

TPM²⁴

by S&P Global

Intermodal Shipping for Importers and Exporters

TPM Academy 2024

Theodore Prince

CEO & Founder

Tri-Cities Intermodal LLC

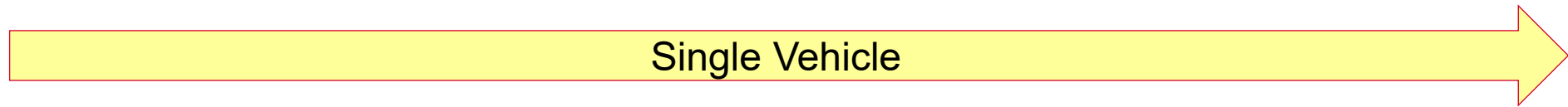
5 March 2024

Brief Introduction

- Chief Executive Officer and Founder of Tri-Cities Intermodal LLC
- 40+ Years in surface freight across all modes
 - Awarded IANA’s Silver King Pin Award in 2022 for lifetime achievement and contribution to the intermodal industry.
 - Published over 400 articles and columns
 - Chief Operating Officer and Co-Founder; Tiger Cool Express
 - President; Consolidated Chassis Management
 - Vice President of Intermodal and International; Kansas City Southern
 - Chief Commercial Officer; Optimization Alternatives
 - Chief Operating Officer; “K” Line America (and The Rail-Bridge Corp.)
 - Intermodalist; Conrail
- Principal, T. Prince & Associates, LLC
 - Developed “Ocean 53” program for JB Hunt
 - Created intermodal competition model for the Panama Canal Authority
 - Training first cadre of intermodal managers for the China Ministry of Railways
 - Reconfigured import supply chain for a major retailer

The Intermodal Network

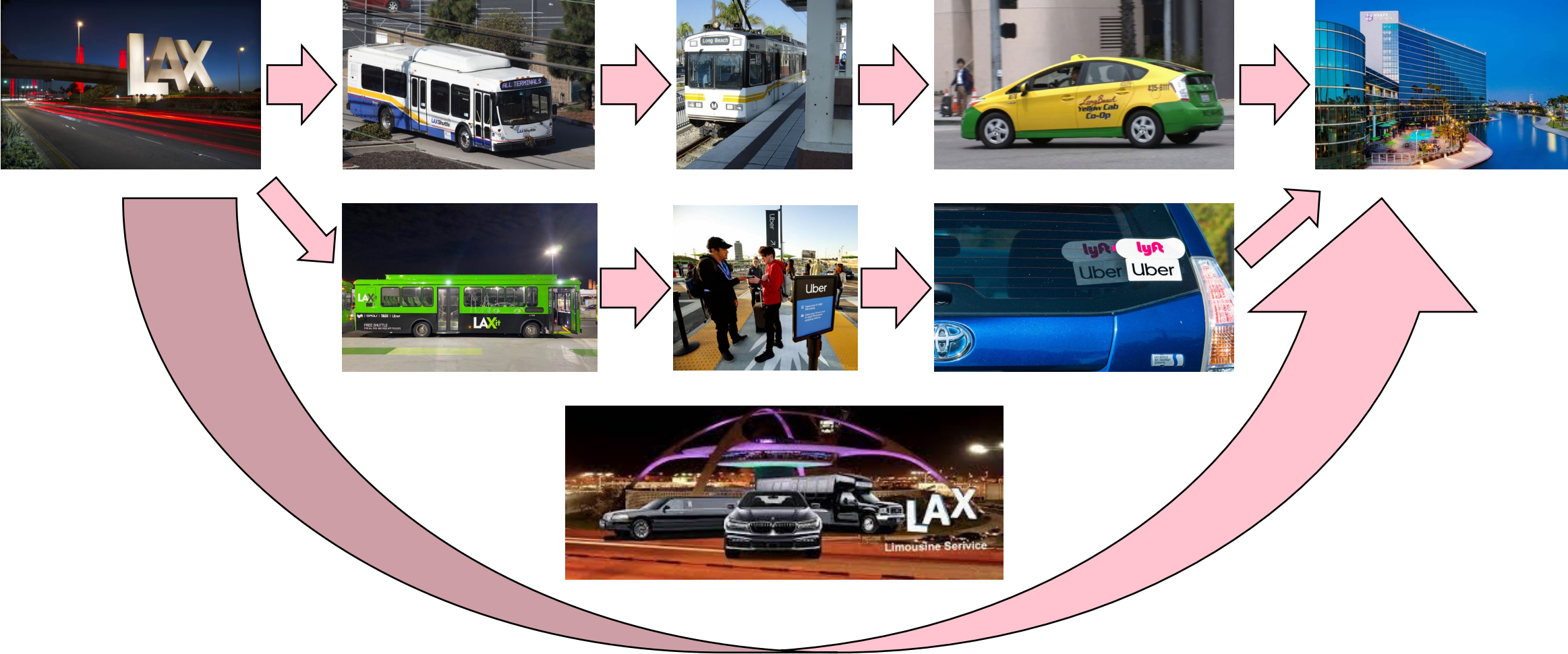
- The topology is always identical for passenger or freight transportation
– Intermodal vs. single vehicle



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Freight or passenger intermodal is the same



Intermodal and *Multimodal* are not the same – although both use multiple modes of transportation

Intermodal

A subset of multimodal where the cargo is contained in a unitized container throughout the transit

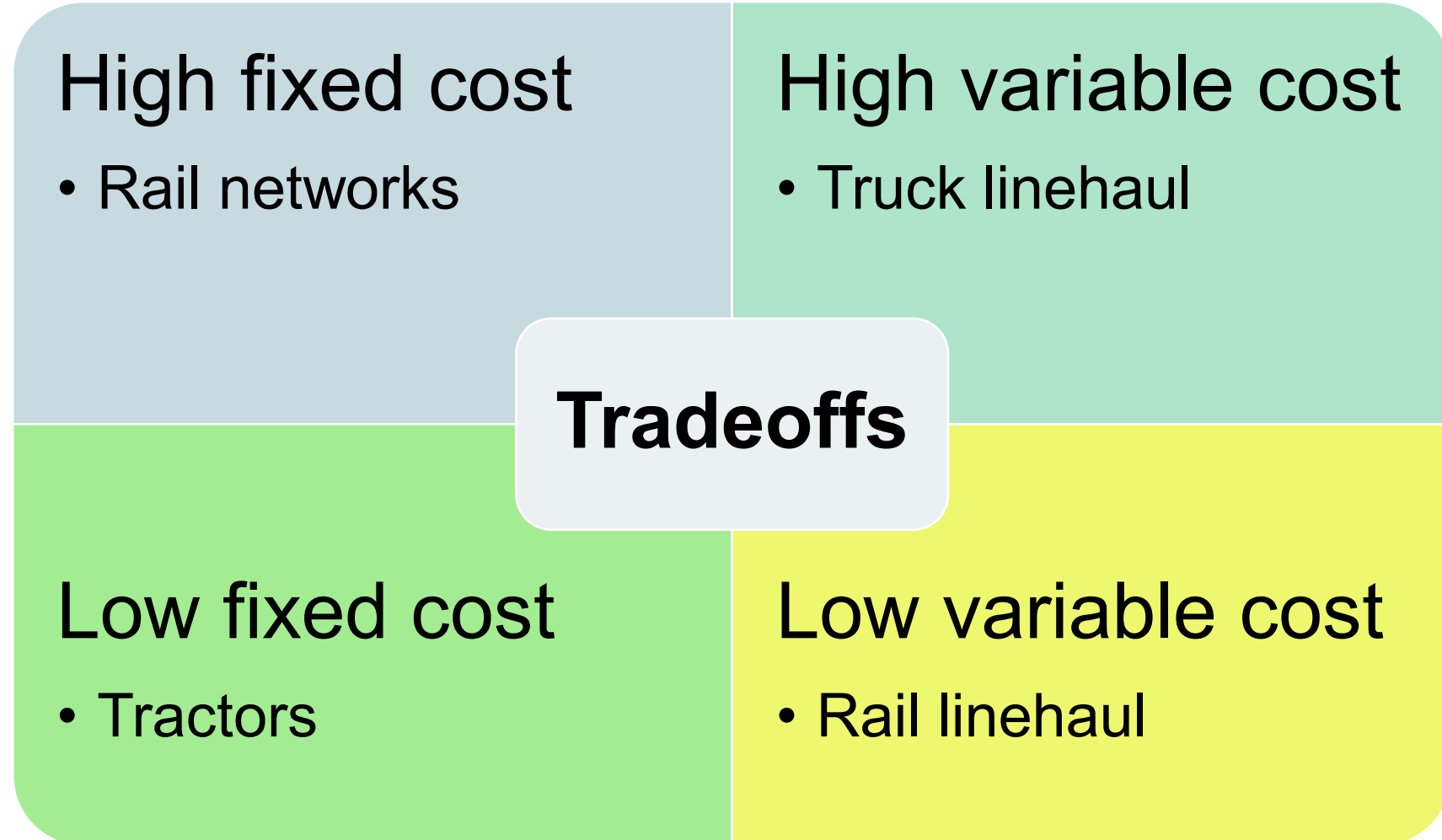


Multimodal

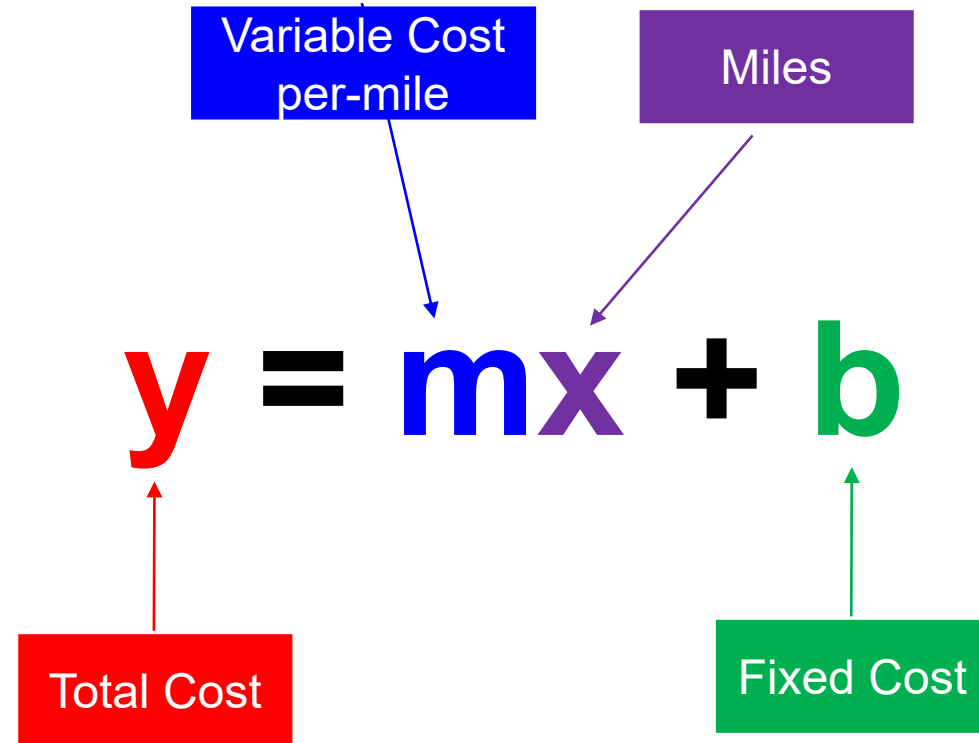
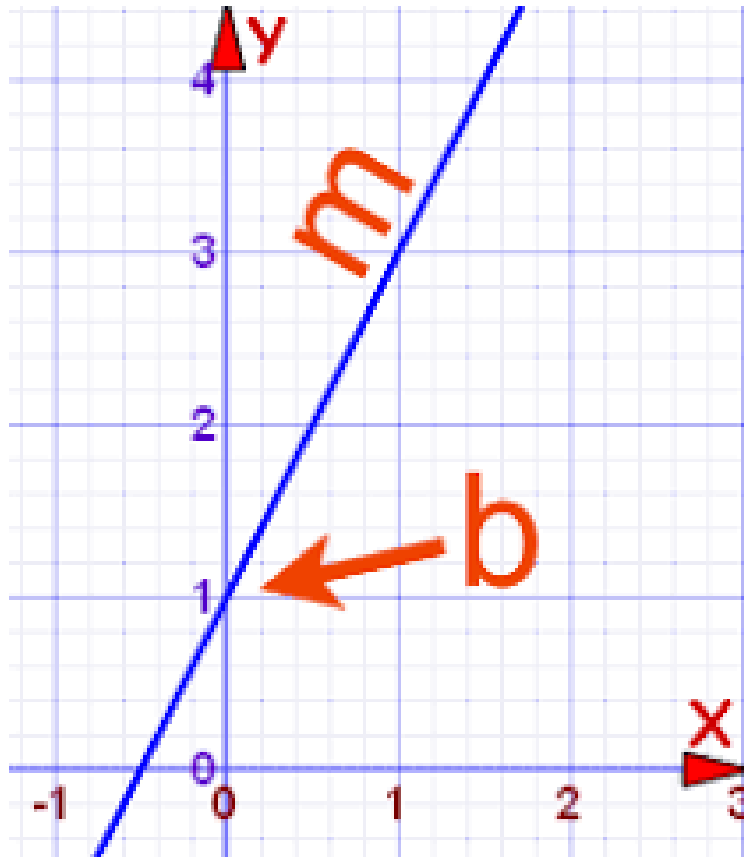
A shipment combining at least two or more different modes, (e.g., air, water, rail, or truck) to move cargo from one point to another



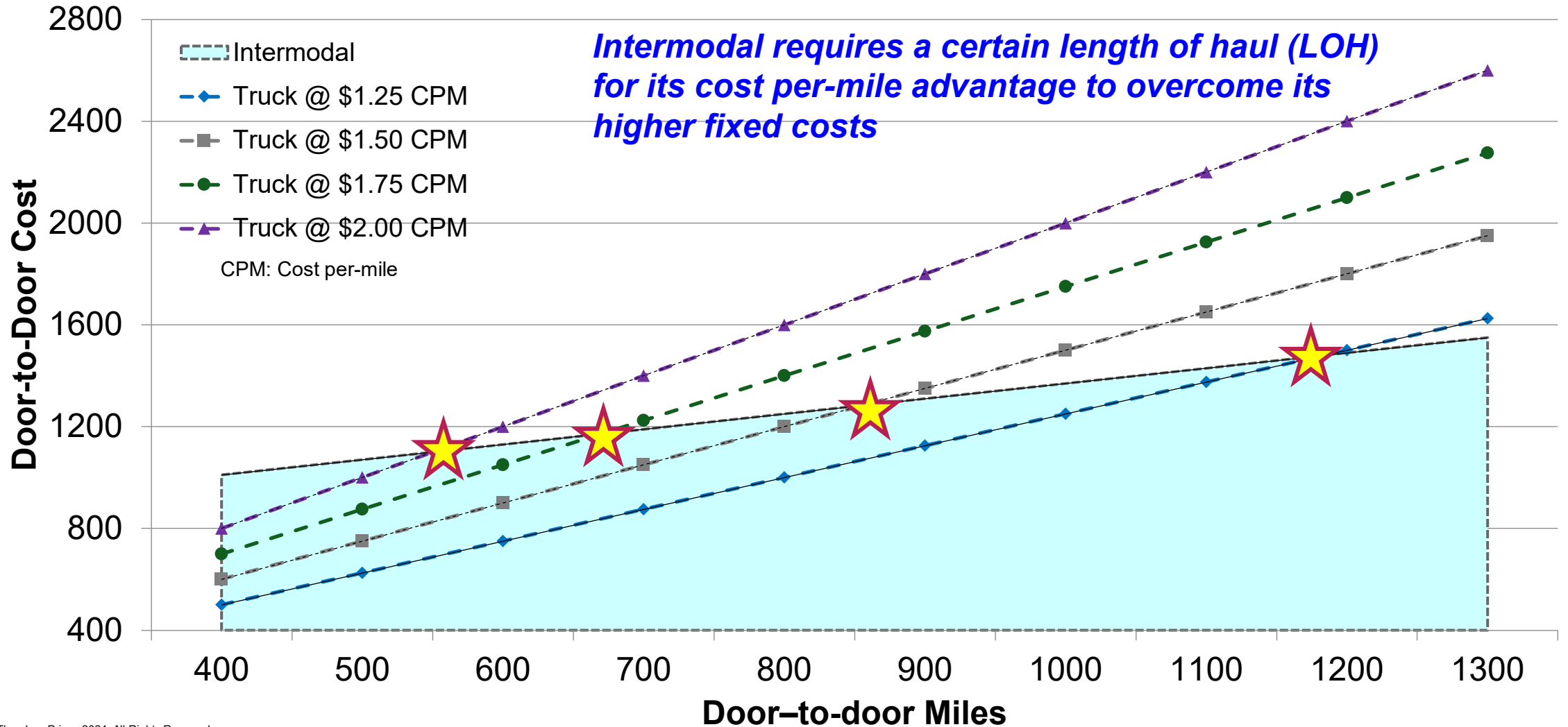
Rail-Truck Intermodal Economics



Intermodal economics explained by linear equation



Intermodal Price Competitiveness



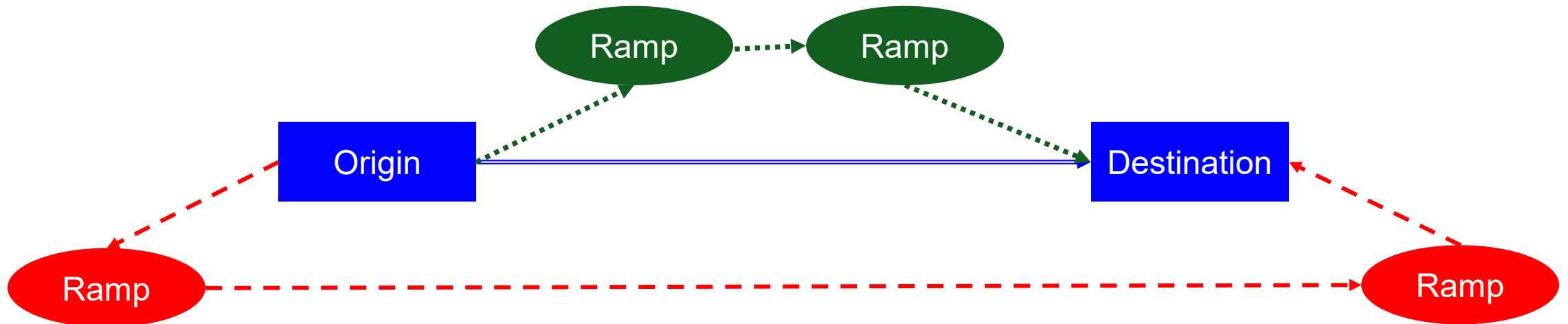
Intermodal Structural Advantages

Factor	Good for Intermodal	Bad for Intermodal
Length of Haul (LOH)	Longer	Shorter
Diesel Price-per gallon (PPG)	High	Low
Demand Patterns	Peaks and Valleys	Steady
Traffic Balance	Imbalanced	Balanced
Railroad Service	East – West	North - South
Railroad Circuitry	Low	High

These are “rule of thumb” guidelines – and there are always exceptions

Intermodal Price Advantages

Factor	Good for Intermodal	Bad for Intermodal
Truck Market	“Hot” (Low discount)	“Cold” (High Discount)
Pickup and Delivery Distance	Close	Far
Pickup and Delivery Roundtrip	Load/Load	Load/Empty or Empty/Load
Pickup/Delivery Complexity	Single stop	Multiple Stops
Door-to-door circuitry	Low	High



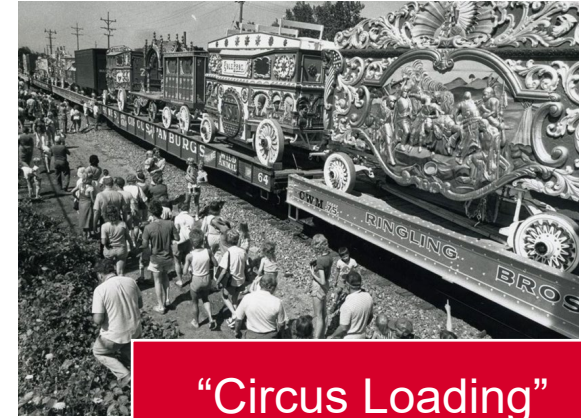
A Brief History of Domestic Intermodal



Early LCL



Piggyback (TOFC)



“Circus Loading”



Early Lifts (TOFC)



Domestic Containers



Early Lifts (COFC)

Trans-Pacific Ocean Service

All-Water

- Via Panama or Suez Canal
- No rail

Land-bridge

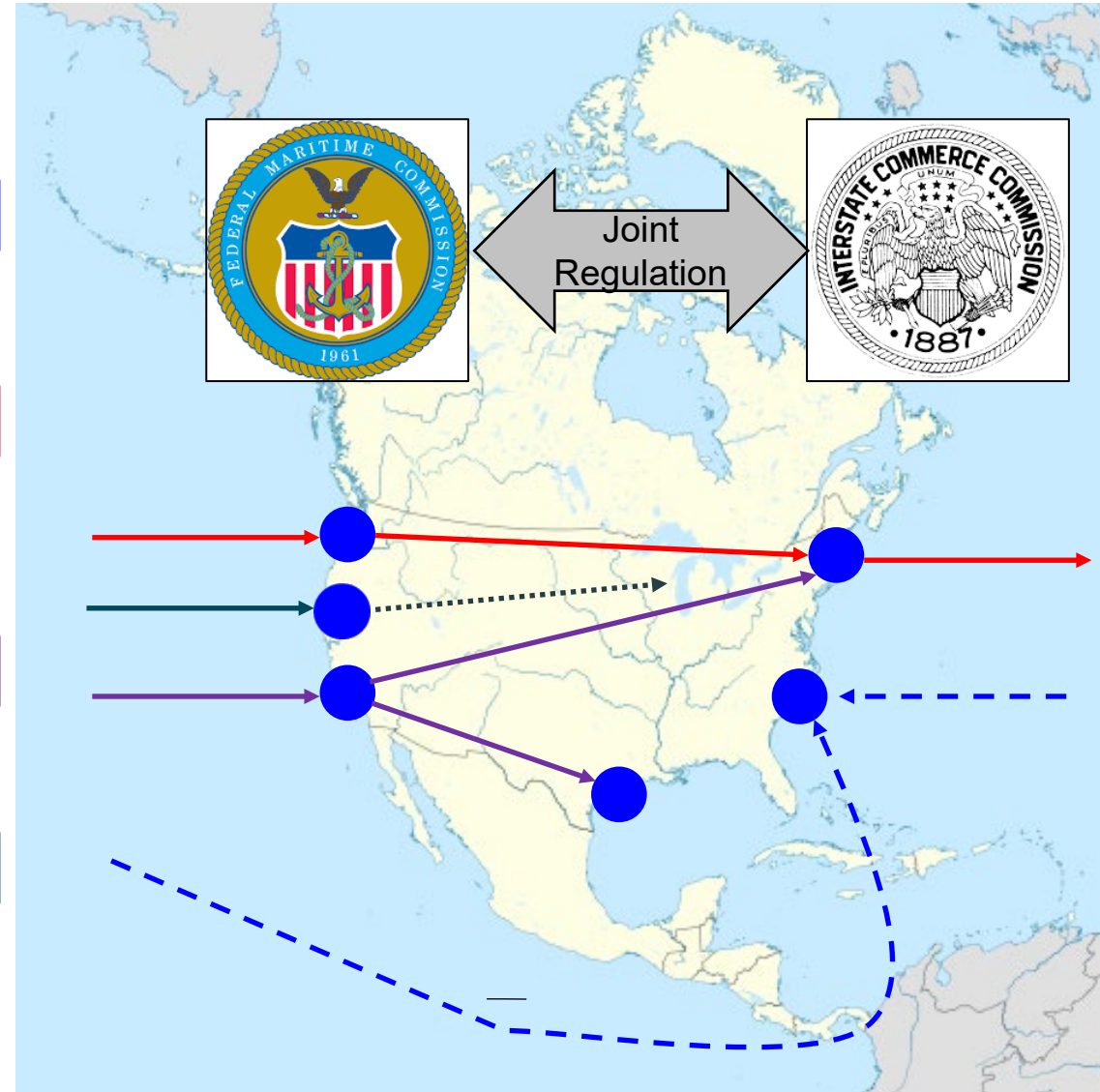
- Rail port-to-port movement connecting two ocean legs
- Utilized during Suez Canal closure 1967-1975

Mini-Land-Bridge

- Port-to-port ocean B/L with rail substitution to Gulf or Atlantic ports

Overland Common Point

- Rail inland “unbundled” from ocean tariff -- and beyond conference and FMC oversight)



Growth of International Containerization



Vietnam War



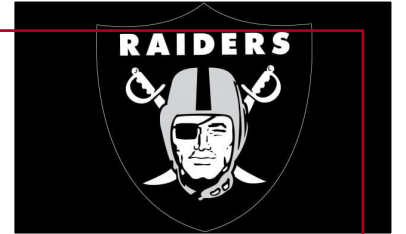
Japan & 4 Tigers



APL Liner Train



Quota Cargo



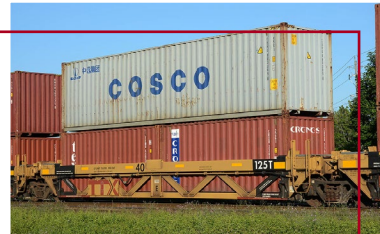
Winter of 1977-78



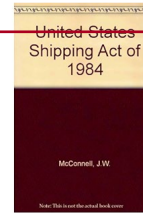
Staggers Act



Double-stack I



Double-stack II



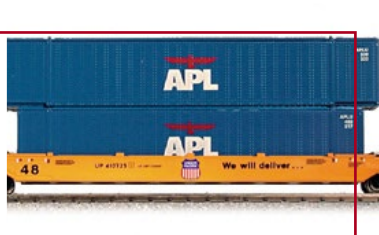
Shipping Act



Plaza Accord



"Voluntary Restraints"



Domestic Containers



US Lines Bankruptcy



Panamax



China WTO

Drayage Overview



First and Last Mile



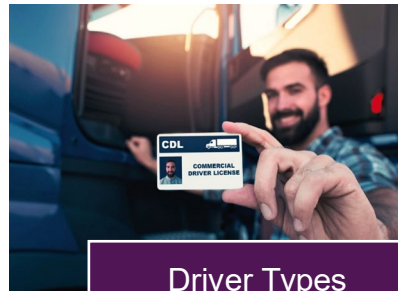
"To transport by a sideless cart",



Make intermodal look like truck



Motor Carrier Subsidiaries



Driver Types



Owner Operators



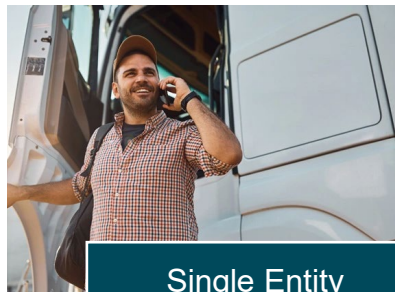
Non-Union Employee



Union Employee



Carrier Structure



Single Entity



Agency Networks



National Organization

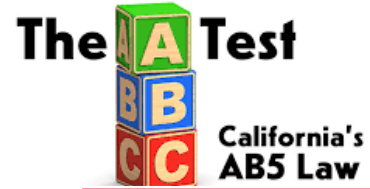
Drayage Challenges



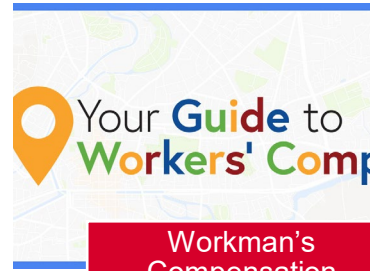
There Are Many



Clean Trucks



Driver Classification



Workman's Compensation



Forced Dispatch



Gate Congestion



Gate Hours



Chassis Pools



Lack of Respect



Customer Dwell



Accessorials



Better Jobs

The On-dock History



Gate Congestion



Cover-up Bad Investment



Port Paranoia



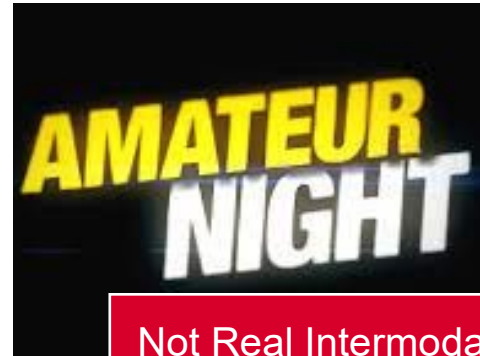
“Ghost of ICTF”



Port Permits



The Question Never Asked

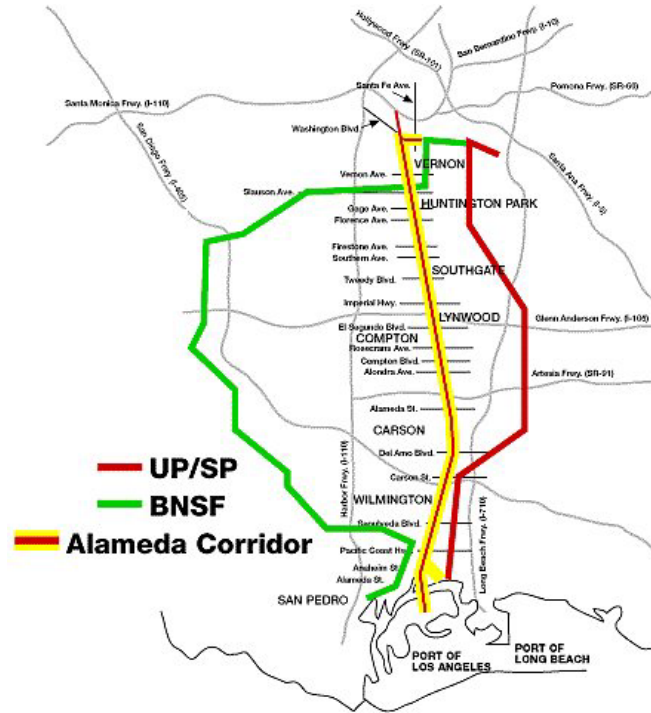


Not Real Intermodal

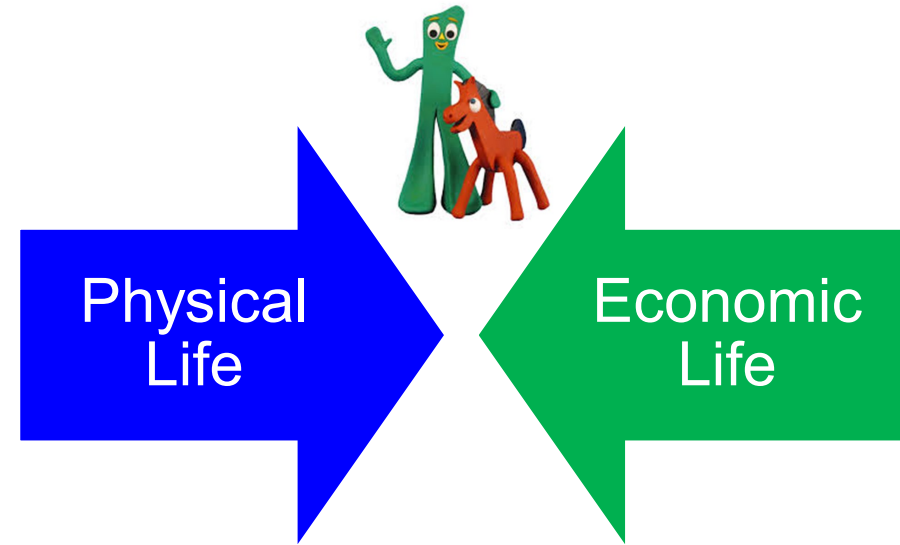


The Legacy

The Alameda Corridor Legend



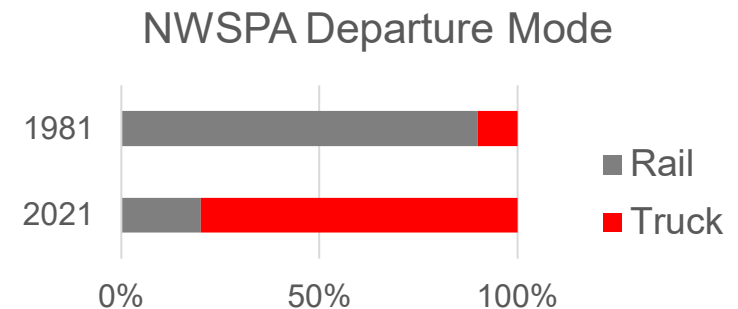
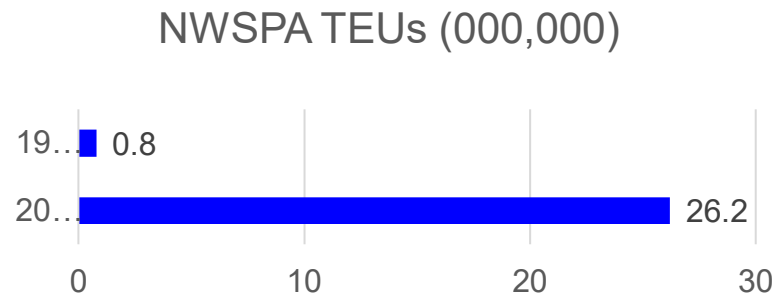
- Alameda Corridor plan never considered that traffic mix might change
- What happens when the traffic comes – but moves in a different way?



The world has changed in the past 40 years

- ⇒ Expensive marine terminal rail capacity is underutilized -- while operations choke on trucks
- ⇒ Marine terminals could *immediately* triple volume today -- if rail mix returned

Asia Load Port	US Discharge Port	DCs
Port consolidation	Local deconsolidation	4 - 6
Port consolidation	Intact rail	5 - 9
Factory loading	Intact rail	6 - 12
Factory loading	Local deconsolidation	100 – 250 (B2C fulfillment)



Transloading?

- Transloading also reduces pipeline time
 - Last-on and first-off vessel
 - Faster rail transit (50 mph vs. 35 mph)

Intact Movement via Los Angeles	Block 1 Chicago	Block 2 New York	Block 3 Memphis
Origin Cutoff	SAT (1)	SAT (1)	SAT (1)
Destination Discharge	SUN (16)	MON (17)	TUE (18)
Rail Arrival	SAT (22)	MON (24)	TUE (25)
Available	MON (24)	MON (24)	TUE (25)

Transloading in Los Angeles	Block 1 Chicago	Block 2 New York	Block 3 Memphis
Origin Cutoff	SUN (1)	SUN (1)	SUN (1)
Destination Discharge	SUN (15)	SUN (15)	SUN (15)
Rail Arrival	FRI (20)	MON (23)	FRI (20)
Available	FRI (20)	MON (23)	FRI (20)
Transit Improvement	4 Days	1 Day	5 Days

Southern California is Illustrative

1980s

- DCs located 20-30 miles one-way from Ports of Los Angeles and Long Beach

2020s

- DCs located wherever there is land
- 90 – 140 miles one-way
- 500% increase in truck miles, congestion and pollution
- **No shorthaul rail alternative**



IS THIS SUSTAINABLE?





Thank You!



QUESTIONS