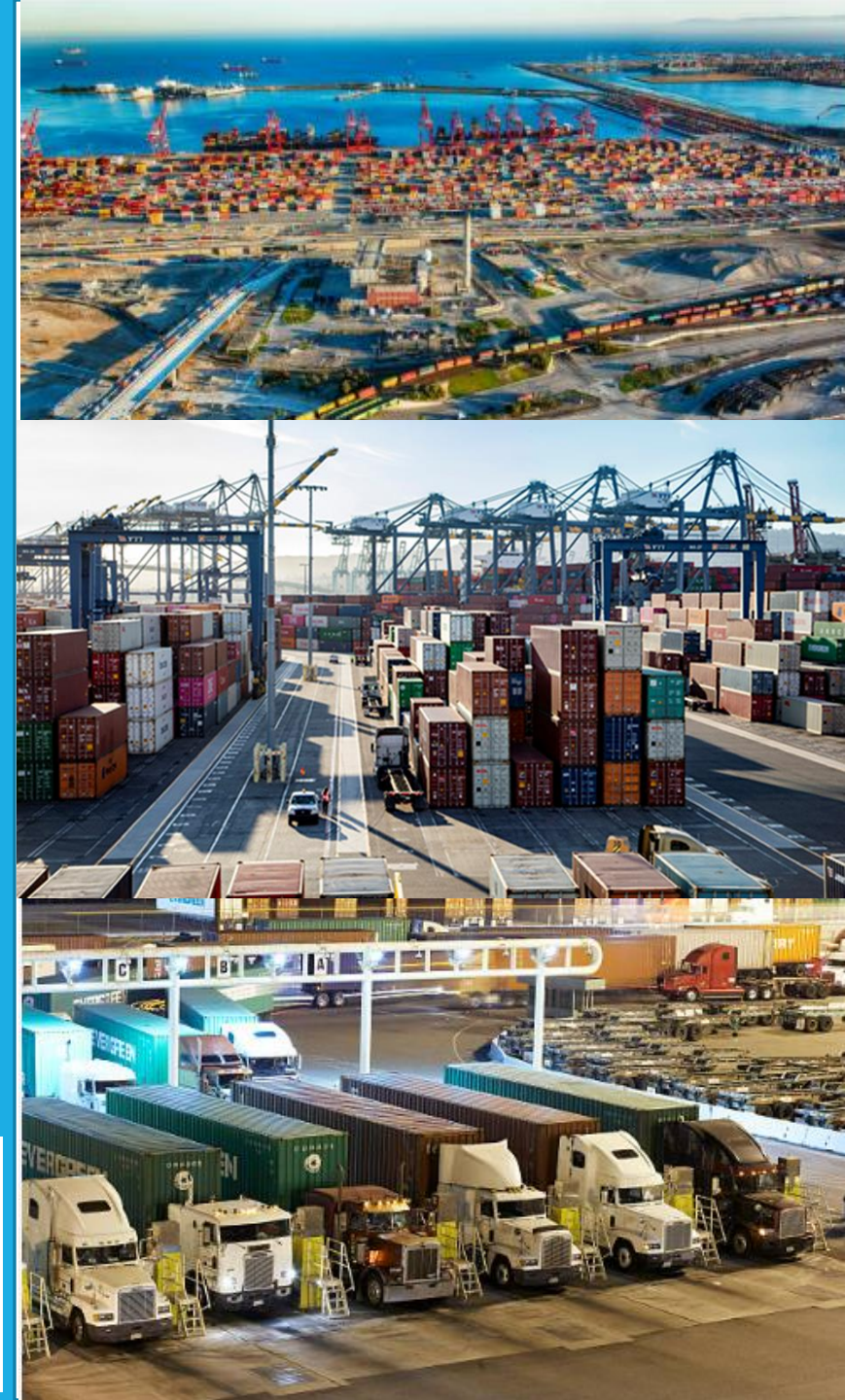


CONTAINER TERMINAL FLUIDITY — ADJUSTING TO THE NEW NORMAL

METRANS INTERNATIONAL URBAN FREIGHT CONFERENCE MAY 26, 2022

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OUTLINE

Background on container terminal capacity, fluidity and dwell times.

Tools for managing container dwell times.

Terminal strategies at the Port of Vancouver.

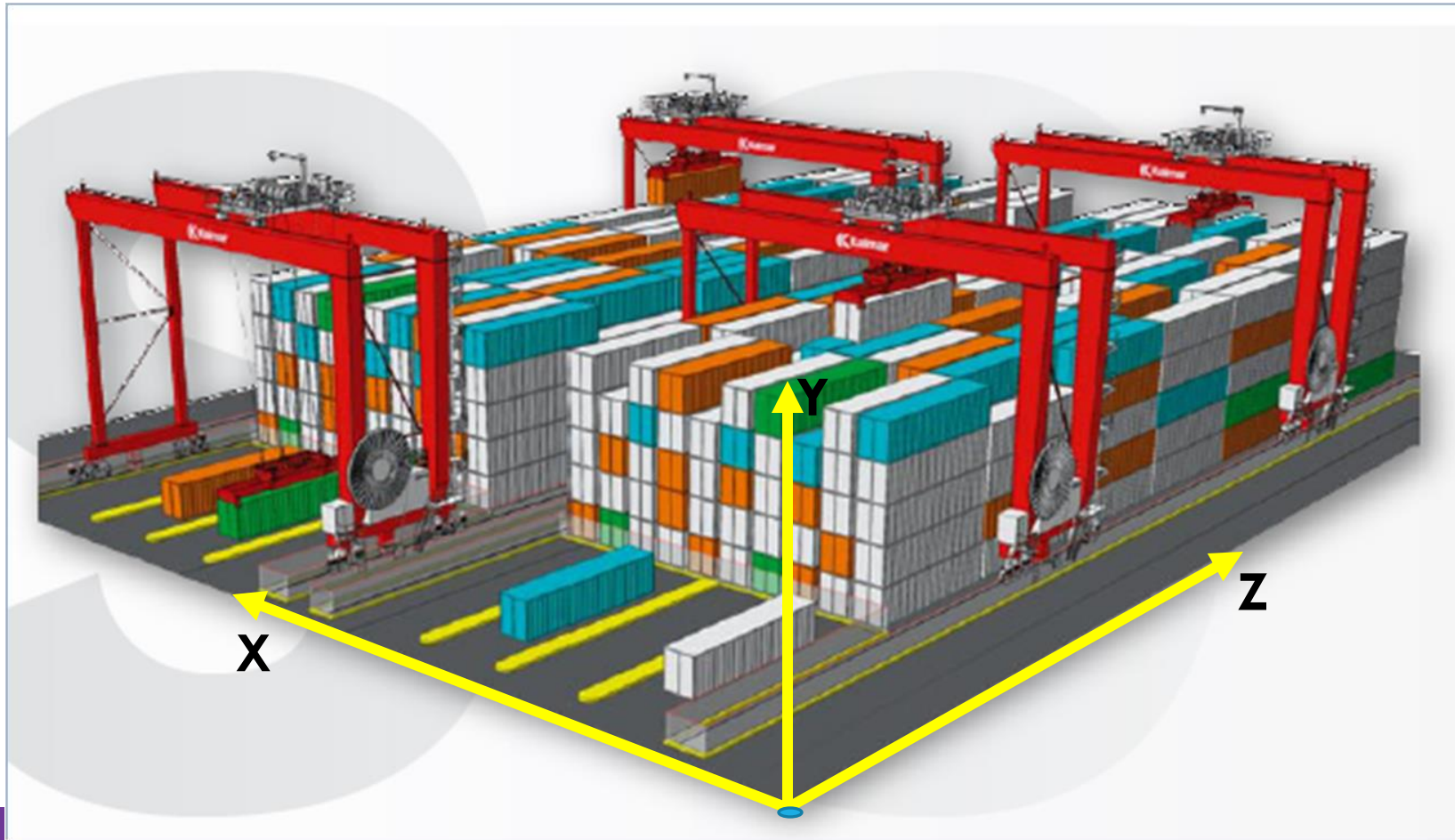
System impacts and adaptation.

Options for Southern California terminals.

PORTS & TERMINAL OPERATIONS SYSTEM



BACKGROUND ON CONTAINER TERMINAL CAPACITY, FLUIDITY AND DWELL TIMES.



- X: Terminal Land Area (Acres)
 - Y: Stacking Density (TEUs/Acre)
 - Z: Terminal Area Utilization (TEUs/Acre/Yr.)
- “Fluidity” or “Cargo Velocity”
- Hours of operation (Hrs)
 - Dwell time (Days)

POLICIES FOR MANAGING CONTAINER DWELL TIMES

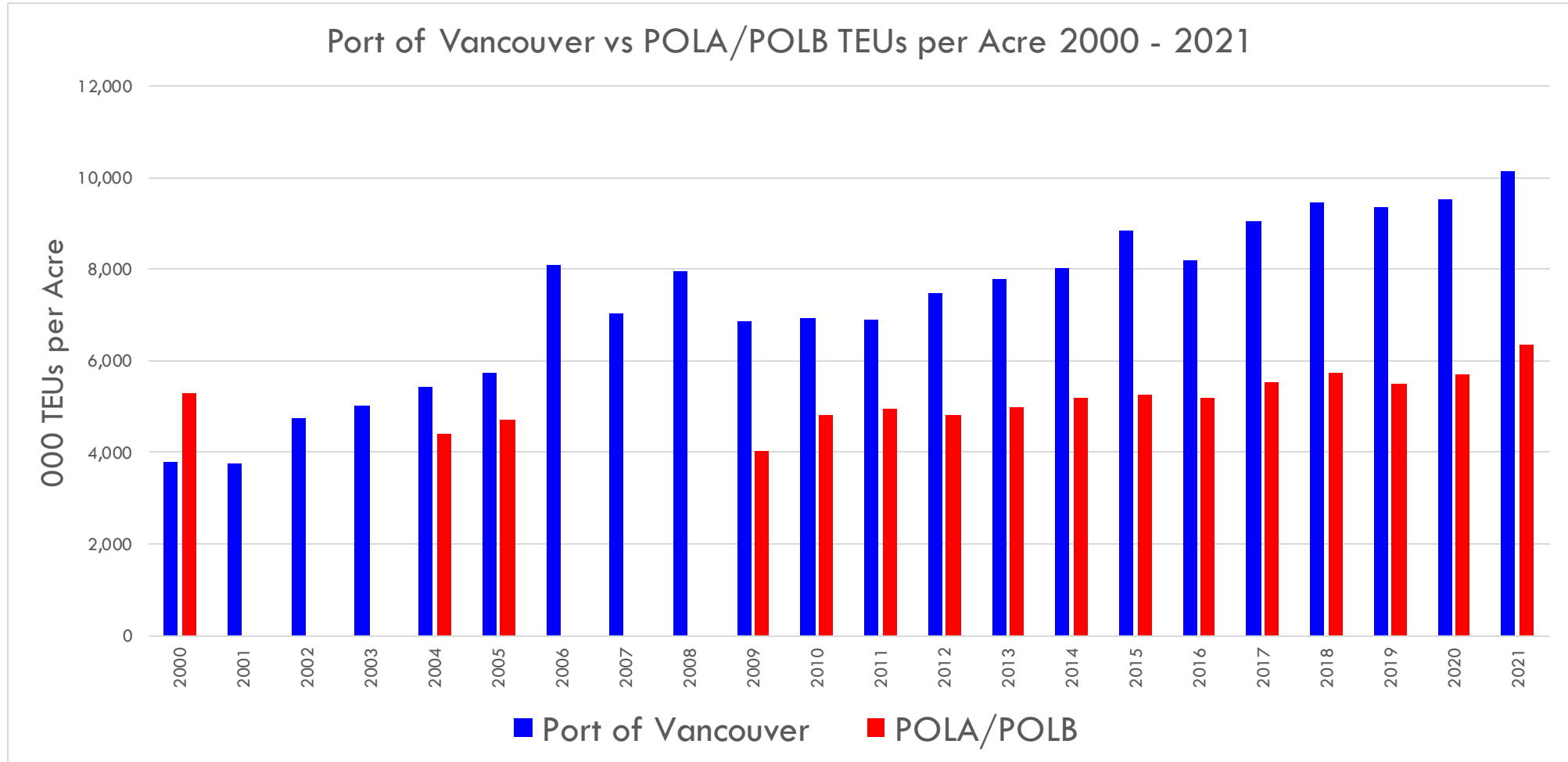
Free time: The period during which goods/containers may be left on terminal property without demurrage charges being incurred.

Empty Container Storage Charges: Container storage is the service of providing open or ground space in the container storage area for empty containers in idle status.

Earliest Receiving Date (ERD): Sets the earliest date that outbound/export containers will be accepted at the terminal prior to vessel loading.

Demurrage: A container TEU daily charge payable on loaded containers in transit which remain on the terminal longer than the free time allowed.

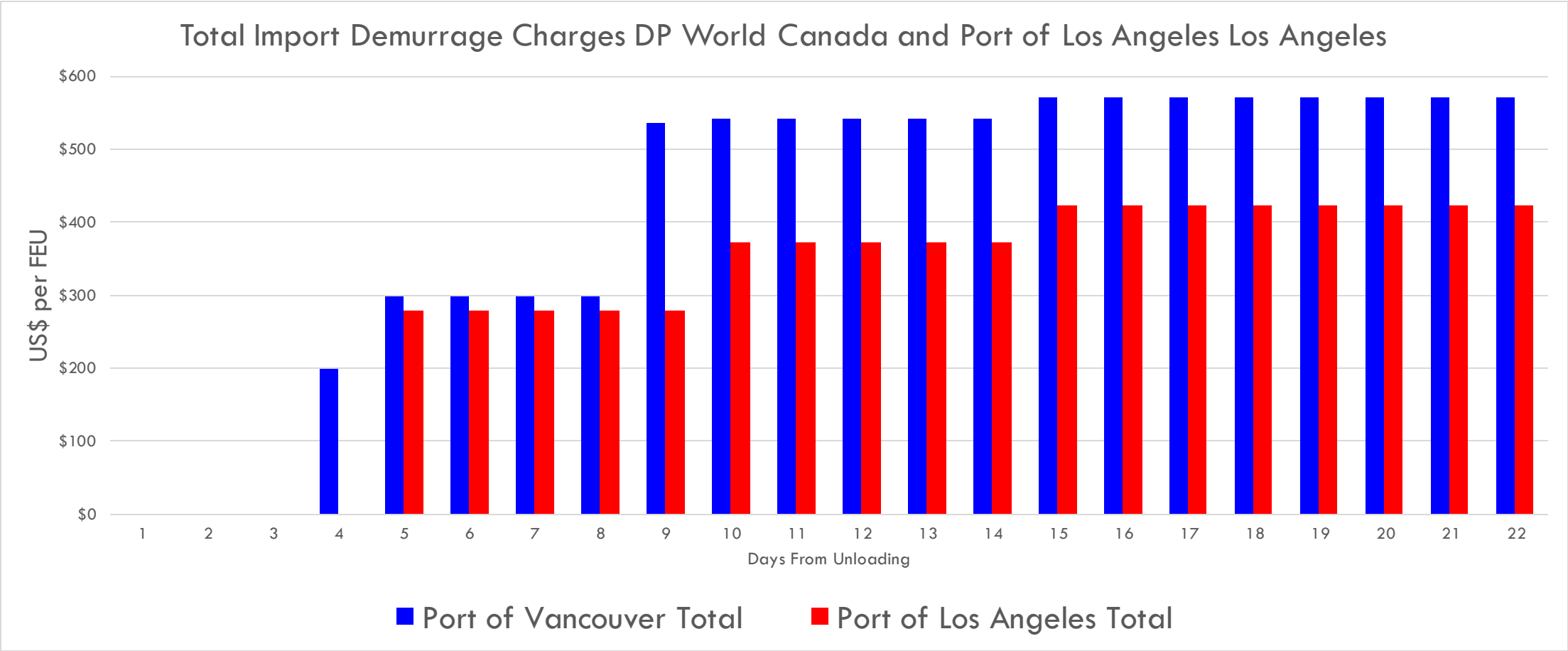
PORT OF VANCOUVER VS POLA/POLB CONTAINER THROUGHPUT PER ACRE.



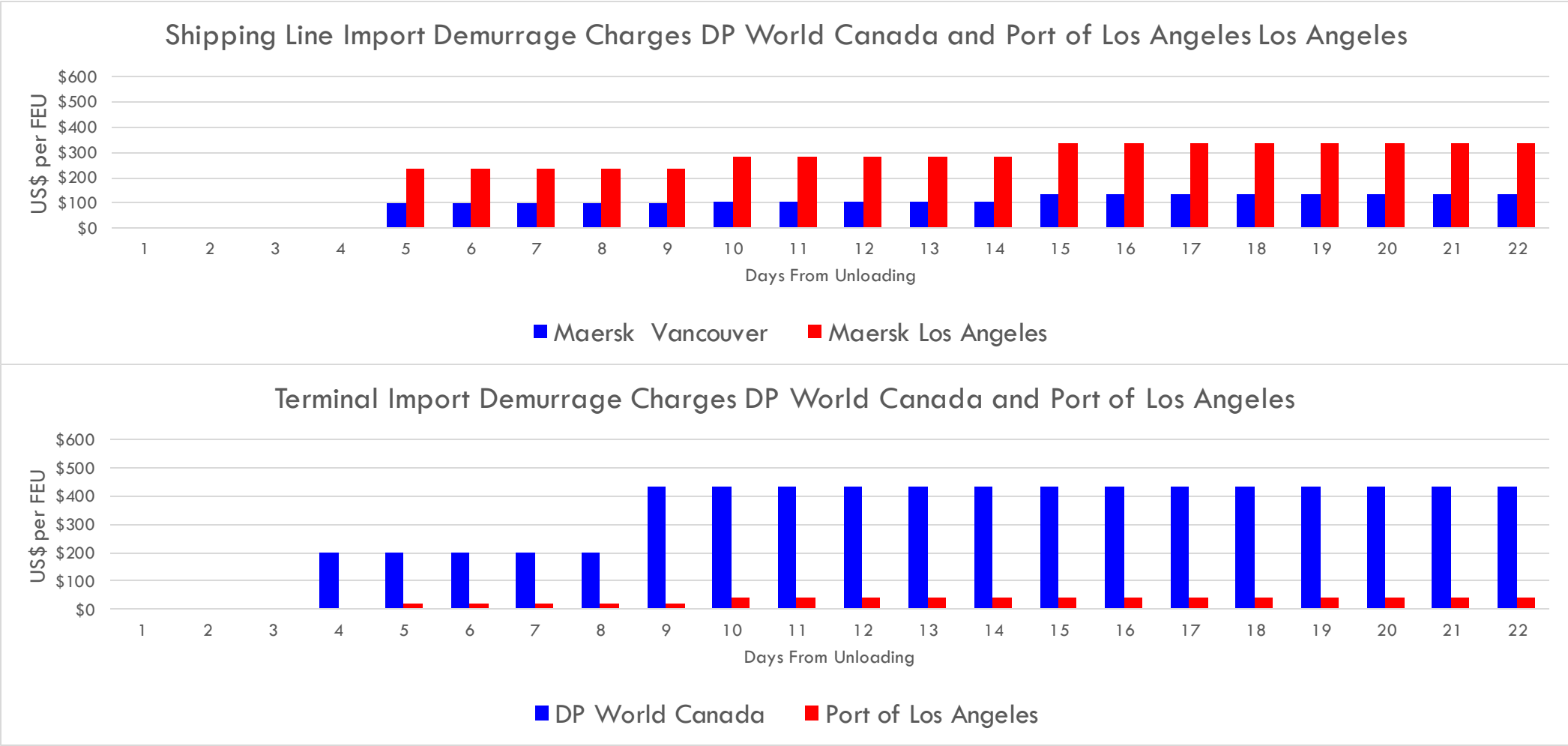
PORT OF VANCOUVER - TSI TERMINALS FLUIDITY PROGRAM 2006

- Response to terminal congestion crisis.
- Reduced Free Time for imports and exports (shorter ERDs for exports).
- Increased terminal demurrage charges.
- Eliminated empty container storage on the docks except for empty containers scheduled for evacuation on the next vessel.

PORT OF VANCOUVER AND PORT OF LOS ANGELES IMPORT DEMURRAGE CHARGES



PORT OF VANCOUVER AND PORT OF LOS ANGELES IMPORT DEMURRAGE CHARGES



SYSTEM IMPACTS — DRAYAGE

- Shift to off-dock storage of empty containers destabilized the drayage sector.
- Higher costs due to inefficient trip patterns.
- Erosion of round-trip rate model.
- “Market failure” – inability of the drayage sector to adapt.
- Low rates, high port terminal turn times and off-dock storage impacts led to port trucking strikes in 2005 and 2014.

SYSTEM ADAPTATION — DRAYAGE

- Comprehensive regulation of the drayage sector implemented following 2014 strike.
- Regulation of drayage fleet size by Port of Vancouver.
- Regulation of owner-operator and employee driver compensation by new BC government Port Trucking Commissioner.
- Terminal operators required to make penalty payments to drivers for long turn times.

SYSTEM IMPACTS

- Land required for off-dock storage.
- Limited industrial land base due to Provincial Agricultural Land reserve and high land prices.

SYSTEM ADAPTATION — LAND USE

Initially two models for off-dock container storage:

Stand-alone empty container depot.

- These have disappeared due to high land prices and limited revenue potential.

Empty container storage as an ancillary service at import DCs, export transload facilities and drayage yards.

- More efficient land utilization due to stacking of containers.
- Results in increased chassis productivity and more efficient trip patterns.
- Facilitates pre-positioning of empty containers for reloading without detention charges.

OUTCOMES

- Increase in drayage rates to owner-operators of approximately 75% since 2005 (increases in 2014 and 2020).
- Mode shift innovations:
 - Short sea shipping – Container on barge service from Vancouver Island since 2013.
 - Inland Terminal: Ashcroft Terminals 355 km (220 miles) inland.
 - Short haul rail: New Maersk distribution centre adjacent to CP intermodal yard.

REQUIREMENTS FOR SYSTEM EVOLUTION – ALIGNMENT OF INCENTIVES AND CAPABILITIES

Alignment of Incentives and Capabilities - Port of Vancouver vs POLA/POLB					
Efficiency Measures	Agent	Vancouver		POLA/POLB	
		Incentive	Capability	Incentive	Capability
Off-Dock Empty Container Storage	Shipping Lines	Yes - High on-dock storage charges, short free time	Yes	No - Low or no storage charges, long free times, detention income	Yes
Land Use Efficiency - Stacking Containers Off-Dock	DC's-Export Transloads - Drayage Firms	Yes - Limited land base, high land prices	Yes	No - Availability of cheaper land farther from the Ports	Yes
Trip Patterns	Drayage Firms	Yes - Chassis Ownership, drayage costs	Yes	Yes - Drayage costs	No
Trip Patterns	Drayage Chassis Lessors	N/A	N/A	No - Increased productivity in chassis use would reduce revenue	No
Low Turn Times at On-Dock Terminals	Terminal Operators	Yes - Long turn time penalties	Yes	No	Yes

PORTS OF LOS ANGELES AND LONG BEACH — PREVIOUS INITIATIVES

- **Extended truck gate hours** – financed by PierPASS fees consisting of peak period truck gate fees (2004 to October 2018) and flat Transportation Mitigation Fee charged on both day and night shifts (PierPASS 2.0) since November 2018.
- **“Dray-off”** – Loaded import containers are trucked directly from the port terminal to a secure off-dock container yard.
- **Peel off Yards** – Containers from several pre-approved importers are discharged from the vessel and block-stored at the marine terminal. When a sufficient block is formed, truckers are given preferential gate access and the ILWU equipment operator “peels off” the containers without regard to consignee.

PORTS OF LOS ANGELES AND LONG BEACH — CURRENT CONGESTION CRISIS

- Port congestion crisis due to COVID impacts.
- Terminal congestion due to long dwell times for loaded import containers.
- Terminal restrictions on returns of empty containers impacting drayage efficiency due to reduction in chassis productivity (empty containers stored off-dock on chassis) and community impacts due to use of unauthorized storage locations.
- Massive increase in demurrage and detention penalties collected by shipping lines due to inability of drayage carriers and/or shippers to pick up imports and return empty containers.

PORTS OF LOS ANGELES AND LONG BEACH — CURRENT CONGESTION CRISIS AND SHORT-TERM STRATEGIES

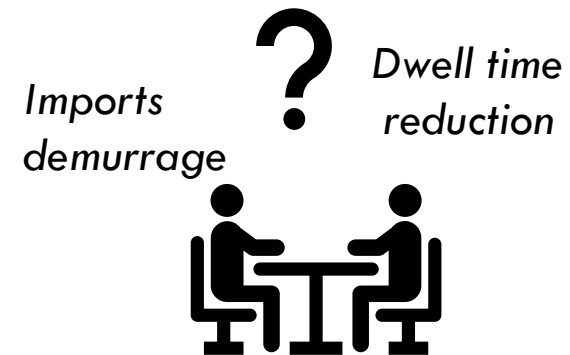
- Ports proposed temporary Container Excess Dwell Fee November 2022
 - \$100/import container after 9 days or after 3 days for IPI cargo;
 - \$100/container additional for each day thereafter.
- Not implemented to date – threat of implementation successful in reducing number of long-dwelling (over 9 days) import containers at port terminals by 50%.

PORTS OF LOS ANGELES AND LONG BEACH — CURRENT CONGESTION CRISIS AND SHORT-TERM STRATEGIES

- Container Excess Dwell Fees for empty containers proposed but not pursued.
- “Pop-up” container storage yards established on Port property (Pier S at the Port of Long Beach), state-owned properties and other locations)
- Temporary easing of stacking limits for existing facilities (up to 5 containers high) by City of Long Beach.

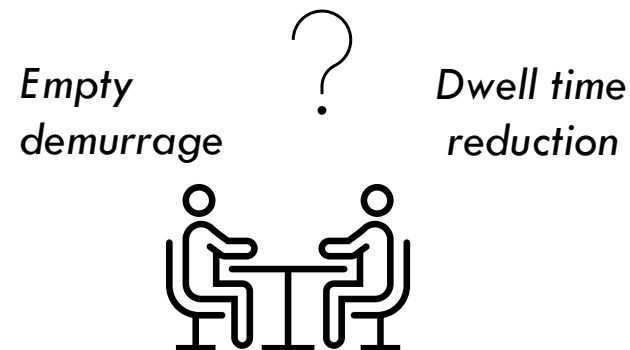
PORTS OF LOS ANGELES AND LONG BEACH – POTENTIAL LONG-TERM DWELL REDUCTION STRATEGIES

- Permanent increase in import demurrage fees or reduction in free time by the Ports.
- Ports have jurisdiction to increase fees.
- Ports have jurisdiction to ensure containers are available for pickup within free time period.



PORTS OF LOS ANGELES AND LONG BEACH — POTENTIAL LONG-TERM DWELL REDUCTION STRATEGIES

- Implementation of storage charges and free time limits for **empty containers** by the Ports.
- Ports have jurisdiction to increase fees.
- Onus on shipping lines to find off-dock storage solutions.
- Disruptive to drayage efficiency and industrial land utilization.



PORTS OF LOS ANGELES AND LONG BEACH — TRUCK TURN TIMES

- Combination of port-local travel-landside facilities
- No mechanism in place for port to motivate terminal operators to reduce turn times in port/terminal – commercial incentives

PORTS OF LOS ANGELES AND LONG BEACH — POTENTIAL DRAYAGE REFORM

- Would require changes to federal transportation and/or labor policies.
- Port, state or local measures constrained by federal pre-emption.

SUMMARY & Q&A



Increase Demurrage Fee



Off-dock storage yards



Drayage Reform



Truck Turn Time @Port

CONTAINER TERMINAL FLUIDITY

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