Marine Terminal Management Training Program

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YTI YUSEN TERMINALS

CERES®

About Me

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Doug Hansen, Director of Strategic Planning

- 1998 Graduate of the University of Rhode Island (Marine Affairs/Poli Sci)
- 16 Years in the Industry
- Began in Philadelphia in Breakbulk Terminal and Shipping Operations
- 12 Years in Container terminal operations, design and commercial management
- Developed terminals in Zeebrugge, Belgium; Luanda, Angola; Santos, Brazil
- Lived most of the past 12 years in England, Belgium and Holland
- The last 2.5 years with YTI (Ceres) in Los Angeles – project to upgrade the terminal to accommodate 13k teu vessels
- Last ½ a year in NJ working on Business Development for Ceres/NYK Ports

Our History

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1958
Ceres Founded in Chicago

1966
Canada Operations Began

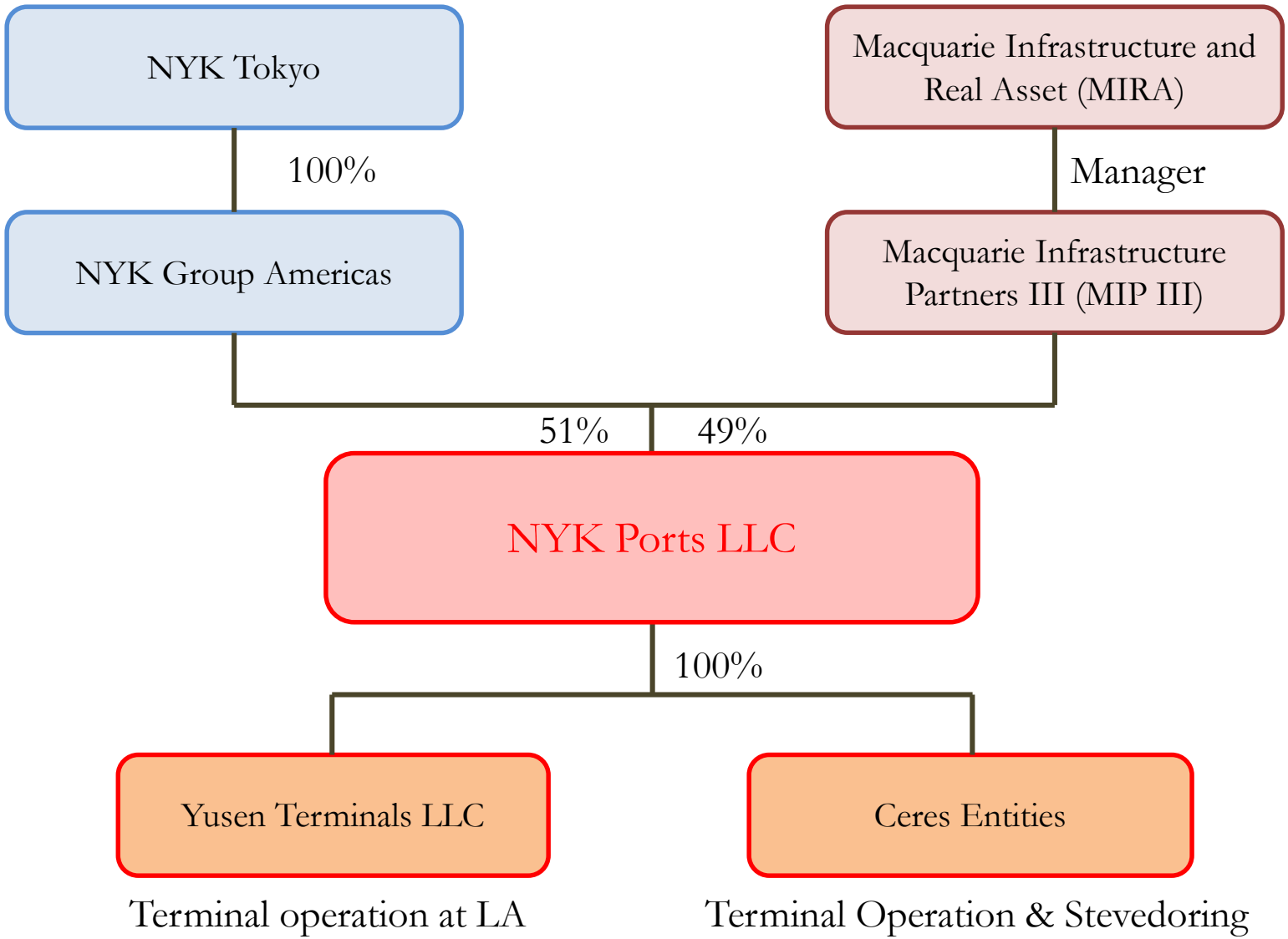
1991
Yusen Terminals Inc. (YTI), a wholly-owned subsidiary within the NYK Group opened as a full service container terminal in the Port of Los Angeles with a 25 year lease

2002
Ceres acquired by Nippon Yusen Kaisha (NYK) & Operates as a Wholly-Owned Subsidiary Within the NYK Group of Companies

2013
YTI announces plan to redevelop terminal in Los Angeles. Ceres and YTI brought together under single CEO in order to develop corporate synergies

2015
NYK sells a minority share to Global Infrastructure investor Macquarie to form NYK Ports to manage all North American terminal and stevedoring assets

Recent History



Container, Cruise and RoRo

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SoCal Terminal Map

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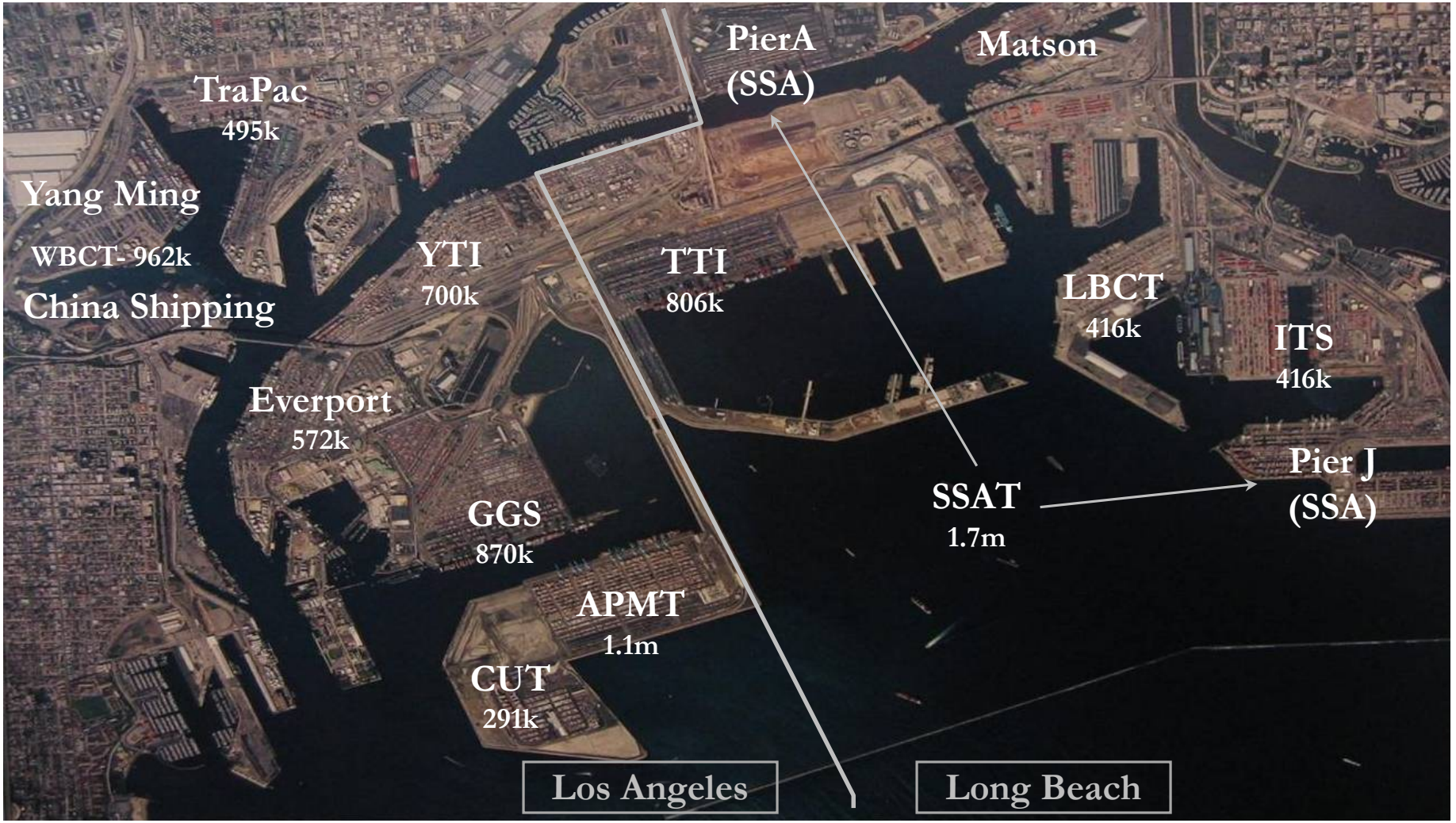

Big Picture Issues in the Business

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Exciting times in the industry……

- Panama Canal Expansion
- Investment/Divestment Activity in Terminals: Trapac/YTI in LA, APMT in HOU and JAX, not to mention international acquistions
- M&A in the Liner Trade: Hapag-CSAV and the rumors of COCSO-CSCL
- Infrastructure Investment Race: Which USEC/Gulf Ports will win?
- Labor Contracts: What is the impact of the 2014/15 ILWU contract? Will the ILA and USMX negotiate an extension?

Container Terminal Planning & Ops

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3 Major Challenges Facing the industry today and in turn, directly linked to day-to-day challenges in container terminal planning and operations:

- Liner Alliances
- Big Ships
- Cargo Shifts from USWC to USEC/Gulf
  - Affects bi/tri-coastal operators
  - Affects Port Authorities

Alliances

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G6, 2M, O3, CKYH-E Alliances add complexity

What do these alliances mean?

- Larger Vessels : 13kteu + in LA/LB today, 18kteu tomorrow?
- Liner flexibility in terminal selection, Shippers demands of Lines
- Intermodal utilization is a challenge with cargo spread across multiple terminals
- Truck Capacity in question

What is your view on port capabilities, space for chassis pools, empty depots, intermodal rail capacity and the like?

Big Ships

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Larger, more efficient ships decrease unit cost for liners

What do big ships mean to terminals?

- Peak Congestion Issues
  - Gate
  - Rail
  - Yard

- Need for higher productivity (Dispatch larger vessels in same time slot)
  - Potential for 50% more cargo to be handled in a single call

- Challenges around chassis availability, intermodal service

Vessel Size/Deployment Impacts

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What do big ships mean to ports/port authorities?

- Mega-Ships Drive Investment in U.S. Port Infrastructure
- The proprietary container terminal operated for an individual shipping line is becoming an endangered species.
- Formation of operating/equipment sharing agreements to become more asset efficient.
- Push to automation sooner where possible but one size does not fit all.

What is your view on port capabilities, do you want to be able to handle the big ships?

Cargo Shifts

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Even without the Panama Canal, more cargo moving to the USEC and USGC

What do cargo shifts mean to terminals/ports?

- Shippers looking for consistent transit to markets – major distribution centers are in the mid-West and South East
- Lines will seek out lowest cost, path of least resistance through the ports and to their inland customers
- Port/Terminal water and landside infrastructure
- Ports on both coasts find themselves having to deal with large ships, it's no longer a West Coast issue only
- LA/LB still primary import route but alternate routes have developed

Has your port been affected by shifting cargo?

Asian Cargo Shift via Suez

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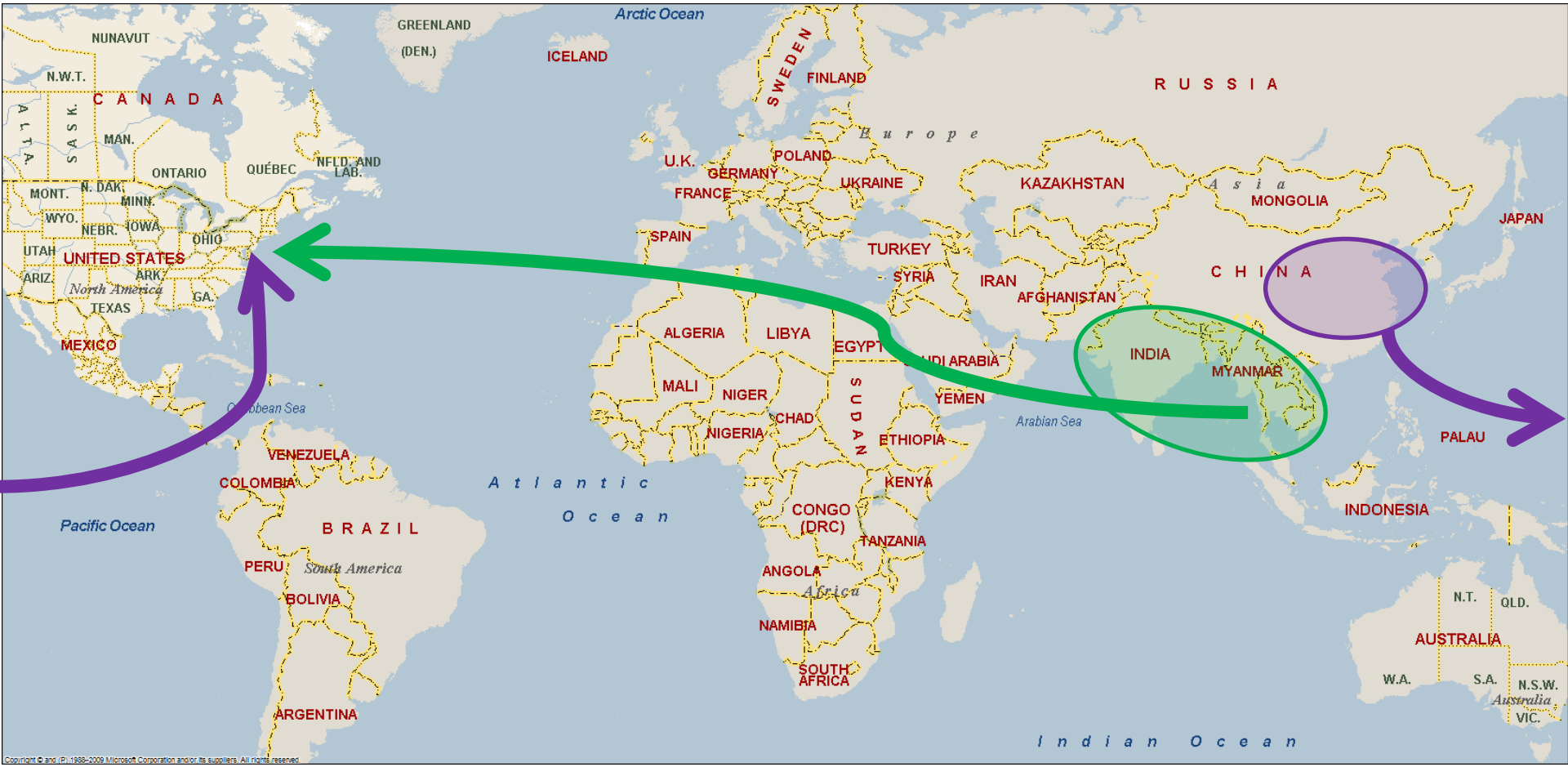

Source: U.S. Bureau of Census, USA Trade Online

Southwest Asian Supply Sources Favor a Suez All-Water Routing to the East Coast

Mid-West Battleground

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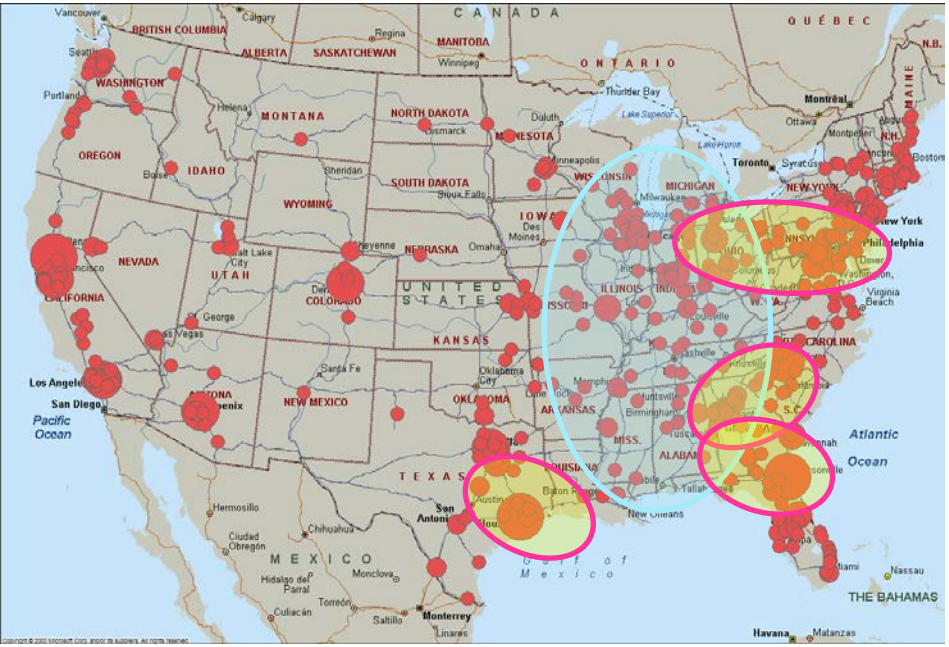
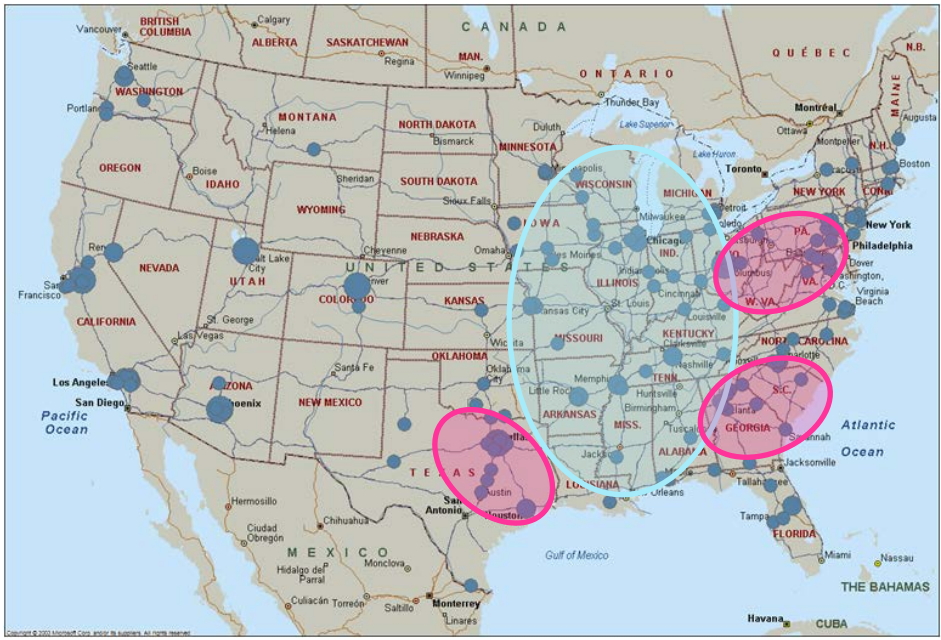
- Top 25 Retailers



- 26-50 Retailers



Source: Chain Store Guide, National Retail Federation

The Midwest is the Battleground for All-Water vs. Trans-Pacific Service

5 common challenges on the terminal

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Vessel Proforma/Schedule Reliability

Stowage

- Larger holds = more time per hold
- Longer time per hold and stability means import cargo may sit on vessel longer than customers accustomed to

Import/Export Delivery/Receipt data not available so terminals face new scenarios day after day and are finding difficulty to optimize

Terminal Inventory and Dwell Time

- Challenges with balancing inventories
  - Keep empties out as long as possible to keep terminal fluid (Im/Ex mkt)
  - Vessel stack weights in yard for planning(TS mkt)

Intermodal and Chassis Availability

- LA/LB Rail Utilization, Norfolk Rail Cap and Infrastructure challenges, NY/NJ gate strain

How can we minimize the impacts?

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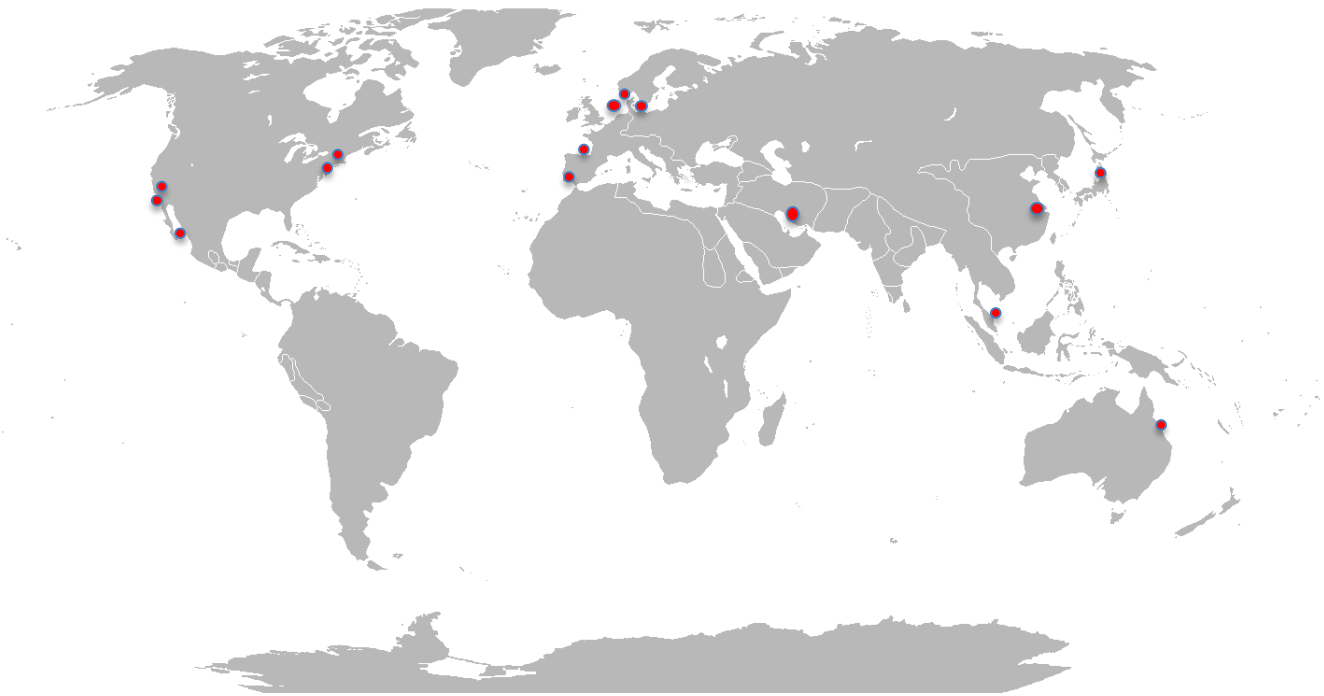
Globally

Semi-automated terminals are on-line or being developed in:

Rotterdam
Abu Dhabi
Antwerp
China
Hamburg
Spain
Singapore
Australia
Japan
Mexico
USA



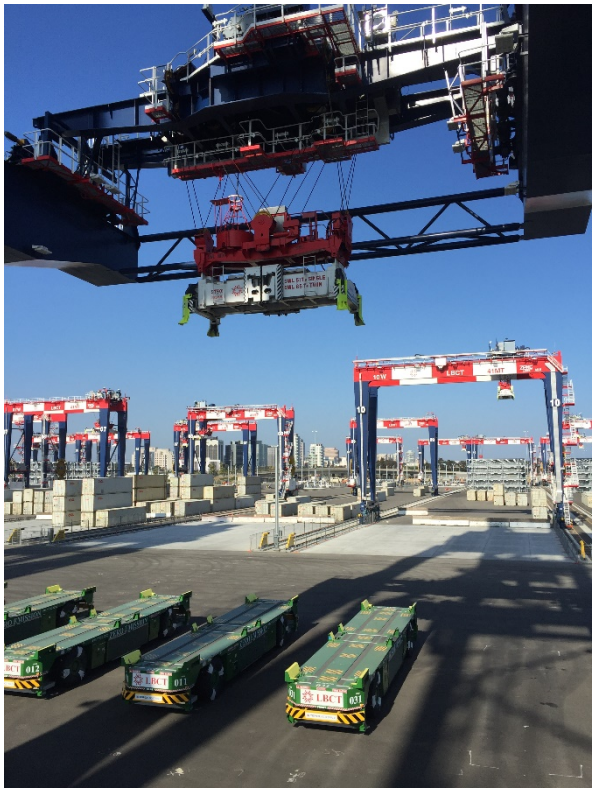
AAPA American Association of Port Authorities
Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

Some ‘local’ solutions

Automation: there is no ‘one size fits all’ so each company is doing what is right for them, cost, volumes, operations type (Capital Allocation)

TraPac

- ½ Semi-Automated Terminal
- Auto Strad for waterside transfer
- ASC’s for yard and landside transfer zone
- Single Hoist manned QC’s



LBCT Middle Harbor

- Semi-Automated Terminal
- AGV for waterside transfer
- ASC’s for yard and landside transfer zone
- Dual Hoist/Trolley manned Quay Cranes

Alternate solutions and long term plans

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Creative uses of Automation to improve operations and create skilled jobs:

- Improve safety, productivity and inventory
- Maintain current footprint/cost structures
- Less CAPEX intensive

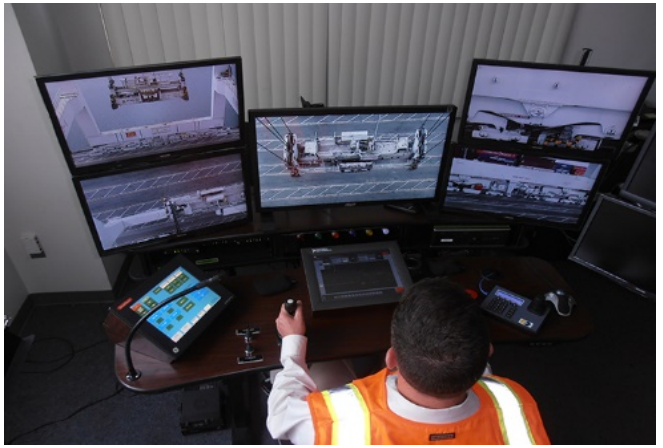
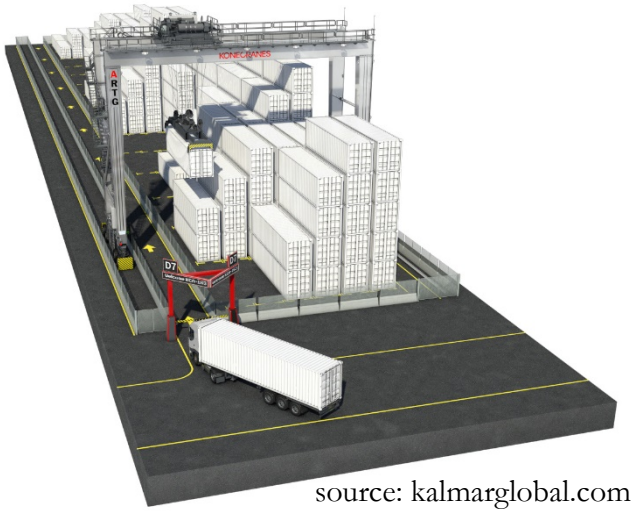


Photo credit: joc.com

DGPS for position detection: YTI, WBCT, APMT Pier 400

Remotely operated cranes for SSA Terminals



source: kalmarglobal.com

Remote/Automated RTG's

Upgrade OCR and semi-automated gates around LA/LB Harbor

- Appointment systems

TOS Optimization

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Safety and Automation

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This year the industry has seen two similar fatalities on container terminals on the USEC and USWC

USWC Container Terminal Industry figures today

- 3.29 LTIR
- LA/LB at historical low of 2.0 LTIR

Mining – Rio Tinto

- 0.6 LTIR, Rio Tinto attributes this to automation
- represents a 67% drop (from 1.8) in the last 10 years
- LTIR reduced with a steady increase in productivity

Source: Canada's National Post – Rio Tinto figures

LTIR = Lost Time Incidents * 200k man hours / actual man hours

Closing Thought

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What is next?

- vessel and carrier alliances
- carrier mergers (though not as many as some think should happen)
- demand for lower cost and higher efficiency
- a need for specific capacity, especially with peaks
- a squeeze on capital for port authorities and operators alike

Rationalization of Terminal Capacity?

Worth discussing? I think so……..

Forum

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My Questions:

1. To what degree is automation used to handle containers in your port, state, country?
   a. If containers are not handled in your port, how is automation utilized?

2. How do you as an individual, company or port view the use of automation in handling containers?
   a. If containers are not relevant, automation in your respective sector of the industry?

3. How does the labor force in your respective port/business view the introduction of automation into their daily work lives?

Thank You

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