



ASX ANNOUNCEMENT

Thursday, 20 November 2008

The Manager
Company Announcements Office
Australian Securities Exchange
Level 45, South Tower Rialto
525 Collins Street
MELBOURNE VIC 3000

ELECTRONIC LODGEMENT

Dear Sir or Madam

NSW Operational Site Tour Presentations

Please see the attached announcement for the immediate release to the market.

Yours faithfully

A handwritten signature in black ink that reads "F. Mead". The signature is written in a cursive style.

Fiona Mead
Company Secretary

MELBOURNE

Level 6/380 St Kilda Road,
Melbourne VIC 3004 Australia
Telephone: +61 3 9284 4000
Facsimile: +61 3 9699 2869

SYDNEY

Level 6/15 Blue Street,
North Sydney NSW 2060 Australia
Telephone: +61 2 8484 8000
Facsimile: +61 2 8484 8154

Email: info@asciano.com.au
www.asciano.com

ABN: 26 123 652 862

HUNTER VALLEY COAL CHAIN LOGISTICS

20th November 2008

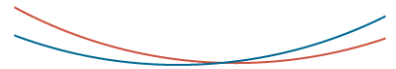
8226



Planning for Performance

HVCCLT Presentation

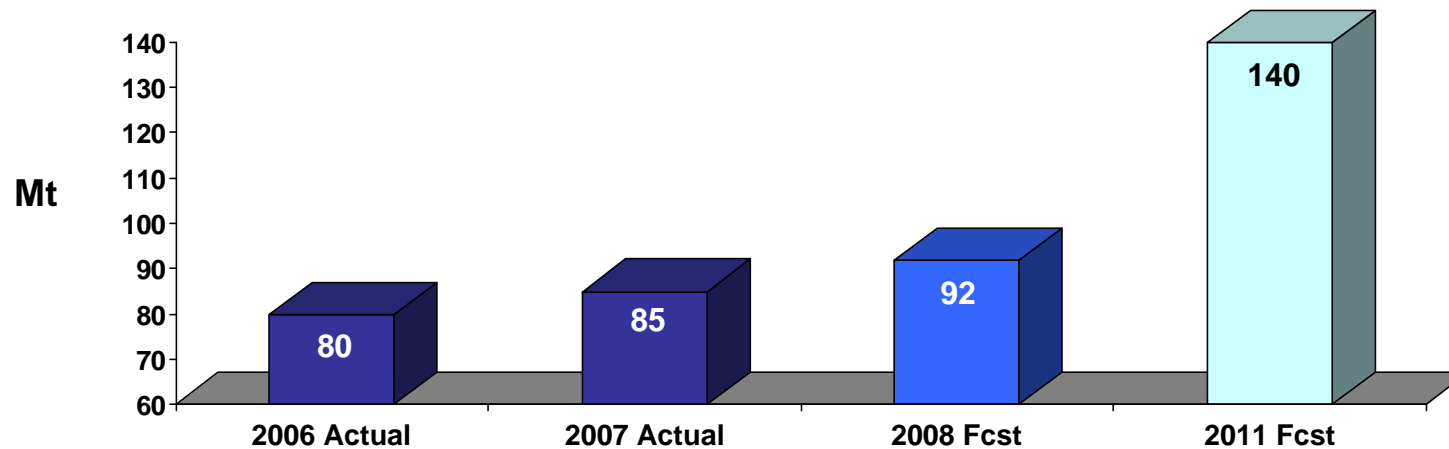
20th November 2008



Hunter Valley Coal Chain



- Being planned and made available **at an all-time record** rate over a sustained period. Productivity of existing infrastructure increased by 15% from 2004 to 2007
- For 2008 **the system is running 9% (6.4mt) ahead** of the same period last year with a **16% increase in the rail task (Net Tonne Kms)** as demand moves further away from the Port of Newcastle
- Approximately **\$650million in new infrastructure** has been commissioned in the last 3 years
- A further **\$1.5billion in new infrastructure is planned** for delivery in the next 3 years



However, coal chain capacity is also:

- **A constraint to export volumes** and production through Newcastle
- **Contributing to the vessel queue** when delivered capacity is less than targeted

Hunter Valley Coal Chain: The Worlds Largest Coal Export Operation



- 40 Coal Mines
- 14 Producers
- 24 Load Points
- > 100 Different Brands of Coal



- 2 Above Rail Operators
- 28 Trains/15,000 trips per year
- 2 Track Owner/Operators
- Haulage distances up to 350km



- 2 Coal Loading Terminals – KCT & CCT
- 5 Dump Stations
- 1.5Mt of Working Stockyard
- 5 Ship Berths and Loaders, “4 Queues”



- Approx. 1000 vessels per year
- Average vessel size is 87kt
- Avg 2 Cargoes per Vessel
- Multiple Components per Cargo
- Tidal constrained river port



- 10% Domestic Consumption
- 90% Export – mostly Thermal coal
- 65% to Japan

- Turn of Arrival loading port
- JIT cargo assembly process
- 16 independent organisations required to move each tonne of coal
- No control over demand – only two weeks visibility and highly variable volumes
- Avg 5 days clean coal on stock at the mines

Q: How to maximise system throughput and drive efficient asset utilisation?

A: Plan and operate the system as though owned by a single shareholder



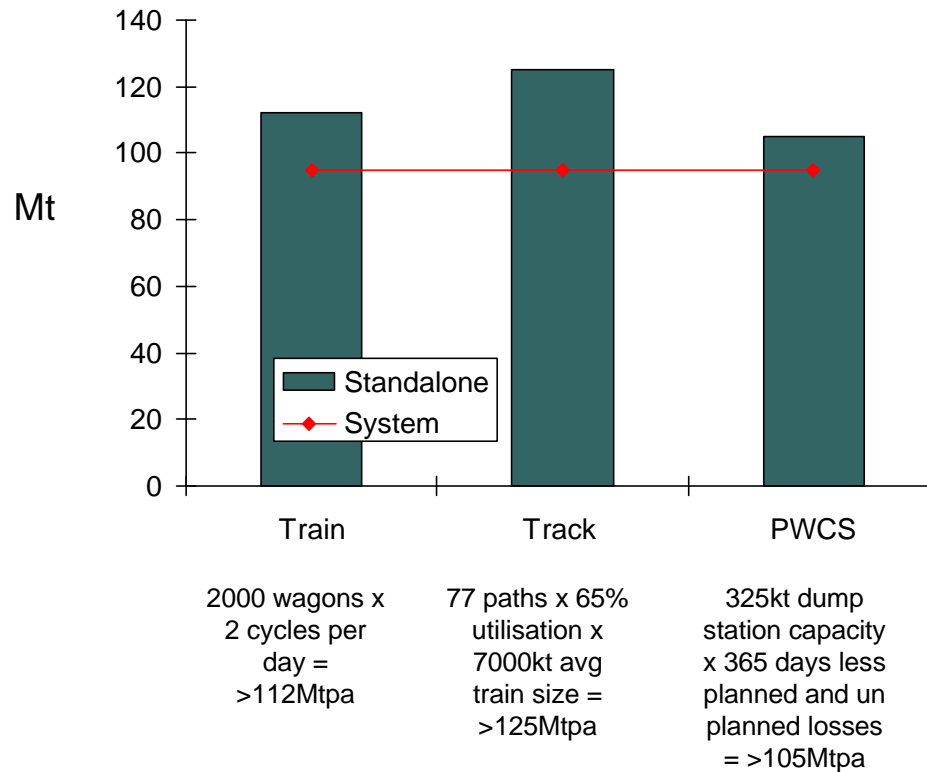
HVCCLT: A Cooperative Planning and Operating Model



- *MOU between the organisations that own the train, track, terminal and port infrastructure*
- *The movement of every tonne of domestic and export coal is planned via the HVCCLT*
- *HVCCLT provides a 'system wide' forum for pursuing operational improvements and making efficient decisions about future investment in infrastructure*

- Provides centralised planning services on behalf of its members:
 1. **Short term objective** – focus on maximising daily capacity and throughput
 2. **Long term objective** – assist members with investment planning
- Established as a trial in 2003 and formalised with governance arrangements under an MoU in July 2005 – operates on a premise of cooperation between the member organisations
- Membership includes all transport asset owners in the Hunter Valley – and the newest operator, NCIG, have expressed intent to participate in the model
- 30 Employees seconded from member organisations
- \$5 million investment in state-of-the-art constraint based planning technology and models

Short-term Planning – Managing the Coal Chain as a System



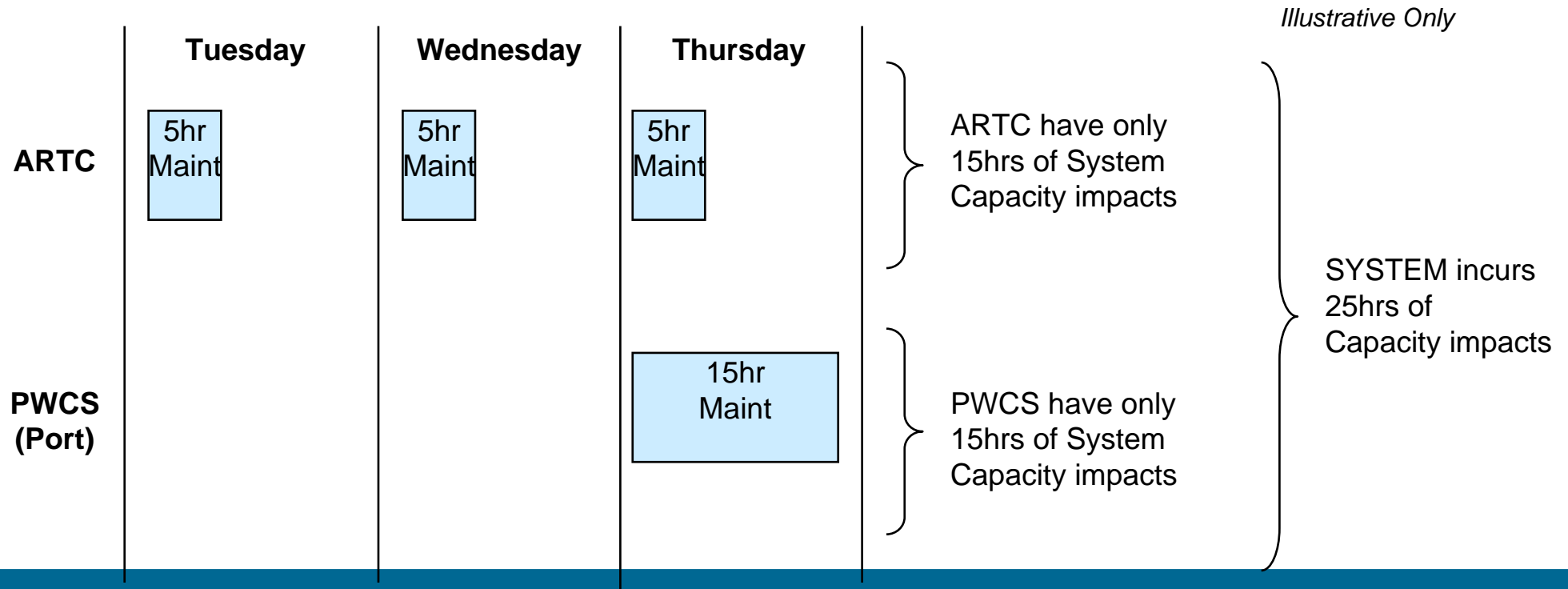
- Each element of the coal chain can claim capacity above the system capacity - however these standalone capacities **are not available** in the sense they cannot be turned into real export tonnes
- The opportunity to lift the system capacity closer to the standalone capacity of the coal chain is entirely dependent upon the cooperation of the component elements of the coal chain to work together. Maintenance alignment is the major lever to unlocking inaccessible capacity

Short-term Planning – Maintenance Co-ordination



Capacity losses due to planned maintenance are the biggest driver of system capacity being below standalone capacity of each element of the coal chain:

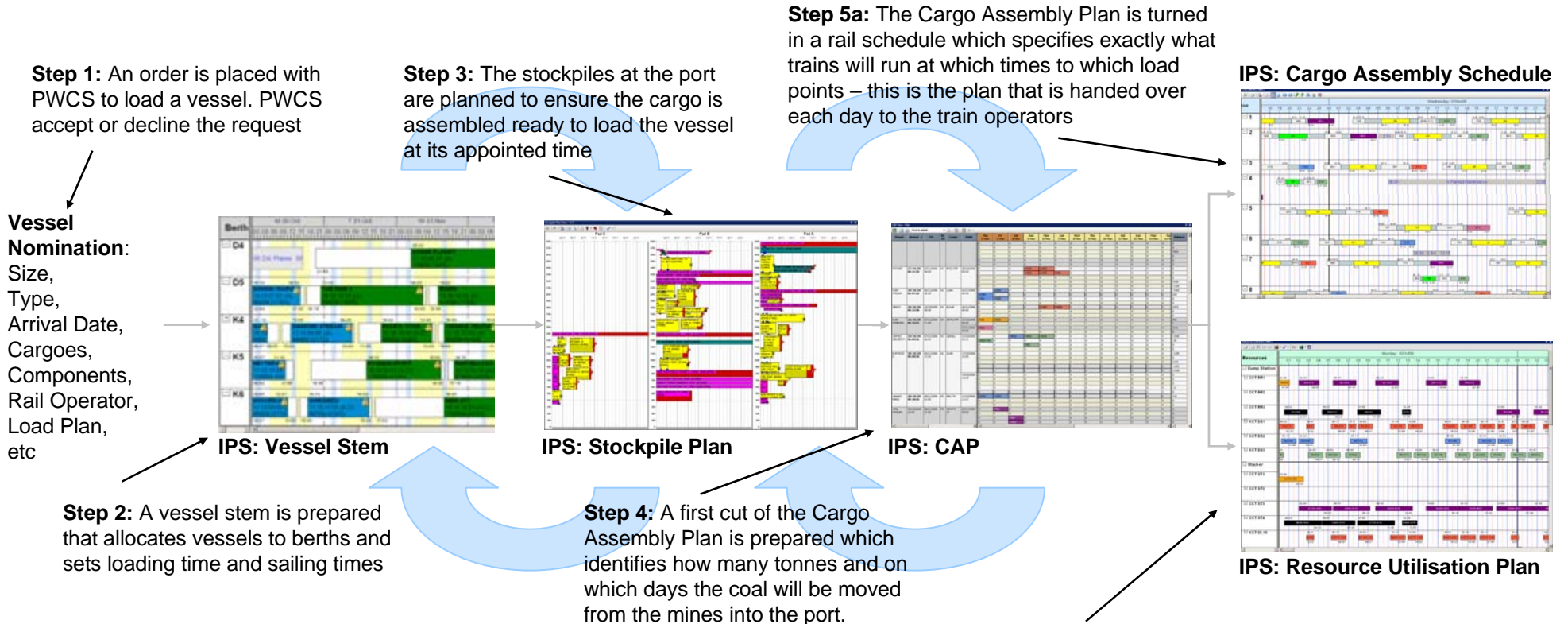
- Maintenance impacts at the port reduce access to available rail paths and trains
- Maintenance impacts on the track reduce access to available dump station capacity and trains
- The combined effect means that the System losses through planned maintenance are greater than the standalone losses of each member – i.e. no individual organisation is “the constraint”, but collectively all participants determine system capacity



Short-term Planning – Operations Planning and Scheduling



- Coal Chain Planning is a continuous process of preparing and updating the plans to fulfil customer orders to load vessels.
- In a Cargo Assembly model such as the Hunter Valley, no coal moves unless there is a vessel that has been nominated. Coal is only assembled at the port in order to fulfil a vessel order



The Coal Chain plans are continuously revised in response to:

- Changes and events that occur during the Live Run mean the next day's plan needs to be updated
- Changes (e.g. to blends) from Customers necessary to fulfil their vessels.

Step 5b: A set of plans are provided each day to identify exactly what assets are required to do what task at what times in order to maximise system throughput. This includes everything from stackers to assemble stockpiles through to reclaimers, shiploaders and requests to the Newcastle Port Corp to move vessels



Daily Performance Report

Monday, 3 November 2008

24hrs to midnight



Throughput Indicators

Inbound Receptions (tonnes)

Minimum Throughput Estimate		280,750
Actual variance for day	-26,498	
Budgeted Variance for day	-35,750	
Net variance (actual - budgeted)		9,252
Actual Inbound Performance		290,002

[Click for Details](#)

Outbound Loading (tonnes)

Declared Shiploading capacity		281,250
Actual variance for day	-3,258	
Budgeted Variance for day	52,987	
Net variance (actual - budgeted)		49,729
Actual Outbound Performance		330,979

[Click for Details](#)

Daily Variance: Inbound

Daily variance and losses - Inbound details

Result	Cause	Who	Tonnes	Explanation
Planning Gain			5,900	Plan exceeds target rate
Over/Under Loading			-792	Light Loaded
Diversion	MO194	Cargo	0	Diverted to alternate cargo
Diversion	MT182	Loadpoint	0	Diverted to alternate loadpoint
Cancellations	AH222	Dump Station	PWCS	-8,500 Stacker-Reclaimer clash - Unit 9 discharged 0900-1305-caused late running
Cancellations	RC260	Labour	PN	-7,300 Brake certificate Unit 16 - caused delay
Cancellations	MO266	Live Run	ARTC	-7,300 Out of sequence tipping BW176(QR) ahead of RM166(PN)
Roll In/Out				-8,506
Total variance (+ / -)				-26,498

Daily Variance: Outbound

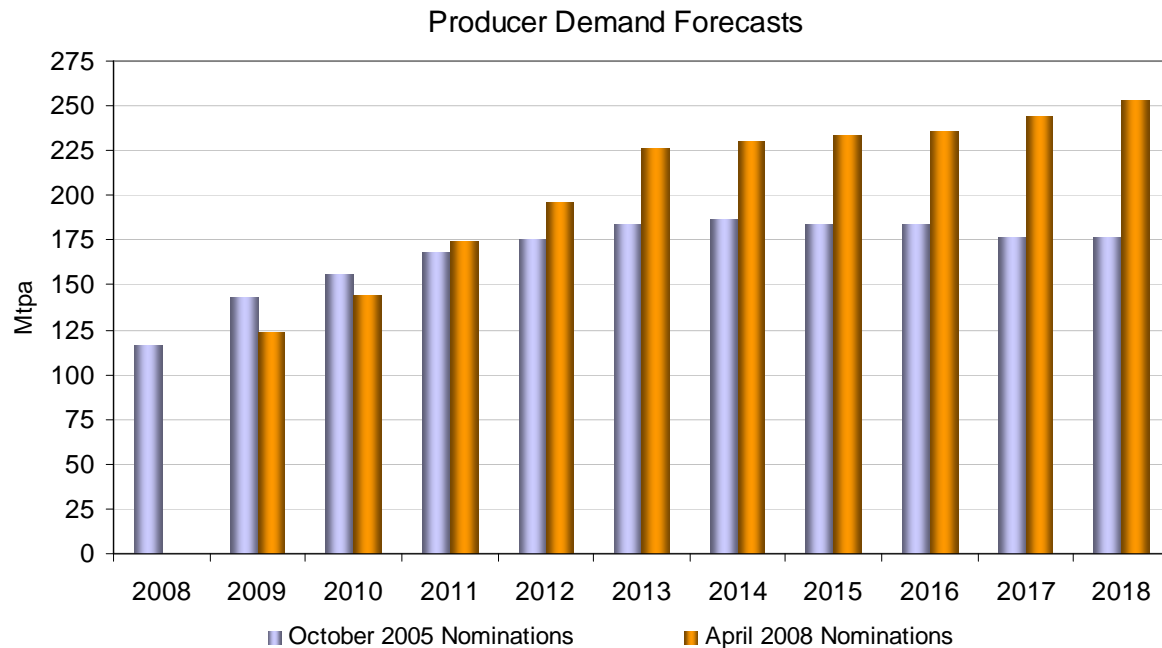
Daily variance and losses - Outbound details

Result	Cause	Who	Tonnes	Explanation
Live Run Gain			49,729	Loading exceeds declared capacity
Capacity Gain		KCT	-43,750	Planned Maintenance cancelled
Planning Gain			-9,237	Plan exceeds declared capacity
Total variance (+ / -)				-3,258

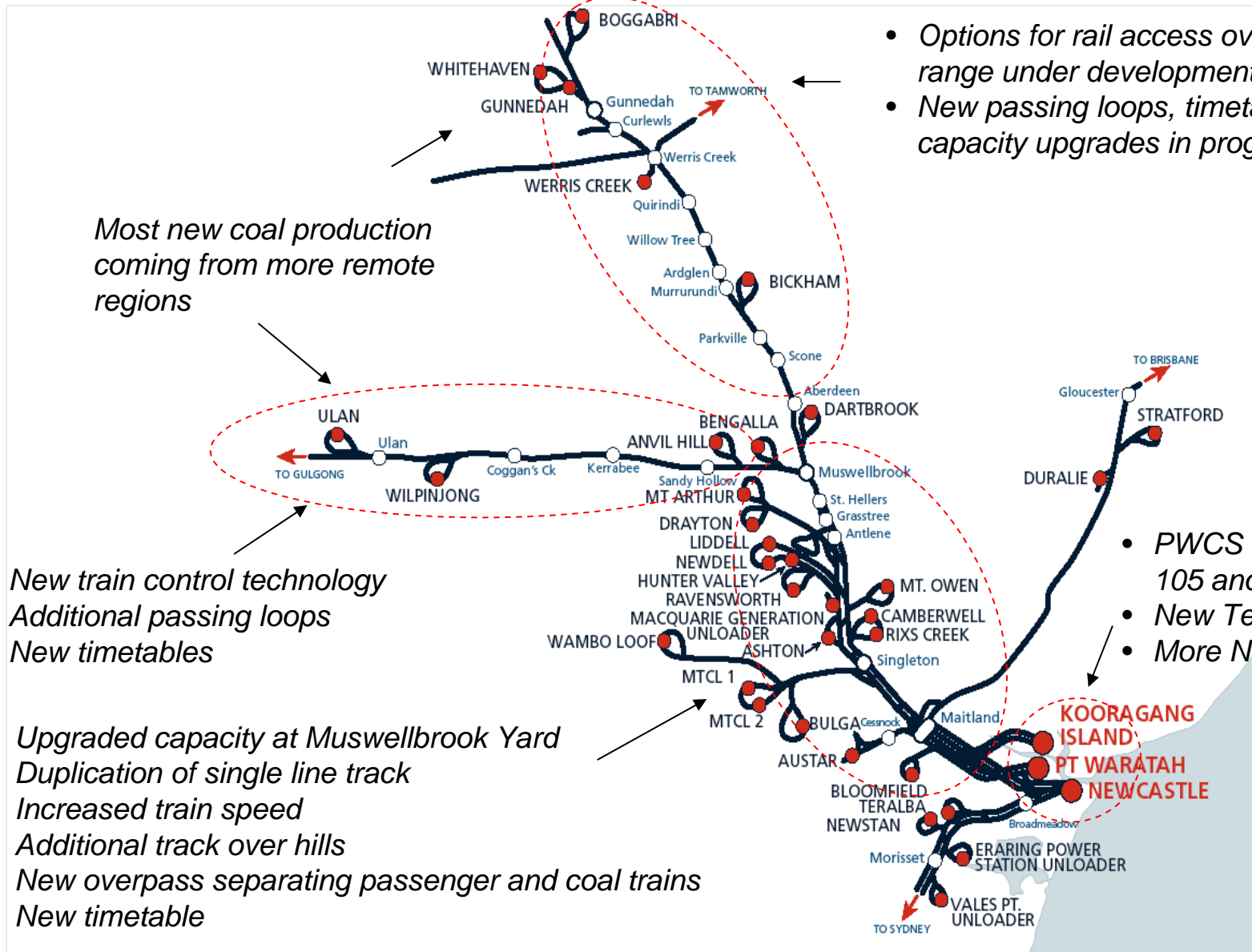
Long-term Planning – Coordinating Capital Investment



- Forecasts of between 50% and 100% growth in export demand from Newcastle over the next ten years continues to create pressure for growth in coal chain capacity.
- Cooperation within the coal chain becomes even more critical, with up to \$2billion in new transport infrastructure required to create capacity to meet demand. Key themes for the future include:
 - Contract alignment – how to coordinate investment when there is no common contract for capacity across the system
 - Efficient allocation of capital – who determines where money should be spent to create the least cost outcome for the system (e.g. trade-off between loadpoint, train, track and port capacity)
 - Integration of mines and ships into the cooperative model



Long-term Planning – Coordinating Capital Investment



- Options for rail access over mountain range under development
- New passing loops, timetables, track capacity upgrades in progress

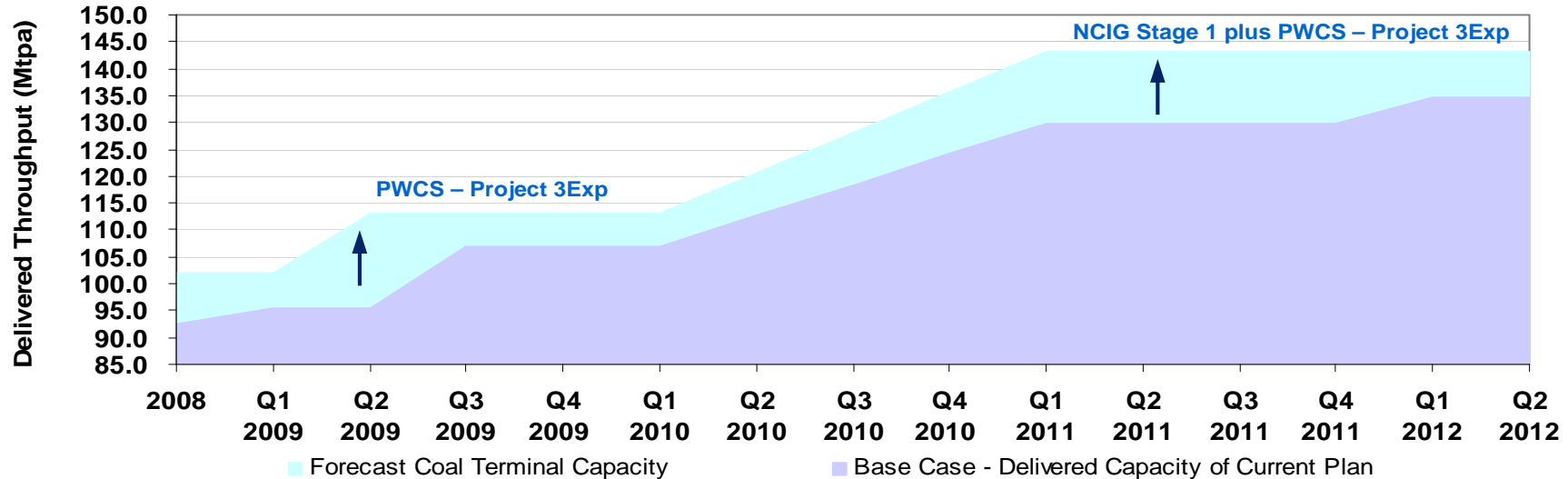
Most new coal production coming from more remote regions

- PWCS Expansion to 105 and up to 119+
- New Terminal (NCIG)
- More NPC capacity

- New train control technology
- Additional passing loops
- New timetables
- Upgraded capacity at Muswellbrook Yard
- Duplication of single line track
- Increased train speed
- Additional track over hills
- New overpass separating passenger and coal trains
- New timetable



10 Year Capacity Master Plan 2009 to 2012 Summary
Base Case - Current Plan



Current Infrastructure Plans – Base Case

- The Base Case **unable** to achieve Coal terminal capacity “target” demand of 143Mtpa.
- The Base Case does not meet 2008 Producer Forecast demands

The Long Capacity Modelling Challenge

- First, to develop new and/or refocus current planned initiatives to lift overall Coal Chain delivered capacity to match forecast Coal Terminal capacity
- Second, to develop options and solutions to lift delivered Coal Chain to match Producer forecasts

Options Under Consideration, include;

- Track infrastructure duplication, key load point improvements, “what if” acceleration of key initiatives
- Out of the Box thinking: “What if” Inland Coal Terminal, “What if” deep water Tie Up berths....



the world's largest coal export operation

about us	map of operations	events calendar	newsletters	contact us / feedback
throughput reports	maintenance plan	other documents	capacity notices	links to other sites



HVCC PERFORMANCE [Download latest performance report](#)

target for month		month to date	
	MTPA		MTPA
April 2007	94.3	Inbound	89.0
		Outbound	84.8

as at midnight 23/4/2007

Vessel Queue	70	Port Stocks	933	Vessels Assembled	3
--------------	----	-------------	-----	-------------------	---

last 24 hours

	KT	MTPA	% vs plan
Inbound	218	79.56	78%
Outbound	237	86.58	117%

year to date coal chain performance (MTPA) as at midnight 31/3/2007



MEMBERS' SECTION

This form is secure

I have read and agree to HVCCLT's [Terms & Conditions](#) and [Privacy Policy](#)

[Not Registered?](#)

Receive Reports via SMS

Email Password



[Lost Password?](#)

Members of the Logistics Team include: > Pacific National > QRNational > Australian Rail Track Corporation > Rail Infrastructure Corporation > Port Waratah Coal Services > Newcastle Port Corporation



PACIFIC NATIONAL COAL
20th November 2008

asciano 



Pacific National Coal

David Irwin – Divisional General Manager Coal

20th November, 2008

Pacific National Coal Division



- Pacific National delivers close to 100 million tonnes of coal per annum by rail to both domestic and export markets.
- Coal is currently hauled from the Hunter Valley, Gunnedah Basin, Southern and Western coalfields to the export ports of Newcastle and Port Kembla.
- Coal is currently hauled for domestic usage to power stations and steelworks located in NSW.
- Additionally coal is hauled in South Australia from Leigh Creek to the Flinders Power stations at Port Augusta.
- Crew depots located at Newcastle, Mudgee, Werris Creek, Antiene, Port Kembla, Lithgow and Port Augusta.
- Value added services (eg: track infrastructure management, train loading) are provided.
- Track access regulatory matters are managed on a transparent and inclusive basis for customers.
- Project implementation team well established in Queensland for 2009 operations startup.

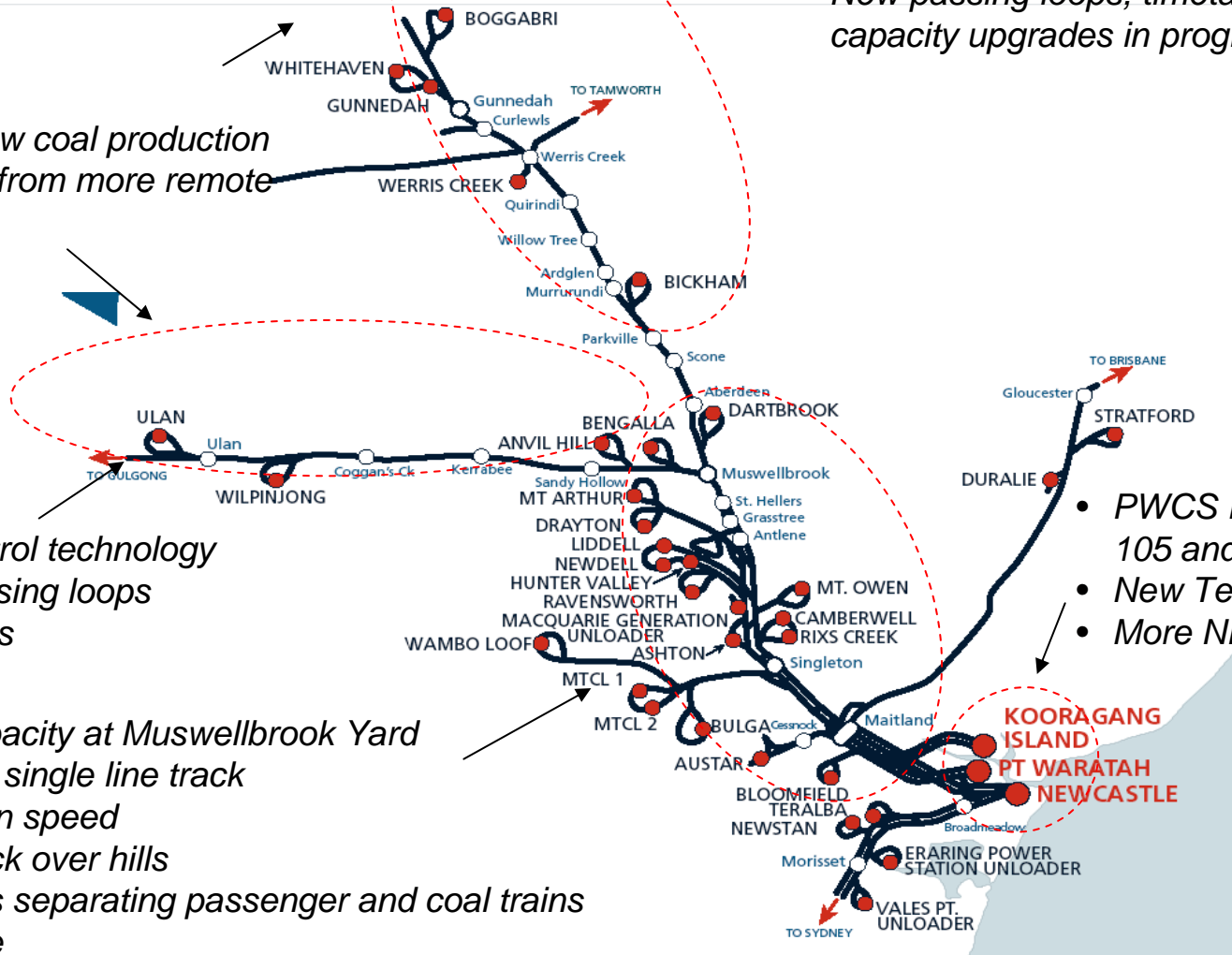
Long-term Planning – Coordinating Capital Investment

- Options for rail access over mountain range under development
- New passing loops, timetables, track capacity upgrades in progress

Most new coal production coming from more remote regions

- New train control technology
- Additional passing loops
- New timetables
- Upgraded capacity at Muswellbrook Yard
- Duplication of single line track
- Increased train speed
- Additional track over hills
- New overpass separating passenger and coal trains
- New timetable

- PWCS Expansion to 105 and up to 119+
- New Terminal (NCIG)
- More NPC capacity



 NHYH
92022V I ←
LENGTH 15.3 METRES

pacificnational

92022

RRHK 128







Pacific National
9202

9202

Pacific National

Hunter Valley Coal Chain Growth Plans

- Nominal Port capacity will be at 145Mt in 2011 (combined PWCS & NCIG)
- To provide Coal Chain capacity to 145Mt (currently 95Mt in 2008), major investment is required in track infrastructure, mine loading point infrastructure and additional trains.
 - **Track: 15 major projects by 2011, including pass loop extensions, track duplications and upgraded signalling**
 - **Load Points: 6-8 capacity upgrades to increase loading rates and throughput capability**
 - **Trains: 8-12 trains, depending on demand profile and infrastructure provided.**

Hunter Valley Coal Chain

Key Growth Metrics

- Average tonnes per day from 260Kt to 397Kt
 - Average train trips per day from 42 to 60
 - Average theoretical train path utilisation from 48% to 70%
-
- Infrastructure redundancy (peaking capability) to mitigate the impacts of planned maintenance is critical to the success of this growth profile

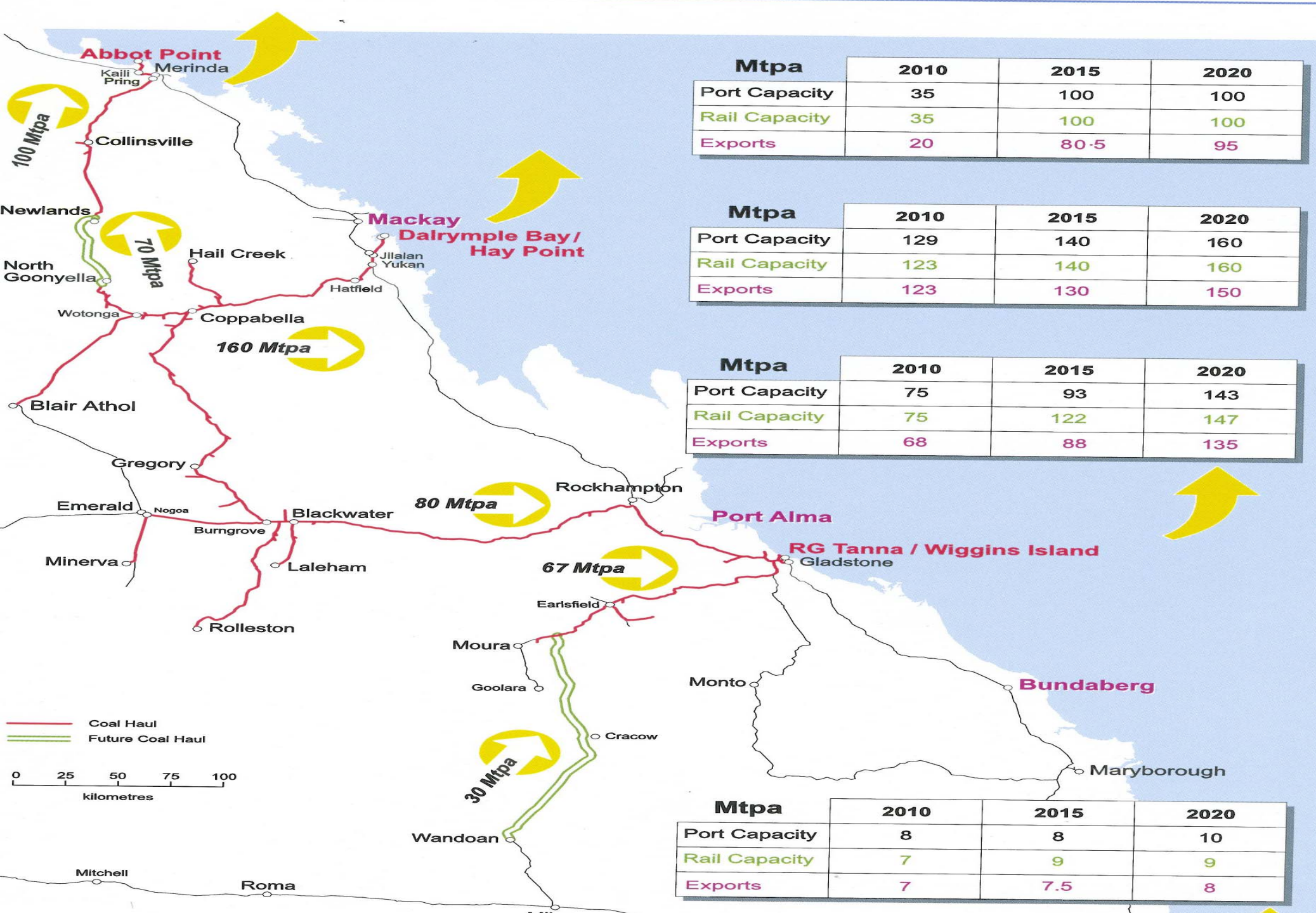
Hunter Valley Coal Chain Commercial Framework

- There is little commercial alignment between service providers involved in coal chain operations, apart from a common drive to maximise export tonnages.
- Rail and port capacity is contracted separately by exporters, with no current mechanism for these elements to be ‘converted’ into Coal Chain Capacity.
- PN’s pricing has been determined on the basis of contracted tonnes and commitments, not allocated tonnes from the CBS. This leads to revenue uncertainty, unplanned cost impacts and a lack of future clarity to support growth investment.

Hunter Valley Coal Chain Major Priority



- Creating certainty within the Coal Chain off the back of the **Greiner Review** process is a key priority for all producers and service providers. The impetus for change and certainty is evident, and the principles of what is required to support the Coal Chain have been well articulated and understood.
- This process will set the framework for future success in the Coal Chain importantly including contracted obligations aligned with exporter's port contracts.
- Strategically this work is critical to release the Coal Chain from the operational and commercial constraints of the existing CBS, and to provide increased contractual certainty to underwrite growth investment.



Mtpa	2010	2015	2020
Port Capacity	35	100	100
Rail Capacity	35	100	100
Exports	20	80.5	95

Mtpa	2010	2015	2020
Port Capacity	129	140	160
Rail Capacity	123	140	160
Exports	123	130	150

Mtpa	2010	2015	2020
Port Capacity	75	93	143
Rail Capacity	75	122	147
Exports	68	88	135

Mtpa	2010	2015	2020
Port Capacity	8	8	10
Rail Capacity	7	9	9
Exports	7	7.5	8

Abbot Point
Kaili Pring
Merinda
Collinsville
100 Mtpa

Newlands
North Goonyella
Wotonga
70 Mtpa

Mackay
Dalrymple Bay / Hay Point

Hail Creek
Coppabella
160 Mtpa

Blair Athol

Gregory

Emerald
Nogoa

Minerva

Burngrove
Blackwater
80 Mtpa

Laleham

Rolleston

Rockhampton

Port Alma

RG Tanna / Wiggins Island

Gladstone
67 Mtpa

Earlsfield

Moura

Goolara

Cracow
30 Mtpa

Wandoan

Monto

Bundaberg

Maryborough

— Coal Haul
— Future Coal Haul
0 25 50 75 100
kilometres

Mitchell

Roma



pacificnational

QLD Coal Market – Growth Projections

- 2006/07 153mt of Export Coal through Qld Ports
- 2010/11 232mt - Qld Govt Planning estimates
 - 80mt of growth
 - 26 new Goonyella sized trains required
- 2014/15 341mt Qld Planning estimates
- Abbott Point expansion (80mt by 2014), DBCT (25mt by 2009), Wiggins Island (70mt by 2016)
- Northern Missing Link open by mid-2010
- Southern Missing Link Dec 2012

Queensland – Current Status



- ✓ Executed haulage contracts for 14.2mt
- ✓ Diesel & Electric Locomotives on target for delivery schedule
- ✓ Wagons designed, ordered & scheduled for delivery
- ✓ Queensland project team established & on target for 2009/2010 start up
- ✓ Contracting of business for 4 additional trains well progressed. Key preferred criteria include:
 - 2010/2011 Current Contract Expiry
 - Tonnages approximating 5mt pa
 - Port Capacity Secured
 - Location/Footprint Fits PN Strategy
 - National Customers



Project Cyclone Commercial Model

pacificnational

What is it?

- Partnering approach with major national coal customers
- Low risk
- Greenfield entry into QLD coal
- Collaborative open book commercial model
- Risk Reward rating mechanism



Operations

- 14.2mt baseline + growth @ 14% IRR
- Resources Required:
 - 6 x train sets
 - 72 FTEs
- Surge capacity: Goonyella 31% & Blackwater 11%
- Infrastructure required:
 - Loco & wagon maintenance, Provisioning (Blackwater & Goonyella)
 - Spur line

Pacific National Coal Division - Summary

- Market Leadership position in NSW
- Greenfields entry into QLD with major national customers, who value the PN difference
- Coal chain awareness and industry understanding / influence are medium term differentiators
- Asset & people base (incumbency) is strong in NSW, and will differentiate in QLD
- Market growth in NSW & QLD is unquestioned. Earnings stability and growth is clearly planned.



PATRICK CONTAINER PORTS

21st November 2008

asciano 



PATRICK CONTAINER PORTS

Doug Schultz
Divisional General Manager
Patrick Container Ports

NOVEMBER 2008

PATRICK CONTAINER PORTS



Patrick is Australia's largest integrated multi-modal container transport logistics provider, with a leading focus on the import/export supply chain

- Australia's largest and most productive container stevedore
- Australia's largest port transport road & rail fleets
- Significant operations in regional transport
- Substantial port and landside infrastructure to support operations and provide value-added services
- Ongoing capital investment in capacity ahead of volume growth
- Considerable and ongoing investments in supply chain technology

TERMINALS



KEY TRENDS

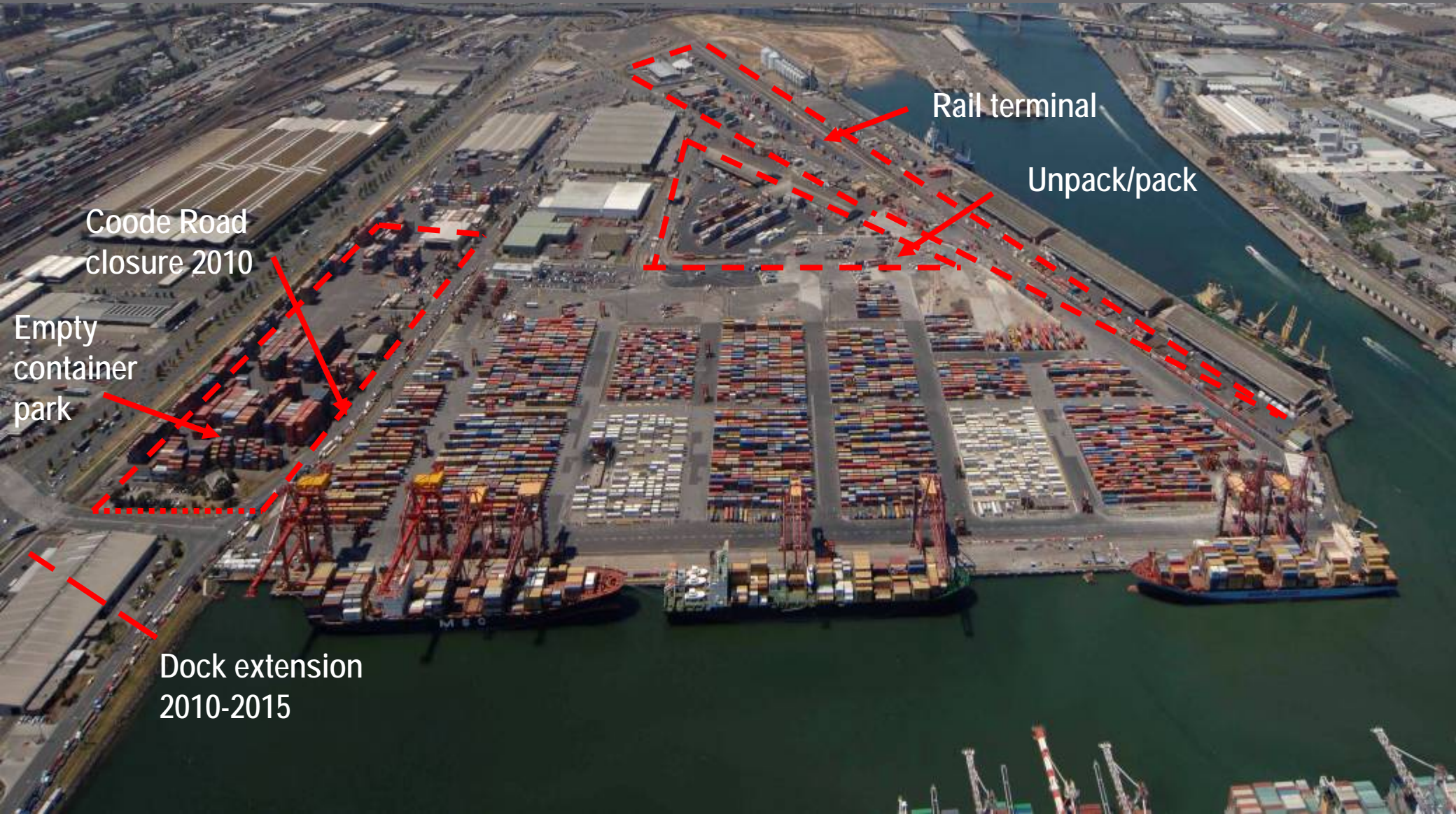


- Long term volume growth trend
- Larger ships/consolidation of shipping lines
- Irregularity of vessel arrivals continues
- Larger exchanges of containers
- Higher crane intensity
- Increased use of 40' containers
- More twin lifting
- Increased automation
- Consolidation of landside container transport demand
- Ongoing drive for container transport efficiency, including fuel and environmental effects
- Increasing demand for supply chain visibility and planning
- Road and rail infrastructure investment often lagging volume growth - not uniformly

TERMINAL FACILITY INFORMATION

CY2008	Port Botany	East Swanson	Brisbane	Fremantle	Total
Berths	4	4	3	3	14
Volume	1,100,000	1,100,000	480,000	320,000	3,000,000
Length (m)	1,000	885	738	766	3,389
Max draft (m)	15.2	12.1	14.0	12.8	
Total land area (ha)	44.2	40	28	25	137.2
Cranes -Panamax	5	5	4	2	16
-Post Panamax	2	3	2	1	8
Yard Equipment	43 Straddles 5 RMGs	42 Straddles	23 AutoStrads®	12 ITVs 20 Forklifts	108
Ground Slots	5,500	6,500	3,200	2,500	17,700
On/Near Dock rail	2 x 600m	2 x 650m	2 x 700m	2 x 400m	

EAST SWANSON DOCK



Coode Road
closure 2010

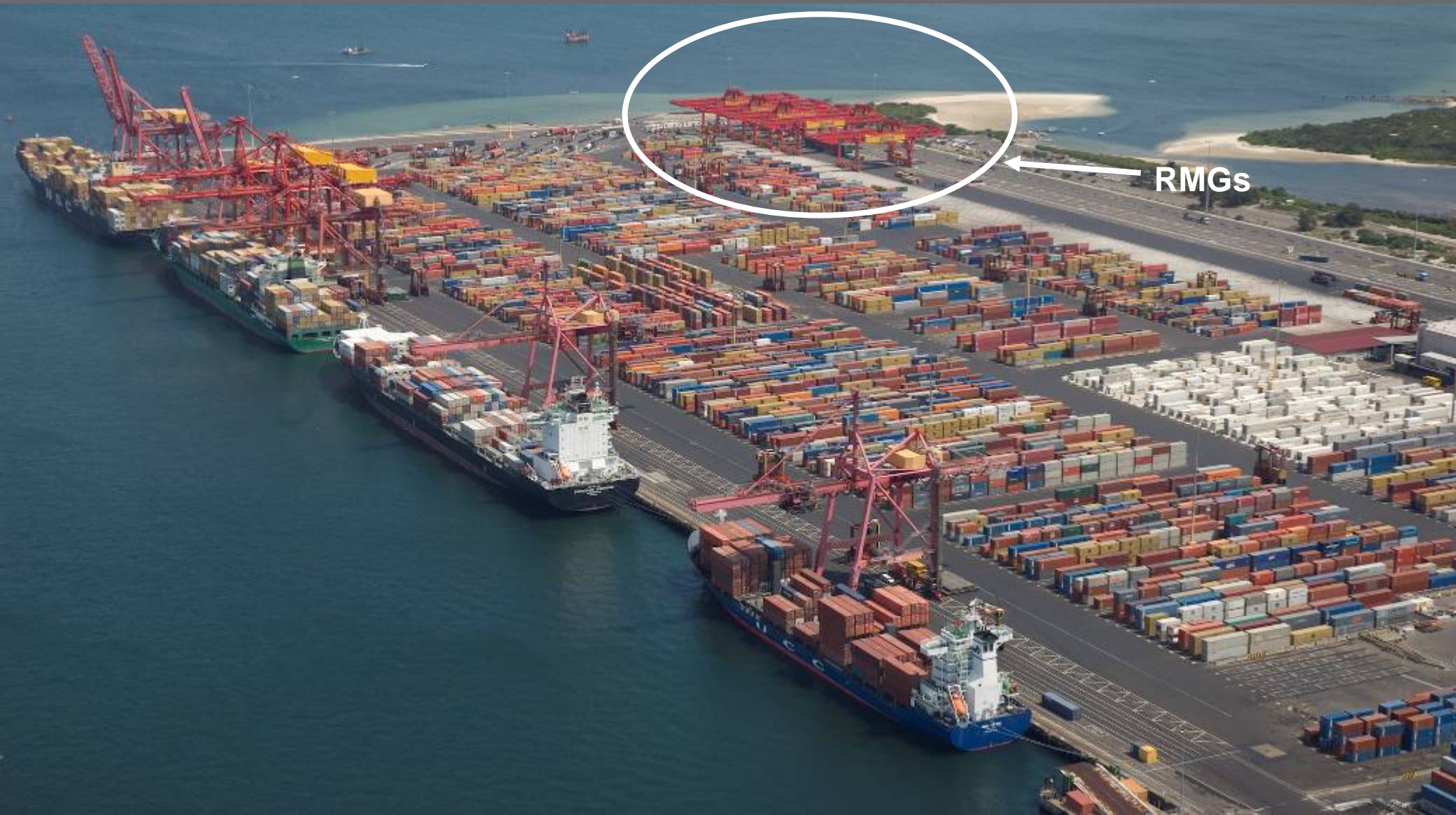
Empty
container
park

Dock extension
2010-2015

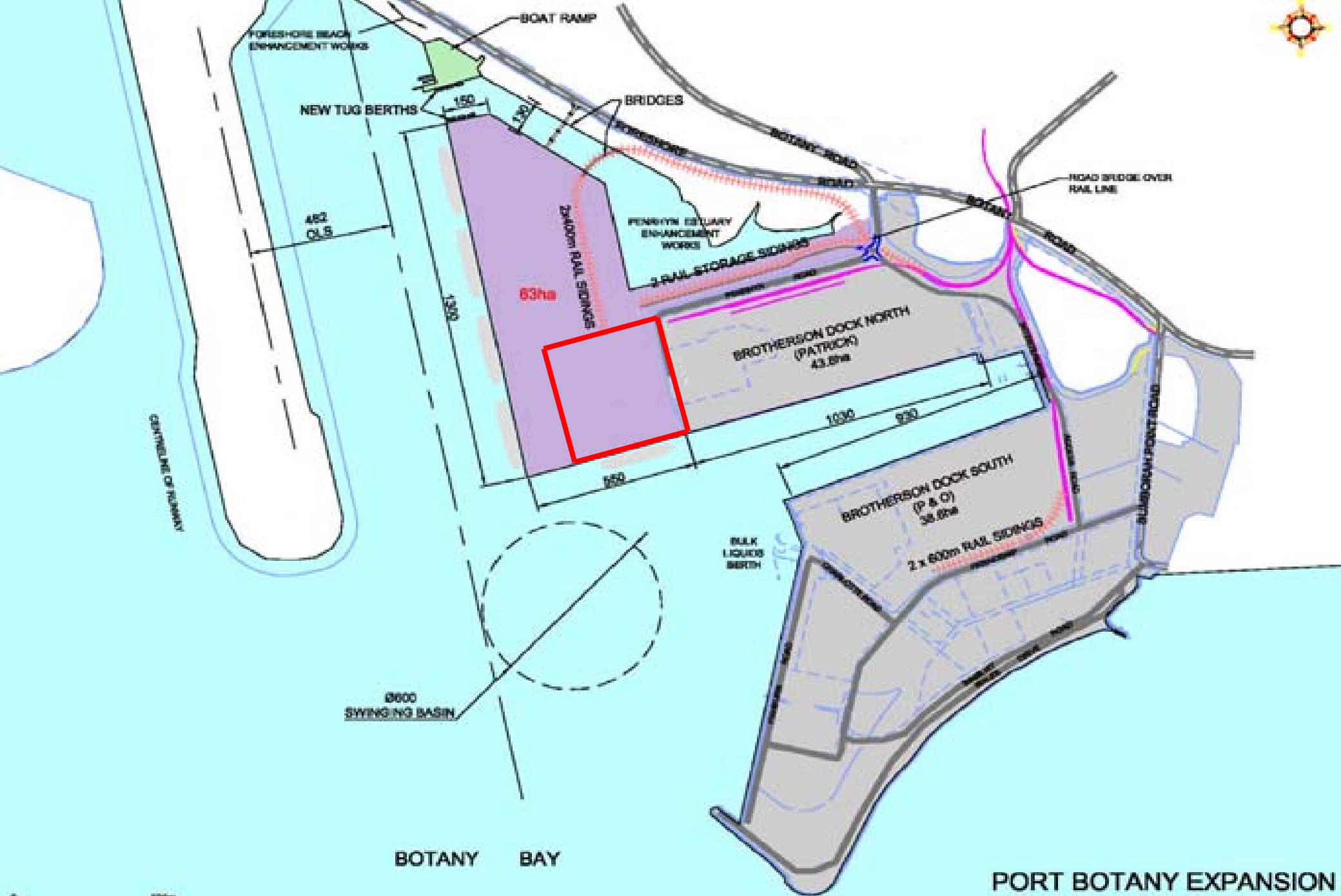
Rail terminal

Unpack/pack

PORT BOTANY



RMGs



BOTANY BAY

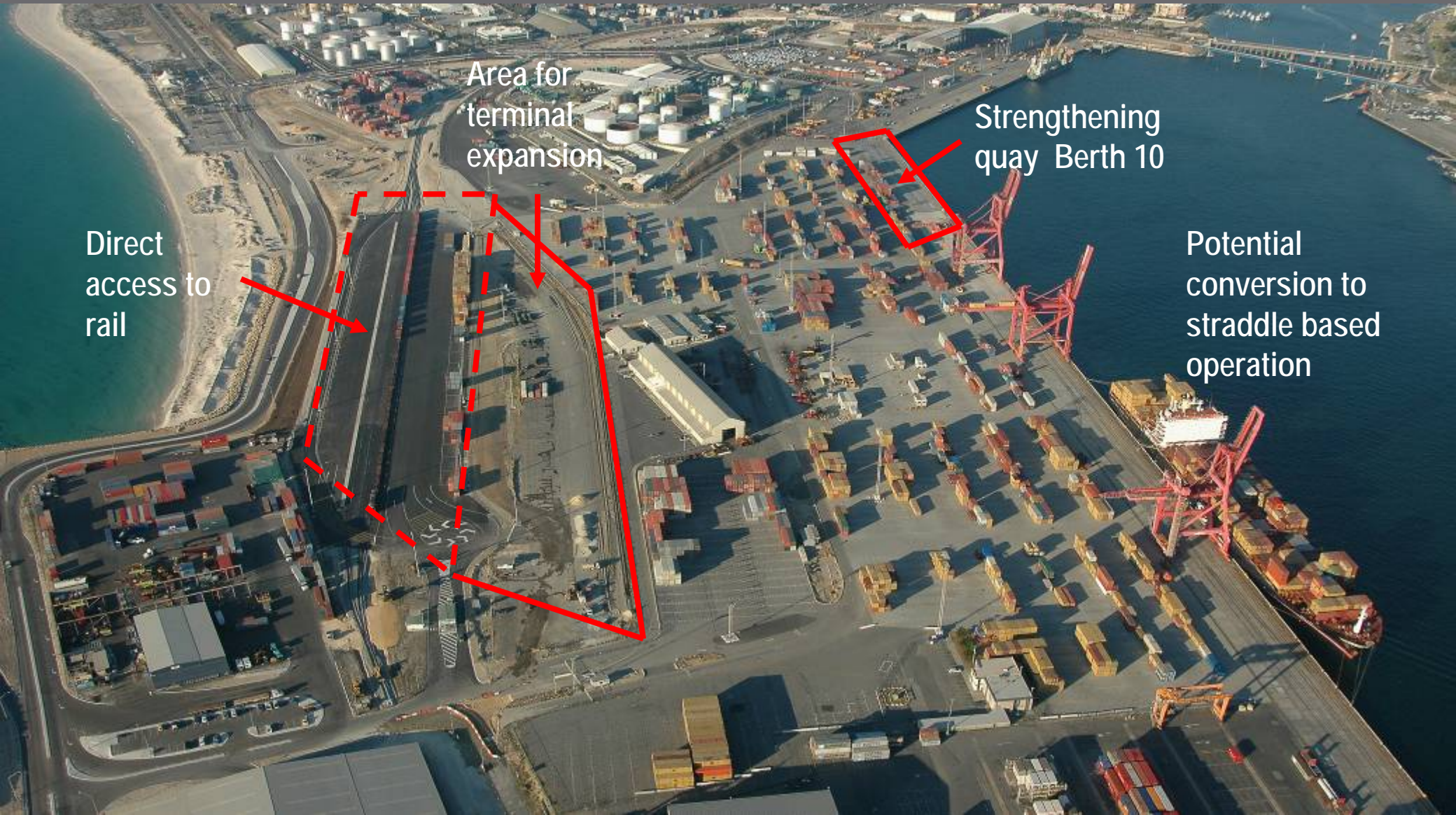
PORT BOTANY EXPANSION
OPTION 1



FISHERMAN ISLANDS BERTHS 8-10



FREMANTLE



Direct access to rail

Area for terminal expansion

Strengthening quay Berth 10

Potential conversion to straddle based operation

LANDSIDE INTERFACE

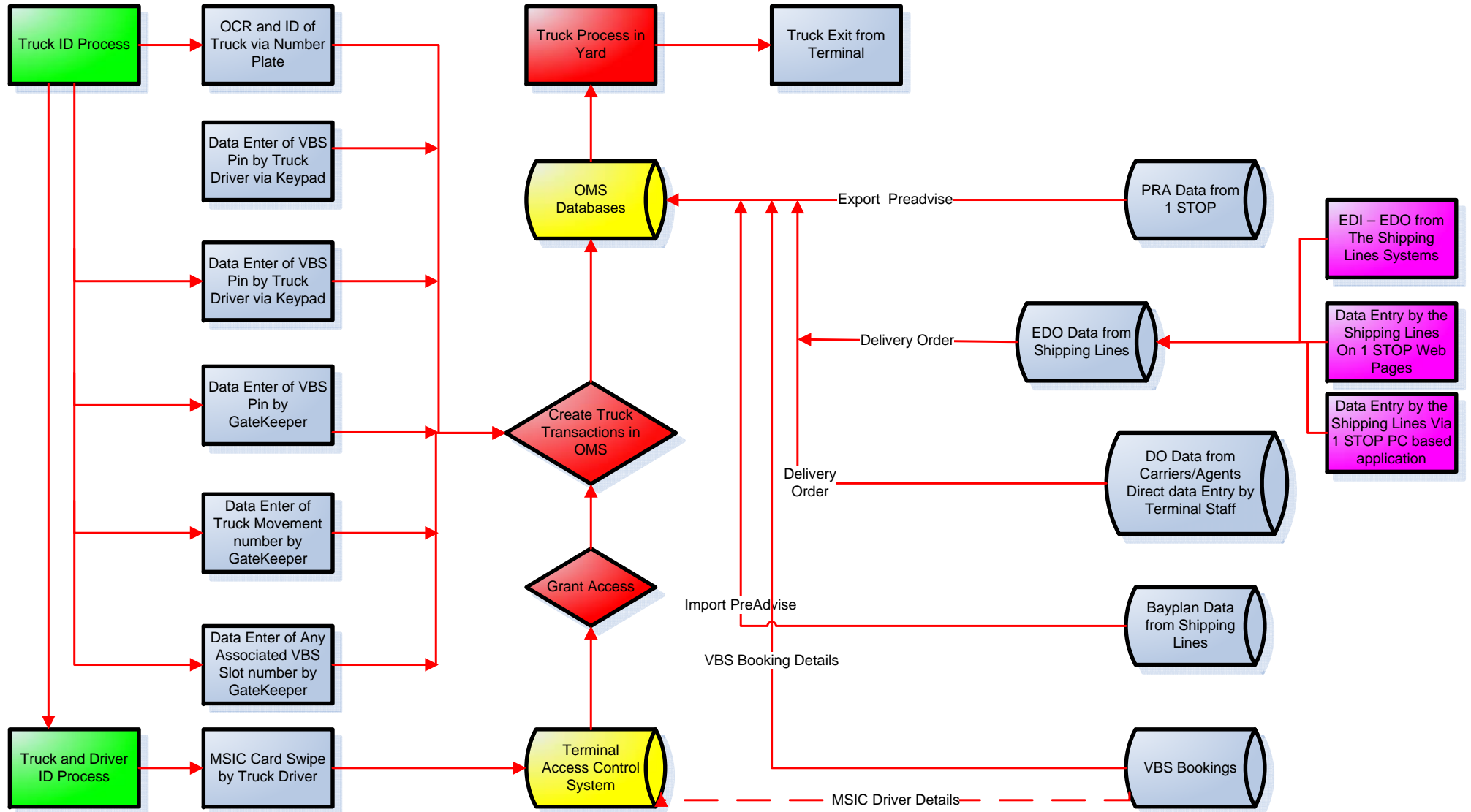
Driving Performance Improvement

- Public Infrastructure efficiency
- Managing growth
- Impacts on community/environment.
- Alternate inland solutions for container storage.
- Improving landside transport efficiency
 - High productivity vehicles
 - Rail
- Information flow & connectivity

Influence on dwell time; Reducing re-handles



AUTO-GATE PROCESS – ROAD AND RAIL



AUTO-GATE OCR TERMINAL



INTERMODAL OPTIONS



- State Government need for 30 – 40% on rail – WA, VIC, NSW
- Effective whole-of-chain solutions
- VBS, 1-Stop, Trade Practices Act, IPART findings
 - The way forward
- Melbourne environment
- WA requirement
- Increase use of 24/7
- Issues common across ports – national industry in State environments (Customs, Quarantine)

INDUSTRY SCORECARD TO DATE



- BTRE and ACCC data show steadily improving service levels to ship owners and transport operators while stevedoring prices have declined by 30.9% in real terms since 1998/99. During this same period, costs have declined by 41.7% in real terms.
- Input costs of employment, fuel, equipment running and especially rental charged by Port Corporations have risen sharply

COMPETITION



- Brisbane has awarded the concession for berths 11 & 12 to Hutchison, who will commence operations at Berth 11 in 2012.
- Sydney is currently seeking tenders to operate the 3rd terminal at Port Botany, with operations expected to commence in 2013.
- Fremantle – WA Government policy causing uncertainty
- Melbourne – 2017 Webb Dock
- Patrick is well placed to compete in this new environment, having made strategic investments in equipment and infrastructure that will provide a strong foundation for low cost, efficient stevedoring operations into the future.

PORT LOGISTICS



PATRICK PORT LOGISTICS - WHAT WE DO?

“Provide container logistics services to importers, exporters and shipping lines in Australia”

That simply is;

- Container Collection and Distribution Services
- Container Management Services for Shipping Lines

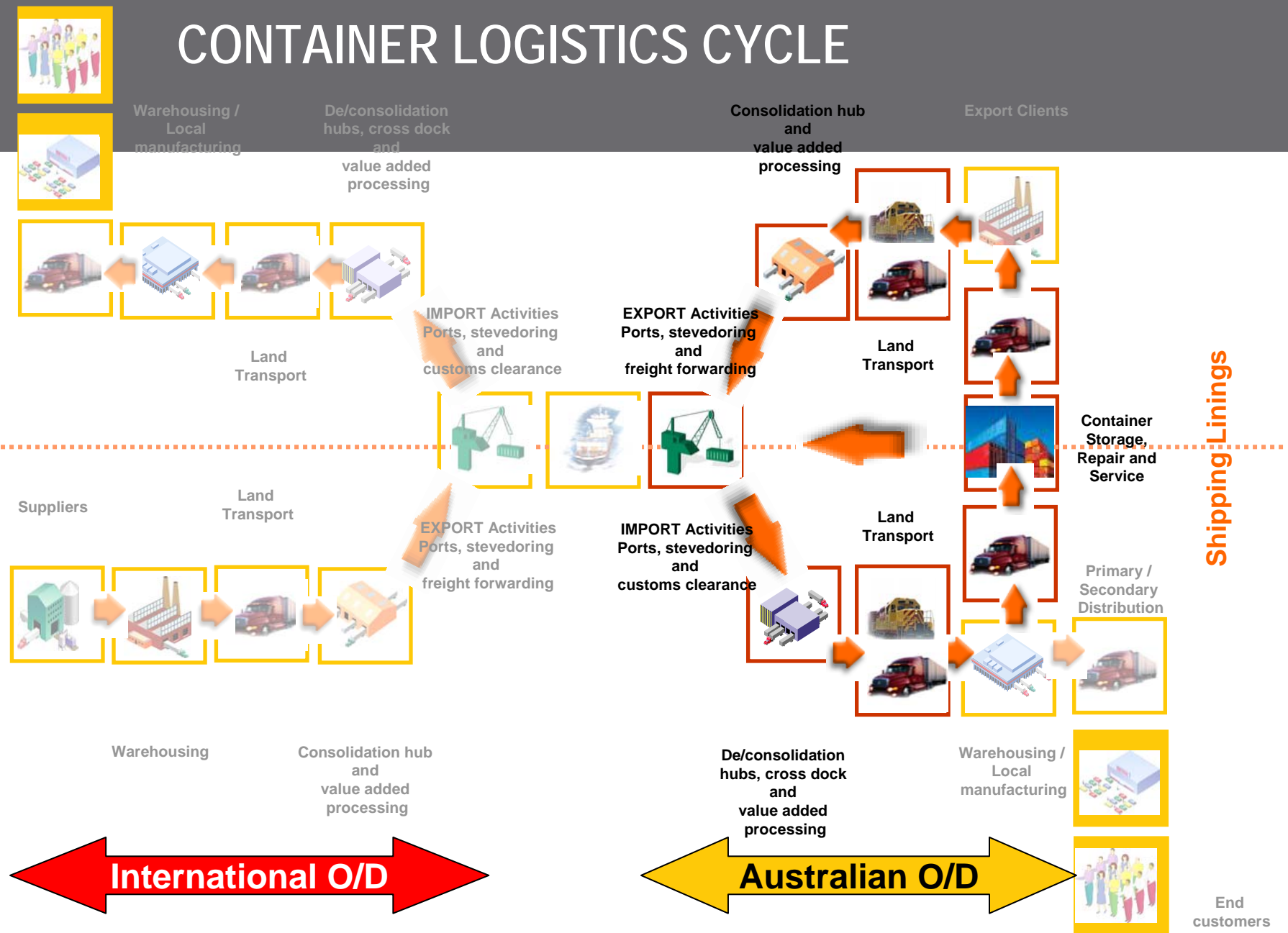
PPL synchronize our customers requirements with the container port operations (shipping).

CONTAINER LOGISTICS CYCLE

Export

Import

Shipping-Linings



OUR CUSTOMERS

- Importers
- Exporters
- Shipping Lines
- International Freight Forwarders
- Domestic 3PL's
- Transport Carriers (wholesale offering)
- Regional Freight Hub Operators



PATRICK PORT LOGISTICS ACTIVITY



ANNUAL MOVEMENTS BY PPL:		TEU
METRO CONTAINER DISTRIBUTION:		785,000
MOVEMENTS ON RAIL <small>(EXCLUDE RAIL TERMINALS):</small>		410,000
MT CONTAINER PARK THROUGHPUT:		1,065,000
CARGOLINK VOLUME:		210,000
DEPOTS (xDock and FCL)		90,000
Total TEU Throughput by PPL:	circa	2.5M TEU pa

IMPORT & EXPORT CONTAINER LOGISTICS ACTIVITY

Landside Movement : Wharf Movement = 5:1

Therefore in Australia with Total Port TEU throughput of approx 6 million TEU there are potentially a further 30 million TEU throughput movements outside the ocean terminal.

CONTAINER MOVEMENTS ARE DETERMINED BY CUSTOMER REQUIREMENTS!



COMPLEXITIES – CONTAINER LOGISTICS CHAIN



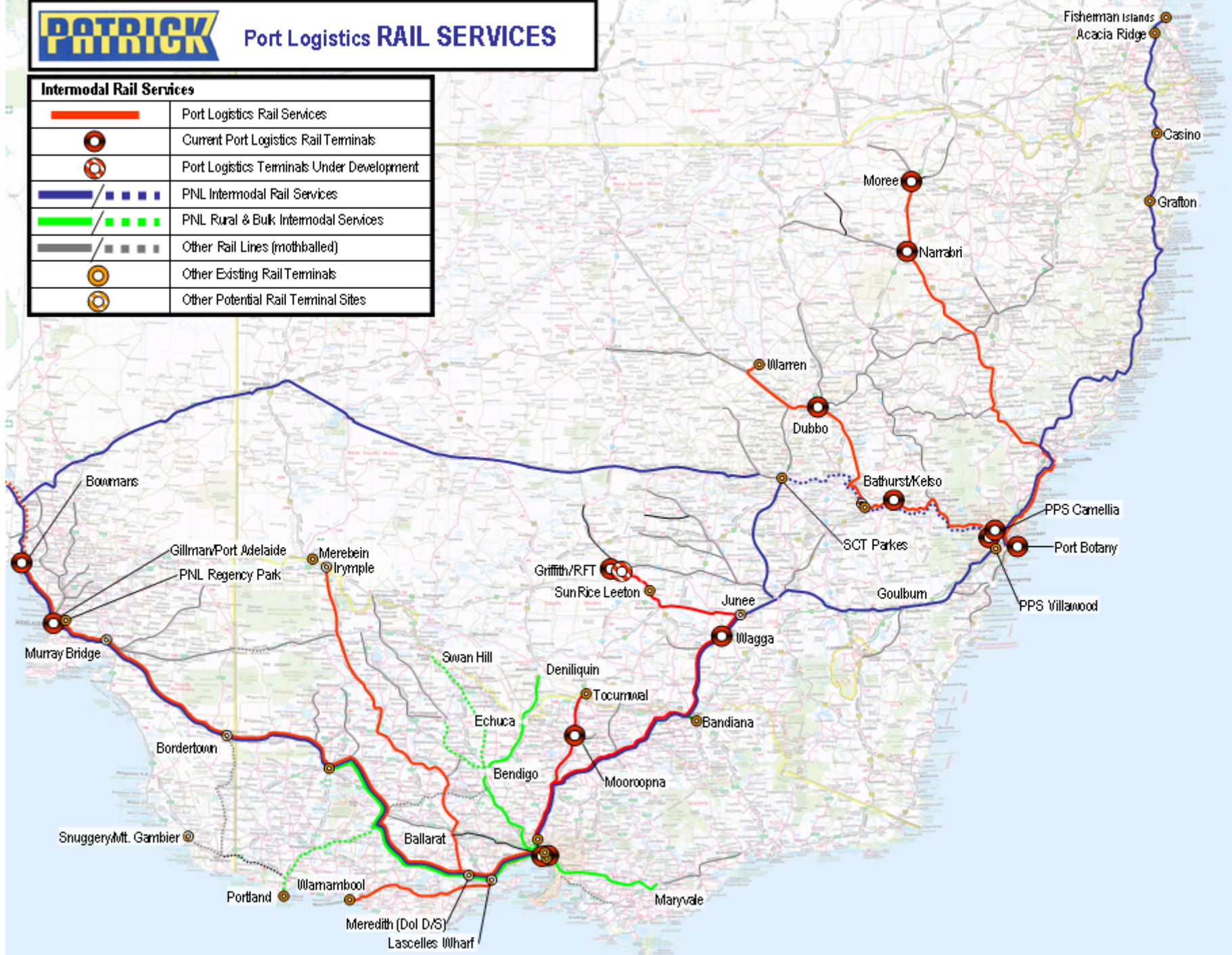
- ALIGNING PRODUCTION WITH SHIPPING SCHEDULES
- DC OPERATING HOURS & PORT OPERATING HOURS
- CONTAINER PARK OPERATING HOURS
- CONTAINER AVAILABILITY (i.e. 20'' food grade)
- TRAFFIC CONGESTION, ACCIDENTS, BREAK DOWNS
- CONTAINER DETENTION TIME
- DRIVING HOURS REGULATION (RAIL AND ROAD, COR)
- COMPLIANCE (HS&E, RAIL REGULATION)
- SKILLED LABOUR
- CUSTOMS AND AQIS



Port Logistics RAIL SERVICES

Intermodal Rail Services

	Port Logistics Rail Services
	Current Port Logistics Rail Terminals
	Port Logistics Terminals Under Development
	PNL Intermodal Rail Services
	PNL Rural & Bulk Intermodal Services
	Other Rail Lines (mothballed)
	Other Existing Rail Terminals
	Other Potential Rail Terminal Sites



RAIL VERSUS ROAD



- ROAD

- Flexible
- Low capital cost
- Low risk
- Not dependant on other links
- Often 1 customer per truck
- Congestion

- RAIL

- Fixed path, Fixed cost
- High capital cost
- Chain of dependent events, path, matching rail terminals, utilization
- Many customers per train, one failure upsets many customers
- Infrastructure constraints

BENEFITS OF RAIL & INTERMODAL HUBS

Average Australian CO2-e emissions Road & Inter-modal freight

(grams per net tonne kilometre)

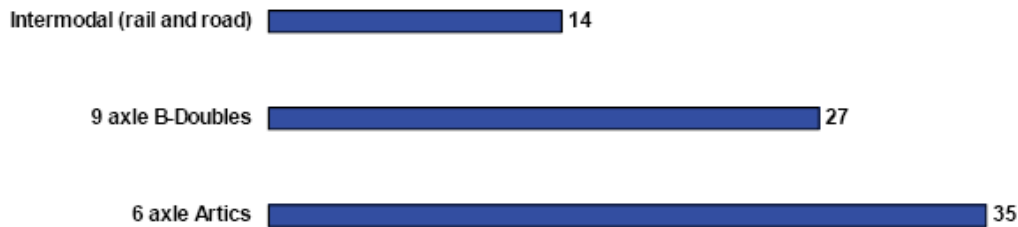


Figure 2: Average Australian CO2-e emissions Road and Intermodal Rail Freight

Source: QRNA Oct 2002 Report – Comparison of Greenhouse Gas Emissions by Australian Intermodal Rail and Road Transport

The Opportunity:

Ability to move containers on mass with increased velocity away from the port.

The Benefits:

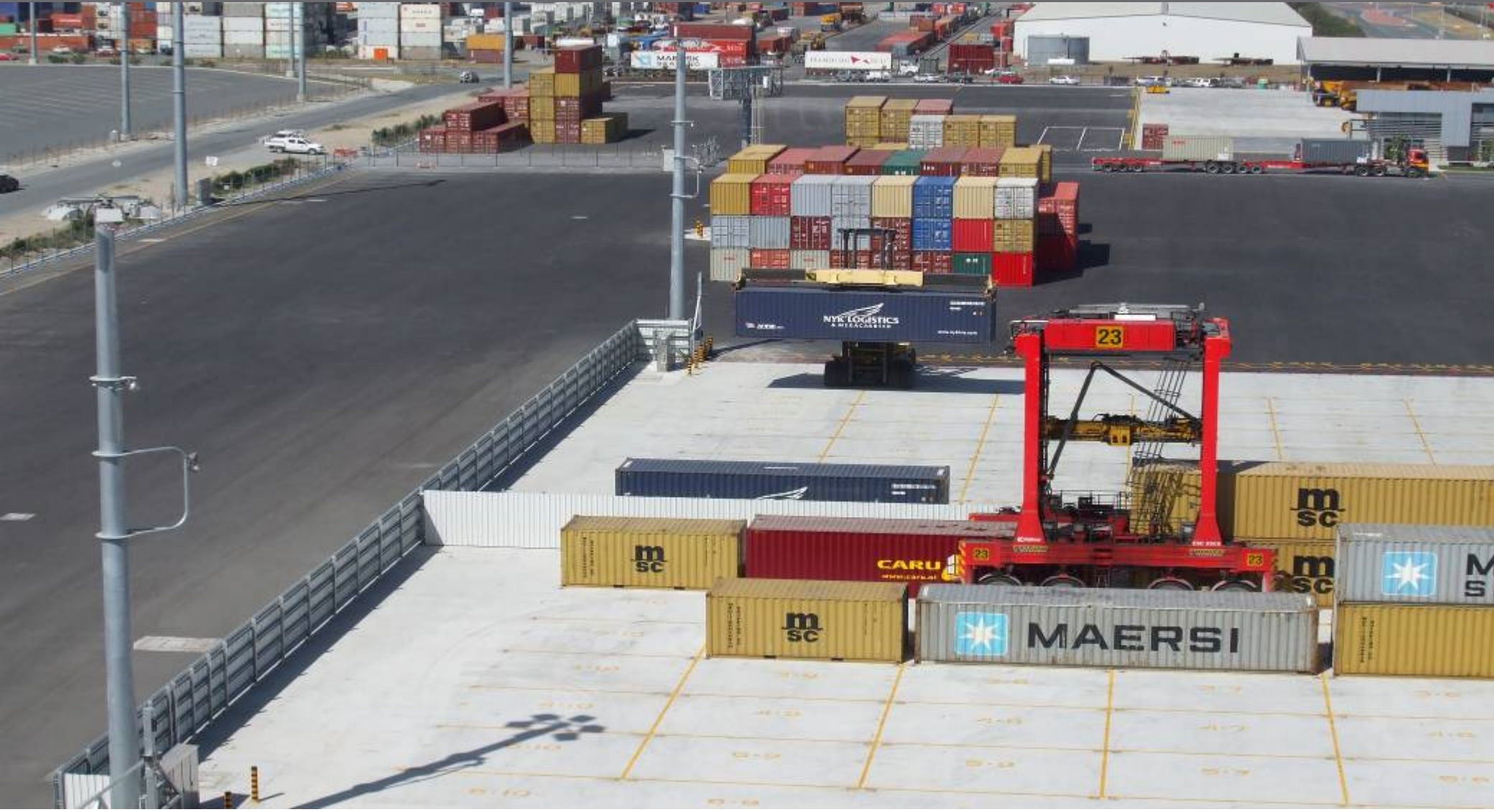
- Extend Economic Lift of key Port Assets
- Reduced Carbon Emissions
- Reduced Road Congestion
- Increased Road Safety

The Challenge:

- High Fixed Cost of Terminals / Trains
- Suitable land located in Catchment Areas
- Inconsistent Regulations and Standards
- Lack of a 'Level Playing Field' with Road

“Off peak road may delivery similar benefits”

PPL Landside Innovation “CargoLink” and “AutoStrad”



SUMMARY – THE FUTURE



- Capturing increased efficiencies from economies of scale and technology requires substantial capital to achieve lowest unit cost and improved service
- Work existing infrastructure harder & smarter
- Continue to develop world-class Ocean Terminal performance to minimise unit costs and improve margins
- Provide effective landside/terminal interfaces and efficient land transport solutions – avoid the landside from constraining the ocean terminal

SUMMARY – THE FUTURE



- Facilitate effective use of road/rail infrastructure to minimise adverse effects on community
- Develop alternate Inland Terminals for volume distribution, increased container velocity and revenue/total margin
- Match capacity with volume growth, to ensure efficient use of capital
- Build on relationships with Ports and Governments

PATRICK PORT LOGISTICS

21st November 2008





PATRICK PORT LOGISTICS

Patrick O'Donnell
GM – Port Logistics

PORT LOGISTICS



Network Capability

End customers



Export

Import

Shipping Linings

Warehousing / Local manufacturing

De/consolidation hubs, cross dock and value added processing

Consolidation hub and value added processing

Export Clients



Land Transport

IMPORT Activities
Ports, stevedoring and customs clearance

EXPORT Activities
Ports, stevedoring and freight forwarding



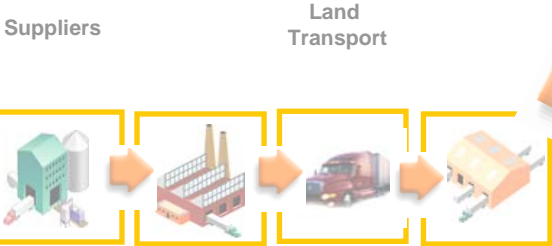
Land Transport



Container Storage, Repair and Service



Primary / Secondary Distribution

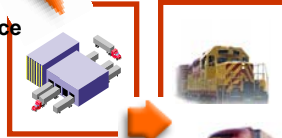


Suppliers

Land Transport

EXPORT Activities
Ports, stevedoring and freight forwarding

IMPORT Activities
Ports, stevedoring and customs clearance



Land Transport



Warehousing

Consolidation hub and value added processing

De/consolidation hubs, cross dock and value added processing

Warehousing / Local manufacturing



End customers



Patrick Cargo Management

Address

Import Planning Diary - Melbourne

[Home](#)

[Brisbane Diary](#) [Melbourne Diary](#) [Sydney Diary](#)

Container #	Vessel Name	Ref #	Vessel ETA	Vessel Avail	DC	Door	Type	Pack Type	Customs	Cleared Date	DC Due Date	Empty Avail	Comments	Est Demurrage Commences
KKTU7274670	COSCO SHEKOU	35212	17/02/2007 11:18 PM	19/02/2007 6:00 AM	BUNDC		20DC		C	20/02/2007	28/02/2007	1/03/2007	28/02/07	10/03/2007
KKFU7102548	XUTRA BHUM	35253	18/02/2007 6:30 AM	19/02/2007 6:30 AM	BUNDC		40HQ		C	13/02/2007	19/02/2007	20/02/2007	19/02/07	28/02/2007
OOLU8161776	CSCL NEW YORK	35658	18/02/2007 2:30 PM	19/02/2007 10:30 PM	BUNDC		40HQ		C	23/02/2007	28/02/2007	1/03/2007	28/02/07	11/03/2007
ITLU8334827	MSC INSA	35699	19/02/2007 12:06 AM	20/02/2007 6:00 AM	BUNDC		20DC		C	19/02/2007	28/02/2007	1/03/2007	28/02/07	12/03/2007
CBHU8413281	KOTA KADO	35757	22/02/2007 4:06 AM	23/02/2007 6:00 AM	BUNDC		40HQ		C	16/02/2007	1/03/2007	2/03/2007	01.03.07	15/03/2007
KKFU1817689	CIMBRIA	35791	22/02/2007 3:12 PM	24/02/2007 6:00 AM	BUNDC		40DC		C	22/02/2007	1/03/2007	2/03/2007	01.03.07	15/03/2007
OOLU3356184	OOCL FIDELITY	35866	23/02/2007 2:30 PM	25/02/2007 10:30 PM	BUNDC		20DC		C	23/02/2007	2/03/2007	5/03/2007	02/03/07	16/03/2007
OOLU7027715	OOCL FIDELITY	35875	23/02/2007 2:30 PM	25/02/2007 10:30 PM	BUNDC		40DC		C	26/02/2007	2/03/2007	5/03/2007	02/03/07	16/03/2007
OOLU8028064	OOCL FIDELITY	35850	23/02/2007 2:30 PM	25/02/2007 10:30 PM	BUNDC	#	40HQ		A				Promotional	16/03/2007
TRLU8258977	OOCL FIDELITY	35850	23/02/2007 2:30 PM	25/02/2007 10:30 PM	BUNDC	#	40HQ		A				Priority	16/03/2007
MSCU4663008	MSC ALPANA	35976	25/02/2007 8:00 AM	26/02/2007 6:00 AM	BUNDC		40DC		C	23/03/2007	5/03/2007	7/03/2007	05/03/07	18/03/2007
MSCU7114470	MSC ALPANA	35665	25/02/2007 8:00 AM	26/02/2007 6:00 AM	BUNDC		40HQ		C	22/02/2007	5/03/2007	7/03/2007	05/03/07	18/03/2007

[Export To Spreadsheet](#)

Sydney Landside Congestion

FIGURE 2: 2001 SYDNEY (CENTRAL) AM PEAK HOUR CONGESTION INDICATOR (VOLUME / CAPACITY RATIO)¹⁴

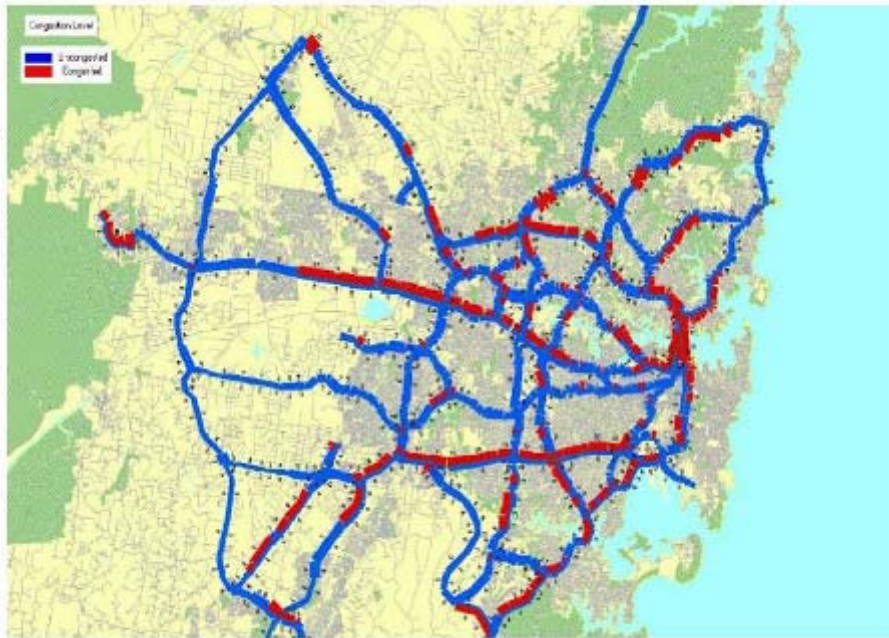
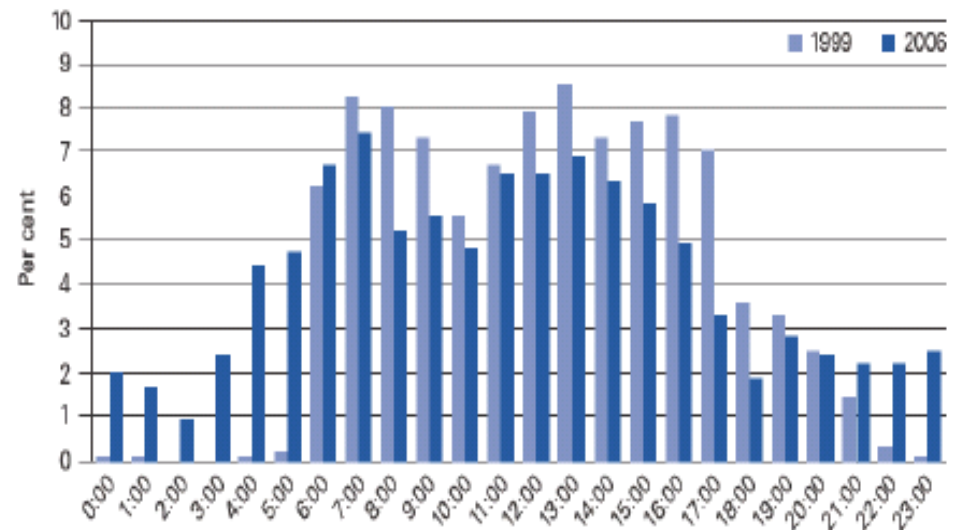


Figure 4.2 Proportion of truck entries by time of day



Source: Sydney Ports Corporation, Logistics Review 2005-06, p 11.

Landside Challenges

National Port Interface Index

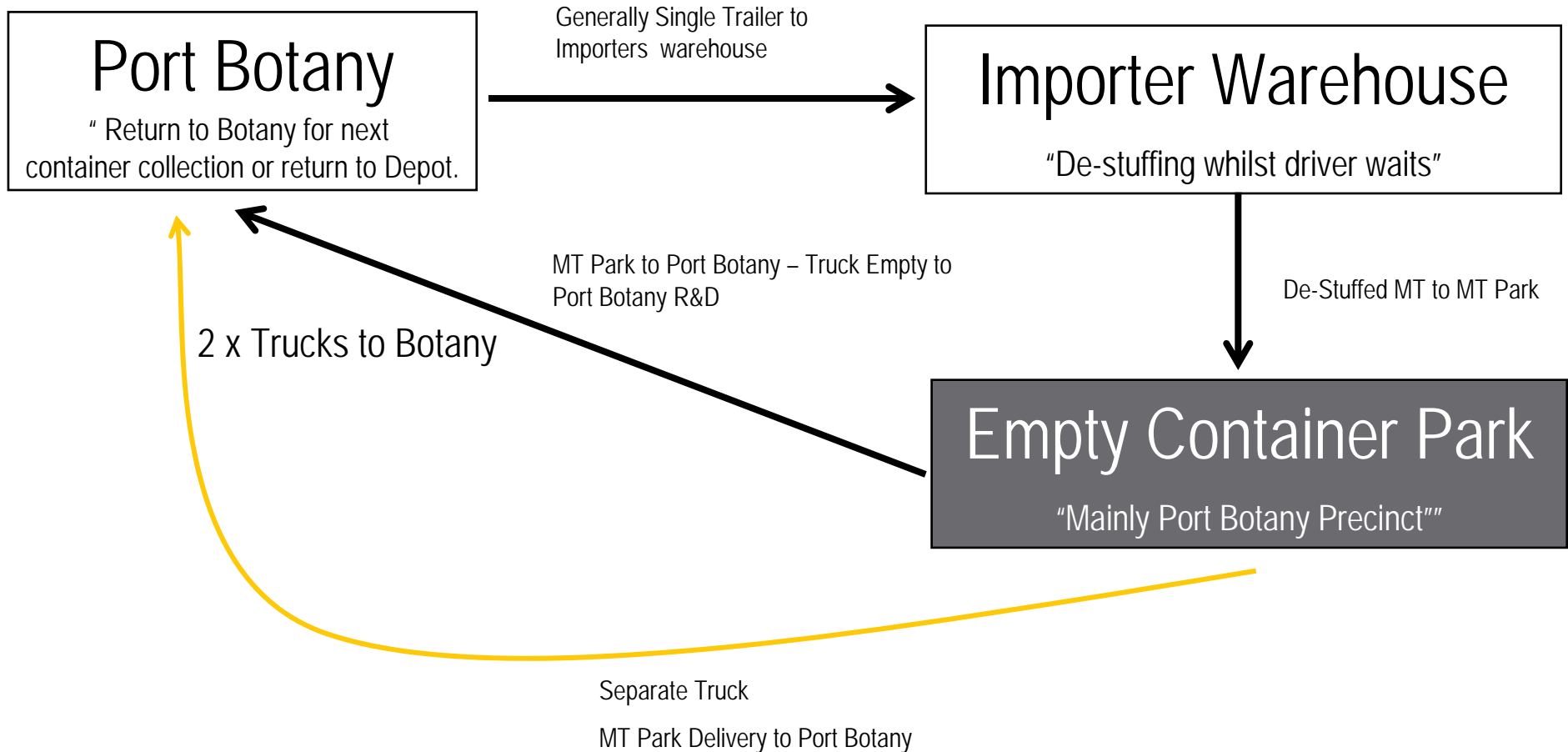


National Port Interface Costs

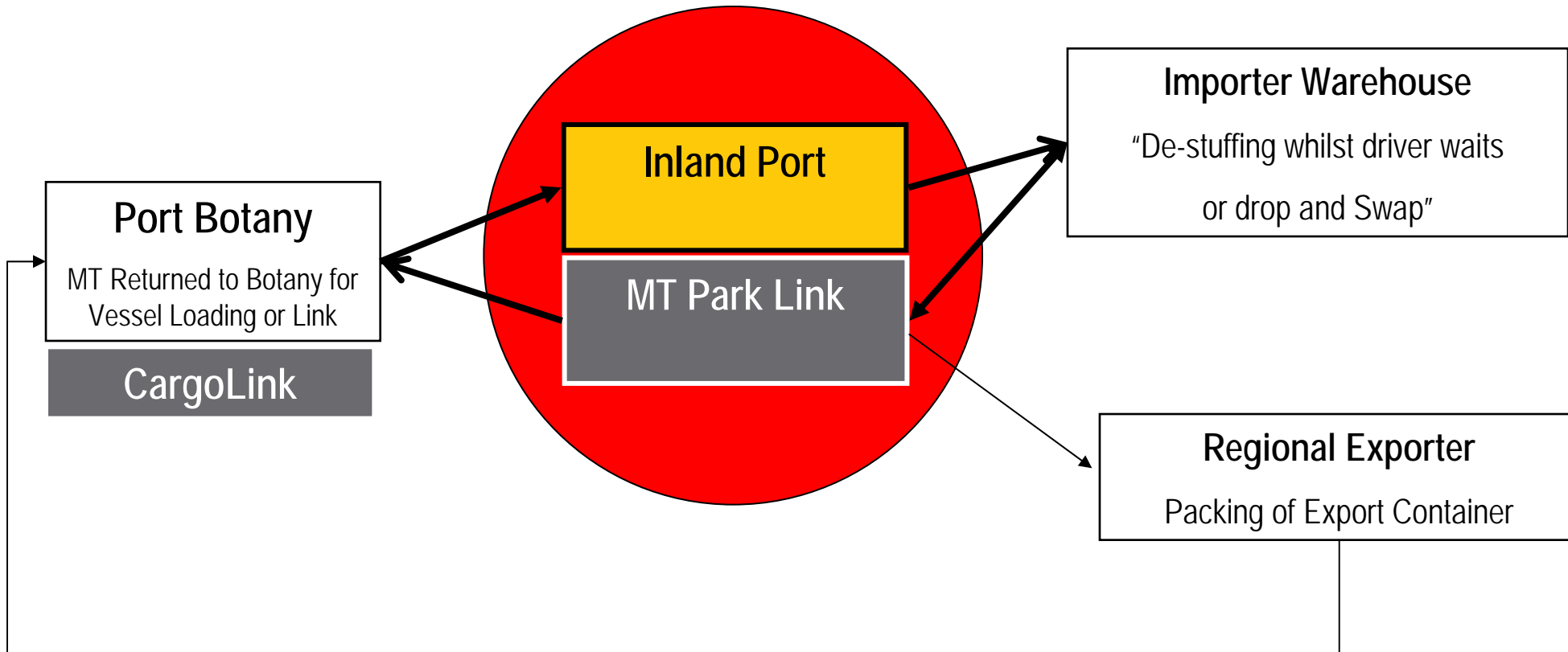
	Brisbane		Sydney		Melbourne		Adelaide		Fremantle	
	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2007	Jul-Dec 2007
	\$/TEU									
Import										
Ship-based charges	34	30	18	16	17	16	40	38	20	19
Cargo-based charges	75	75	68	90	37	39	63	64	70	73
Stevedoring ^p	173	173	173	173	173	173	173	173	173	173
Customs brokers' fees	110	139	135	135	140	138	136	139	167	187
Road transport charges	311	297	424	485	391	353	256	242	328	349
Import total ^a	704	714	818	899	758	720	668	657	758	801
Export										
Ship-based charges	34	30	18	16	17	16	40	38	20	19
Cargo-based charges	75	75	51	51	37	39	63	64	70	73
Stevedoring ^p	173	173	173	173	173	173	173	173	173	173
Customs brokers' fees	136	117	107	107	97	108	84	113	91	99
Road transport charges	311	297	424	485	391	353	256	242	328	349
Export total ^a	730	692	773	833	715	690	616	631	682	714

Source: BTRE *Waterline* Report No. 44 August 2008

Delivery Models – Direct Delivery



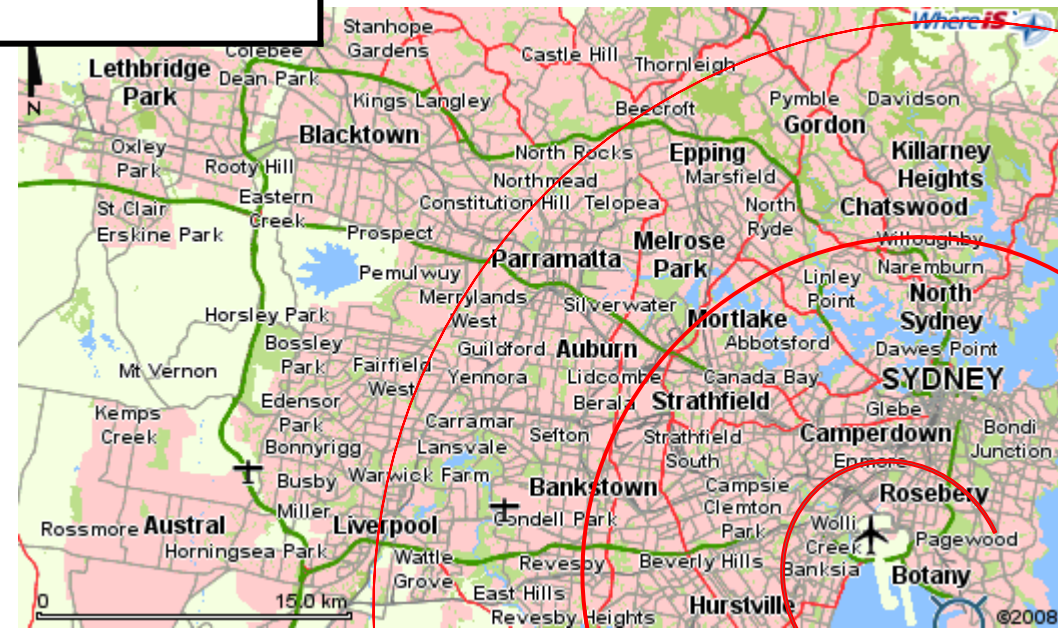
Patrick Inland Port Model - Triangulation



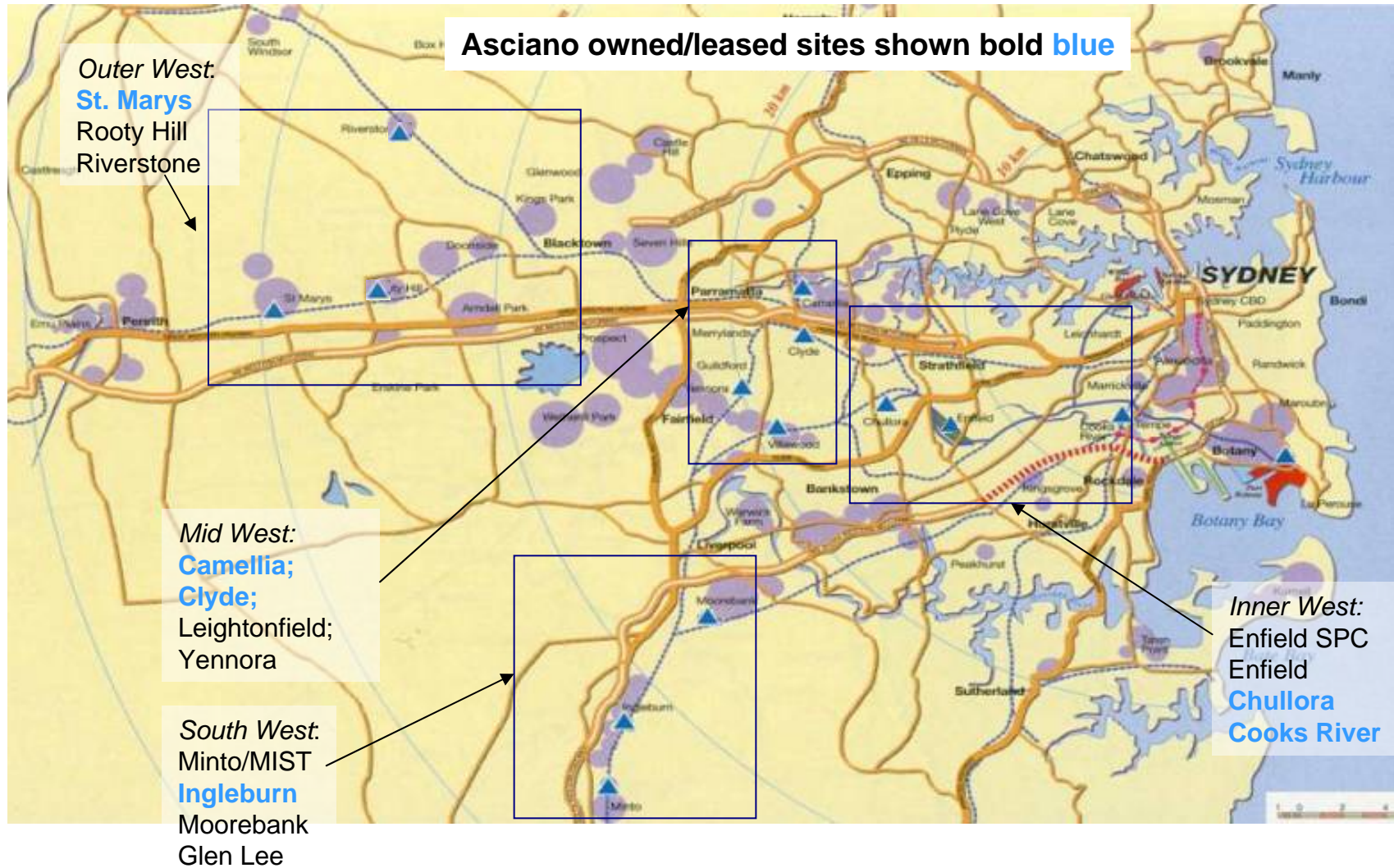
Market rates for container transport increase the further from the Ocean Terminal



Distance from Port Botany	Market Rate (irrespective of mode)
10km	\$275
20km	\$325
30km	\$400
40km	\$475+



Asciano has a significant land footprint in Sydney, with some third party sites also potentially available



NSW Port Rail Services

Train Services

- Camellia
- Villawood
- Bathurst
- Dubbo
- Narribri

Approx 65 Services per week and will vary depending on seasonality and customer requirements.

Note: Riverina, Wagga Wagga and Albury into the PoM

Main Points

- Focused on Port Logistics
- National Provider
- Superior Metropolitan Footprint
- Strong Regional Presence
- Port Rail Capability
- Wholesale Offering
- IT Capability with full container Visibility
- Understand Port Operations and Port Interface challenges
- Synchronize customers requirements with Port Operations



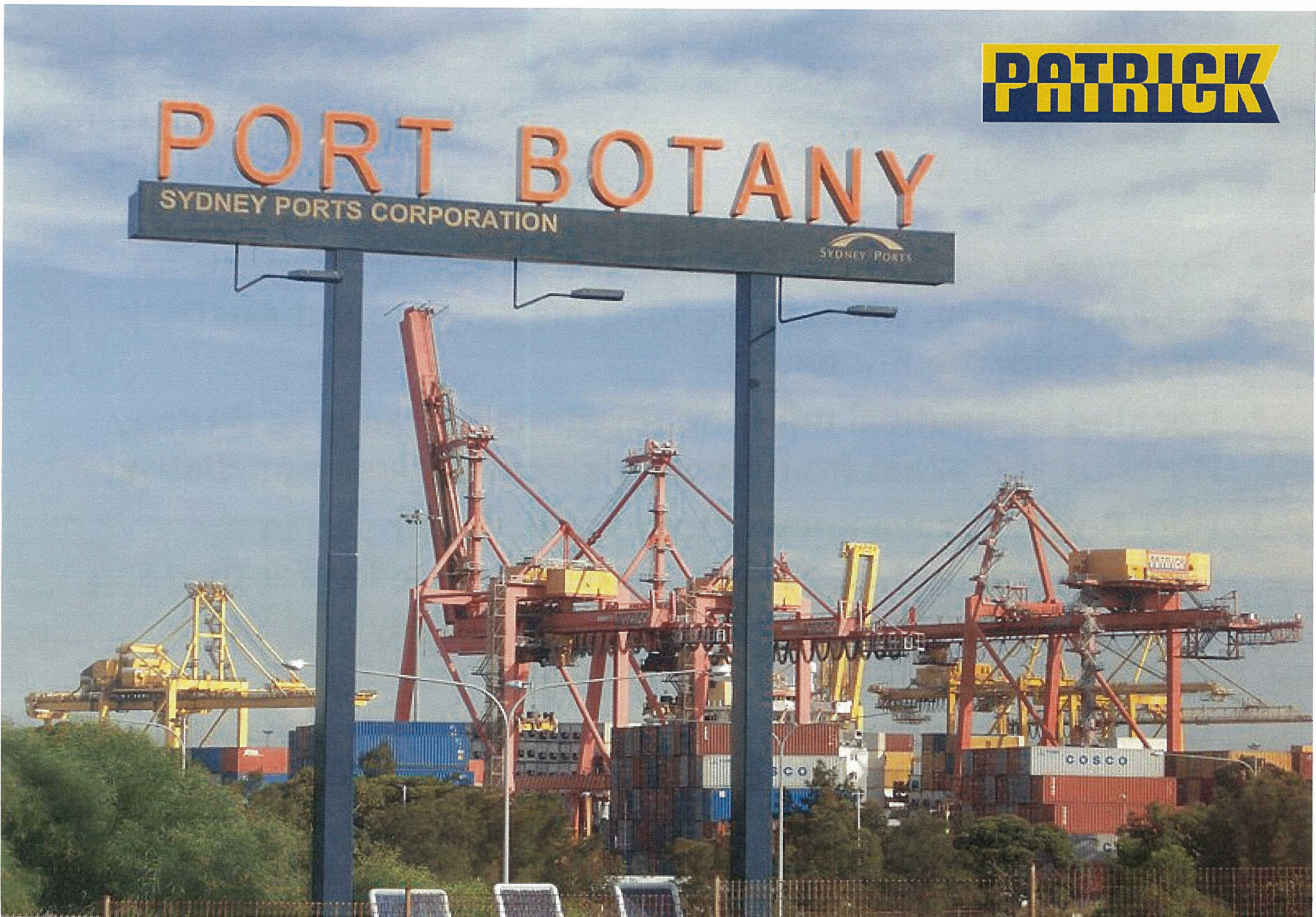
PATRICK PORT BOTANY
21st November 2008

asciano 

PATRICK

PORT BOTANY

SYDNEY PORTS CORPORATION



- **Botany Bay is where Captain James Cook first landed on 29th April 1770, when navigating his way around Australia on his ship, the Endeavour.**
- **Located 12 nautical miles south of the entrance to Sydney Harbour and 12km from Sydney's central business district**
- **Port Botany as we know it today was developed in the 1970s as the first stage of a strategy to provide for the long term trade and port requirements for Sydney and New South Wales**
- **The facilities at Port Botany now account for all of Sydney's total container trade throughput.**

Total Container Trade Trend

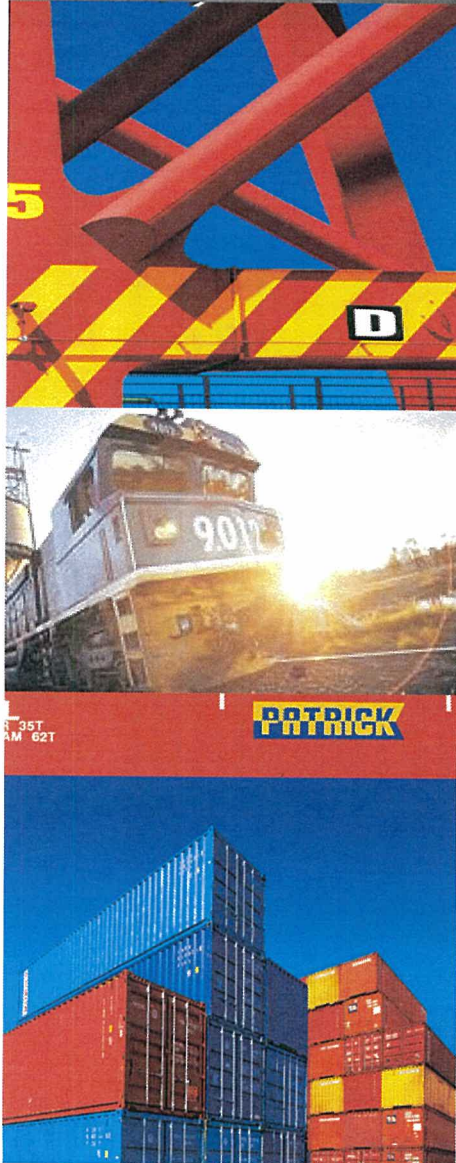
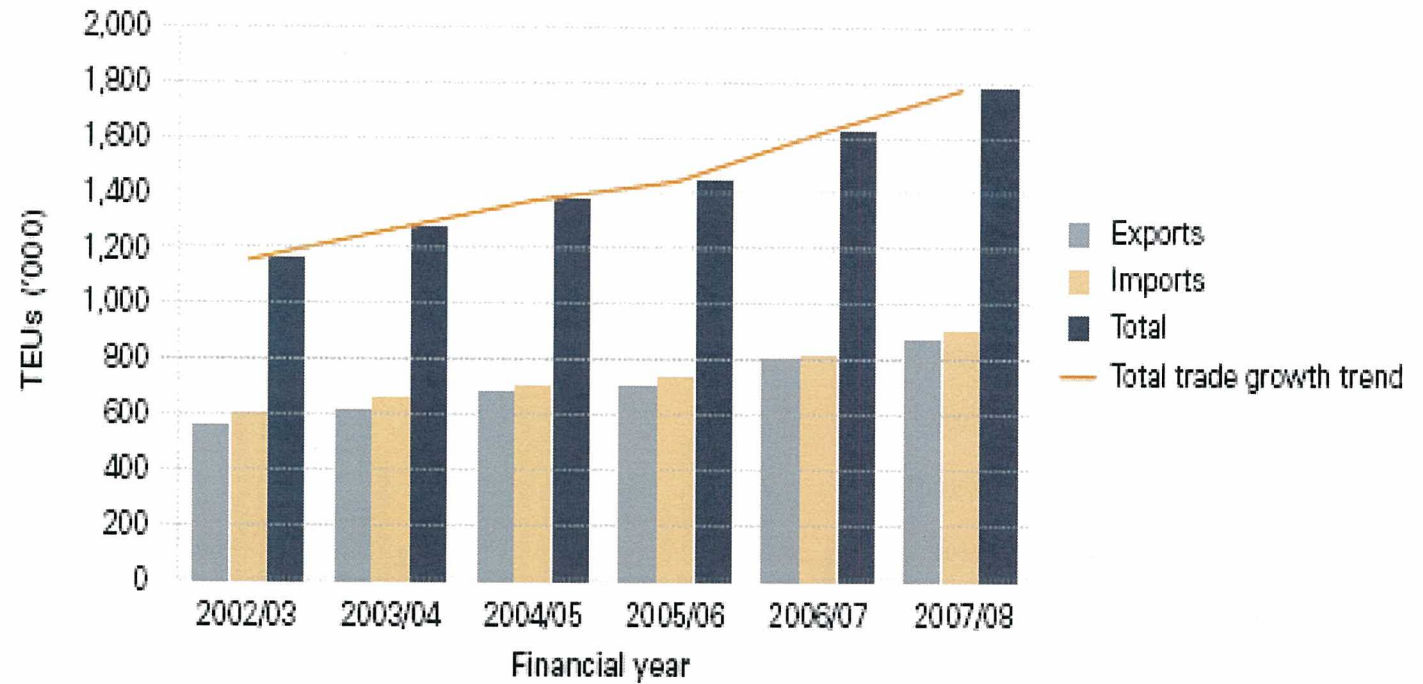
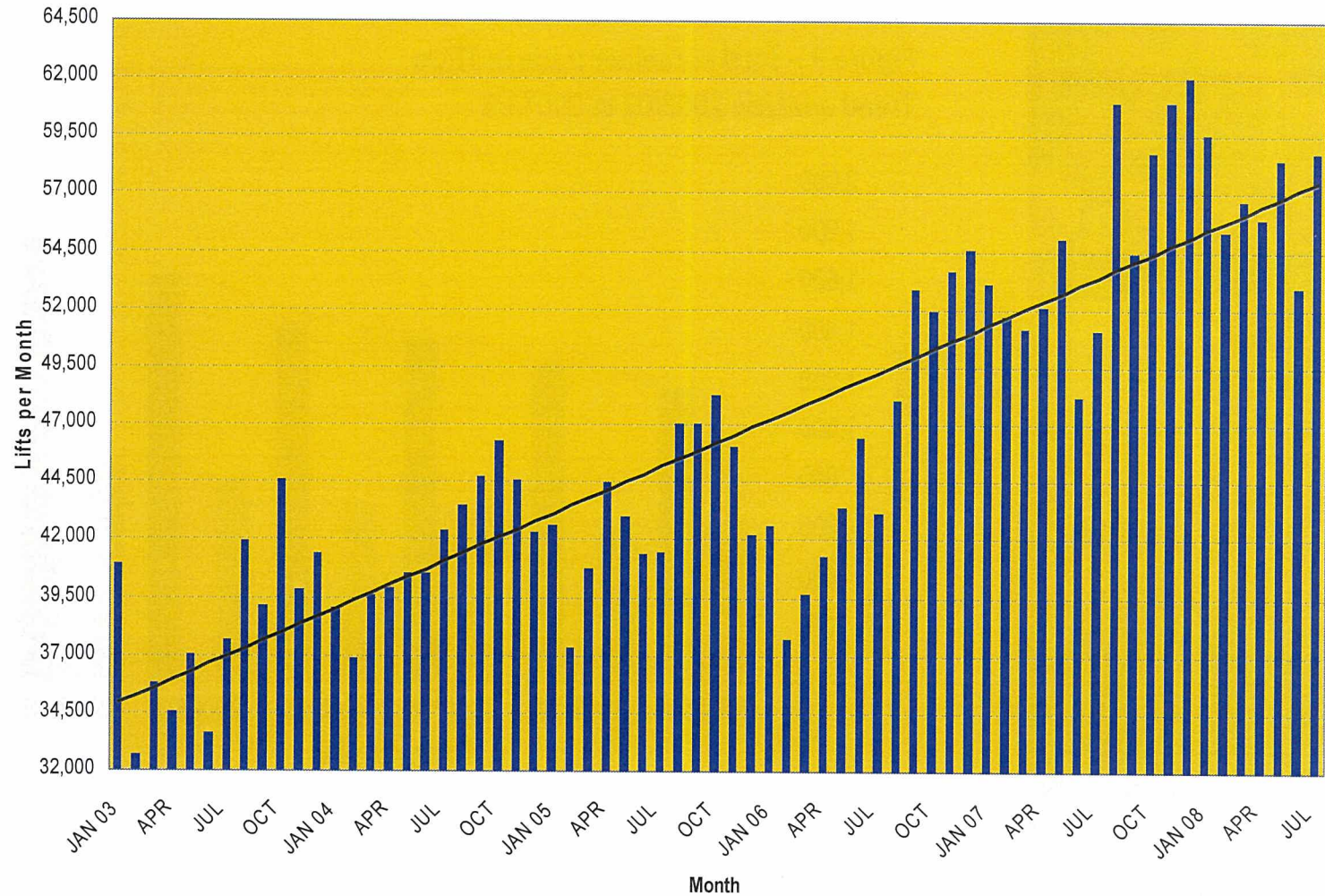
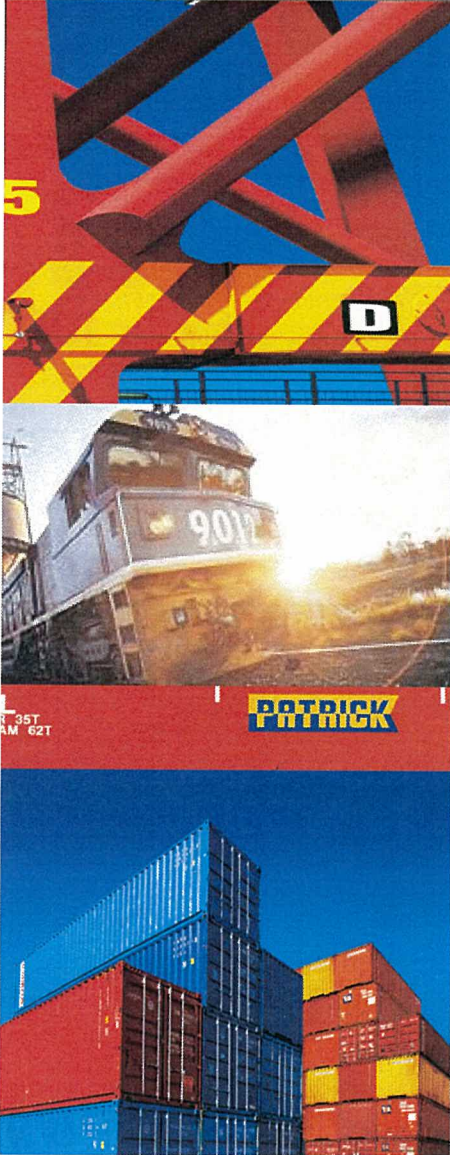


Figure 9 – Total container trade in TEUs
Trend analysis 2002/03 to 2007/08



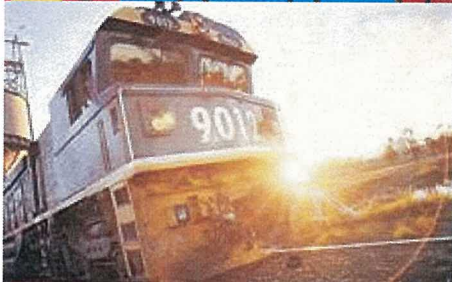
Sydney Terminal Monthly Throughput



Port Botany Overview



Sydney Container Terminal Overview



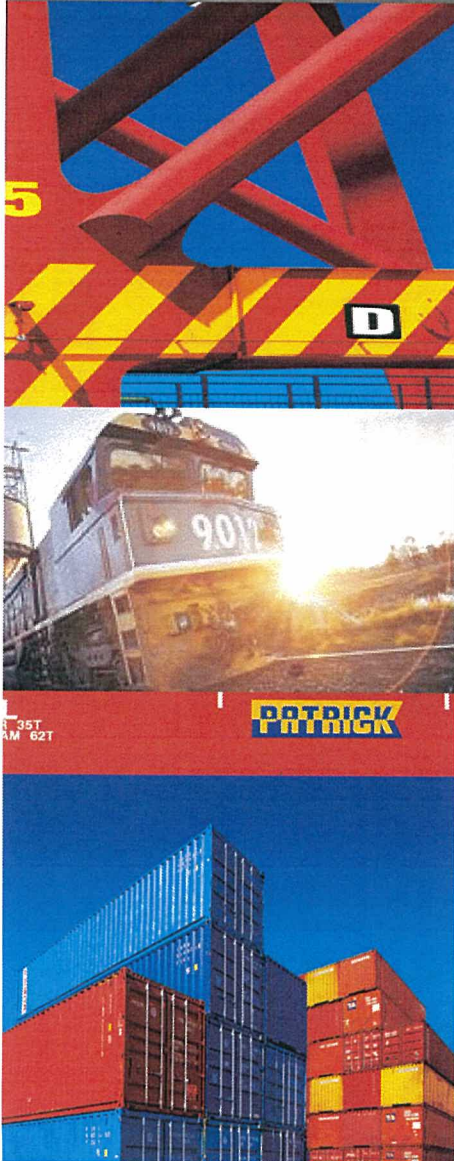
OVERVIEW

Terminal Capacity	1,200,000
Total Land Area	44.2 ha
Yard Ground Slots	5,500
Reefer Slots/Voltage	650/440V
Reefer Monitoring System	Yes
Yard Planning System	Navis/Patrick

BERTHS

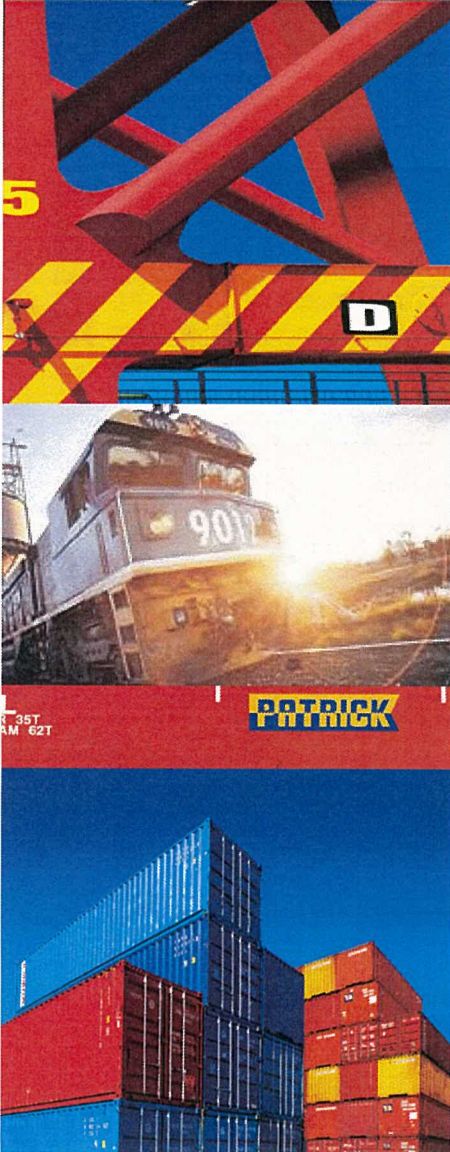
Length	1,005m
no. of Berths	4
Max Draft	15.2
Berth Depth (Zero Tide)	15.2
Harbour Pilot Time	1hr
Preferred Berthing Side	Stb
Max Vessel Length	310

Equipment & Facilities



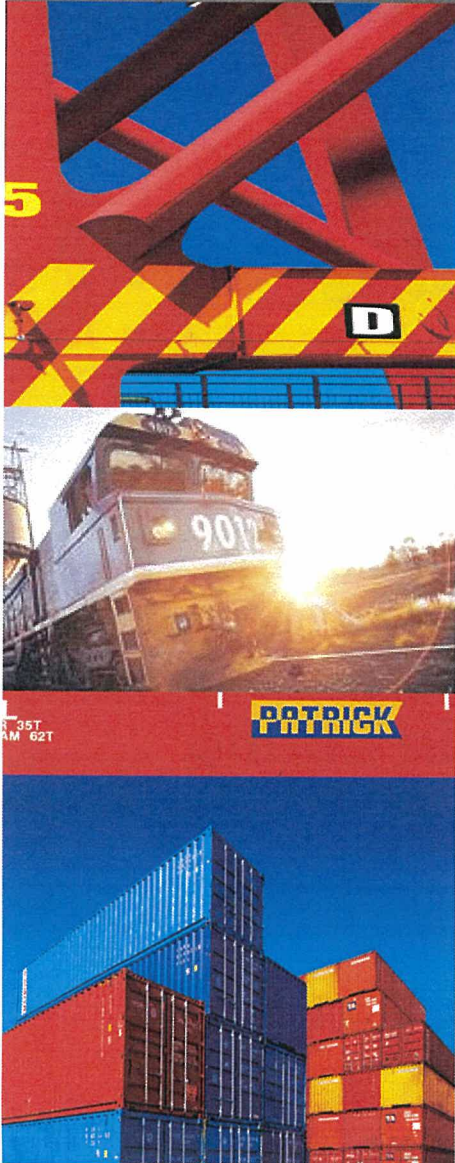
EQUIPMENT & FACILITIES	
Cranes	7
Panamax	5
Post Panamax	2
Twin Lift	Yes
Straddles	44
Forklifts	4
Reachstackers	2
On Dock Rail	Yes
Rail Sliding/Length	2 x 600m
Rail Mounted Gantries	5

Definition of Capacity



- **Drives capital investment within the business**
- **Quantifies the level of competition within a Port or Ports**
- **Key in providing service levels through congestion management**
- **Prime measure influencing Government policies and industry perception impacting on the business**
- **Misjudged, can place on-going investment at risk, which impacts economies of scale and efficient port operation**

Terminal Capacity

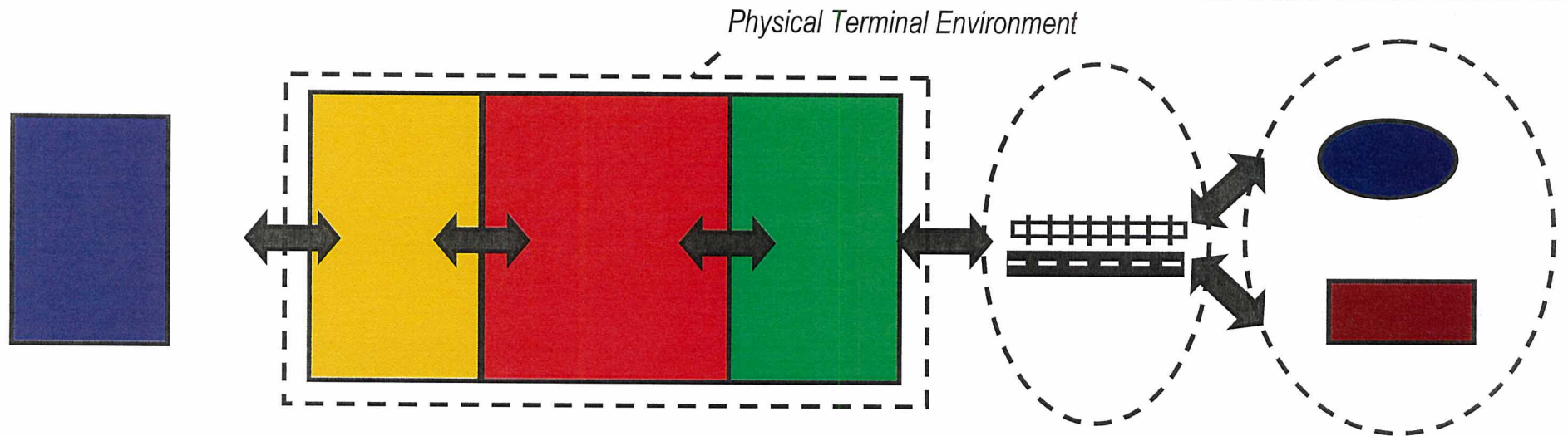


- **Design Capacity** – derived from complex models
- **Operational Capacity** – based on achieved results in similar ports and/or benchmarks
- **Physical Limit** – Generally not used as requires 100% berth, gate and yard capacity

Capacity Determinates

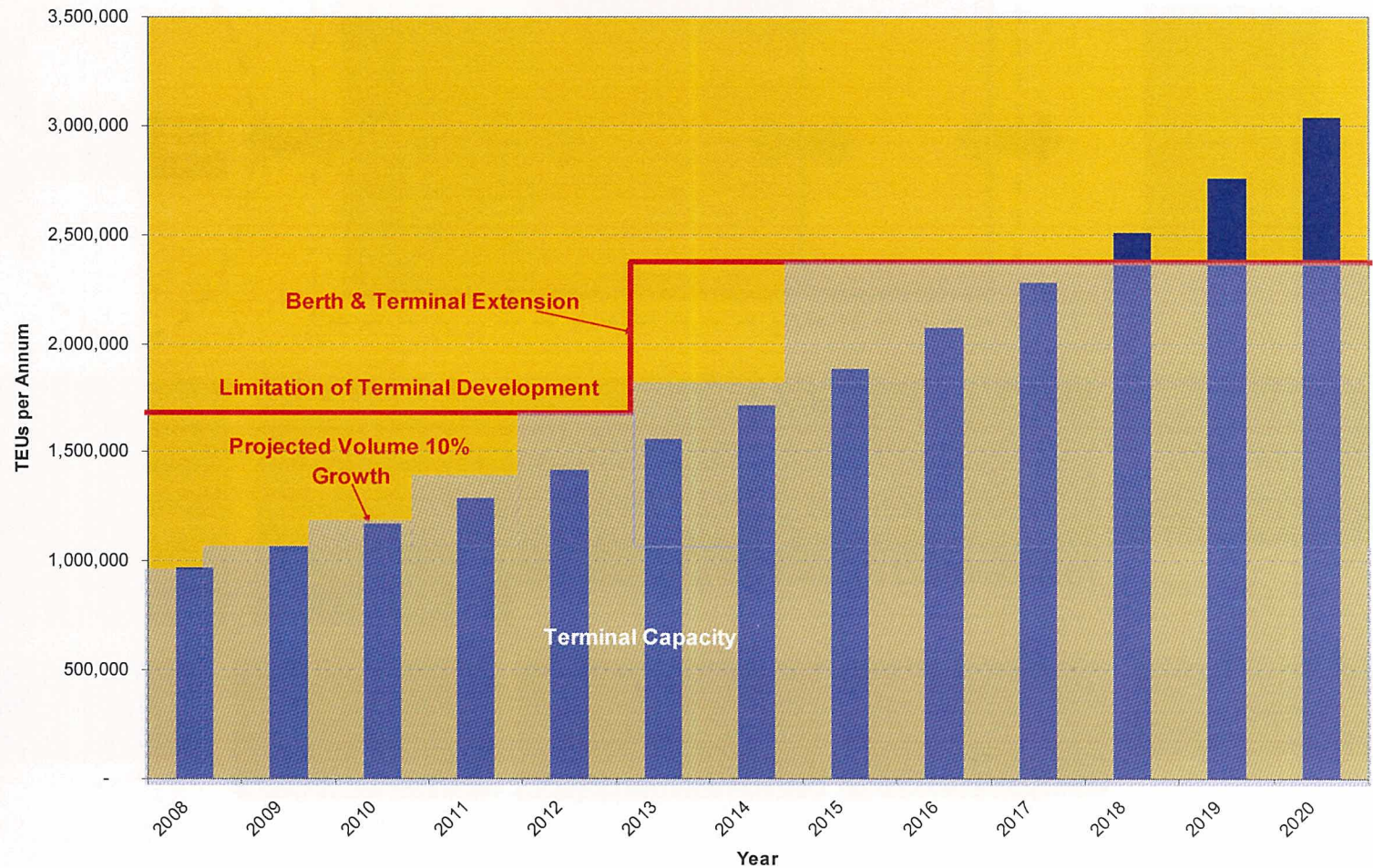
- **Yard Capacity**
 - Area of land
 - Yard equipment
 - Automation of Operating Equipment
 - Yard Systems/Technology Employed
 - Ground Slots Available
 - Stacking Density
 - Container Dwell Times
 - Road operating days/hours
- **Berth Capacity**
 - Berth Length
 - Number of Cranes
 - Available Crane Intensity
 - Crane Productivity
 - Ship Exchange/Profile
 - 40'/20' Ratio
 - Percent of Twin Lifting
 - Vessel Schedule Reliability

Issues with Patrick Botany Capacity

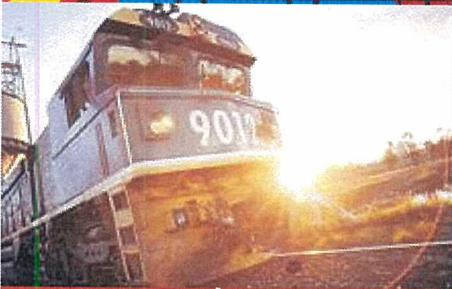


Shipping lines introducing new, larger vessels, new services.	Improved vessel exchanges (size, design) and additional cranes can increase capacity over existing berths	Extremely limited expansion space at Patrick Terminal – terminal already close to limits	Introduction of RMG's/ revised R&D layout/VBS management will meet growing demand –	Network congestion created through poor co-ordination and passenger traffic demands (road and rail) already impacting commercial environment	Existing operations drive inefficiencies into import/export chain, particularly at peak times
No Capacity Limitations	Any Capacity Limitations are long term	Short Term Capacity Constraints with current operation	Any Capacity Limitations are long term	Short Term Capacity Constraints	Short to Medium Term Capacity Constraints

Sydney Terminal Throughput

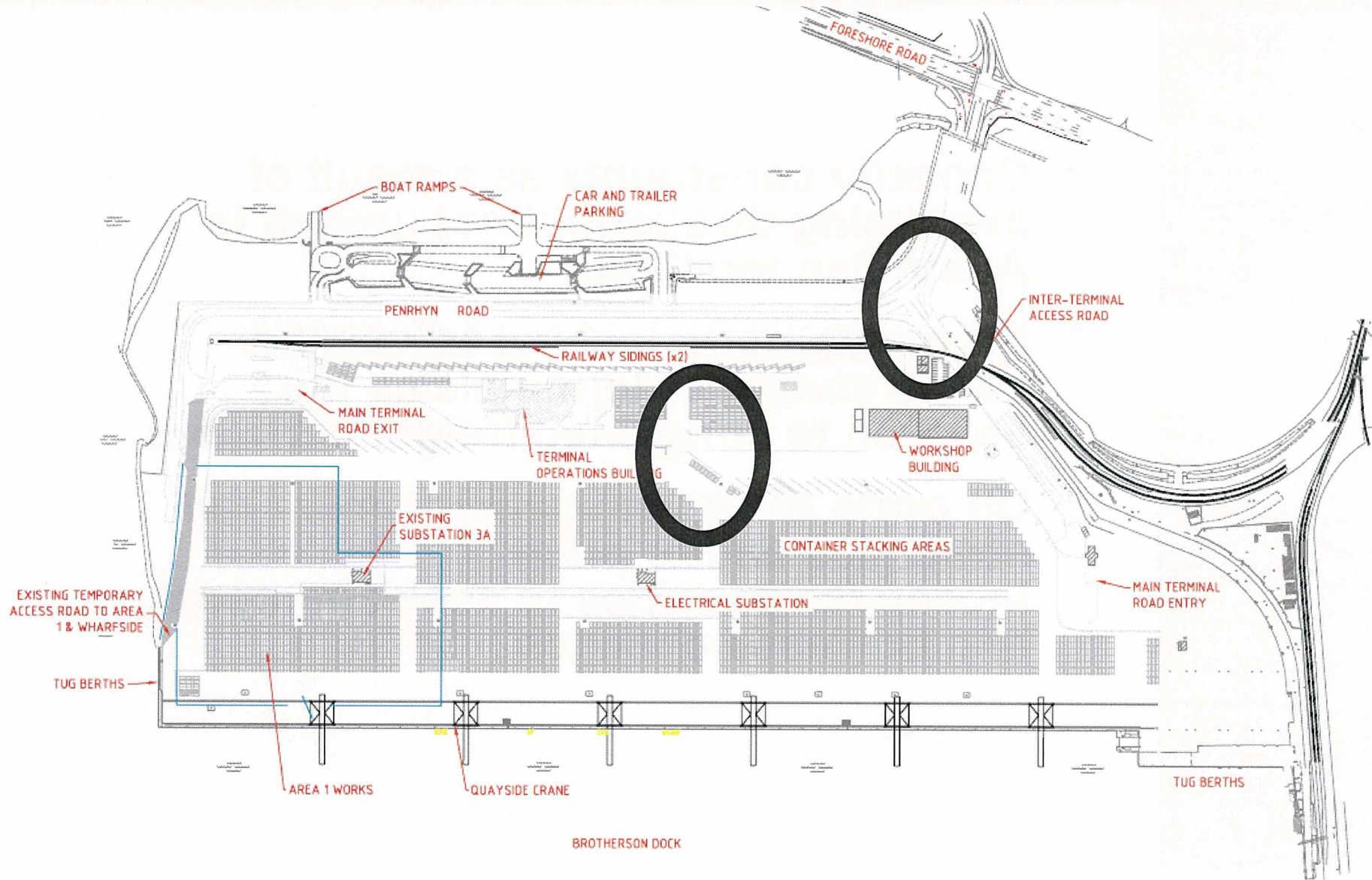


Global Issues

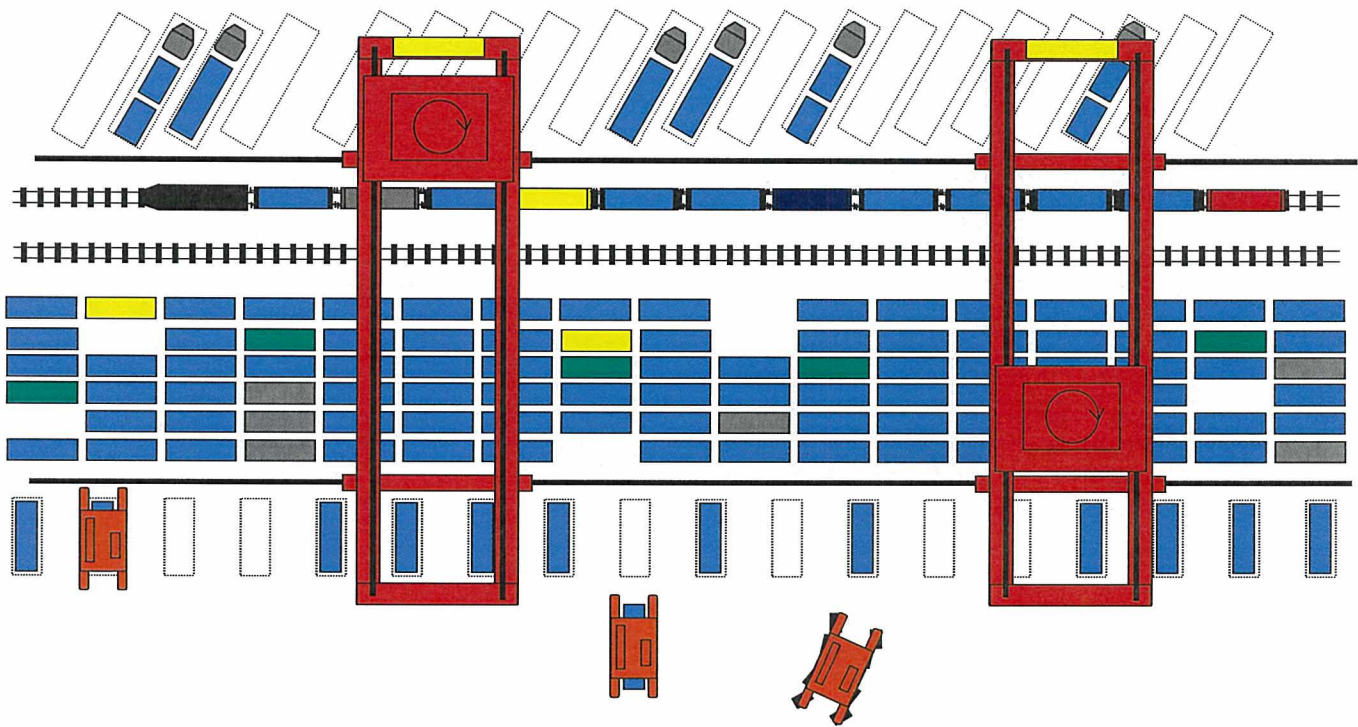
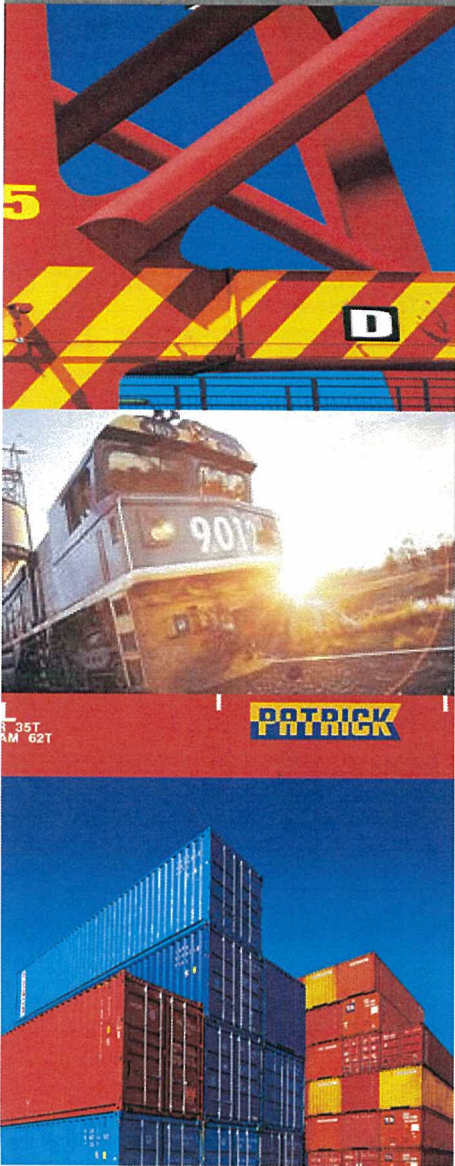


- **Capacity constraints as a result of increasing throughput not unique to Australian terminals**
- **European ports looking to rail and inland container terminals as the solution to congested freight corridors**
- **US ports are investigating similar rail strategies and/or price incentives/penalties to assist in modal and business changes**

Port Botany - 2004



Landside Interface RMGs



RMGs

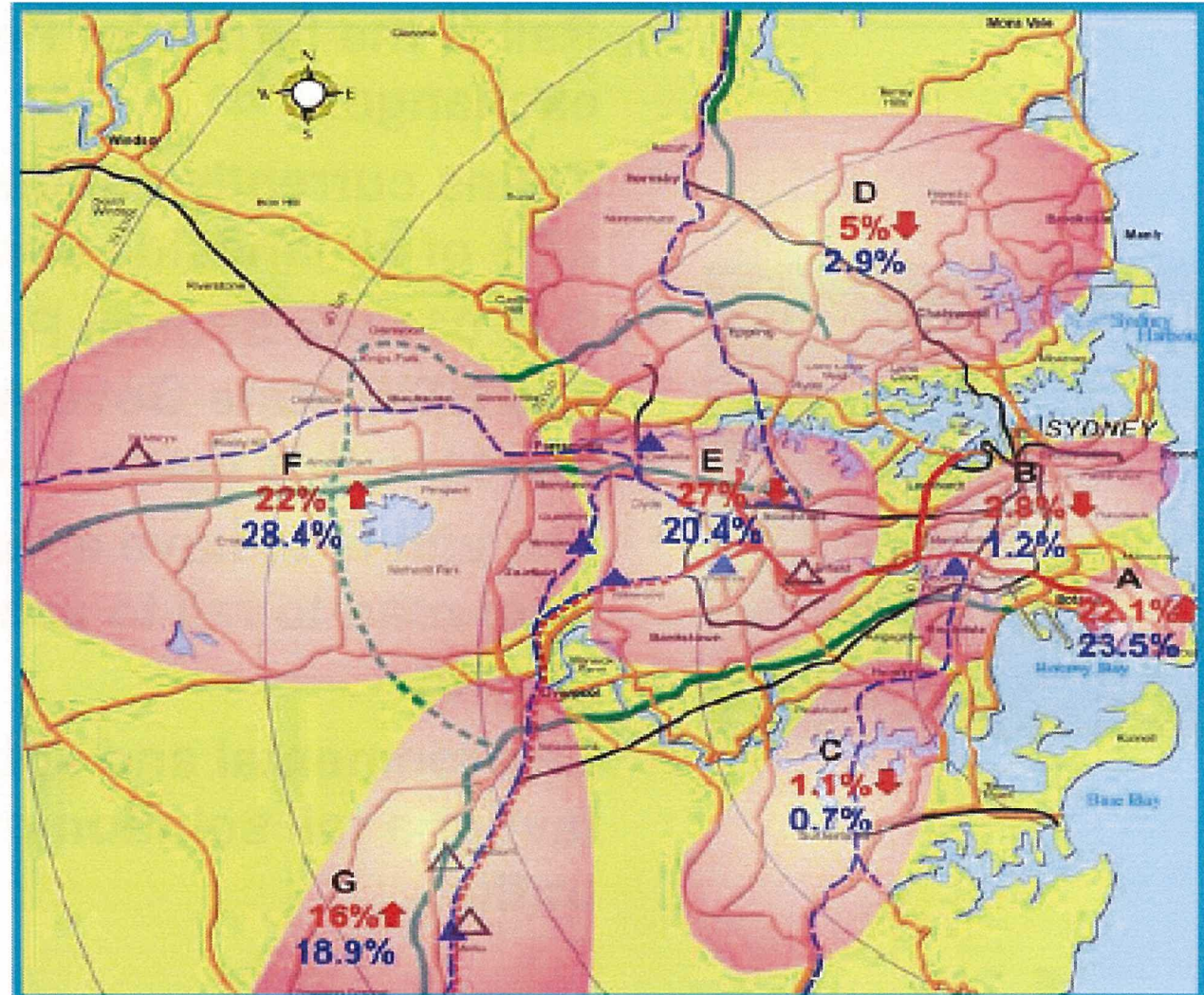
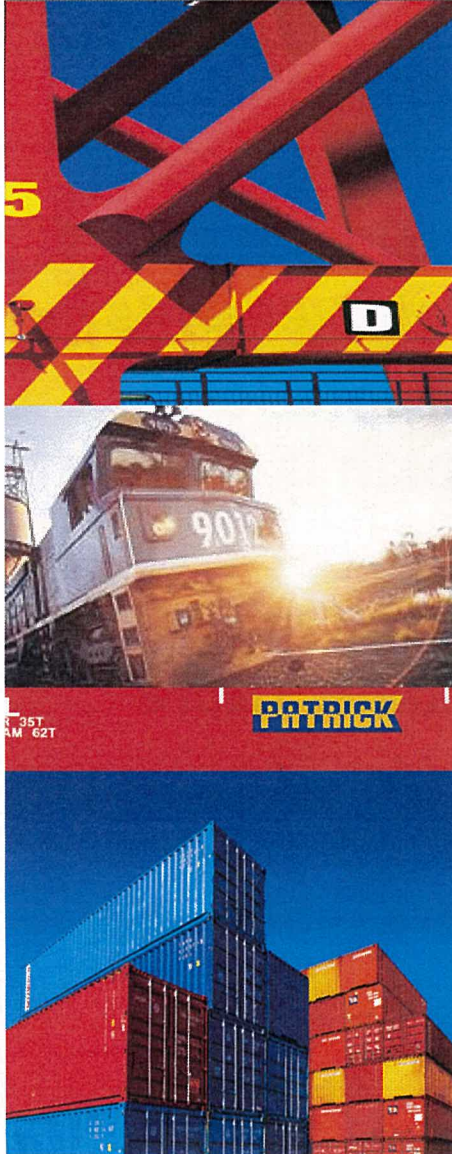


Moving Forward



- **Rail is the future for Port Botany landside exchange.**
- **Trains currently handle approximately 27% of all landside container movements.**
- **By 2011 the Sydney Ports Corporation and NSW State Government plan is to increase this figure to 40%.**
- **The aim is to have a fundamental shift from road to rail to accommodate future growth.**
- **Environmental and social considerations favour a rail solution over increased road traffic.**

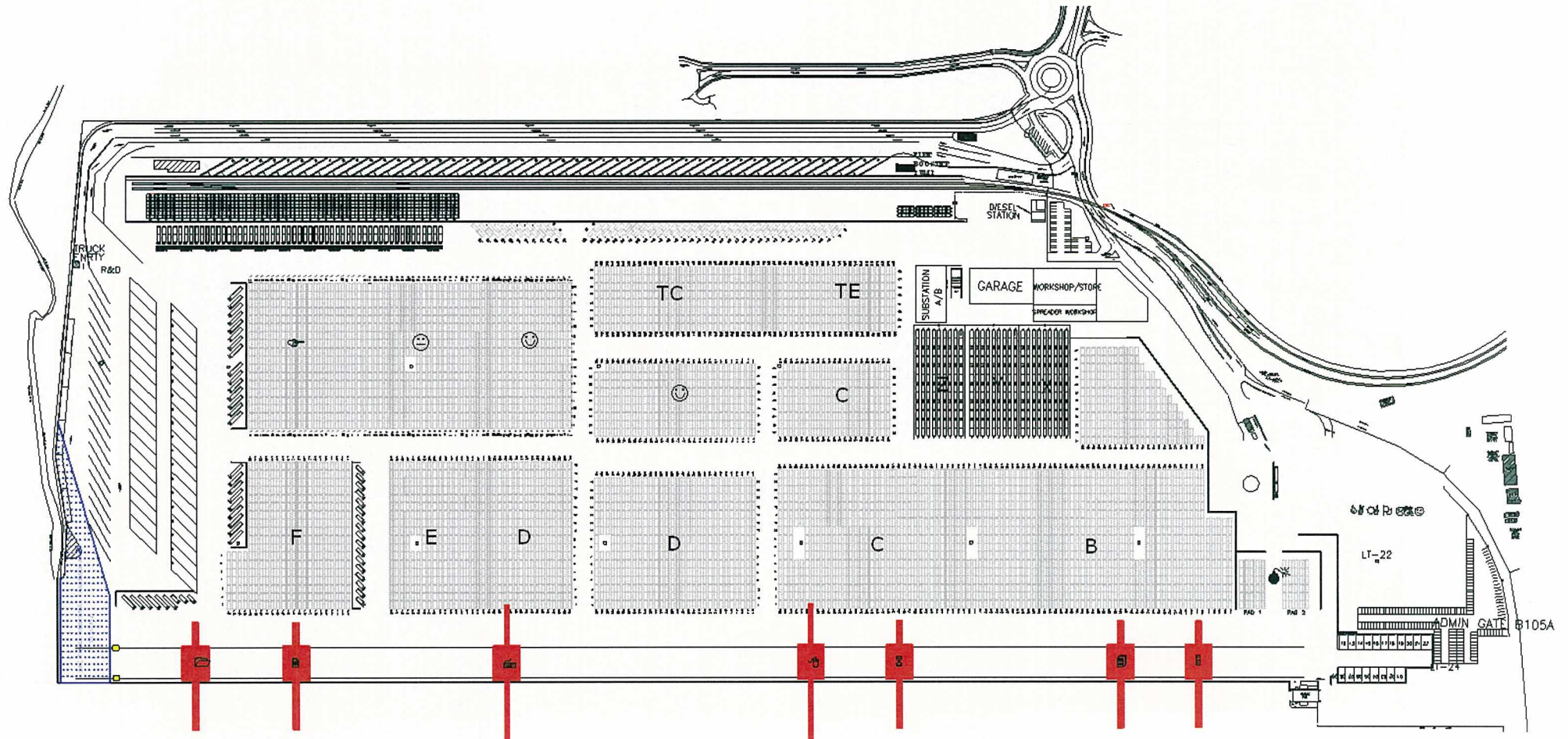
Sydney Hinterland



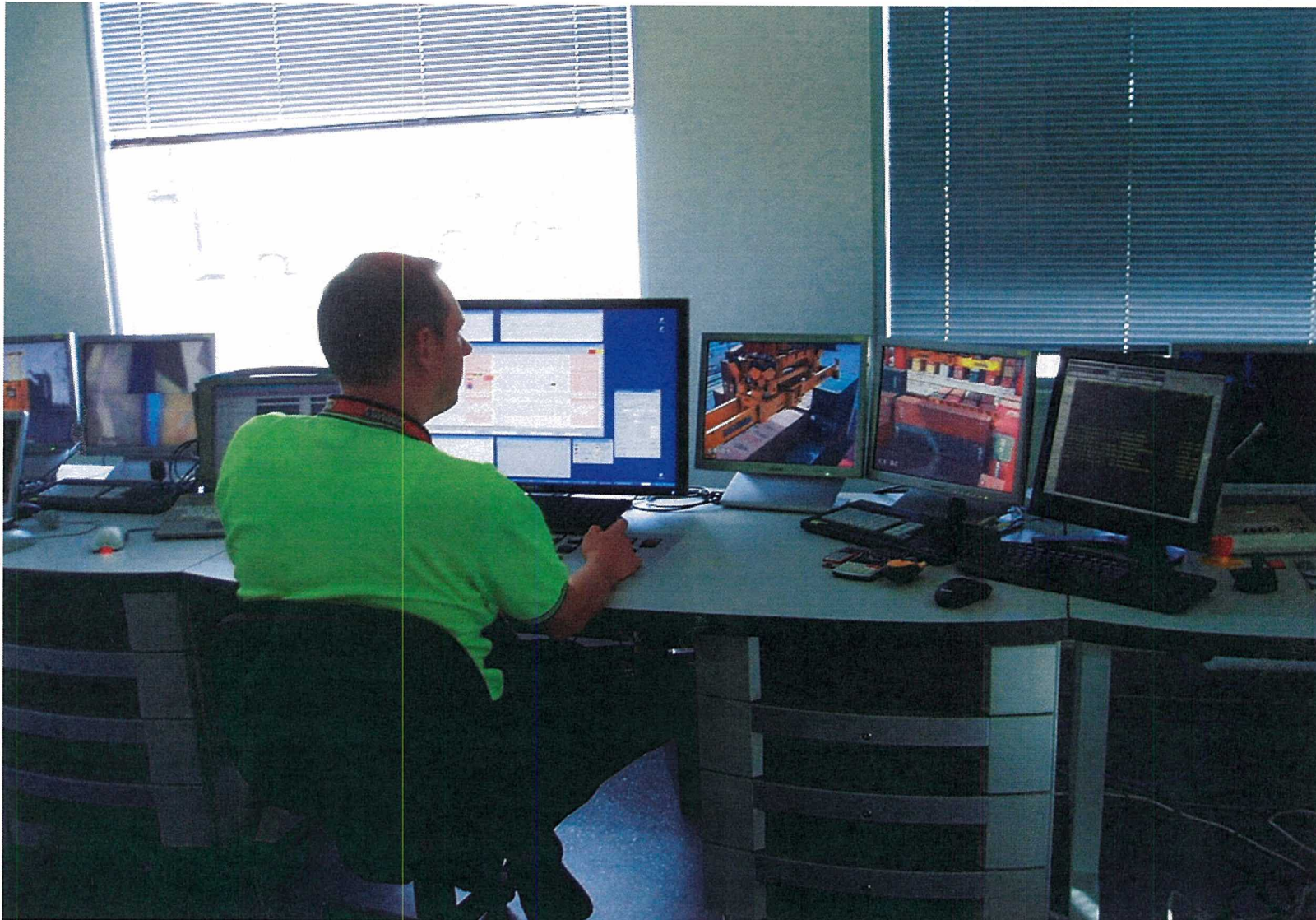
Port Botany Rail Exchange 2004



Port Botany - 2008



Remote Crane Operating Centre



Port Botany - 2012

