



Driving Terminal Performance and Productivity in the ASEAN Market

Johannes Leholm, Sales Engineering, Navis
ASEAN Ports and Shipping, June 2015





How does your terminal currently manage and measure terminal operations and processes?



Does your terminal drive continuous improvement with performance targets and reporting?



Do your systems provide the necessary data (and access) to implement new operational reports, metrics, and KPIs?

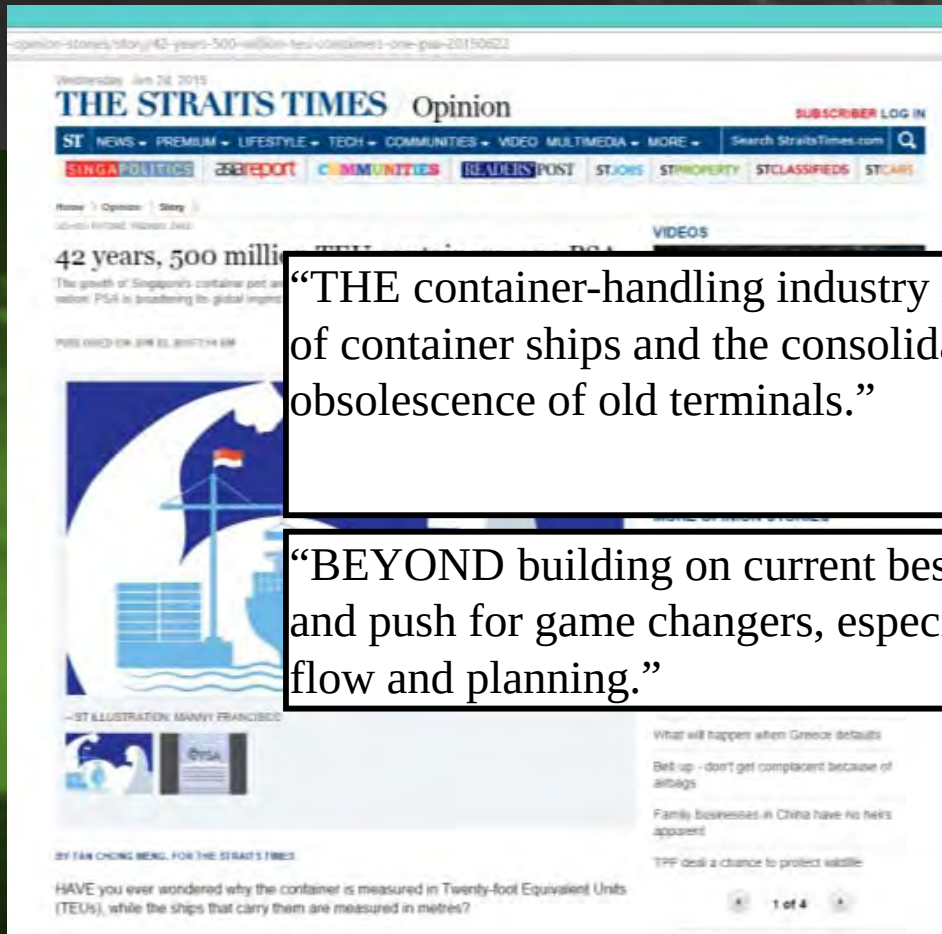


Do your reports provide sufficient feedback to detect and analyze operational bottlenecks and procedural inefficiencies?



An aerial photograph of a port terminal with numerous shipping containers and cranes, overlaid with a semi-transparent green filter. The sky is dark and cloudy.

Is your terminal prepared to adapt to a rapidly changing operational environment?



“THE container-handling industry is now in the midst of unprecedented change, with the upsizing of container ships and the consolidation of shipping liners. As a result, we will see the inevitable obsolescence of old terminals.”

“BEYOND building on current best practices, we must also continue to challenge our assumptions and push for game changers, especially in fast-mutating areas such as security and information flow and planning.”

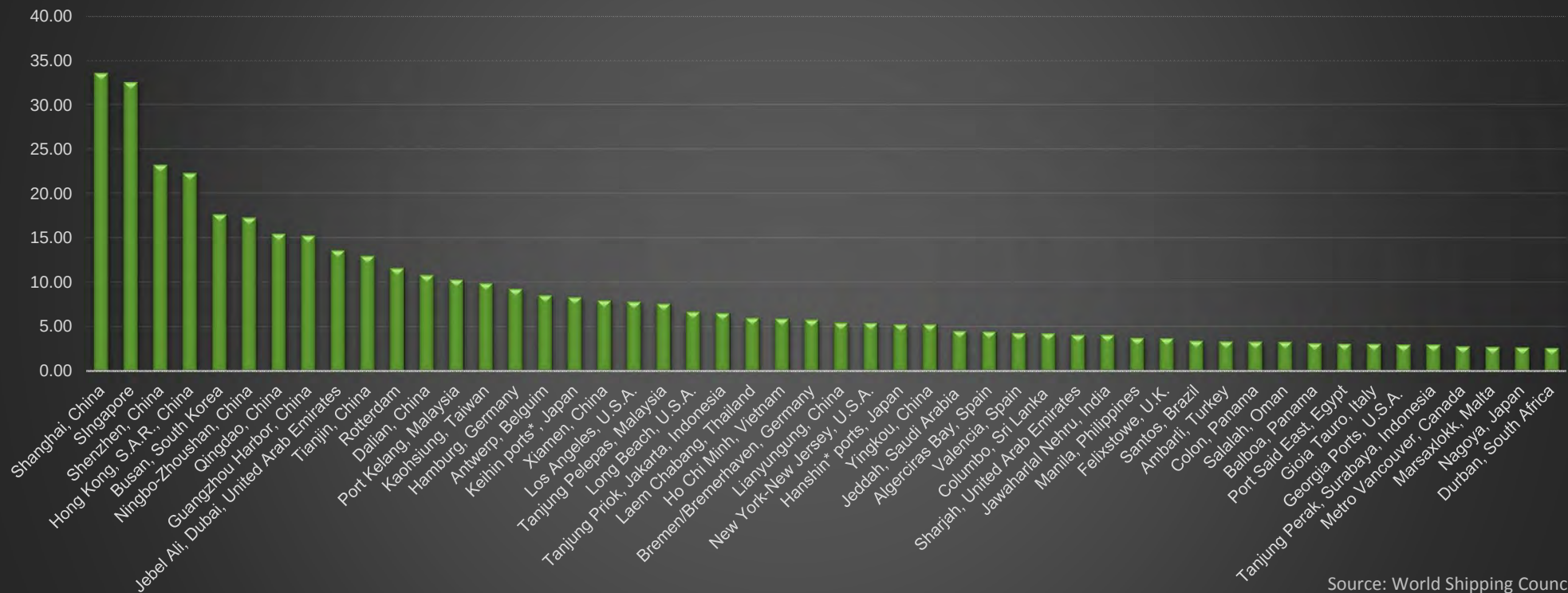
Source: Straits Times, “42 Years, 500 Million TEU, One PSA” Tam Chong Meng

Agenda

- ASEAN Terminal Operator Market Trends and Challenges
- Terminal Operational Performance Objectives
- Analytical Solutions and Strategies that Drive Productivity

Top Global Ports

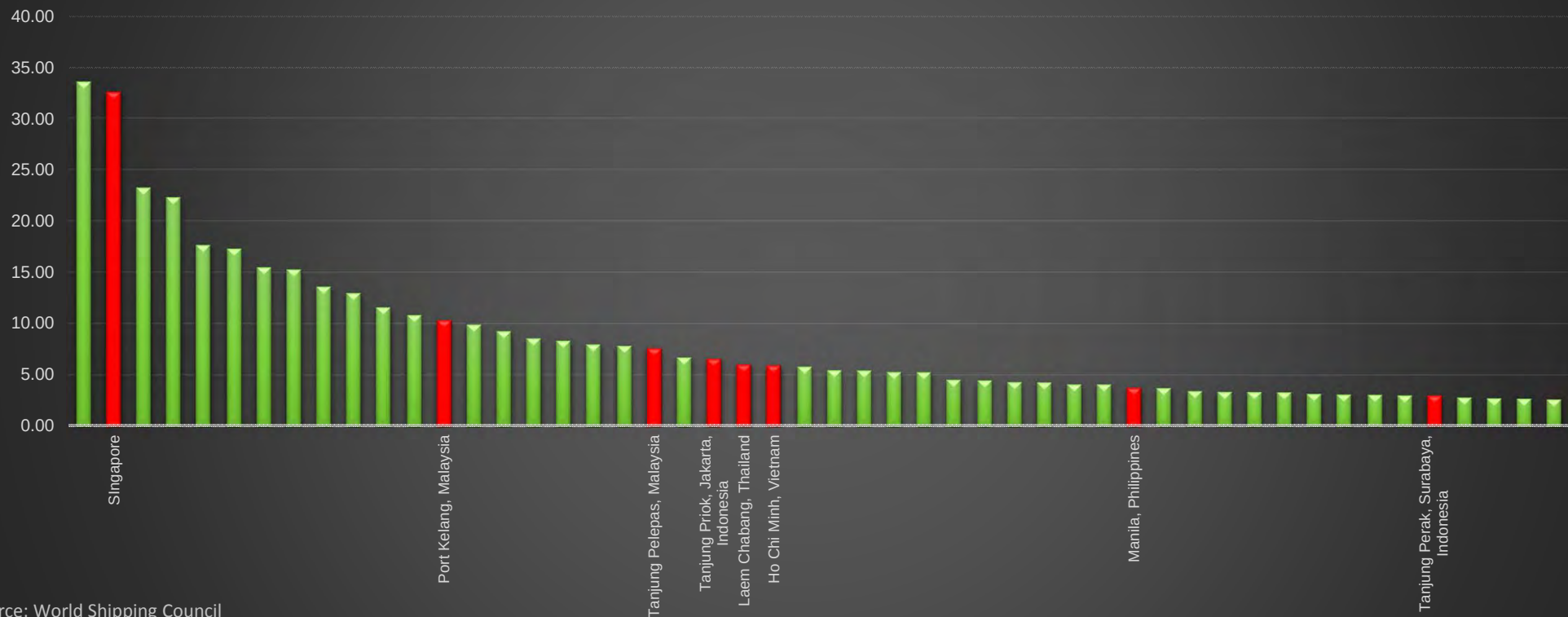
Port Size in Handled TEUs (million) 2013



Source: World Shipping Council

Top ASEAN Ports

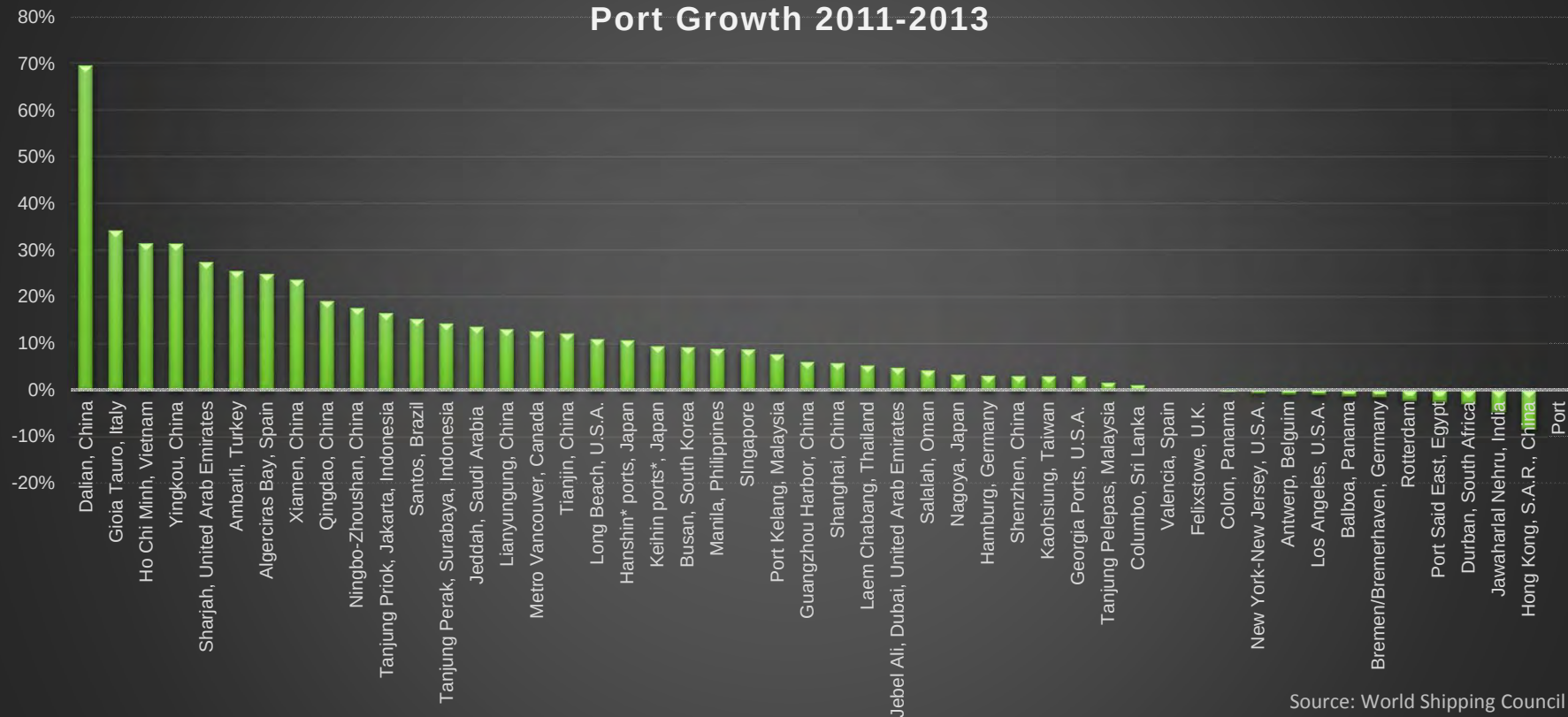
World Port Volume 2013 (Million TEU)



Source: World Shipping Council

Global Port Growth

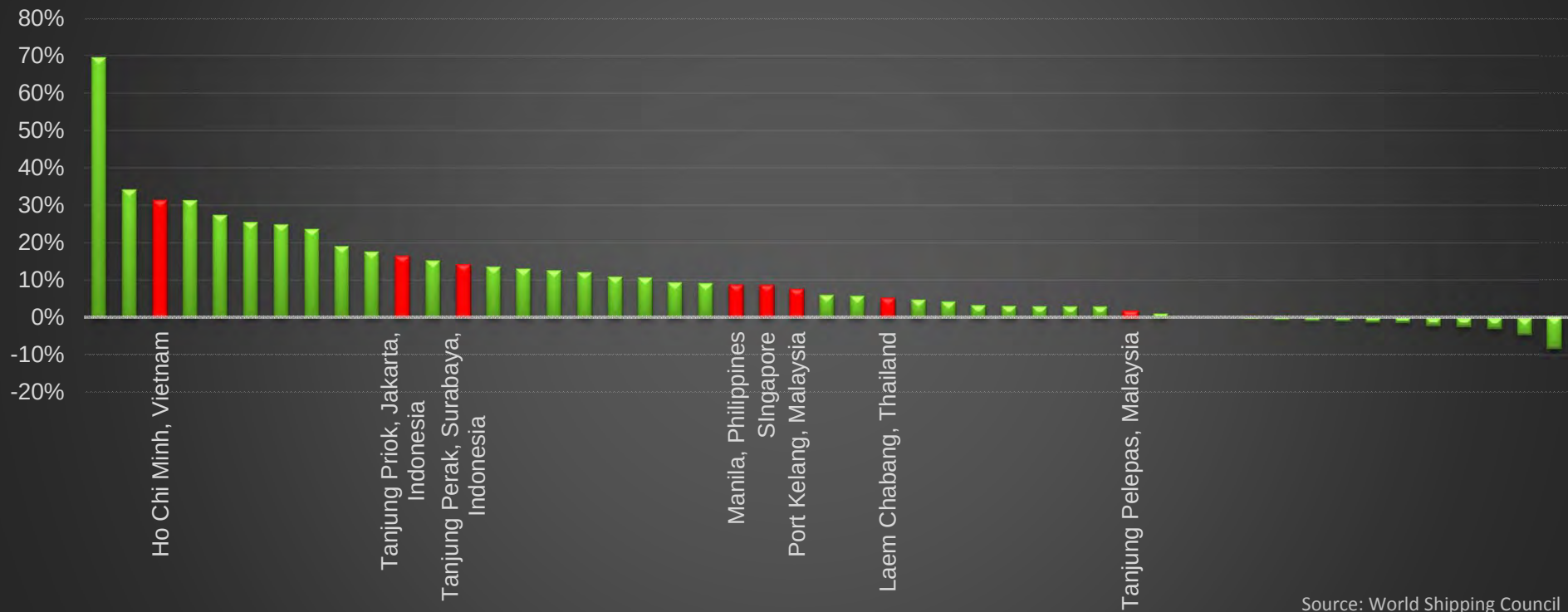
Port Growth 2011-2013



Source: World Shipping Council

ASEAN Port Growth

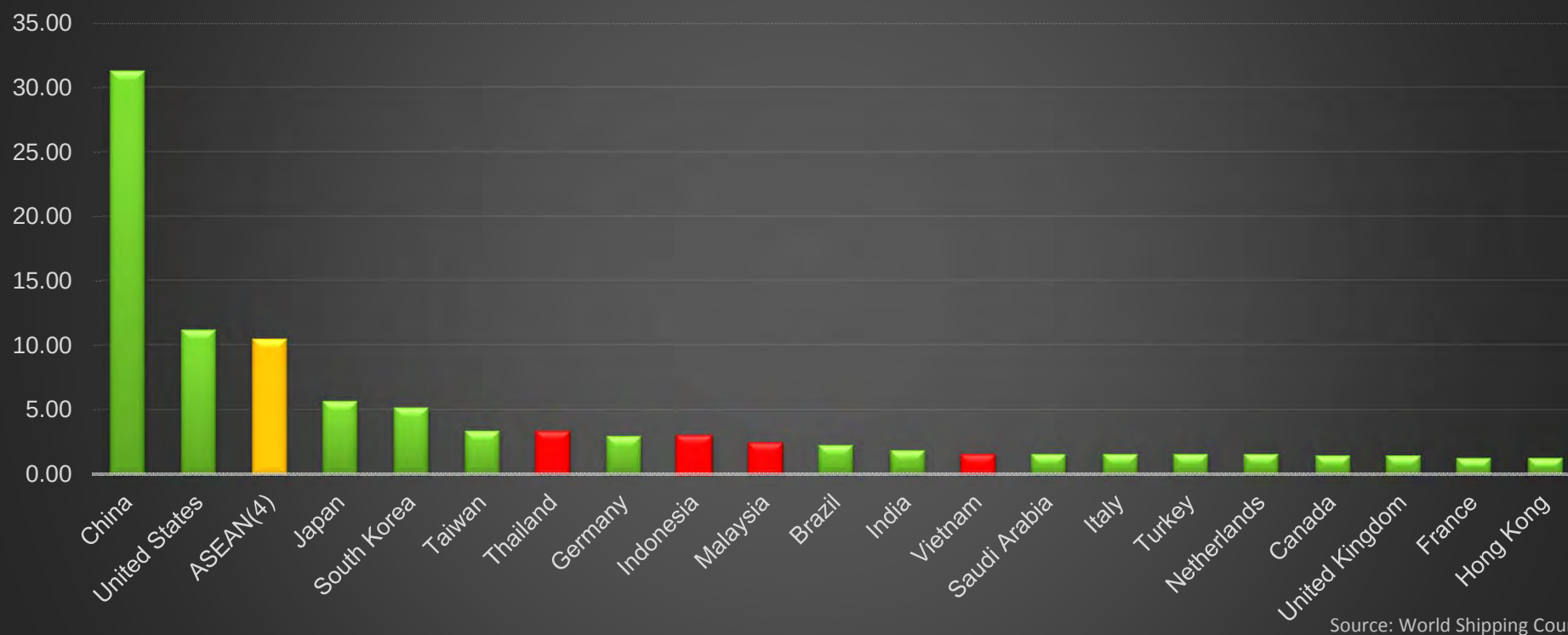
Growth 2011-2013



Source: World Shipping Council

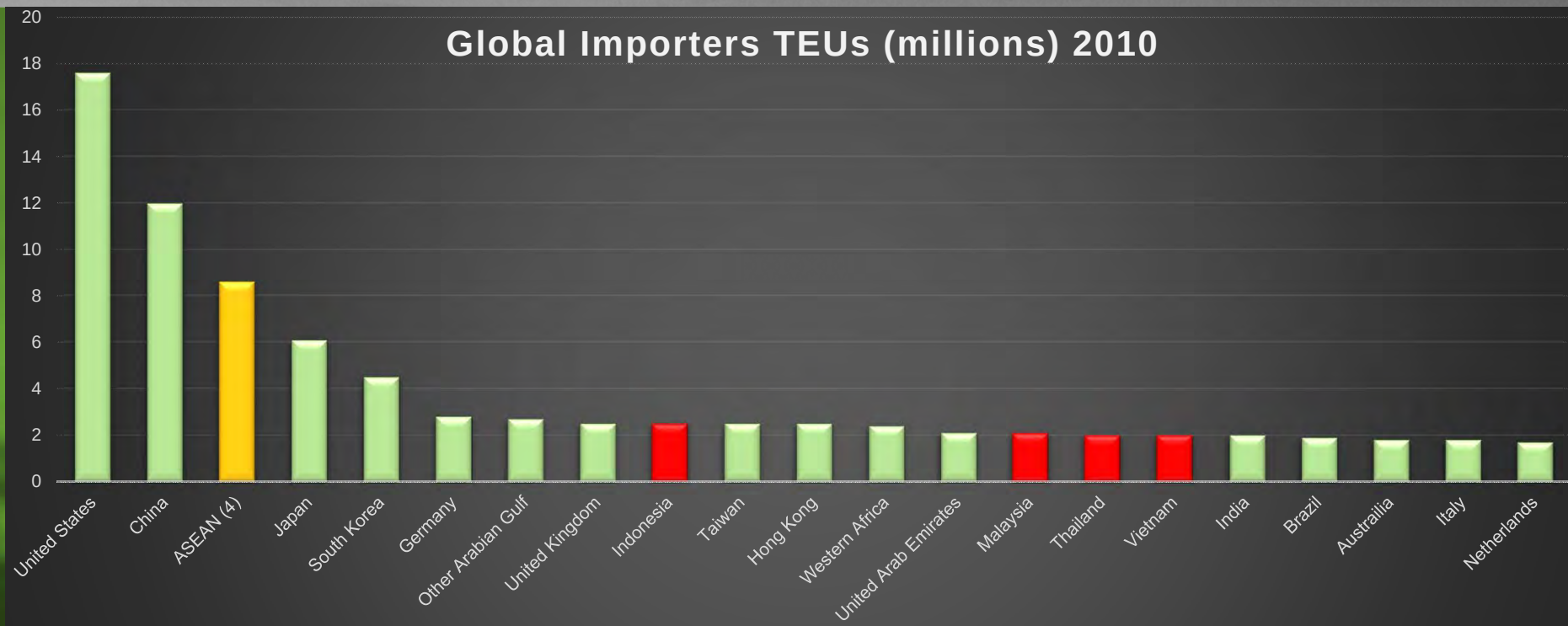
Global Exporters

Global Exporters TEUs (millions) 2010



Source: World Shipping Council

Global Importers



Source: World Shipping Council

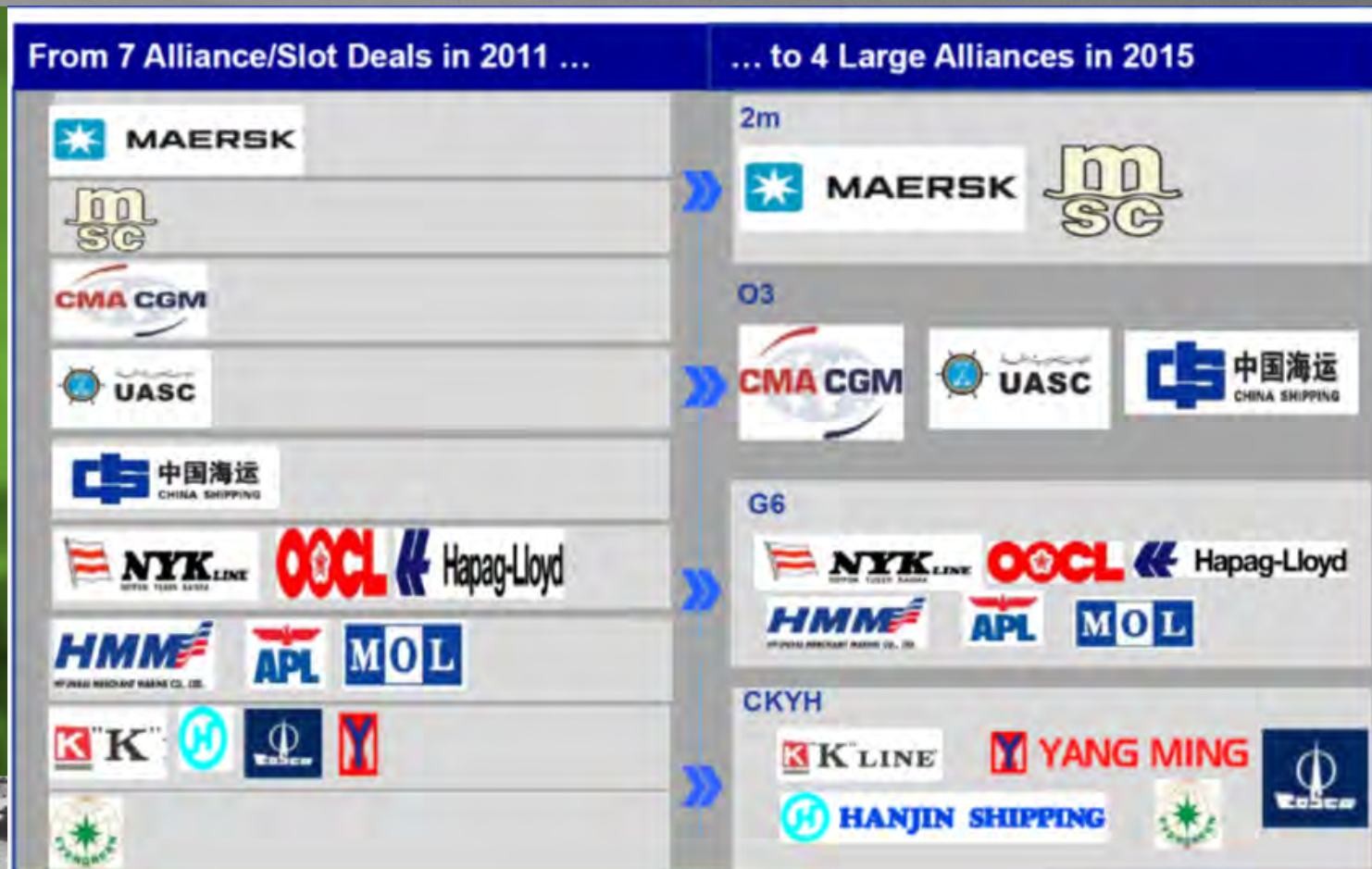
Indonesia and ASEAN Importers/Exporters Focus on Hinterland

Changes to Terminal Operations with New Technologies, Processes, and Systems

- Port Community Systems
- Auto Gates / OCR / LPR
- Truck Appointments
- Truck Staging
- Barge/Feeder Operations
- On Dock Rail Operations
- Inland Container Depots and Off Dock Rail

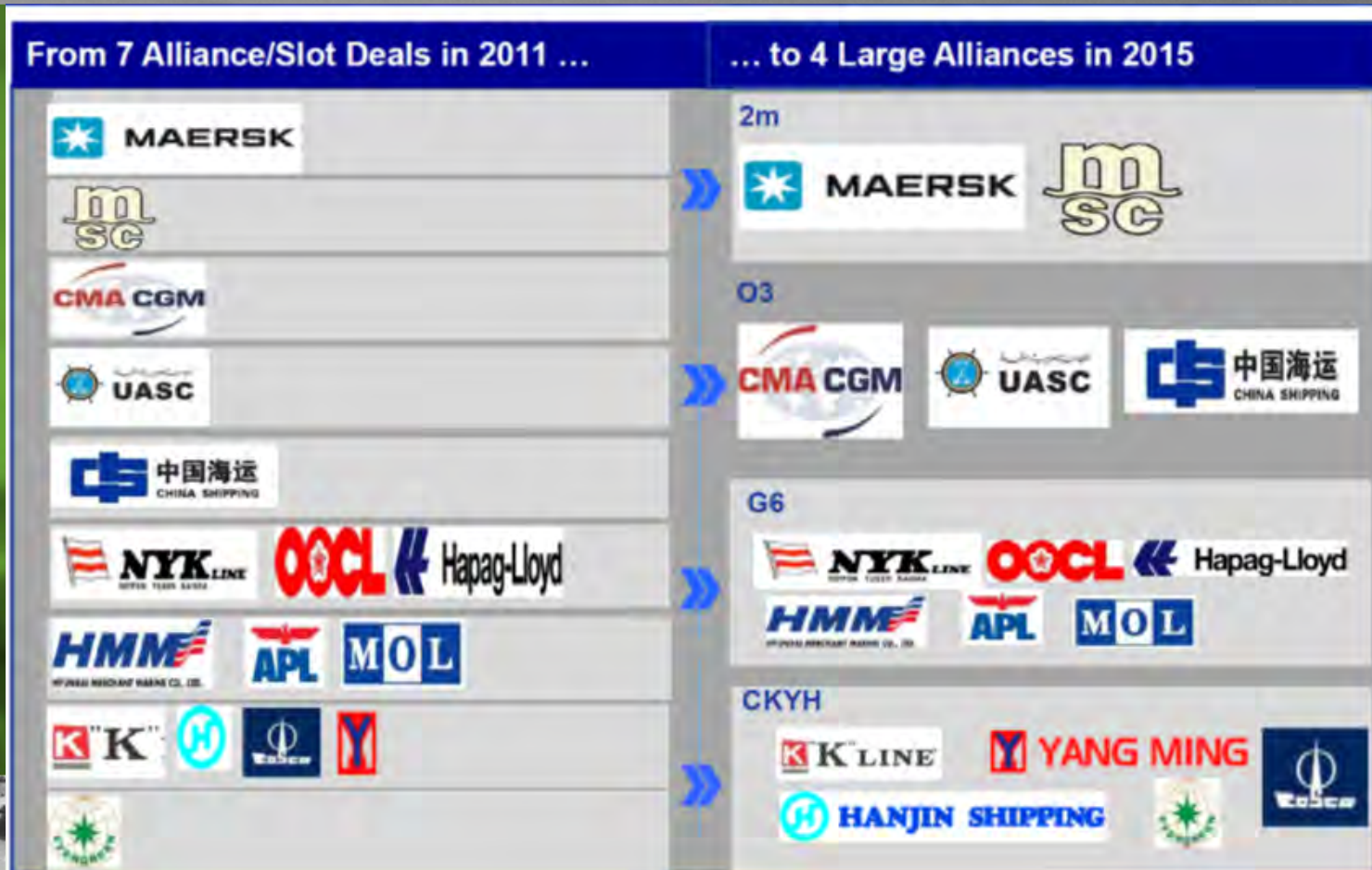


Vessel Line Consolidation



Source: Ronald D. Widdows Associates

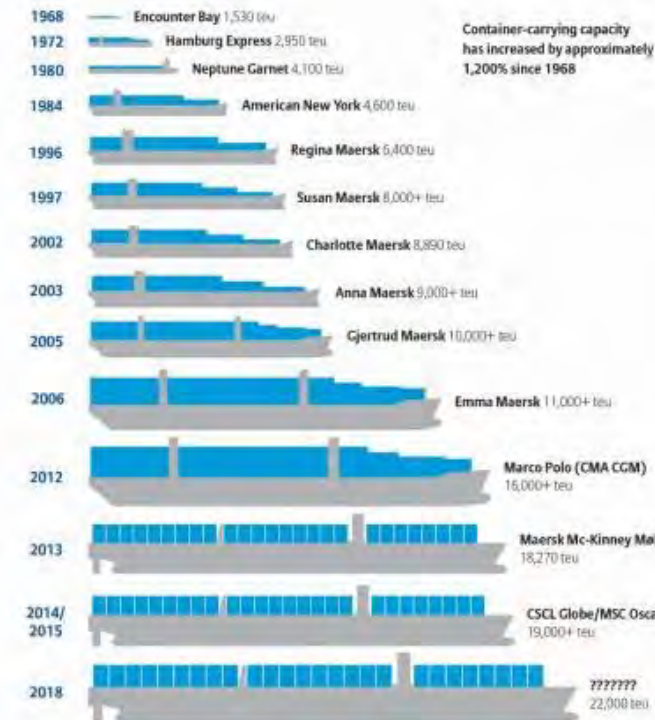
Vessel Line Consolidation



Source: Ronald D. Widdows Associates

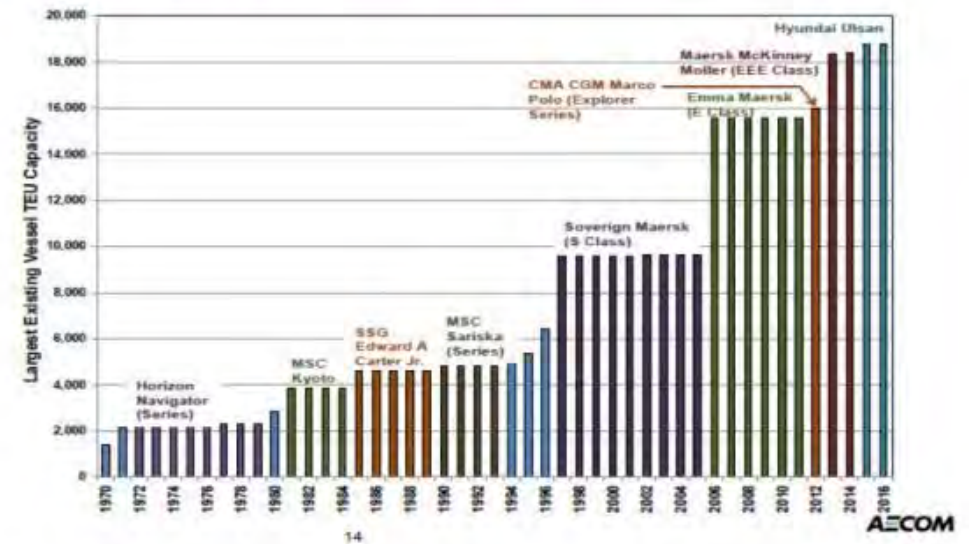
Vessel Size Increase and Cascading Impact

50 years of Container Ship Growth



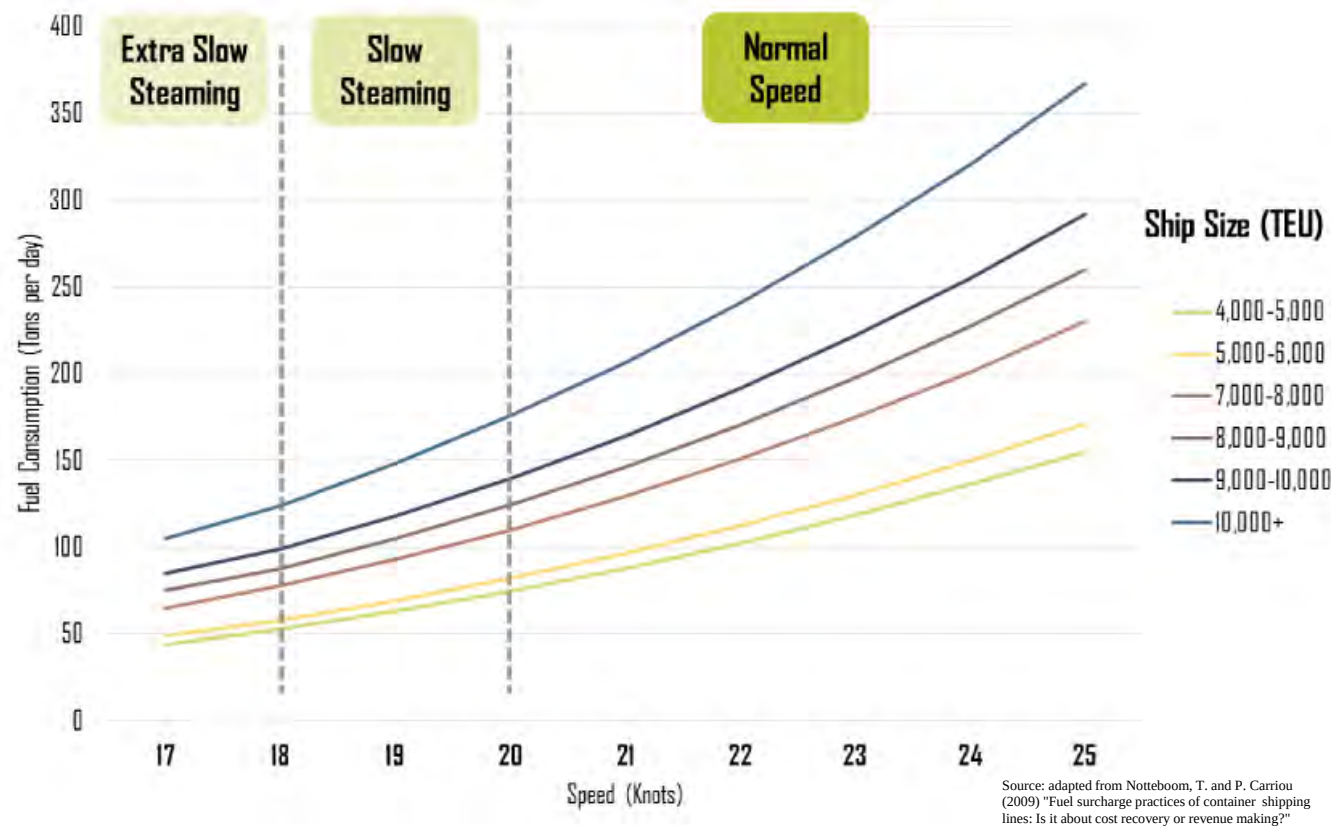
Graphic: Allianz Global Corporate & Specialty
Approximate ship capacity data: Container-transportation.com

Largest Vessel Size over Time

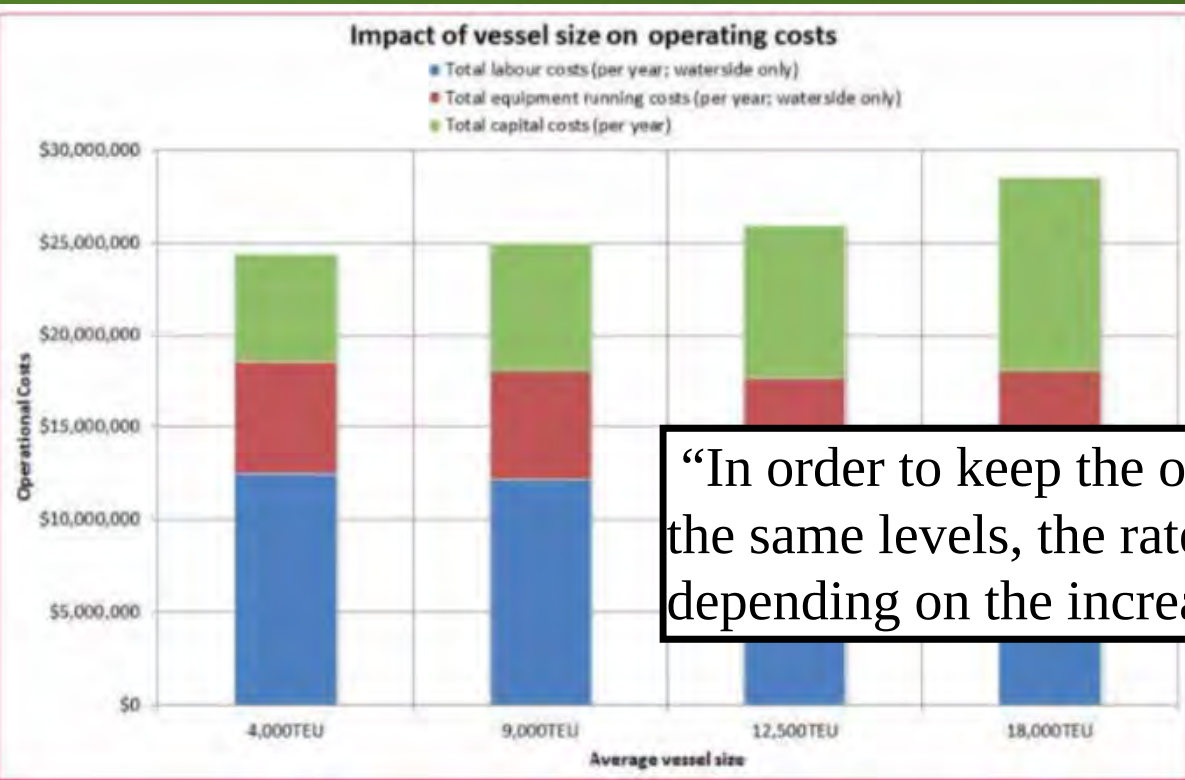


Source: Sisson, M. (2013). "Impact and Opportunities from Global Change." Presented at AAPA Facilities Engineering Seminar on November 6, 2013.

Vessel Slow Steaming the New Normal



Operational Impact of Larger Vessels

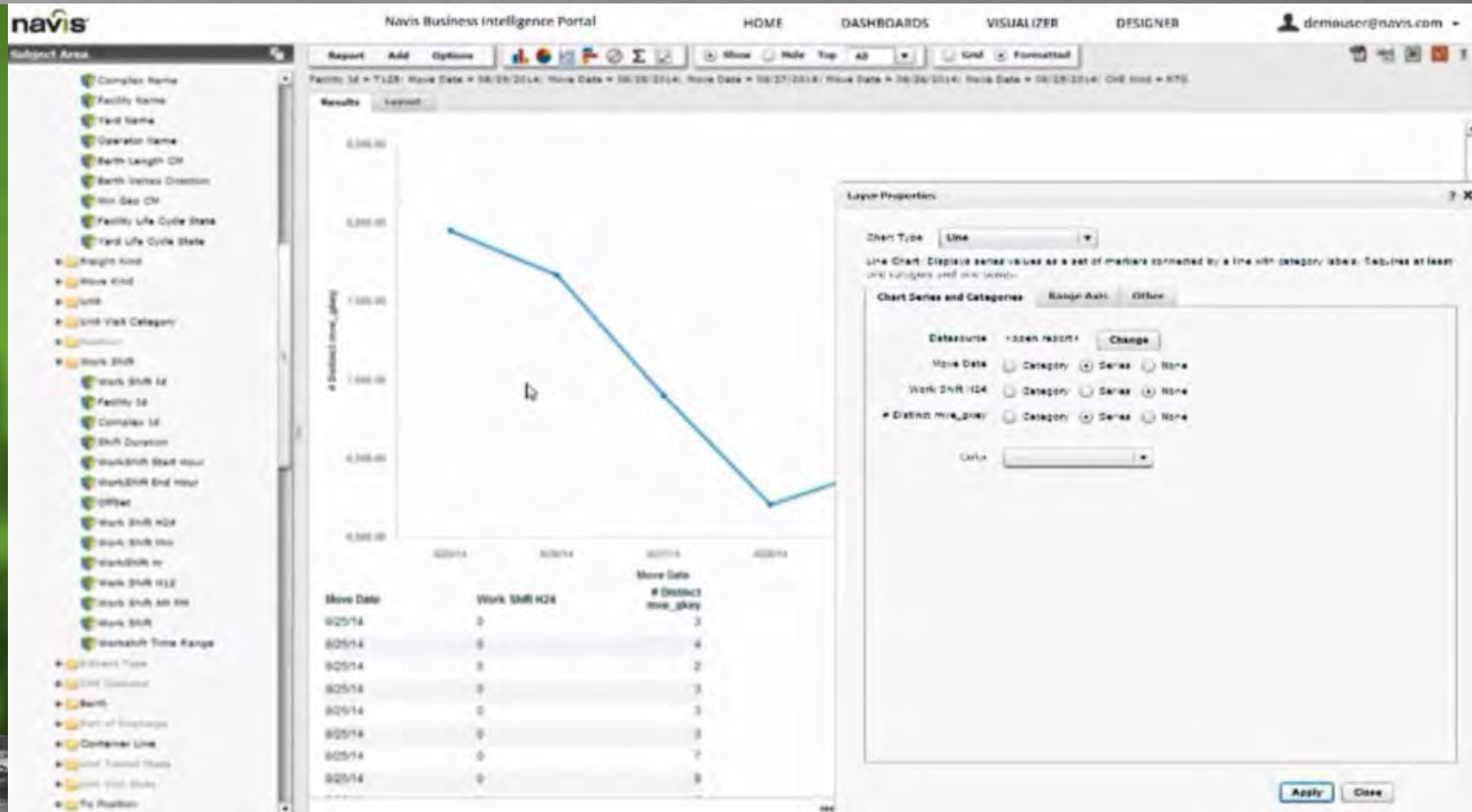


“In order to keep the operational costs at the same levels, the rates need to increase by 3 – 17 percent depending on the increase in vessel size.”

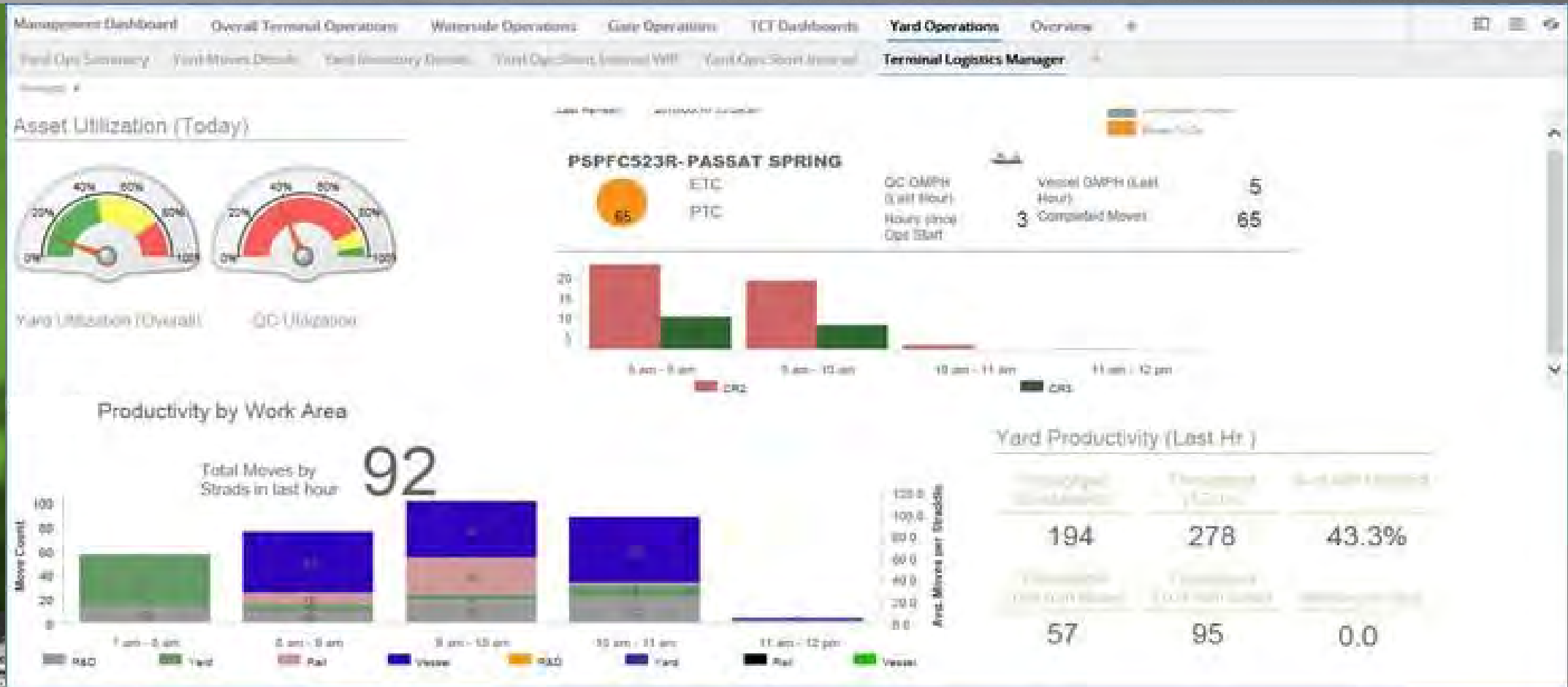
Source: Dr Yvo Saanen “Mega ships: positive asset or terminals’ worst nightmare?”



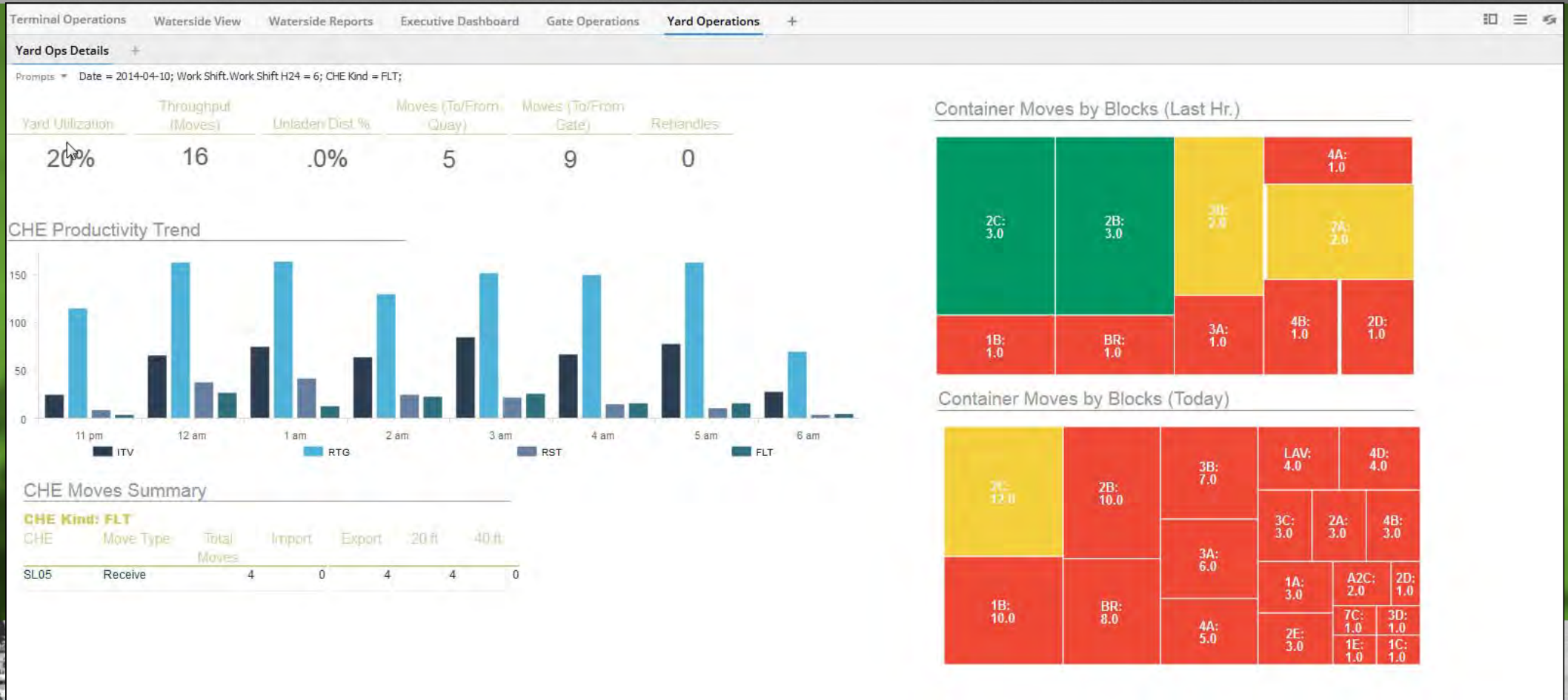
Empower Operations with Intuitive Tool



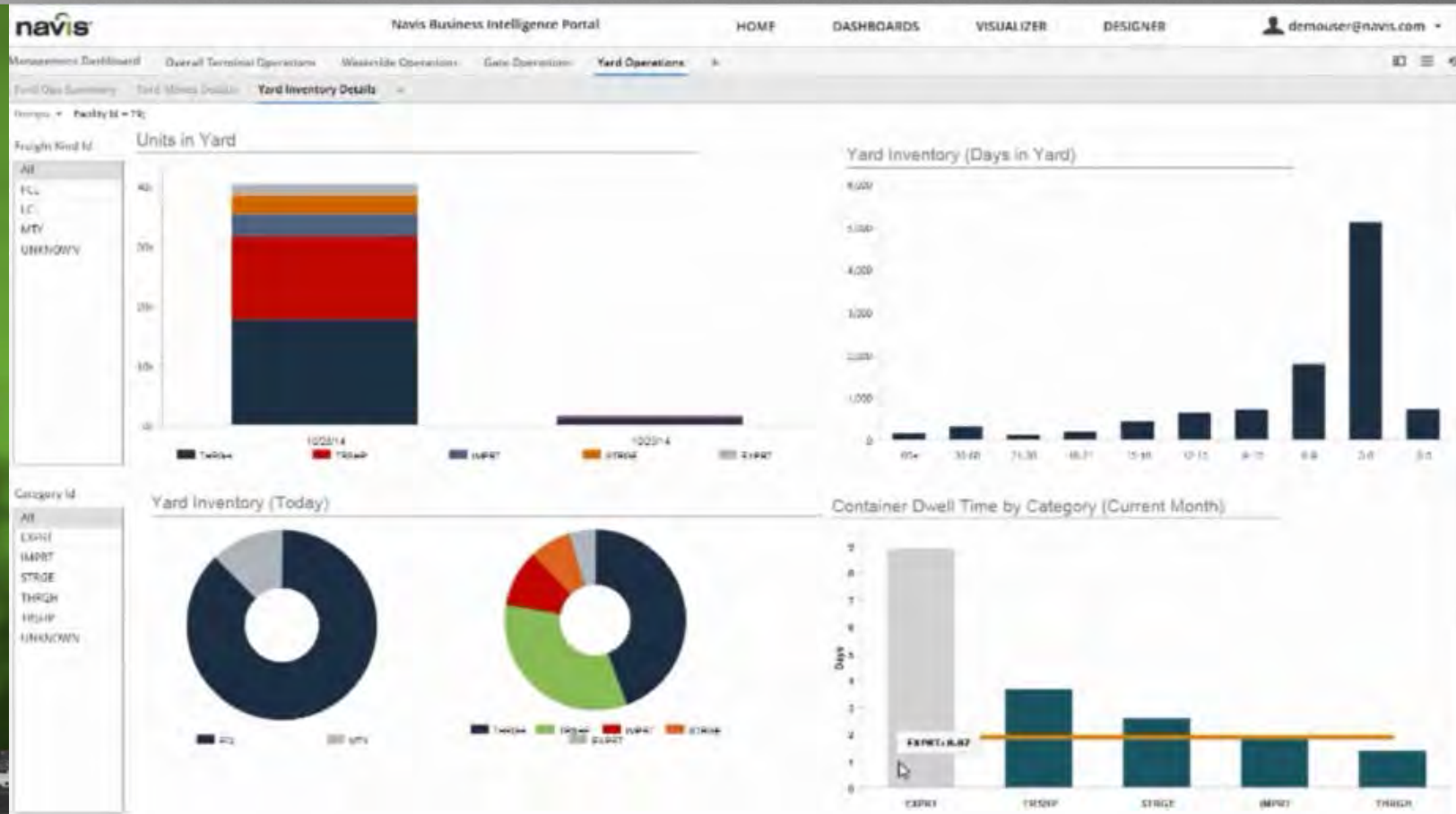
Overall Operations Dashboard Case



Yard Operations Dashboard



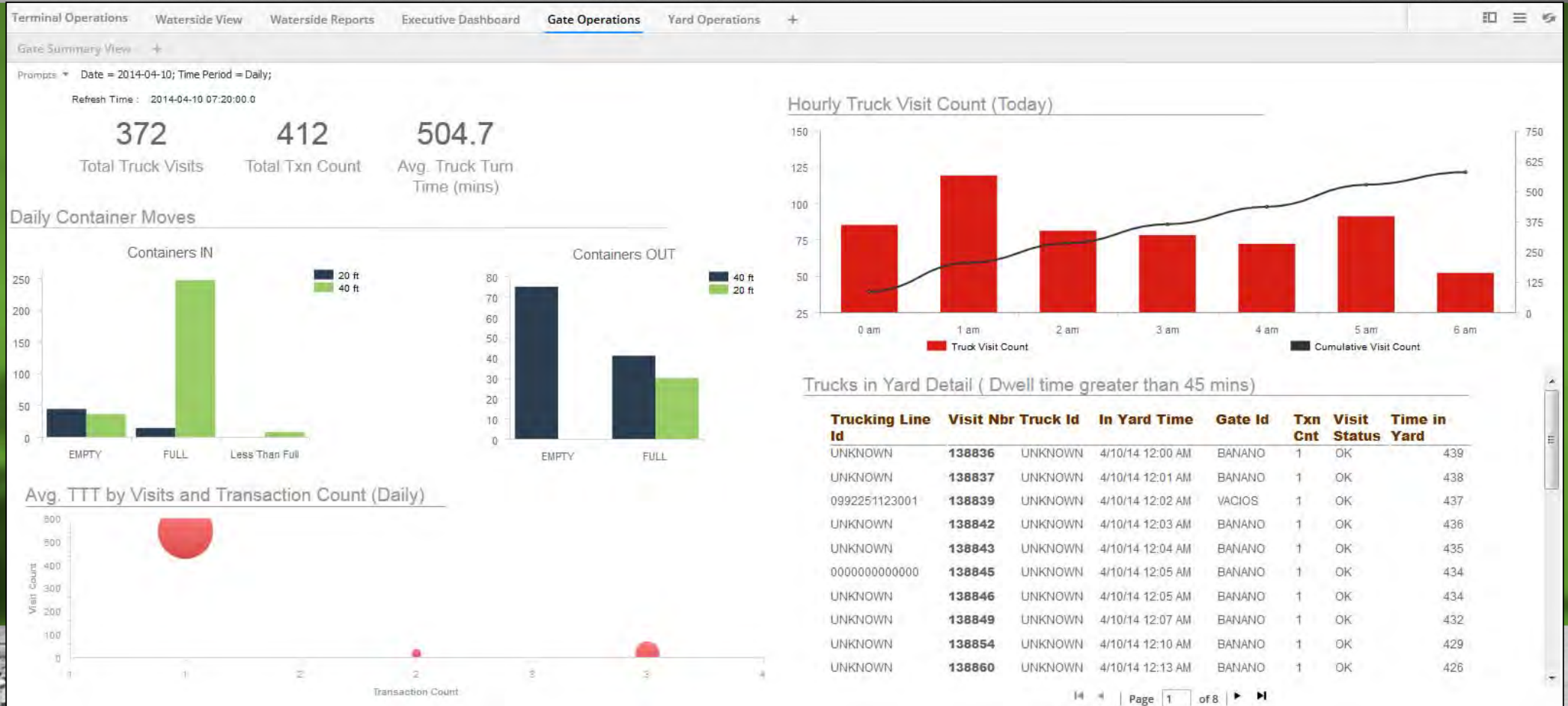
Yard Operations Dashboard



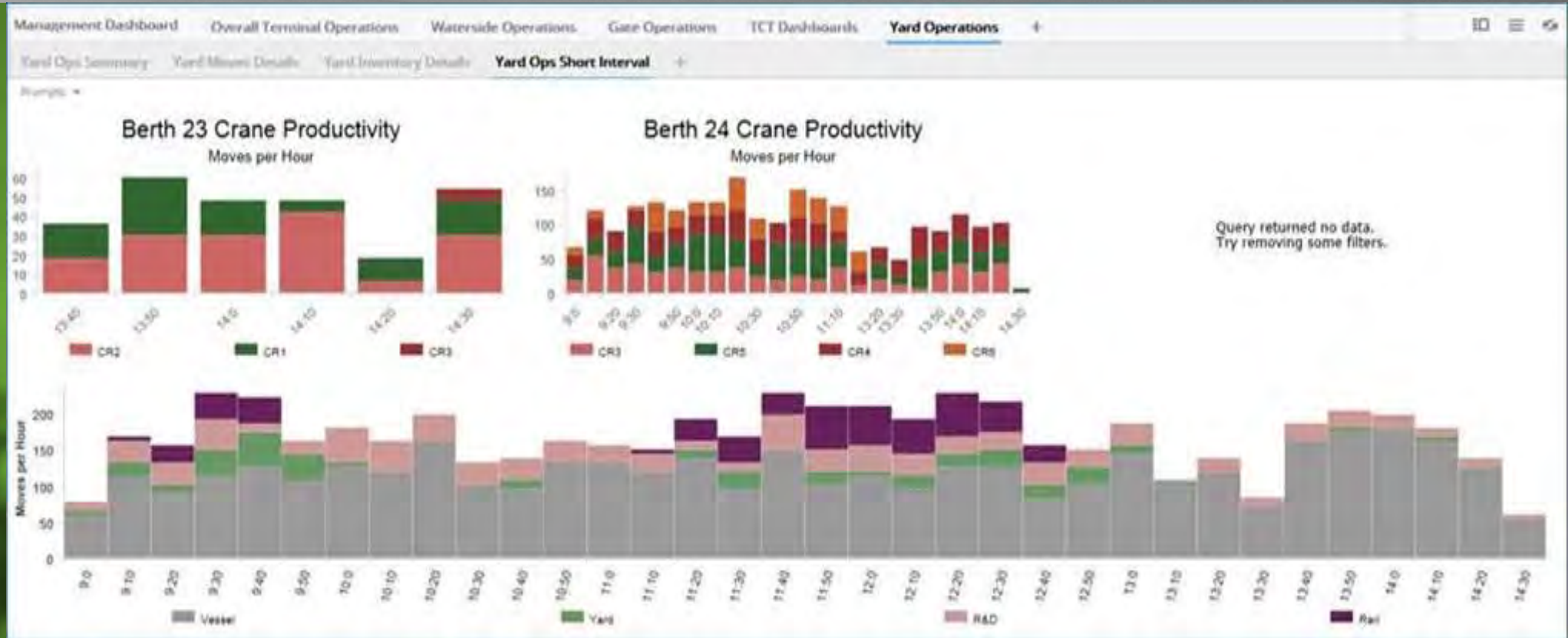
Yard Utilization Dashboard



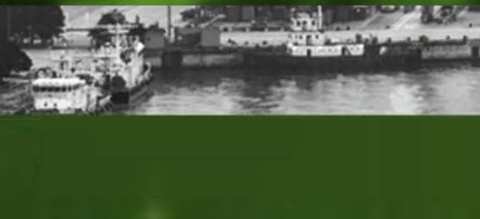
Gate Operations Dashboard



Berth Operations Dashboard

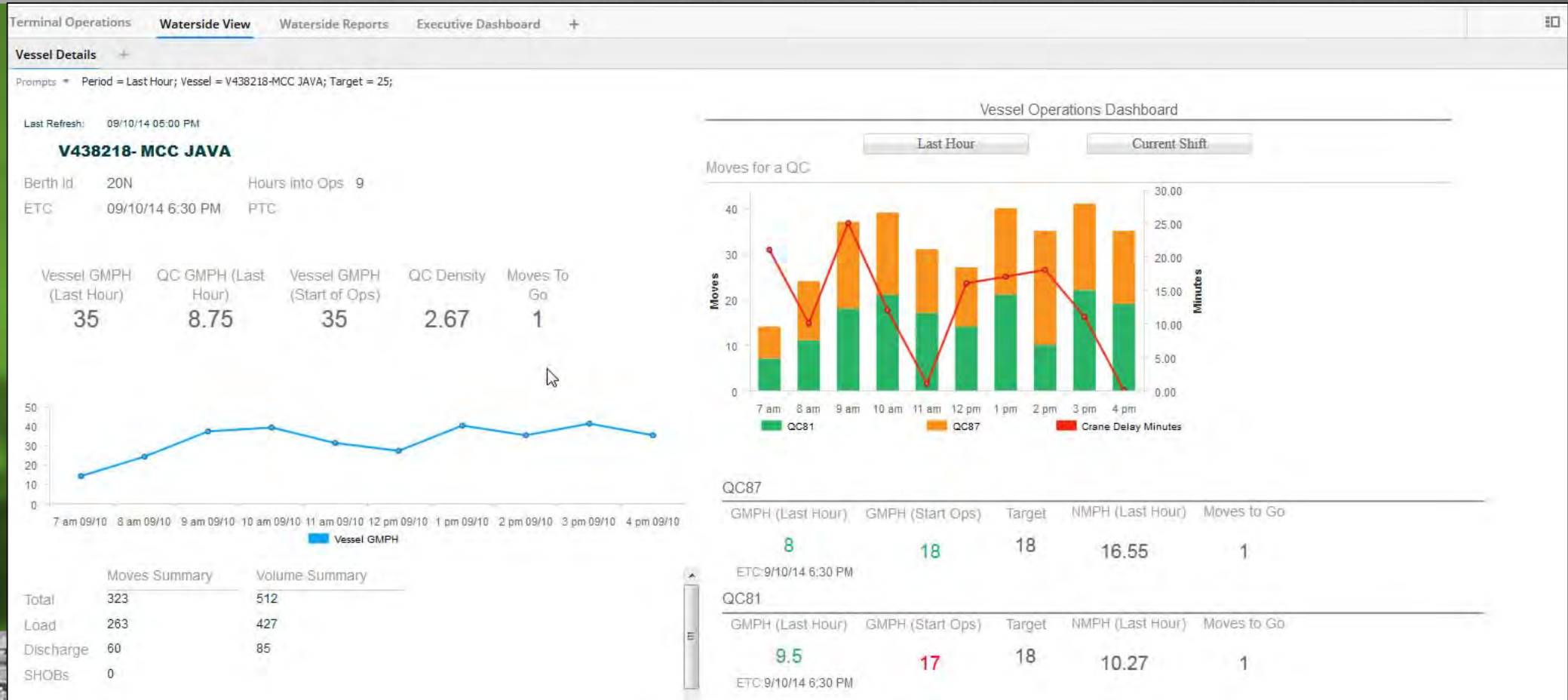


Waterside Operations Dashboard





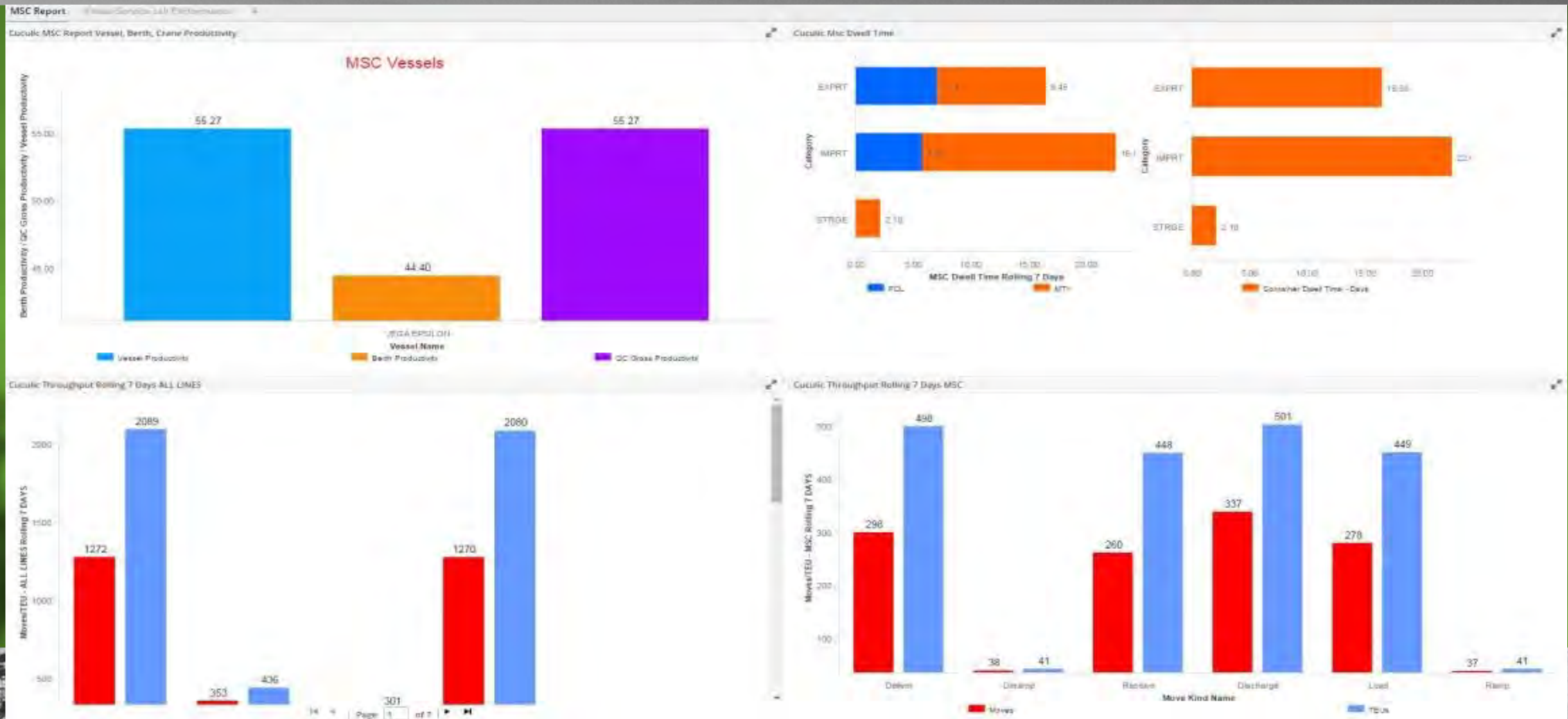
Vessel Operations Dashboard



Custom Dashboard for Target Audience



Carrier Specific Dashboard



Automated Equipment Monitoring Dashboard

navis

Framework Team

Terminal Monitor: Alarm Panel

Alarm Panel

Alarm Map

Welcome JFinley | Log Out

Auto-Refresh: ON ①

② —

Show Filter

MY ALARMS

Exception	Description	Work Instruction	Work Assignment	Move Purpose	Assigned User	CHE	POW	Time	Priority ③	⑤
Abort by ASC11W	Error on Spreader	BBCU2204074	13615	INTRASTACK	JFINLEY	ASC01	QC71	11:55	② Medium	Resolve
Abort by ASC11W	Transfer Zone not..	BBCU2204074	14723	INTRASTACK	JFINLEY	ASC01	QC44	10:35	④ High ①	Resolve

GENERAL ALARMS

Exception	Description	Work Instruction	Work Assignment	Move Purpose	Assigned User	CHE	POW	Time	Priority	
Dispatch Rejected	ASC Not Dispatched	BBCU2204074	27439	INTRASTACK	SSMITH	QRZ01	PV41	14:35	③ Low	Resolve

RESOLVED ALARMS

Exception	Description	Work Instruction	Work Assignment	Move Purpose	Assigned User	CHE	POW	Time		
Abort by ASC11W	Error on Spreader	DDEJ3604156	13637	INTRASTACK	JFINLEY	ASC03	WC71	09:55		

Notes

① Users may toggle button to select auto-refresh ON or OFF

② Users may perform filter actions:

- Group by role; i.e., EC Control, Yard Planning, etc.
- Create a unique filter

③ Users may sort priorities in the list

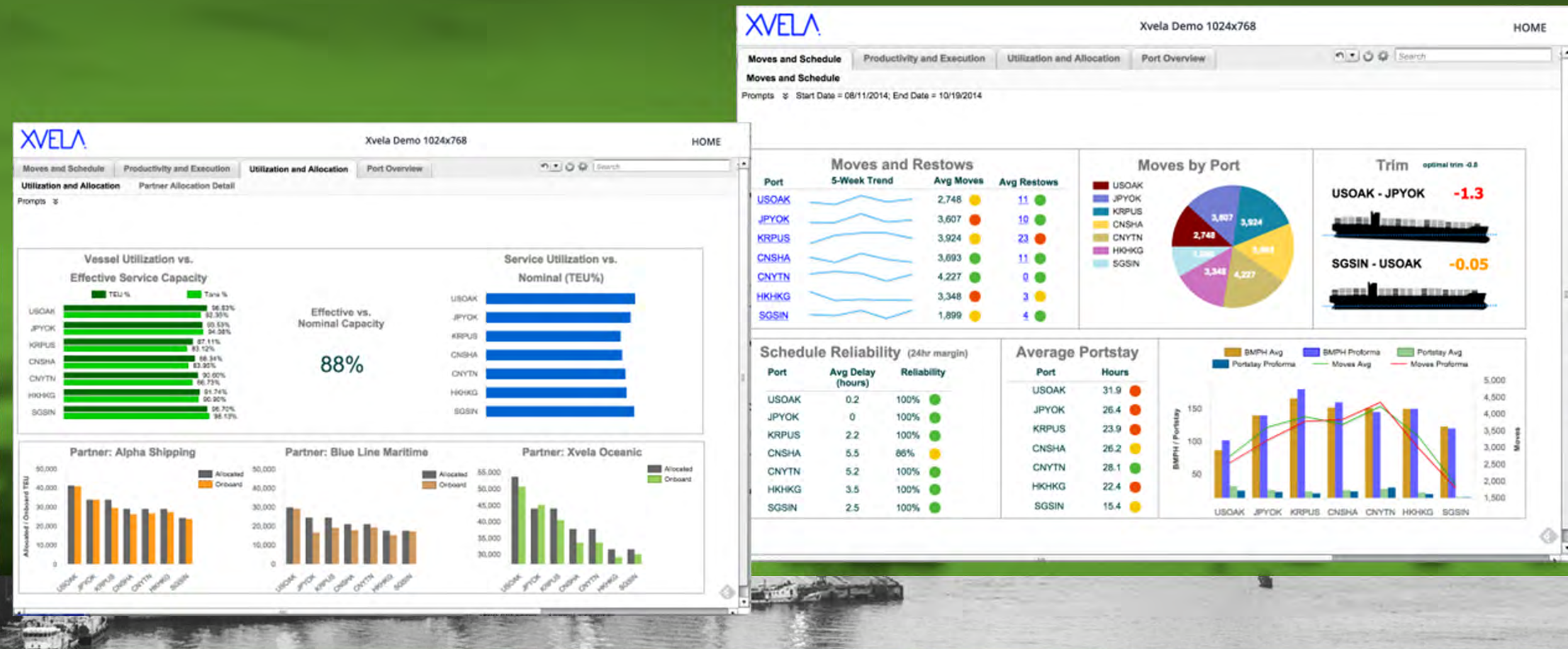
④ Priority icons use shape, numbers and color To impart the severity of a priority

⑤ Users may resolve an exception issue by clicking on the Resolve button and completing the provided form fields

Automated Equipment Monitoring Dashboard



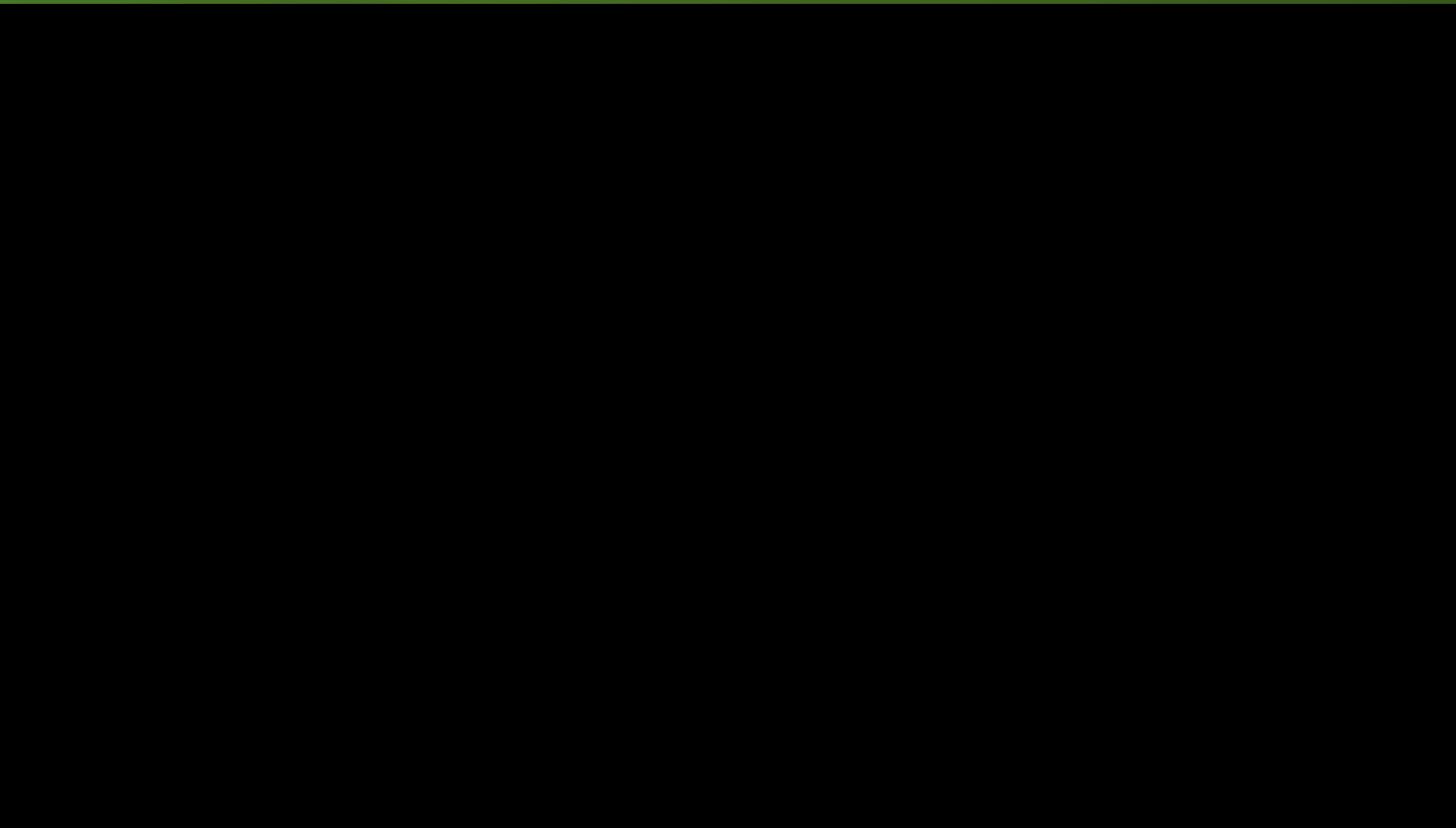
Vessel Carrier Dashboard and Enhanced Data Exchange



Upgrading the Operation



Upgrading the Operation





Thank You!

Johannes Leholm, Sales Engineering, Navis
ASEAN Ports and Shipping, June 2015

