

# Business Model

Aurizon is Australia's largest rail freight company, utilising below and above rail capabilities to carry products for domestic and global consumption.

## WHAT WE DO

Each year, Aurizon transports more than 250 million tonnes of bulk and agricultural commodities, connecting miners, primary producers, and industry with international and domestic markets. We also provide containerised transport solutions across an extensive national rail and road network.

In addition, Aurizon co-ordinates operation of the Central Queensland Coal Network (CQCN), an open access network servicing multiple customers across interconnected corridors and ports. We are well positioned in all aspects of rail network design, construction, asset monitoring, maintenance and operation.

We're the only vertically integrated, multi-user heavy haul rail company in Australia.

## OUTLOOK

In FY2017 we are targeting:

- underlying Earnings Before Interest and Tax (EBIT) between \$900 and \$950 million
- revenue between \$3.35 and \$3.55 billion
- above rail haulage of 255mt - 275mt
- coal haulage of 200 - 212mt.

"Since listing on the ASX in FY2011, we have hauled 11% more tonnes, with 37% fewer locomotives and 19% fewer wagons."

**Managing Director & CEO** Lance Hockridge

## REVENUE

- Our Network business provides a stable, defensive, regulated stream of earnings (34% of Aurizon revenue).
- For our rail haulage business, 79% of our coal volumes and 100% of our iron ore volumes are under long-term 'new form' contracts providing a 60-70% fixed-revenue stream through take-or-pay arrangements.
- No material coal haulage contracts are due to expire until FY2022, while the weighted average remaining contract length is 10.5 years for coal and 5.2 years for iron ore.

## COSTS

- We have been successful in becoming a more cost-competitive business with a stronger operational, commercial and customer focus.
- The bulk of the ongoing costs of our operations relate to labour (45%), consumables (30%), track access (15%) and fuel (10%).
- Our Operating Ratio (i.e. 1-EBIT margin) reduced from 88% in FY2011 to 74.8% in FY2016.

## ASSETS

- We have approximately 500 active locomotives and 13,000 active wagons across 28 rail depots.
- We operate and manage the Central Queensland Coal Network, 2,670 kilometres of track with a Regulated Asset Base of \$5.6 billion.

## FUNDING AND CAPITAL MANAGEMENT

- Aurizon Enterprise Value was \$13.0 billion as at 30 June 2016, made up of \$9.5 billion of equity value (market capitalisation) and \$3.5 billion of debt value.
- Aurizon seeks to create sustainable value through disciplined capital allocation which generates returns above the cost of capital.



## OUR BUSINESS STRUCTURE — BELOW AND ABOVE RAIL

Our operations fit broadly into two categories — below rail network infrastructure and above rail transport operations. An overview of our integrated set of capabilities is provided below:

### BELOW RAIL (NETWORK)



#### Operation and planning

With an average of 70 rail services on the CQCN each day, Aurizon performs all aspects of network traffic control, capacity planning, safety accreditation and day of operations planning in the CQCN. Each year since IPO in 2010, we have set new records of coal volumes hauled on the CQCN. In FY2016 the CQCN achieved another record of 226 million tonnes.



#### Maintenance and renewal

Aurizon undertakes track inspections, preventative maintenance, asset renewals, emergency repair, response and recovery. We also operate a fleet of specialised track maintenance machines and employ a sophisticated system for maintenance planning and asset management. We provide these services within the CQCN and nationally for other network providers and can scale this capability to other opportunities.



#### Design and construction

Aurizon has demonstrated experience and competency across engineering, design, project management and construction disciplines. In response to customer requests, we have completed approximately \$2.5 billion in major capital works since IPO and added 70 million tonnes of network capacity.

### ABOVE RAIL (RAIL HAULAGE)



#### Operations

Aurizon has extensive experience in transporting mining products, bulk commodities, industrial products and intermodal freight. We do this in large volumes, over long distances, in demanding environments and across complex supply chains.



#### Engineering and maintenance

Aurizon manages the majority of rollingstock and terminal equipment maintenance across the locomotive and wagon fleet.



#### Other services

Aurizon also provides a wide range of rail-based services including terminal operation, third-party provisioning and coordination of containerised pick-up and delivery.

## QCOAL — BYERWEN COAL PROJECT

The Byerwen Coal Project is located 150 kilometres west of Mackay, Queensland. Once operational, the Byerwen Mine will produce up to 10 million tonnes of metallurgical coal per year to be railed to Abbot Point Coal Terminal for export.

Aurizon is designing the signalling systems and anticipates beginning construction of the track, telecommunications and signalling infrastructure for the new mine in late September 2016.

This is the second contract we have won from Qcoal after managing the civil works contractor (Murphy Pipe and Civil) on-site.

“This has been an outstanding team effort and a clear demonstration of the results that can be achieved through the delivery of great infrastructure solutions for our customers in the industry.”

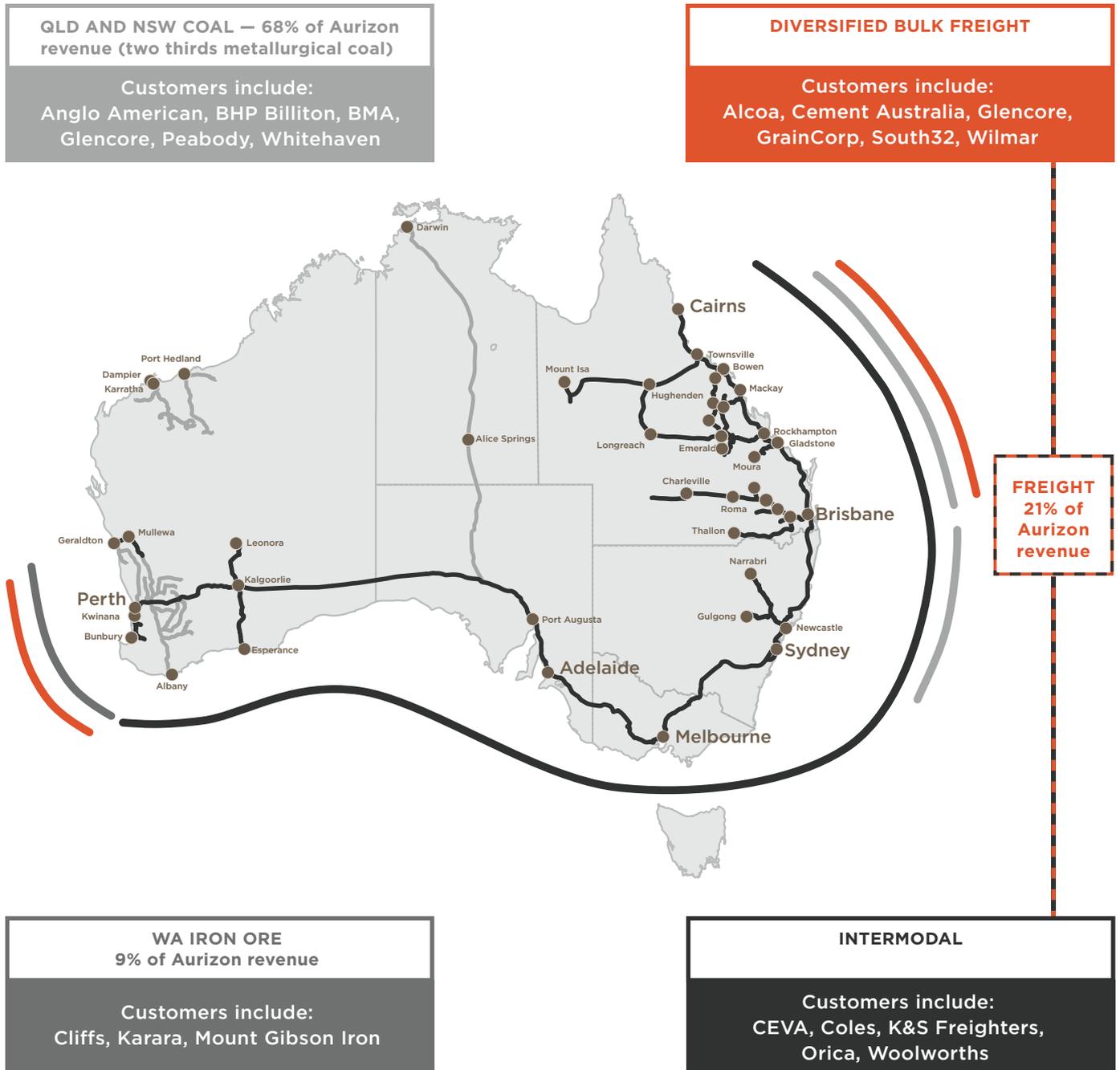
**Michael Carter**  
A/EVP Operations

## WHERE WE OPERATE

The Australian rail industry operates nationally across 33,000 kilometres of track using over 2,200 locomotives (majority of which are standard gauge). Each year the rail industry hauls over one billion tonnes of bulk and containerised freight<sup>2</sup>.

Australia has some of the best coal and iron ore reserves globally, which support its position as the largest global exporter of both coal and iron ore. Considering these commodities account for 60%<sup>3</sup> of dry bulk commodities transported by sea, we believe Australia is the best country in which to be a bulk rail operator.

As shown below, Aurizon is a significant contributor to Australian supply chains, particularly across the four markets of iron ore, coal, intermodal and diversified bulk freight. Approximately 68% of our total revenue relates to coal and is discussed in the Future of Coal chapter of this Report. Figure 10 below shows the broad geographic regions of each of our four markets, associated revenue contributions and example customers.



Other revenue from disposal of PP&E or provision of maintenance services to external customers not shown.

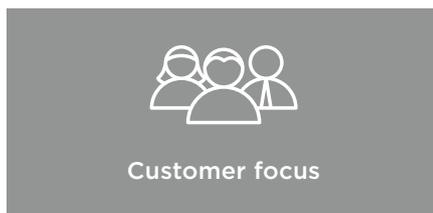
**Figure 10:**  
Aurizon operations across four key markets.

<sup>2</sup> Sourced from FY2016 Full-year results for Aurizon, Rio Tinto, BHP Billiton, FMG and Asciano.

<sup>3</sup> Dry Bulk Magazine — Spring 2016 — Volume 1.

## OUR STRATEGY

In FY2015 Aurizon developed the Blueprint strategy and engaged with employees and external stakeholders on how this framework will create value. The strategy will be delivered through the following areas:



- Aurizon is strengthening and growing our current business through a relentless focus on our customers. Aurizon has continued to work with customers in order to identify cost savings and productivity opportunities across the supply chain.
- Our investment in information and operations technology improves our customer offering, with greater transparency and consistency of information.



- The new Enterprise Agreements, which were substantially implemented in September 2015, are a key enabler for productivity improvements and efficiencies – allowing us to consistently deliver what we promise for our customers.
- Over the next two to three years we expect stable volumes, which reinforces our commitment to transformation. Our multi-year transformation program involves identifying and implementing initiatives to create a highly focused, performance-driven culture which will reduce our cost base, drive productivity improvements and create shareholder value.
- We use world-leading Condition Monitoring technology to provide real-time and predictive data, enabling our staff to focus on fixing rather than finding maintenance issues.



- We explore growth opportunities that are aligned to our Blueprint and leverage our capabilities.
- We develop innovative solutions to attract new customers in existing intermodal and bulk markets.
- We will continue to seek opportunities that utilise our capacity to support existing and emerging coal producers.

## OUR ROADMAP FOR THE LONG-TERM FUTURE OF THE NETWORK

The [Aurizon Network Technical Strategy](#) (Technical Strategy) will be published annually and complements the [Network Development Plan](#), by defining those opportunities that can facilitate growth at the lowest cost.

The Technical Strategy also provides a detailed means of articulating a future vision for operating the Network centred on customer focus and productivity improvement.

Network improvement opportunities are considered using the following principles:

- An integrated system approach is facilitated.
- There is potential to reduce the total cost of transport.
- Innovation is promoted.
- Sustainability goals are achieved.
- Renewals investment is leveraged.

The inaugural version of the Technical Strategy includes information regarding the following opportunities:

- Network upgrades to facilitate heavier trains.
- Improved IT systems for train scheduling and management.
- Modelling tools to optimise timing of maintenance and renewals.
- Expansion of wayside Condition Monitoring capability.
- Purchase of mechanised track maintenance equipment.

For example, above rail operators have expressed a need to understand what rollingstock could be utilised on the Network in the future. In our inaugural Technical Strategy we evaluated the potential upgrade of infrastructure for heavier trains, including above and below rail cost implications. This evaluation was conducted using two scenarios for tonnage growth in the CQCN, 1% and 3% per annum over 25 years.

The results indicated that upgrading the infrastructure for heavier trains is currently not viable, but a future tonnage growth rate above 3% per annum could alter this initial assessment. The evaluation also revealed that the next iteration of the Technical Strategy should consider infrastructure upgrades which facilitate heavier locomotives (with current wagons) and facilitate higher wagon overload limits.

## GLOBAL FACTORS INFLUENCING OUR FUTURE

Over our 150-year history Aurizon has witnessed considerable change. It is in this context that we have every confidence in our continued resilience and, where necessary, ability to adapt to changing market conditions. Our views on several key drivers of uncertainty and opportunity relating to our business are as follows:

- **Urbanisation and development in Asia:** Asia, including the Indian sub-continent, is currently undergoing a major urban transformation with an additional one billion people forecast to move to cities by 2050. We pay close attention to this trend given urbanisation requires infrastructure investment and drives associated demand for steel. We see this as a key driver for the future of seaborne metallurgical coal and iron ore demand, given steel is predominantly produced using these bulk commodities.
- **Climate change:** Discussed extensively throughout this Report, the physical impacts and potential policy responses relating to climate change will continue to be a long-term strategic consideration for Aurizon and our customers. In the short term we have set targets to reduce our direct carbon emissions, however, our main focus is to monitor emissions reduction commitments in key thermal coal import countries in Asia. Aurizon believes that if emissions reduction mechanisms are implemented in these countries it could direct more finance towards high-efficiency coal-fired generation. For Aurizon, there is also a strong relationship across Asia between increased adoption of high-efficiency generation technology and coal quality, which could provide an advantage for high-quality Australian coal.
- **Trade liberalisation:** Australia is well connected to the world economy through a flow of people, goods, services and capital. There are currently a record number of free trade agreements under negotiation, or recently signed, providing significant opportunities for Australian companies such as Aurizon and our customers. We must also ensure that, at the same time, trade protectionism is not used to protect unsustainable industries to the detriment of competitive global supplies. We see this as a key driver for the future of Australian export commodity demand.

The importance of the factors described above are further discussed in our Future of Coal and Regulatory Environment chapters.

## OUR SCENARIO PLANNING APPROACH

To Aurizon, sustainability means building a resilient business to manage long-term trends. This requires foresight to monitor key factors with the potential to impact customers, communities and the commodities we haul.

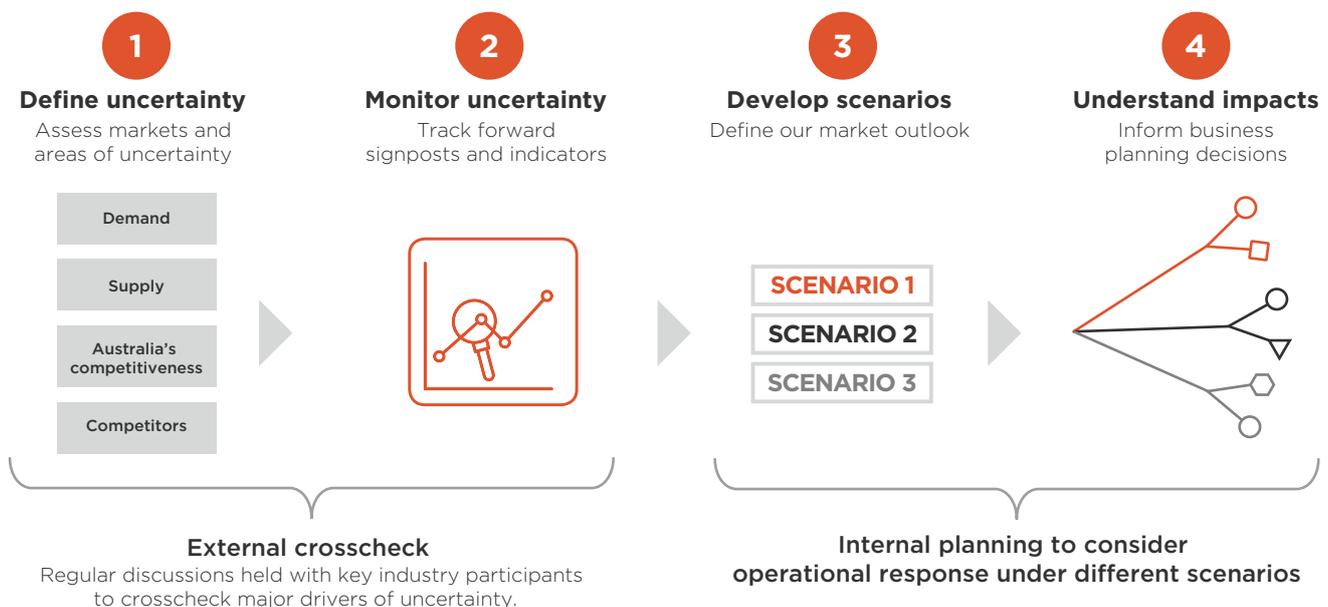
To ensure our continued success we regularly undertake scenario planning focussed on assessing risks and opportunities. A key component of this assessment is consideration of future commodity demand and supply scenarios driven by economic indicators, emerging technologies and policy in domestic and international markets.

We believe that Australia is well placed to make the most of the opportunities in our region. Aurizon in particular will play a key role in this due to our central position in Australia's globally competitive export supply chains.

Our business strategy makes use of scenario development to inform business decisions. We monitor the external environment using signposts or lead indicators to ensure we are able to identify when to implement adaptive strategies. As the market and government regulatory environments are not static, this analysis is regularly updated to ensure the most

relevant information is at hand to inform major investments in long-life assets.

The diagram below illustrates the high level approach used. Ultimately this approach provides consideration for our business model and forecasts. In this context we specifically note that on 15 August 2016, Aurizon announced that a performance review is underway. The aim of the review is to determine options to achieve appropriate risk-adjusted returns across our intermodal and diversified bulk freight businesses.



**Figure 11:** Key elements of Aurizon's scenario planning approach.