



Queensland's freight and export infrastructure: streamlining the supply chain

As a vital gateway to Australia's export markets, Queensland must secure the productivity, resource efficiency and competitiveness of its rail and port infrastructure into the future. At the fourth session of CEDA's *InfraStructuring Australia* conference series, sponsored by Clayton Utz, Ernst & Young and GHD, public and private sector delegates explored the issues constraining the state's freight and export infrastructure.

For the last decade, Queensland's mining industry has faced export delays due to bottlenecks within the rail supply chain and capacity constraints at major ports. Stephen Meyrick, Business Leader - Transportation Economics and Logistics for GHD, believes the cost of ship queues alone is already reaching over \$1 billion per year.

"If you add to that the costs that come from congestion through underutilisation of rail, rolling stock, and add to that again the opportunity cost of lost sales at times at peak prices, you could easily double that billion dollar figure and start talking in the order of two, maybe three billion dollars a year in economic loss through infrastructure failure."

However, this already compressed mining supply chain is facing substantial future pressure. By 2020, Liquefied Natural Gas (LNG) exports are expected to reach 46 million tonnes per annum. Meanwhile, according to the Australian Bureau of Agricultural

and Resource Economics (ABARE), demand for Queensland coal alone will increase by between 64% and 120% over the next ten years.

To meet this level of projected demand, Queensland is already planning major mine expansion and transport infrastructure programs. The 40 coal projects, 34 coal transport projects and 40 LNG projects in the pipeline will expand export infrastructure capacity and increase performance. Planned projects include:

- ▶ **Rail** - the \$1.1 billion Goonyella to Abbot Point (GAP) expansion project, which will add 50 million tonnes to the capacity of Queensland's rail network, is due for completion in 2012. This will be followed in 2014 by Hancock's Alpha to Abbot Point 495 km standard gauged line, projected to have open access capacity for 100 million tonnes per annum.
- ▶ **Ports** - Abbot Point X50 is underway and scheduled for completion in a year. Longer-term, the Queensland



“ Over the next ten years, 90% of the spending is due to come from the private sector. The sale of QR National alone, which is still on track for the end of this year, represents a 36% shift from the public to the private sector.”

Rachel Nolan MP, Minister for Transport

Government, along with North Queensland Bulk Ports Corporation, is looking to develop Abbot Point, which has an export capacity of between 230 and 280 million tonnes per annum, potentially making it the largest coal export port in the world.

There are plans to expand the Dalrymple Bay Coal Terminal from the current nominal figure of 85 million tonnes per annum to 153 million tonnes, with BHP BMA planning to expand from 44 to 55 million tonnes by 2015.

At Gladstone, planning for the Wiggins Island Coal Export Terminal is well advanced, with potential for 25 million of the ultimate 85 million tonnes to be delivered by 2013.

In LNG, 1,563 hectares of strategic port land have now been incorporated with an expanded Gladstone state development area to create a dedicated LNG industrial precinct on Curtis Island, with plans for deeper shipping channels, ship berthing pockets, and turning basins.

Increasing levels of private investment

According to the Hon Rachel Nolan MP, Minister for Transport, in a change from Queensland's traditional reliance on government to pay for infrastructure, funding for these projects will come largely from the private sector.

She believes this reflects a “mature balance between the responsibilities of the private sector and the State”. She echoed comments in Professor Ross Fitzgerald's book, *From 1915 to the Early 1980s: A History of Queensland*, that the skewing of government priorities towards economic infrastructure, and away from social infrastructure, contributed to Queensland's lower level of social services and outcomes.

“The fact that we invested more in ports and railways is, for instance, directly related to the fact that we had one less year of schooling in Queensland [until 2007].”

Integrating the supply chain

While acknowledging that the planned projects are all critical elements to providing growth capacity, delegates were concerned that investment is not enough. It takes integration, cooperation and collaboration to optimise a supply chain.

“The thing that keeps me awake at night is the fact that we can invest that capital and actually not realise the benefit if we don't fully integrate the way these supply chains operate,” says David Irwin, Divisional General Manager for Coal, Asciano.

“The challenges we're coming up against today in Queensland are very much the issues we had in the Hunter Valley five years ago. What we learnt then was that integration and interdependence are key to these supply chains. No single player can optimise the supply chain. You need an independent company with every coal producer, every port operator, every above rail operator and the below rail network provider, all sitting on the board - giving it the authority and the power to independently plan and measure the performance of that coal chain.”

In this case, the independent company was the Hunter Valley Coal Chain Co-ordinator (HVCCC), which provides central planning and coordination for the movement of coal through the Hunter Valley. It has proved that centralised planning releases latent coal chain capacity to the benefit of the industry.

“ The only way that master planning can be effective is through collaboration and open relationships among the members of the supply chain.”

Ken Lewsey, Chief Operating Officer, QR Limited

The General Manager Commercial, Australian Rail Track Corporation (ARTC), Simon Ormsby, works very closely with the HVCCC to develop a master plan for the system. He strongly endorses the importance of the organisation’s role in avoiding capacity constraints: “We test theories with them; we propose investment for them; they analyse those in the context of the broader system plan; and we work together to develop our corridor capacity strategy that aligns with the system plan they produce.”

Sharing information

David Irwin also stresses the importance of sharing information: “We are more than willing as above rail operators to compete in an open access environment, and we are also very willing to provide our information into a central body to ensure that the coal chain is optimised.”

But Ross Dunning AC, Chairman of the Port of Townsville Limited, cautions that not everyone will be able or willing to be so cooperative.

“We have a lot of interaction with the people who are going to get their product to the port - we need to know market intelligence on potential users and current users, and their expansion. A lot of that is confidential information; some of it is even market sensitive for listed companies. Sometimes discussions have to be held in an atmosphere of enormous confidentiality. Also, in our experience, there’s not a lot of cooperation between competitors.”

Craig Walker, General Manager Operations, Gladstone Ports Corporation, is more optimistic: “We’ve seen great maturity from rail operators and track providers, to the point where now we have employees of rail actually working in offices at the

port. An integrated approach is definitely evolving; now we need to take it to the next level.”

Aligning investment with coal production

Simon Ormsby believes it’s vital that the control, timing and delivery of projects remain in the hands of the coal producers themselves. ARTC owns, leases, or manages over 10,000 km of track throughout the nation, covering five states, but all of its projects are endorsed by the Rail Capacity Group.

“This is predominantly a group of producers, with representation from the rail operators and the HVCCC. They set the timing, and they endorse the cost of the projects that we propose from our strategy.”

He says this principle is also reflected in ARTC’s new contractual model, where coal producers contract directly with ARTC to buy access.

“Underpinning every access holder agreement are multiple operator sub agreements between ARTC and the rail operators. But they don’t become live until the access holder actually endorses the content of each operator’s sub agreement.”

Building in surge capacity

Stephen Meyrick thinks Queensland may be at risk of systematically under providing export infrastructure capacity. He believes the state is likely to err on the conservative side because of the nature of bulk exports: “Most of our exports are sold on a Free On Board basis. That means that a lot of the costs of export delays are not visible to the exporters. Exporters see the demurrage charges and think that’s the full cost of the delays that result from congestion. In fact, it’s usually a minor part of them.”



“...if you're in the commodity business and there's a cost anywhere along the supply chain, you are going to wear the vast bulk of it one way or another. It might come straight out of your pocket; it might come through the reduced prices you're offered by the buyers; but in the end, it's the producer who's going to pay the costs, not the importer.”

Stephen Meyrick, Business Leader – Transportation Economics and Logistics, GHD

At the same time, he believes infrastructure providers are getting more and more reluctant to bear the volume risks that they can't control: “What that tends to do is compress the investment in capacity towards the clearly known, and leave little capacity for the unknown margin, which is the peaks we get when demand cycles reach their height.”

He also worries that regulation can provide a strong disincentive to infrastructure providers, leaving little buffer capacity in the system: “Some of these disincentives are the requirements to meet secure approval for expansion from existing groups of users; others are provisions in the regulatory structure to disallow investment, which the regulator *ex post* decides wasn't absolutely necessary. Again, the effect is to contract investment capacity towards the known and secure, and narrow the margin that's available to surge unexpected growth and demand – that's where we got caught out last time.”

Learning from past mistakes

Delegates agreed that Queensland missed the first two years of the last mining boom because the industry was unprepared, disorganised, and had failed to invest. However, there was general consensus that the State is better prepared this time around, believing that the private sector was better positioned to ensure good economic outcomes from the proposed investment.

There is a sense that players at every stage of the supply chain are planning for the future.

One delegate is encouraged by the fact all the participants in the GAP chain have agreed to what's called the long term solution, which will prevent port and rail capacity from being misaligned.

David Irwin agrees to a point: “I think, compared to the last boom, there's no doubt the industry as a whole is vastly better prepared from an infrastructure investment perspective, to a point where in some cases there are even predetermined triggers, where that trigger only needs to be pulled and investment happens. It's already defined; feasibility work is done; approvals are in place. I think that's a much more proactive approach.”

However, he believes there remains a secondary risk that the industry has yet to do the hard work between all parties engaged in coal chains to make sure new infrastructure is put to full and efficient use.

“We need to make sure that, structurally, we have all the right things in place, including independence where it's required to ensure that we can make wise judgements, and ensure all our infrastructure is well used and well planned.”

Ernst & Young contacts

Bill Banks

Oceania Infrastructure Leader
Tel: +61 2 9248 4522
bill.banks@au.ey.com

Mark White

Executive Director, Brisbane
Tel: +61 7 3243 3728
mark.white@au.ey.com

Clayton Utz contacts

Alan Maguire

Partner, Construction and Major Projects
Tel: +61 7 3292 7018
amaguire@claytonutz.com

Darren Fooks

Partner, Energy and Resources
Tel: +61 7 3292 7113
dfooks@claytonutz.com

Doug Jones

Head of Construction and Major Projects
Tel: +61 2 9353 4120
djones@claytonutz.com

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