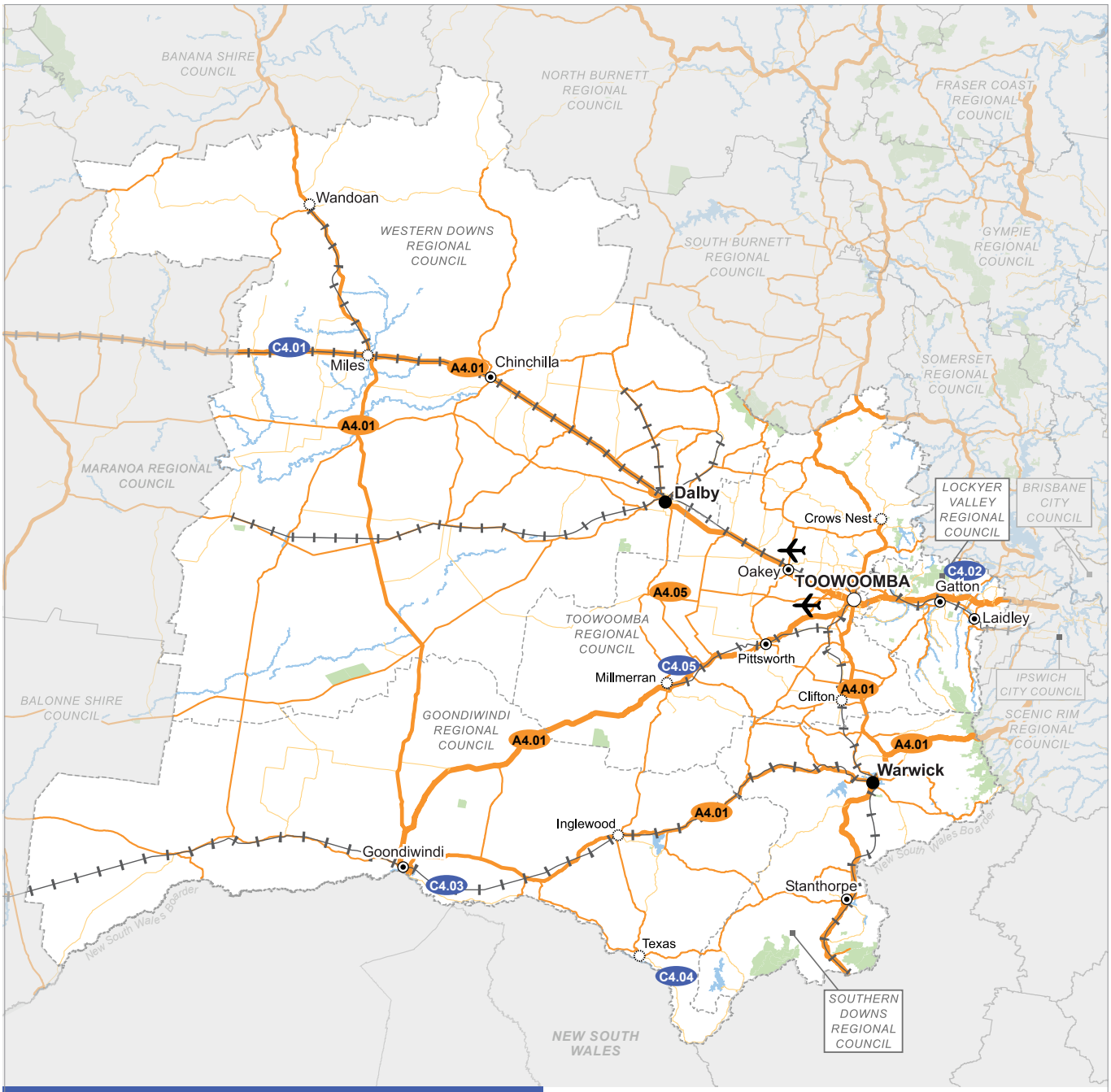
Measures of success

Measure of success	Proposed indicator	Source	Objectives		
			4.1	4.2	4.3
Reduced frequency and duration of unplanned closures.	Total frequency and duration of unplanned closures on the transport network (state-controlled roads).	Transport and Main Roads	✓		✓
Reduction of transport-related greenhouse gas emissions (GHG).	Estimate of GHG emissions from transport sector.	Transport and Main Roads		✓	
Customers are able to access digital information on their journey.	Evolving measure, to be further developed.	Transport and Main Roads			✓

Actions

PRIORITY 4: NETWORK RESILIENCE	OBJECTIVES
Objective 4.1: Design and operate the transport system to minimise the impact on customers during incidences of disruption.	4.1
Objective 4.2: The impact of transport on the environment is minimised.	4.2
Objective 4.3: Adopt an integrated technology enabled response to minimise the impact of disruptions on customers.	4.3

Actions – short-term	4.1	4.2	4.3
A4.01 Flood immunity priorities Undertake planning, design and business case development to upgrade priority flood affected sections of the road network to achieve practicable flood immunity and reroute customers in real-time where technology can be applied. Existing priorities including the Cunningham, Warrego, Gore, Leichardt and New England Highways.	✓		
A4.02 Bridge renewal Using the outputs of 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.	✓		
A4.03 Disaster management Continue refining responsive and adaptive disaster management strategies for emergency access, and access to essential goods and services following extreme weather events.	✓		
A4.04 Flood immunity strategy Develop a strategy which identifies affordable flood immunity targets for key links in the state-controlled road network, and develops a high-level program of prioritised flood immunity upgrades to key links and flood-prone locations for potential development and inclusion in future infrastructure investment programs.	✓		
A4.05 Maintenance projects Undertake planning for priority capital maintenance and widening projects identified in the Surat Basin Planning Study and priority one works indicated in link studies.	✓		
A4.06 Structure management Undertake planning activities to prioritise and plan for necessary major culvert replacements on the state and federal network.	✓		✓
Actions – medium/long-term			
A4.07 Electric vehicles Plan for the future roll out and integration of electric vehicles in regional and remote Queensland.		✓	
A4.08 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.	✓		✓



Committed projects	
C4.01	Warrego Highway (Miles – Roma) Miles western access additional lane/s
C4.02	Lockyer Creek – strengthen bridges
C4.03	Kildonan Road – widen and seal road
C4.04	Riverton Road – construct to sealed standard
C4.05	Lemontree–Bostock Road – Condamine River bridge/s replacement

Disclaimer: This map is indicative to illustrate proposed planning actions and is not intended to be accurate in terms of exact geographic extent.

Legend

- National roads
- State-controlled roads
- Local roads of regional significance
- Local government boundary
- Rail lines
- Strategic airport
- National Parks
- Lakes and rivers
- Committed projects
- Actions

Key centres – population

- 100,000+
- 10,000–20,000
- 2000–9999
- <2000

Figure 11: Priority 4 region map

Retail site under construction along Warrego Highway

5. Implementation

5.1 Taking action

Delivering the *Darling Downs 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 the priorities of customers, stakeholders and the community.

Figure 12 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 the 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.**

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.

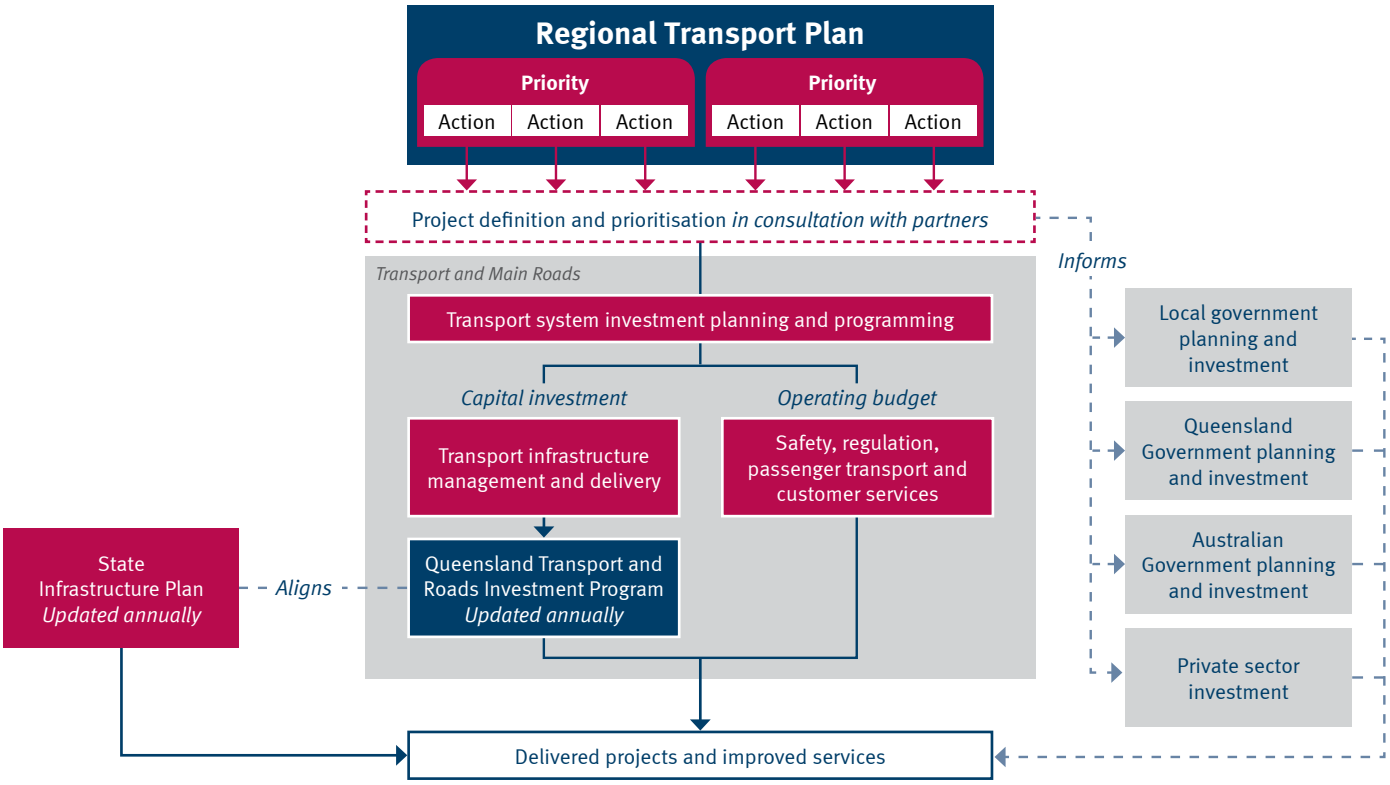


Figure 12: Regional Transport Plans are a critical step in Transport and Main Roads investment lifecycle

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 *Darling Downs 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 and opportunities 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 implementing an initiative or action
- establishing funding partnerships to accelerate action delivery and realise economic or commercial benefits, for example, through market-led proposals 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). RRTGs 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.

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

Train tracks, Chinchilla

5.3 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 (Figure 13).

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.

Overall, the effectiveness of the Plan within the region will be measured against the measures of success outlined for each priority. These align to 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.

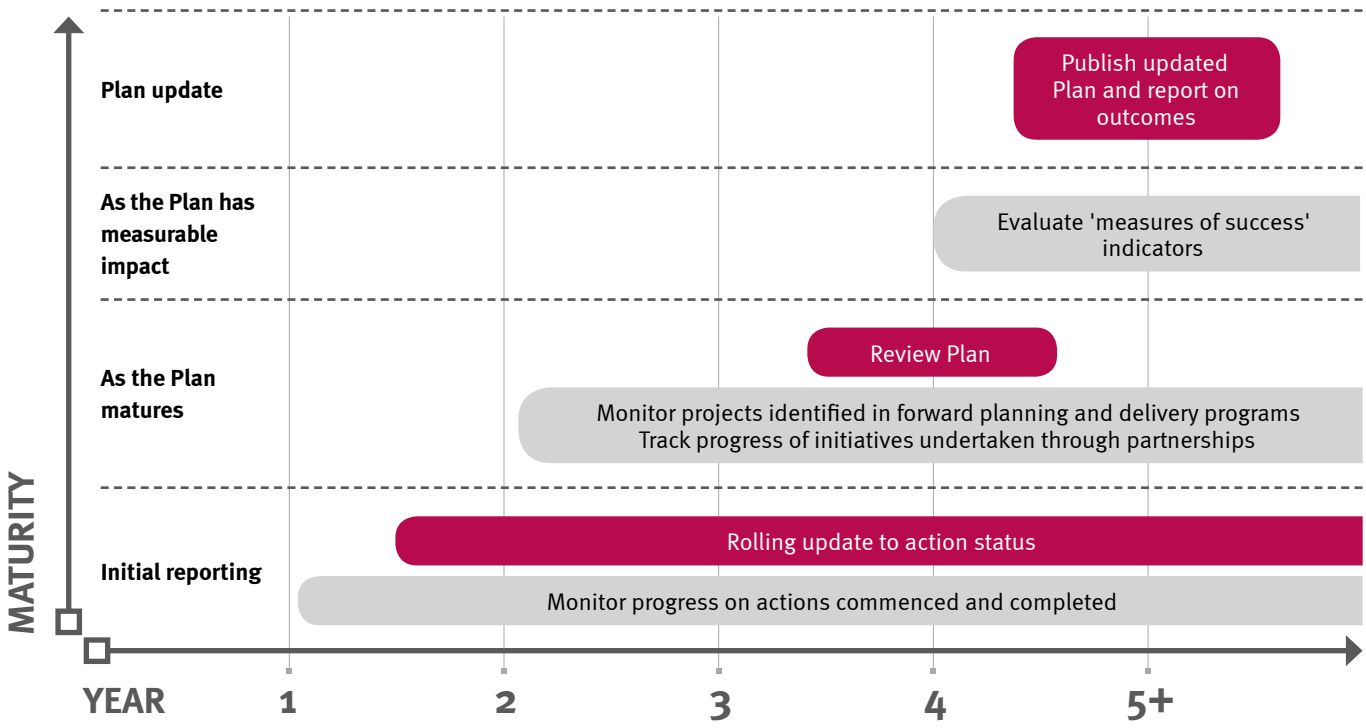


Figure 13: Monitoring, reporting and review as the Plans mature

Further information

Please email TMR_Regional_Transport_Plans@tmr.qld.gov.au for further details on this or other Regional Transport Plans.

Table Top Mountain, Toowoomba

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Page 32, Mount Whitestone, Gatton-Clifton Road, Lockyer Valley Regional Council.

Page 36, Percy Street, Warwick, Trina Kateifides.

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