

QTLC Freight in Focus Seminar Series



► SUMMARY: Unlocking efficiency and productivity through supply chain coordination



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The complexity that arises from multiple supply chain participants, or multiple supply chains using common infrastructure, means that each component is vulnerable to inefficiencies related to delays, scheduling issues and reduced capacity.

Understanding and coordinating the interface between internal participants and across supply chains is critical to optimising capacity and performance of the freight system and overall supply chain productivity.

Misalignment between supply chain participants can result in sub-optimal infrastructure operation and increased operating costs.

Supply chain coordination is a strategic response to address the challenges of multiple participant supply chains and those sharing common infrastructure and services. Supply chain coordinators seek to unify and optimise the freight transport system by coordinating the individual activities of participants within a

particular corridor to improve the overall efficiency and performance of infrastructure servicing that corridor.

The Queensland Transport and Logistics Council held a Freight in Focus Seminar on 9 April 2014 to explore the relative benefits of supply chain coordination models employed in the Hunter Valley and Port Botany, and discuss the potential for applying coordination functions to benefit Queensland supply chains.

The following is a summary of the key themes from the event.

Janelle Endacott – Hunter Valley Coal Chain Coordinator (HVCCC)

The HVCCC is an independent organisation providing centralised planning, coordination, monitoring and capacity alignment services to maximise Hunter Valley coal chain efficiencies and exports.

The HVCCC has a helicopter view of the whole coal chain operating in the region.

The HVCCC coordinates daily rail operations but also contributes to long-term performance and efficiency improvements through recommendations focused on prioritising investment and infrastructure activity.

The key supply chain coordination activities undertaken by the HVCCC include:

- planning and scheduling
- analysis and advice on capacity constraints
- advocacy on matters impacting supply chain efficiency.

All 11 producers and eight major service providers, including above and below rail operators, Newcastle Port and terminal operators, are members of the HVCCC.



Ms Janelle Endacott

System capacity is worked out collectively. Planned maintenance was also coordinated to minimise capacity loss.

Live Run Integration was implemented in 2012 as a joint initiative of HVCCC and service providers to execute the daily rail plan. It seeks to cooperatively manage disruptions and coordinate recovery initiatives.

The concept of 'slot management' was introduced in Live Run during 2013, with trains working to specific 'slots' from the mine to the Port. These slots can be interchanged as needed to isolate and minimise the impact of delays and maximise throughput.

Throughput loss rates have dropped to unprecedented lows since the introduction of slot management and on-time performance has improved significantly.

Steve Gunn – Port Botany Landside Improvement Strategy (PBLIS), Sydney Ports Corp

PBLIS was introduced as a response to inefficiencies in the landside operations of Port Botany, particularly road congestion arising from the movement of containers in and out of stevedores.

The main issues related to a lack of operational visibility and data integrity; the absence of a commercial arrangement between stevedores and carriers; inefficient landside interface; and an absence of performance standards to monitor carrier arrivals and truck turn times. The net result of these issues was high demurrage charges and overall supply chain inefficiency.

The objective of PBLIS is to make the landside supply chain at Port Botany more efficient, consistent and transparent and a move towards 24/7 operations.

The Port Road Taskforce and the Port Rail Team were tasked with collaborating with stakeholders to develop a performance framework that would lead to a reduction in truck queues, turnaround times and transport costs. Agreement was not reached and regulations and mandatory standards were enacted in December 2010.

The Operational Performance Management system for carriers sees penalties paid to stevedores for early arrival, late arrival, failure to show up and cancellation of timeslots.

The Operational Performance Management system for stevedores sees penalties paid to carriers for infringements relating to truck turnaround time, minimum slots offered, truck non-servicing and cancellation of time zones.

A key driving of success for PBLIS is carrier and stevedore education using quality data. Individual performance reports are issued monthly.

Since the introduction of PBLIS, carrier on-time performance has improved from 90% to 98%.

It is estimated that the 26% improvement in truck turnaround time translates to \$10.2 million per year in savings.

Going forward, issues associated with the slot booking process will be addressed to facilitate further performance improvements.

The New South Wales Government is committed to increasing rail's modal share to respond to the growing freight task in the state, particularly for containers into Port Botany.

Obstacles to an efficient rail supply chain include:

- low train utilisation
- poor real-time visibility of train status on paths
- lack of flexibility in train windows versus train arrivals
- passenger network imposing major freight constraints
- just-in-time requirements of empty container movements
- poor perception of the reliability of rail services.

Building on the work of PBLIS, the Cargo Movement Coordination Centre (CMCC) adopts a consultative, collaborative approach to ensure:

- freight networks operate at optimal efficiency
- understanding of the constraints and limitations of network capacity.

Through negotiation and consultation, the CMCC will:

- identify and prioritise short and long-term issues and proposed operational efficiency activities
- gather data and undertake KPI reviews
- facilitate industry forums
- develop performance standards.

Activities aimed at improving operation efficiency include:

- identifying pinch-points in the supply chain
- short-term cargo transport chain modelling
- day-to-day operational planning and scheduling for rail
- disruption management for rail
- operational optimisation for rail
- system simulation modelling and bottleneck identification.

Sal Petrocchio – Department of Transport and Main Roads

Government recognises the value of supply chains and seeks to influence supply chains by innovating through:

- regulation
- communication/facilitation
- investment/co-investment.
- planning and research and development.

The introduction of A-Double PBS vehicles carrying bulk grain from Toowoomba to Brisbane is an example of innovation in regulation. The government has further sought to reduce red tape by introducing a policy for industry to undertake geometric PBS route assessments.

The Central Queensland Inland Port project seeks to leverage improved supply chain efficiencies for resource and agricultural industries operating in the region. It does this through planning and coordination activities focused on establishing an intermodal operation linking the region with Mackay and Gladstone ports as well as coastal shipping opportunities.

The Heavy Vehicle Action Plan identifies priority projects to improve heavy vehicle access.

Further future-proofing of the freight system is occurring through:

- intermodal terminal planning in the South East Queensland region
- the study into capacity improvement on the North Coast Rail Line
- participation in the North Queensland Resources Supply Chain and Austroads research program.

Importantly, the Queensland government is committed to working with industry to inform priorities and planning to benefit supply chains, as evident through forums such as the Agricultural Transport Committee and the QTLC.