

# Fremantle Port

Michael Pal

Principal Logistics Analyst

Improving Port Landside Efficiency and Sustainability



FREMANTLE  
PORTS

# Inside the massive operation at Fremantle Port

todaytonight

A large blue container ship is docked at a port, viewed from a red structure. The ship is heavily loaded with colorful shipping containers. The sky is clear and blue. In the background, there are hills and a body of water. The text 'todaytonight' is visible in the bottom left corner.

A tall, modern office building with a white facade and a grid of blue-tinted windows. The words "FREMANTLE PORTS" are visible in blue letters along the top edge of the building. In the foreground, there are three flagpoles: one with the Australian flag, one with a dark blue flag, and one with a blue and white flag featuring a circular logo. The sky is blue with some light clouds. A dark blue vertical bar is on the left side of the image, containing white and teal text.

**Fremantle Ports**  
is the  
West Australian  
Government-  
owned  
**strategic manager**  
of Fremantle Port




Victoria Quay

Rous Head

North Quay

Fremantle Inner Harbour

A large container ship is docked at a port. The ship's hull is white with the letters 'C M A C M' painted in large white characters. The deck is covered with stacks of colorful shipping containers, including black, orange, and blue ones. In the background, a large white crane with red accents is visible against a clear sky. The water in the foreground is dark blue.

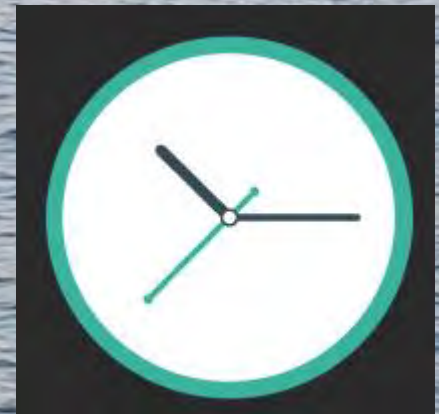
# TRADE

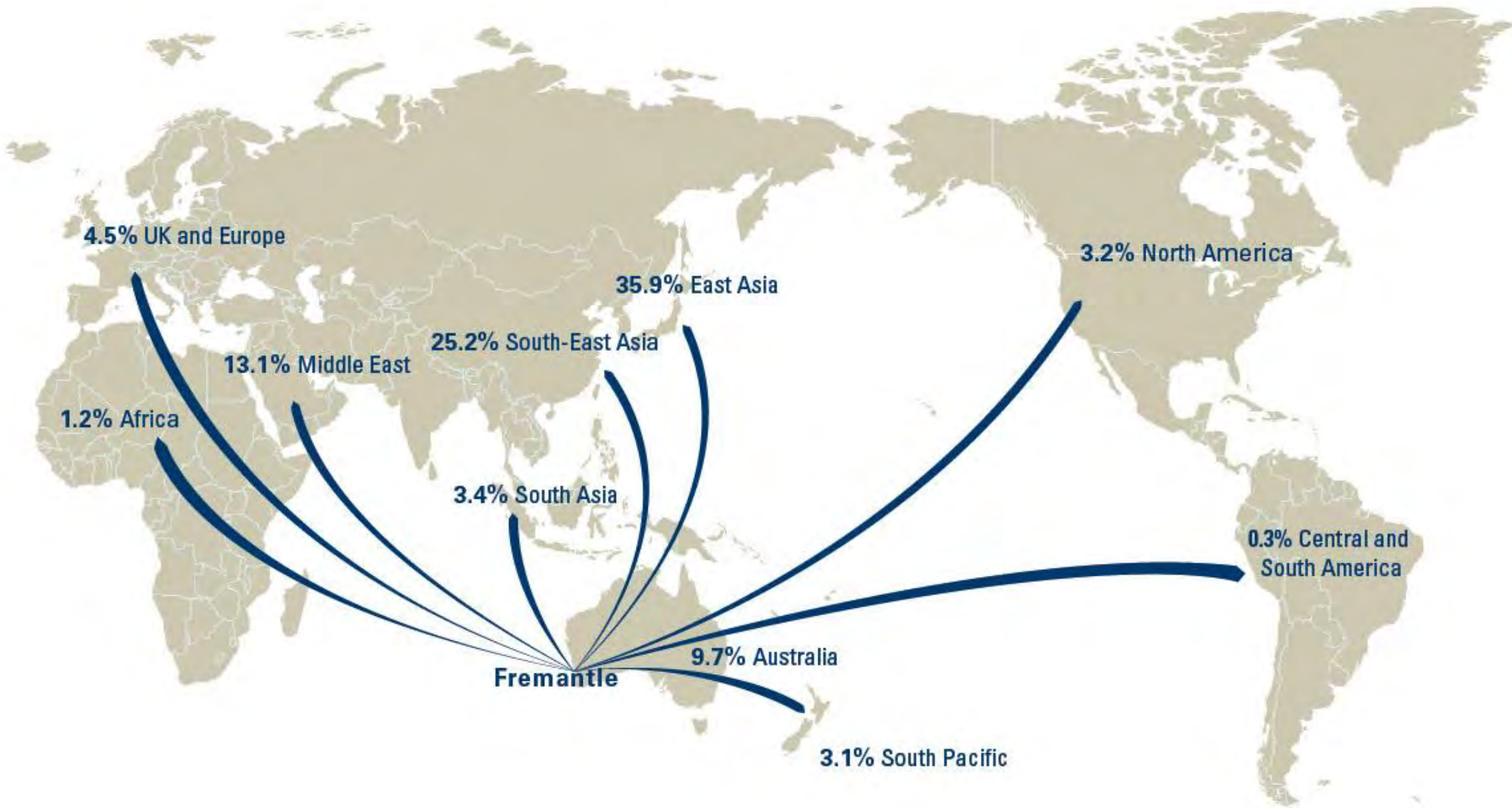
... growing our economy, sustaining our community

**\$26 billion a year** of trade

... almost **\$3 million**

**every hour of every day**





4.5% UK and Europe

3.2% North America

35.9% East Asia

25.2% South-East Asia

13.1% Middle East

1.2% Africa

3.4% South Asia

0.3% Central and South America

9.7% Australia

**Fremantle**

3.1% South Pacific



# Top 10

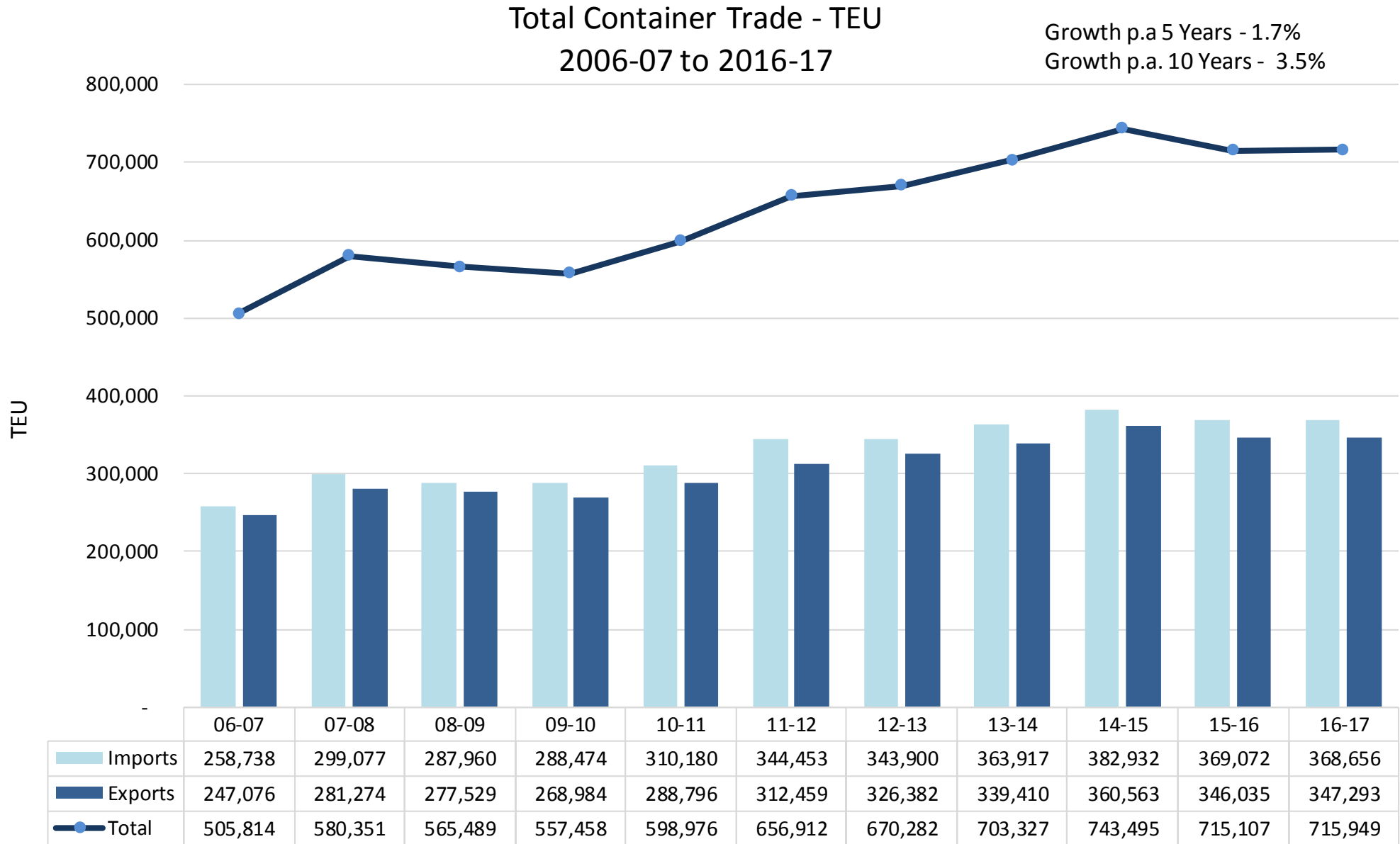
container trading partners  
(76% of trade)

- |                |             |
|----------------|-------------|
| 1. China       | 157,846 TEU |
| 2. Australia   | 67,892      |
| 3. Japan       | 33,845      |
| 4. Malaysia    | 31,513      |
| 5. Thailand    | 28,803      |
| 6. South Korea | 26,617      |
| 7. Indonesia   | 25,562      |
| 8. Singapore   | 17,707      |
| 9. USA         | 17,391      |
| 10. Vietnam    | 17,022      |

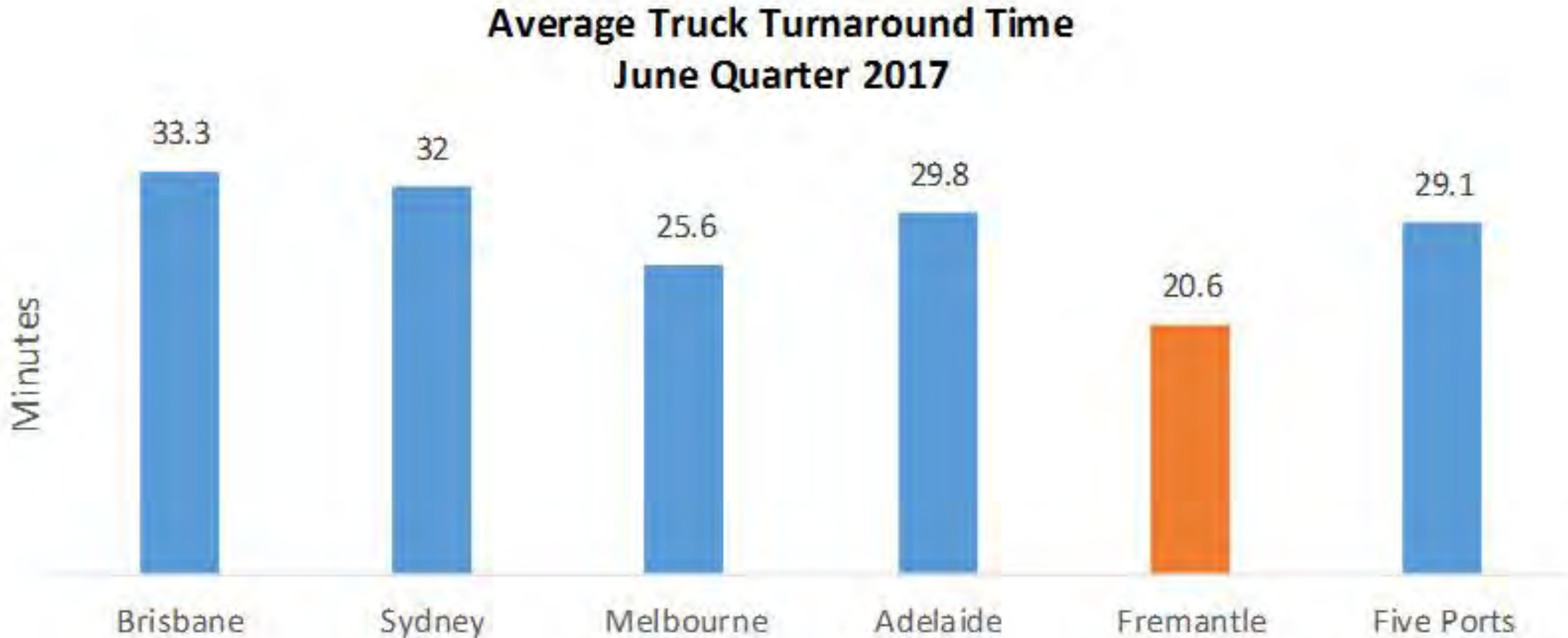


# 715,949 containers (TEU) in 2016-17

average annual growth 3.5% over 10 years



# Best truck turnaround time



# SMART MOVES

## Road and Rail





Inner Harbour operates adjacent to urban areas



Challenges operating close to residential areas

# Ensuring an efficient supply chain, minimising impacts on the community



Overseas port of origin



Fremantle Port  
container terminals



Import unpack



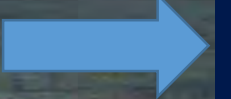
Empty container park



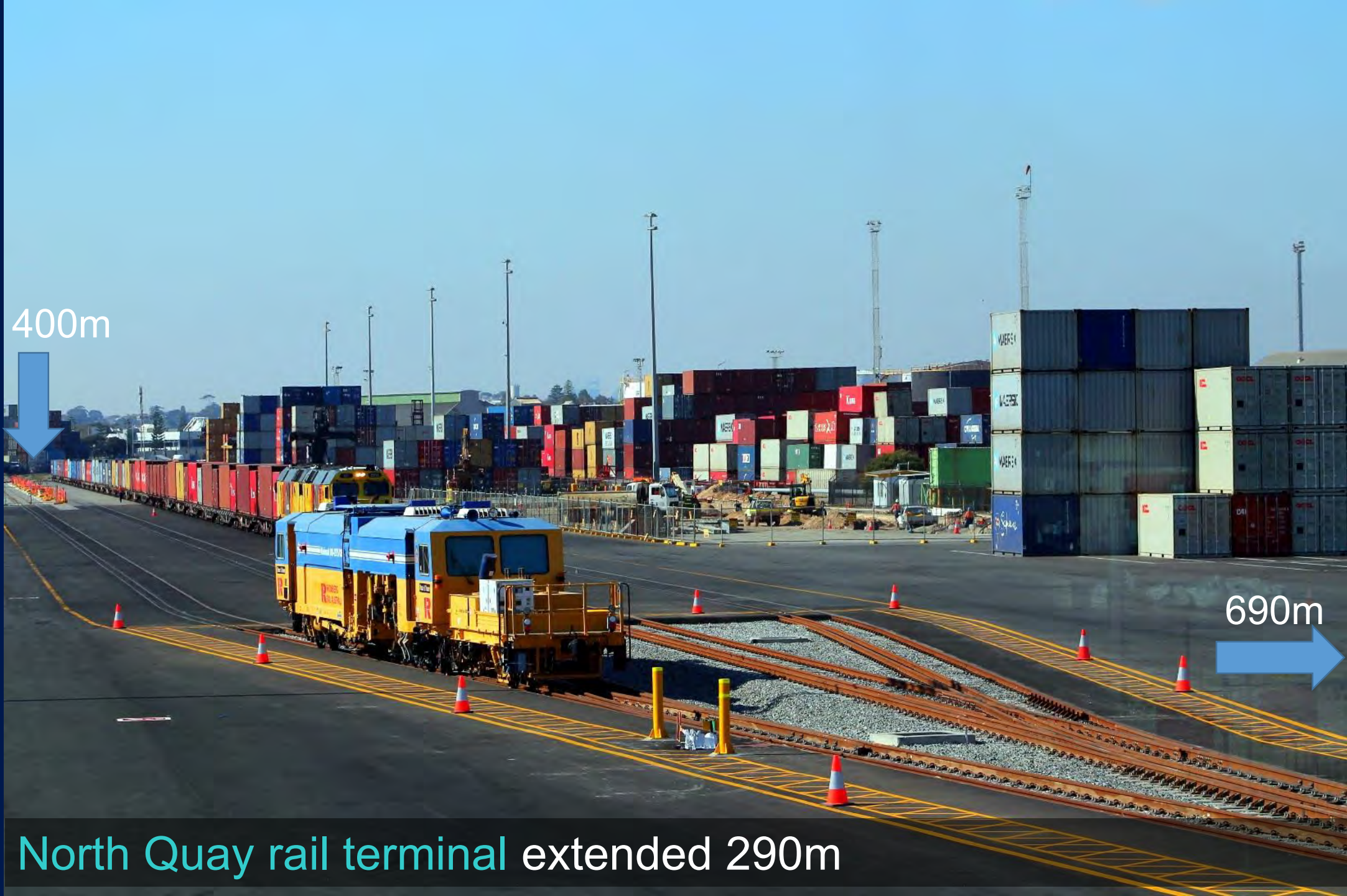
400m



690m



North Quay rail terminal extended 290m



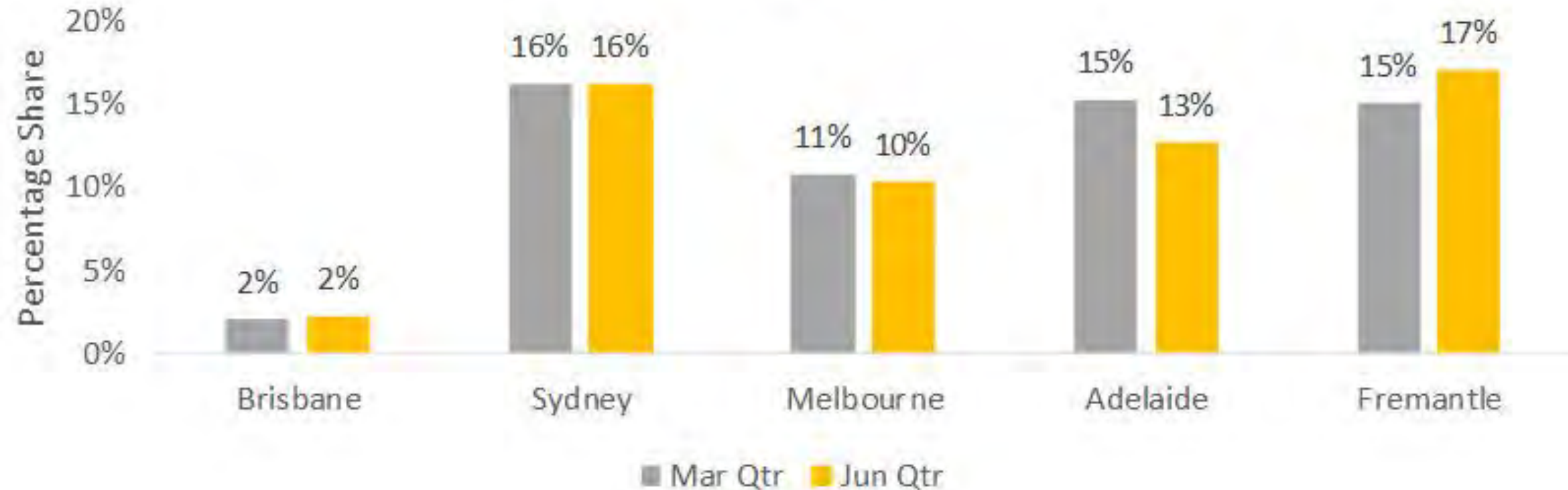
15.1% containers on rail (2016-17)





# Best rail share in country at 17%

Percentage on Rail (TEUs)  
2017





**108,000** containers a year on rail

**60% more** than other city ports

Taking **> 81,000** truck trips off the road



Reduce **empty** running

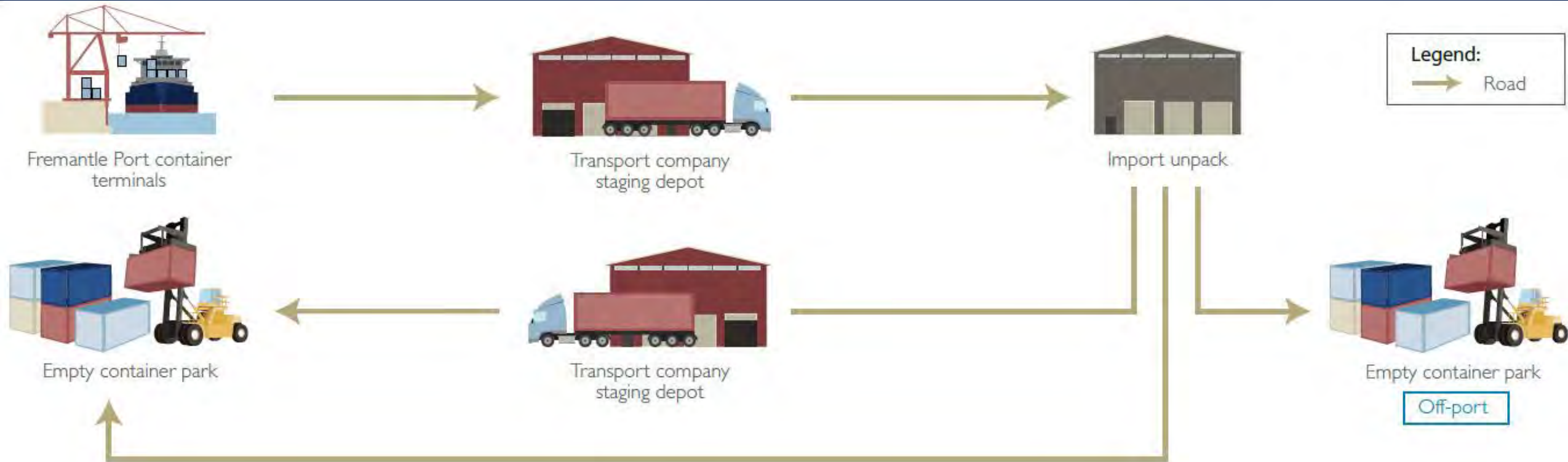
The port works 24/7



**Encourage after-hours operations**

# Staging

e.g. storing containers overnight before delivering to importer the next day



# What we've been doing

- Better co-ordination of heavy vehicles into and out of a sensitive precinct
- Looking at better ways of doing it – Innovation
- Go beyond Australia ... to be world standard
- Actually making a difference – not just co-ordinate but take action

Congestion Management

Truck Marshalling

Vehicle Detection System – instant monitoring of delays

Messaging

In Cab Telematics Driver Information

Queuing Control

Key Performance Indicators

Automated Precinct Status

The Future!

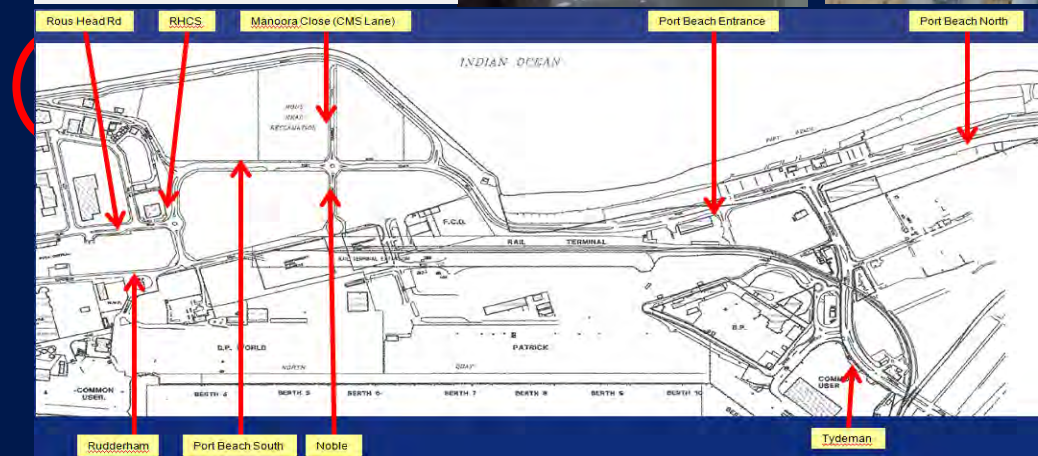
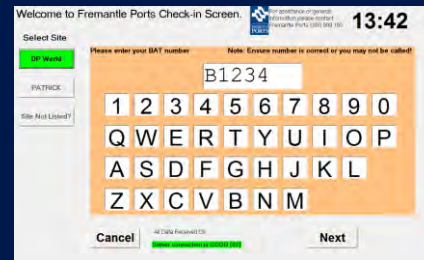
Truck  
Congestion  
Management  
System



# Why is it important?

- Lengthens the useful life of vital infrastructure
- Improves the relationship with our community partners
- Increases efficiency and makes Western Australia more competitive
- Increases the value and importance of the Port in everyone's eyes
- Shows that we are at the forefront of innovation

## Congestion Management System is a core example



That



sustainability

*celebrating sustainability  
triumphs wherever they  
originate*





FREMANTLE  
PORTS

Tenant Operating Performance System

TOPS



HOME DATA RESULTS UNFORESEEN EVENTS OBJECTIONS KPI ACTION PLANS TENANTS REPORTS ADMIN

History Tenant

Change Password

Logout

# Site Key Performance Indicators

- Newly created land areas have given the Port the opportunity to guide key land-side efficiencies
- KPIs linked to results we wish to achieve
- KPIs included in all new leases – Incentive for good performance
- Tenant Operating Performance System (TOPS)
- Requirement to audit results
- Verification through Intelligent Transport Systems





# Truck Control System - The Developments

## Queuing Control

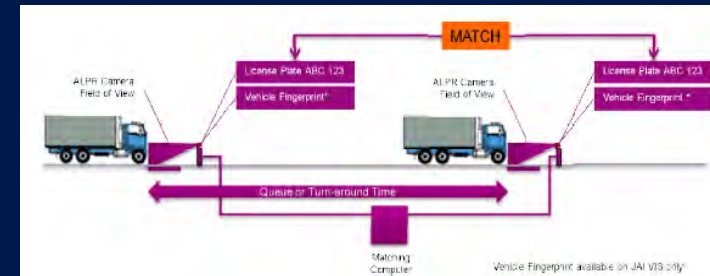
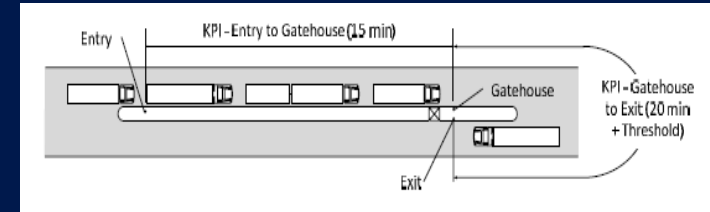
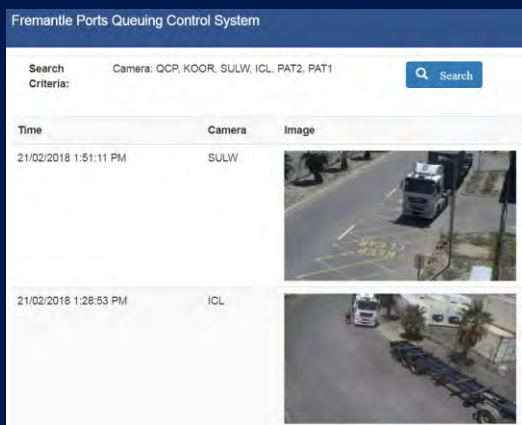
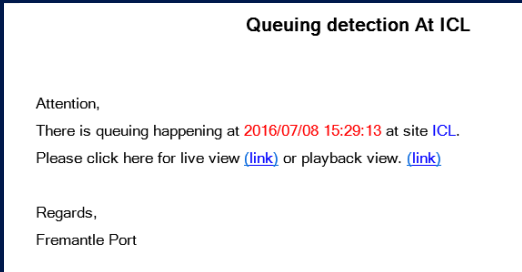
- Largely impractical manual detection
- Eliminates Queuing – environmentally friendly and driver amenity focussed
- Focuses attention on this neglected area of logistics (“what do I care about queues?”)

## Vehicle Detection (including Truck Turn Time)

- Measurement of duration at port – CO2 implications
- Increase throughput

## In Cab Telematics (IVU) – Driver Information System

- Take information from Congestion Management System and send direct to driver
- Driver able to act on issue prior to arriving at port, avoid unnecessary journeys (virtual TMA)



Time Slot:	13:00-14:00	<input type="button" value="Close"/>
Turnaround Average Achieved:	52	
Allowed Average Time:	25	
Time Slot:	14:00-15:00	<input type="button" value="Close"/>
Turnaround Average Achieved:	51	
Allowed Average Time:	25	
Time Slot:	15:00-16:00	<input type="button" value="Close"/>
Turnaround Average Achieved:	65	
Allowed Average Time:	25	

21/02/18 14:09:41	21/02/18 14:08:42	1EOZ678		21/02/18 15:05:52	21/02/18 15:05:52	1EOZ673		00:56
21/02/18 14:10:57	21/02/18 14:10:58	1DUK336		21/02/18 15:08:26	21/02/18 15:08:26	1DUK336		00:57
21/02/18 14:14:34	21/02/18 14:14:35	1DKP850		21/02/18 15:36:22	21/02/18 15:36:22	1DKP850		01:21
21/02/18 14:14:44	21/02/18 14:14:45	1DBU827		21/02/18 15:34:41	21/02/18 15:34:41	1DBU827		01:19
21/02/18 14:15:10	21/02/18 14:15:11	1GCX377		21/02/18 15:39:27	21/02/18 15:39:27	1GCX377		01:24
21/02/18 14:19:38	21/02/18 14:19:39	1DWM786		21/02/18 15:33:44	21/02/18 15:33:44	1DWM786		01:14



# Innovation and Supply Chain Excellence Awards

The screenshot displays the Fremantle Ports website with a blue header and navigation menu. The main content area features a 'NEWS' section on the left and a video player on the right. The video shows a man holding a large award trophy.

**FREMANTLE PORTS**  
Western Australia

Home

About Fremantle Ports | Port Business & Operations | Planning & Projects | Community & Education | Visiting the Port | News & Publications

**NEWS**

**11/06/18 - Fremantle Business Awards 2018 announced**  
Congratulations to all winners at the Fremantle Business Awards 2018  
[Read more](#)

**01/06/18 - Two awards for Fremantle Ports' truck management system**  
Innovations in managing road operations at the port have garnered two awards.  
[Read more](#)

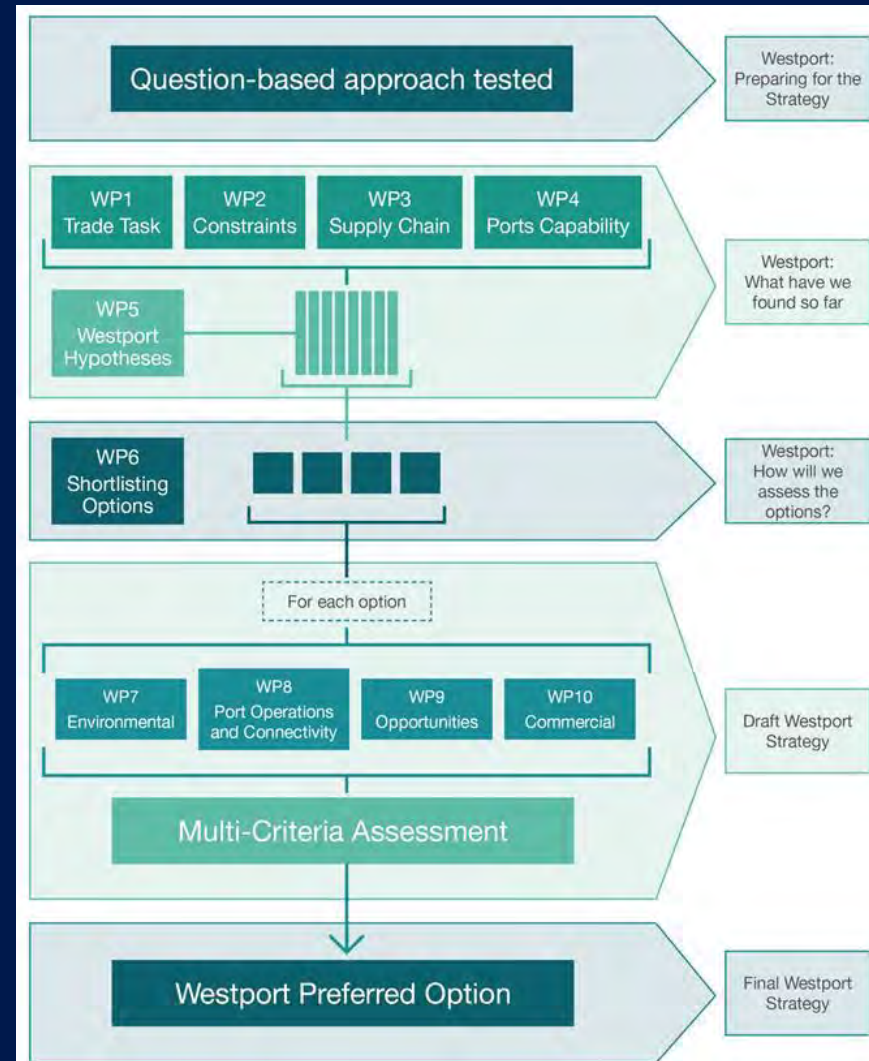
**11/05/18 - North Quay Container Terminals EOI**  
Fremantle Ports invites expressions of interest to develop and operate the intern...  
[Read more](#)

[News Archive](#)

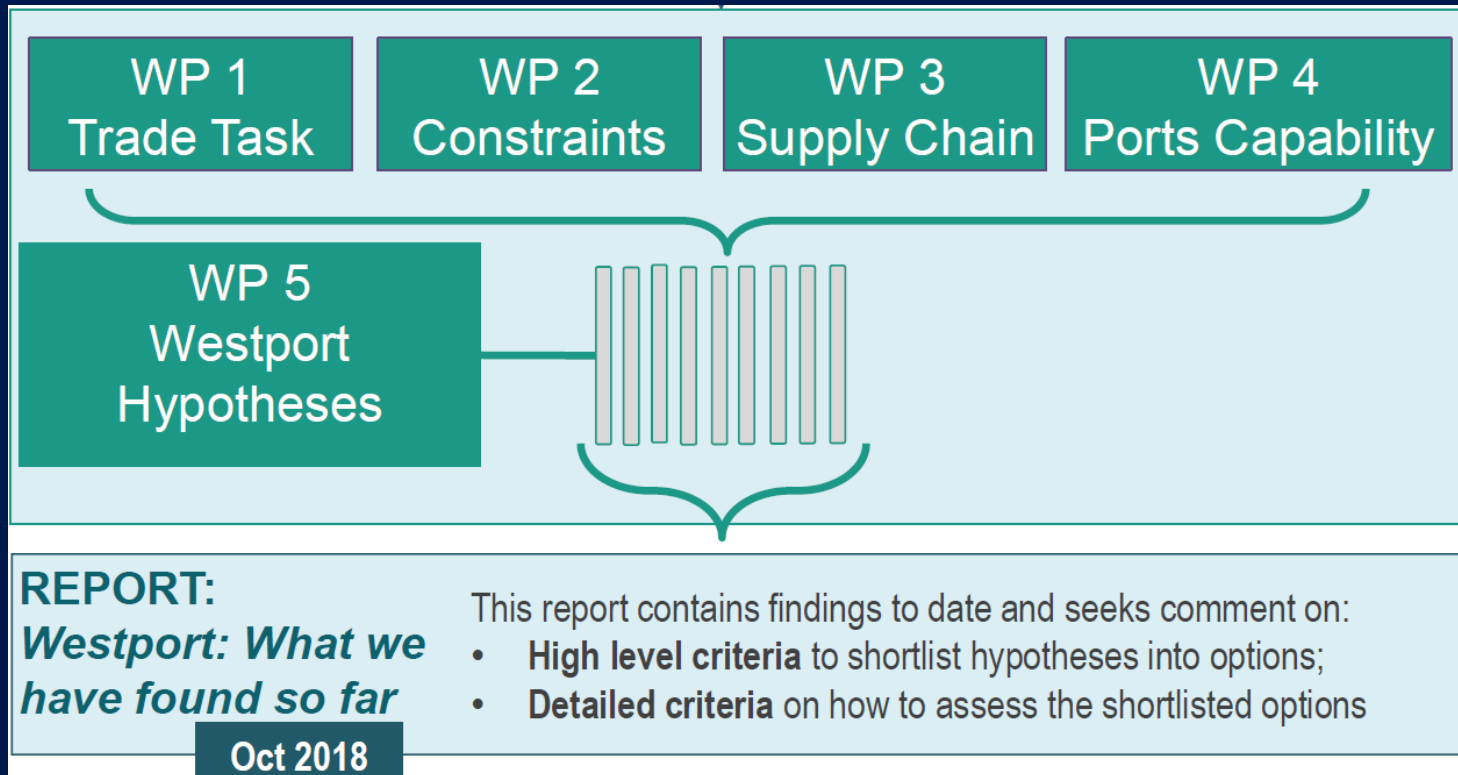
SHIPPING MOVEMENTS | HISTORY & HERITAGE | CRUISING | FREMANTLE WATERFRONT

Our Truck Control System won two awards at the 2018 WA Transport, Supply Chain and Logistics Awards held recently. - [Find out more.](#)

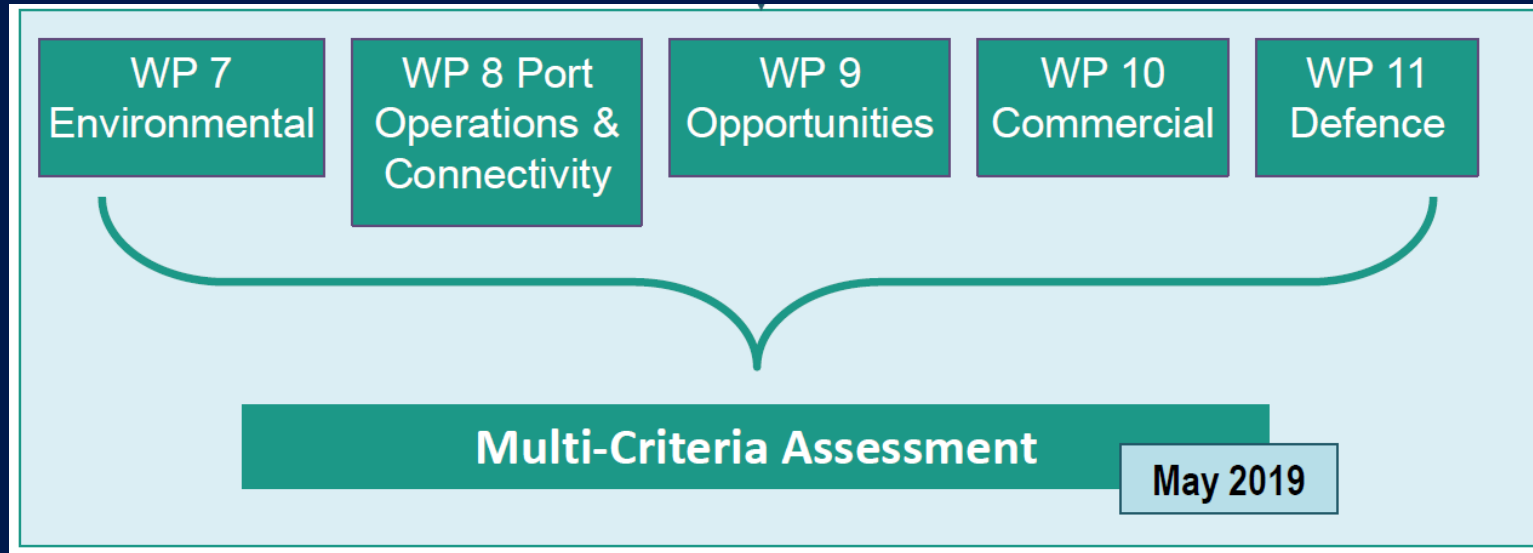
# Westport Process



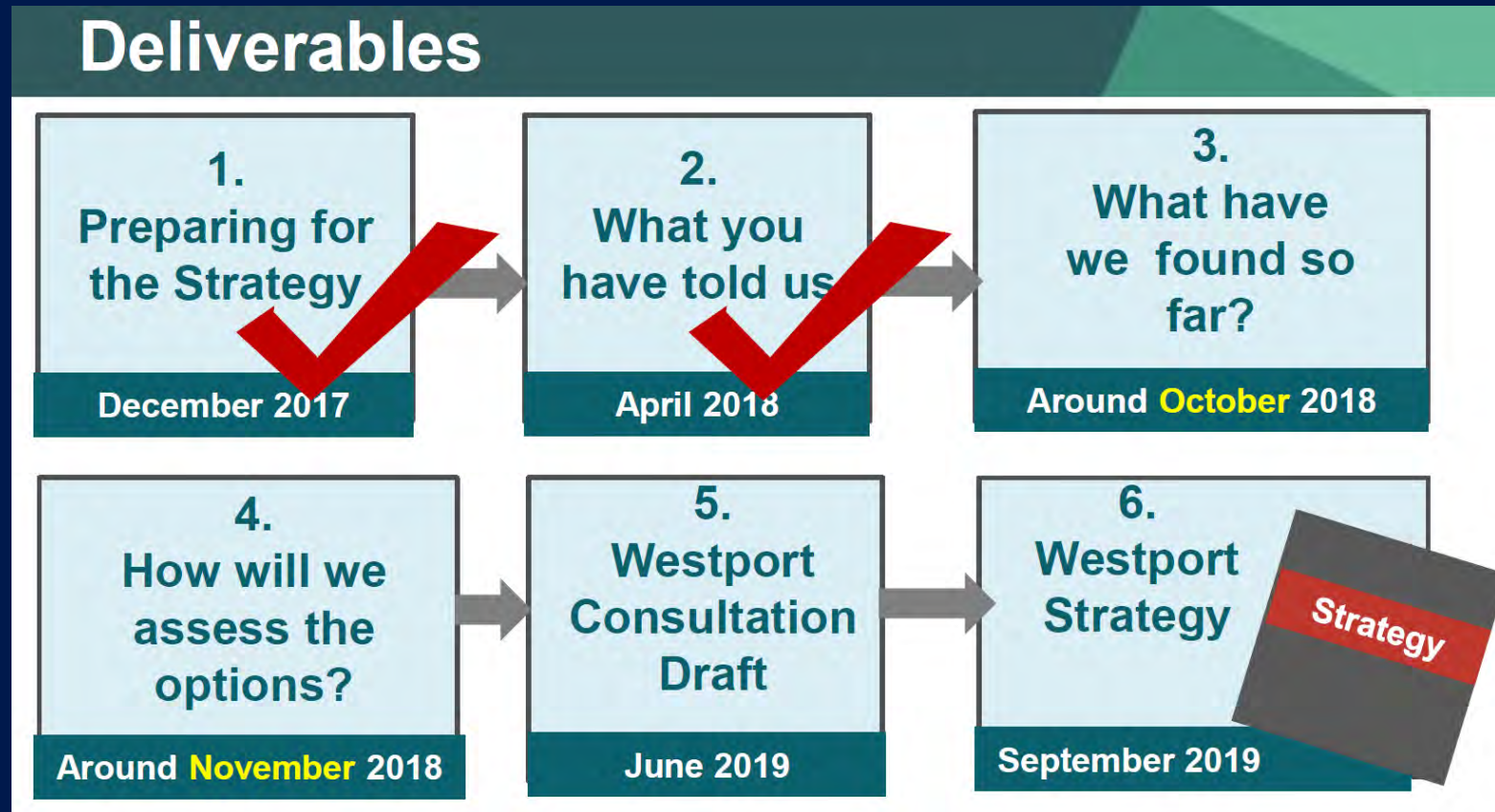
# Westport Process



# Westport Process



# Westport Process



# Many thanks

Further Queries

[michael.pal@fremantleports.com.au](mailto:michael.pal@fremantleports.com.au)

+61 – 419 954 093

