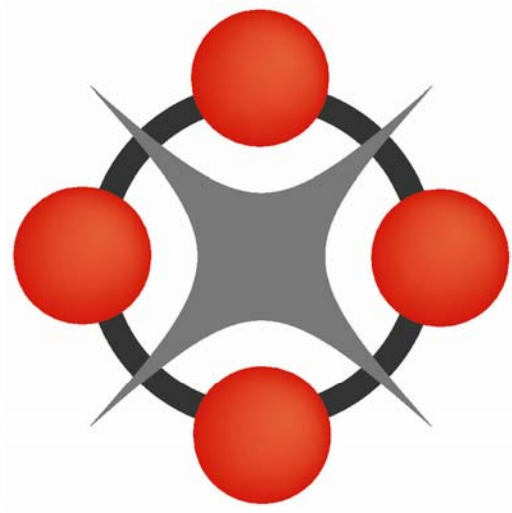


Improving Container Availability and Intermodal Activity in the Heartland



Jason Bittner
National Center for
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Container & Equipment Availability

- Global recession led container manufacturers to slow or halt production in 2009
- Import and export container flows mismatched
 - Import activity decreased during recession while weaker dollar has bolstered exports
 - Midwest exporters are located long distances from where most containers are unloaded
 - Limited resources for repositioning containers
- Other equipment (e.g. flat cars) also in short supply



Import/Export Mismatch

Trade Metrics	
Trade Imbalance (2010)	\$497.8bn
Last Trade Surplus Year	1975
Pacific Container Import/Export Imbalance	2.6:1
Annual Container Repositioning Cost	\$17-20bn

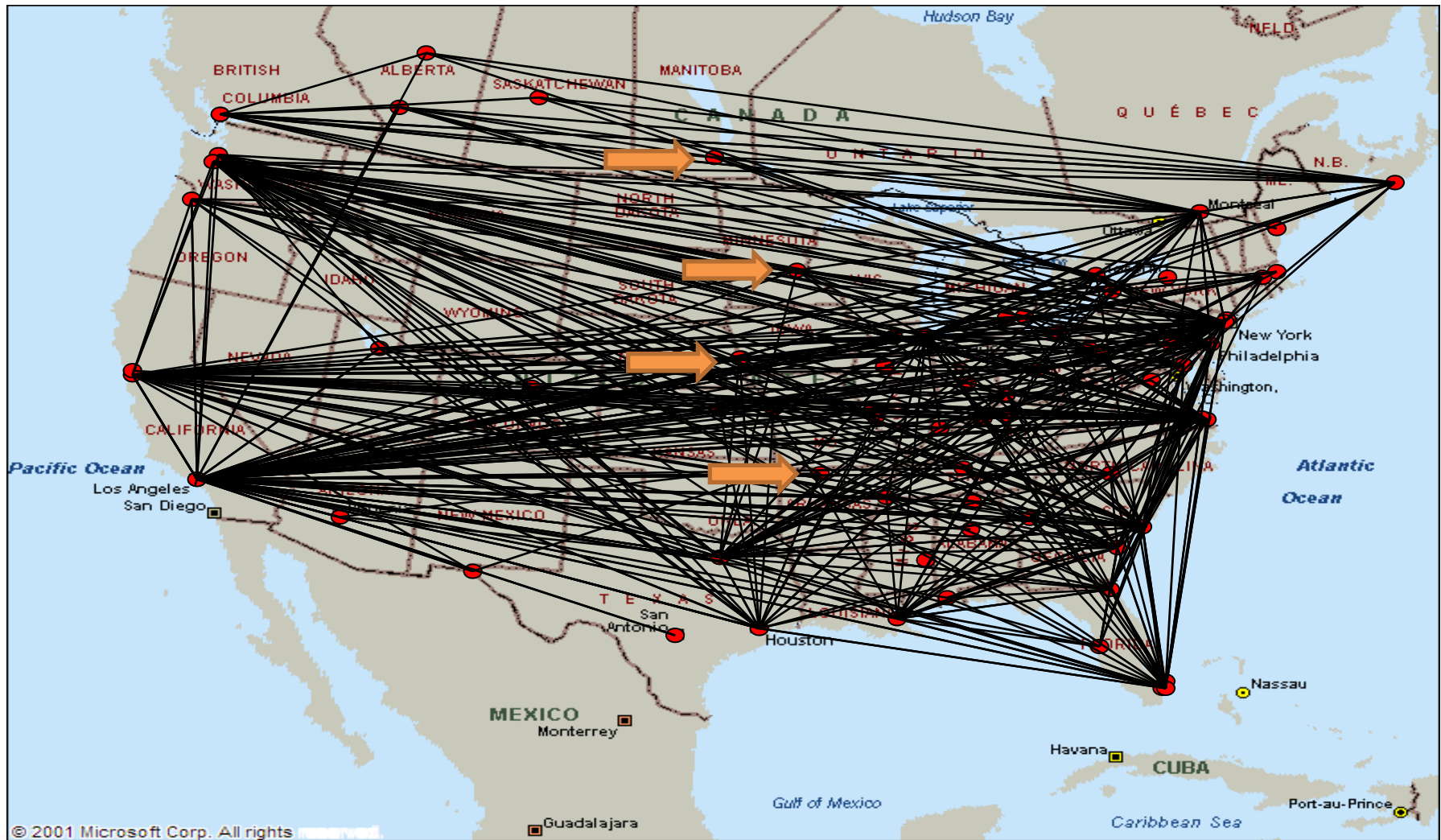


Changing Distribution of Imported Containers

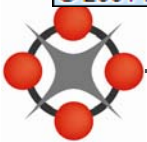
New investments (Heartland Corridor, Northwest Gateway TIGER grant projects) poorly positioned for bringing Midwestern exports to market



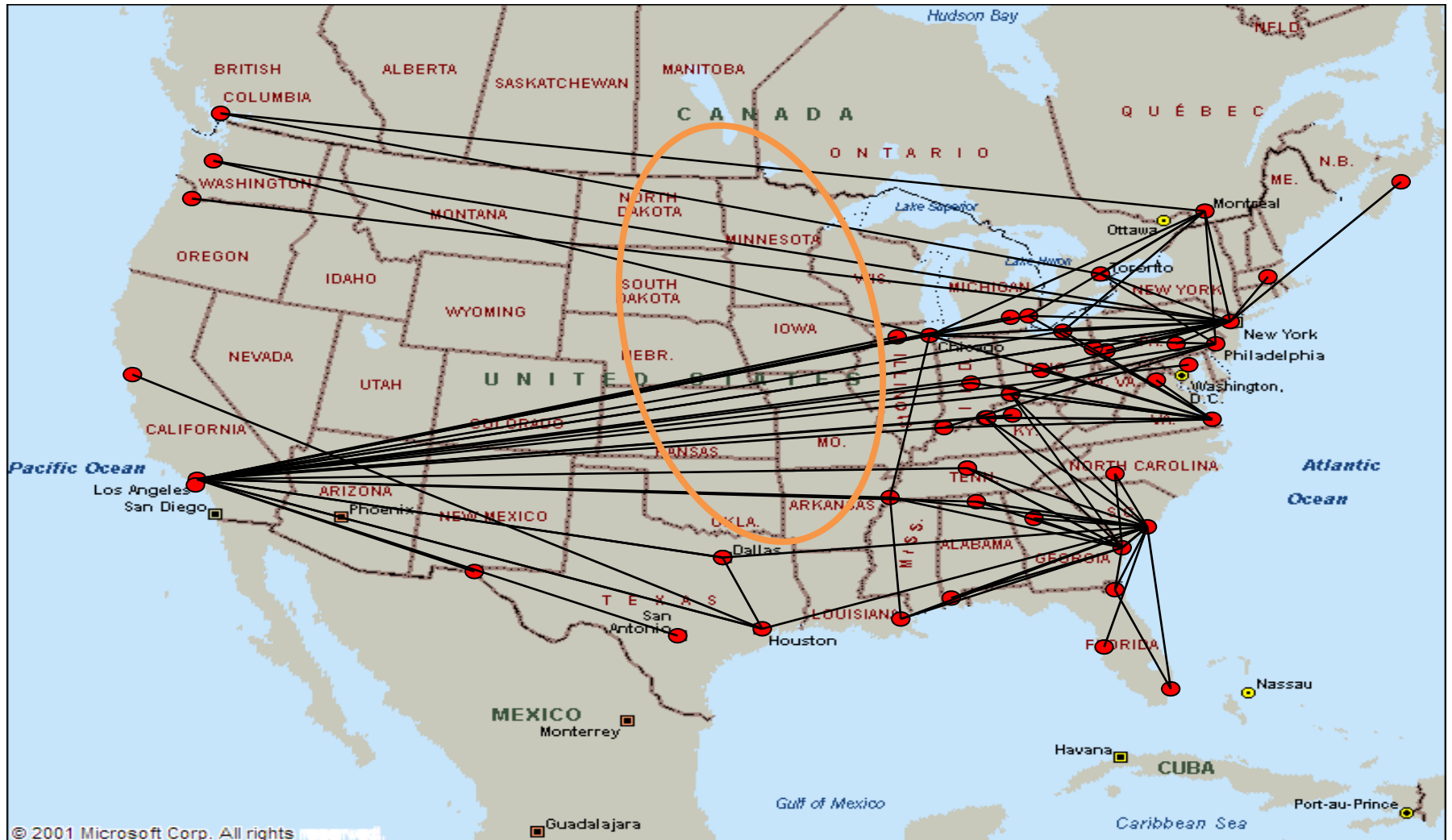
Import/Export Mismatch



Source: E.K. Pentimonti, Maersk Inc.



Import/Export Mismatch

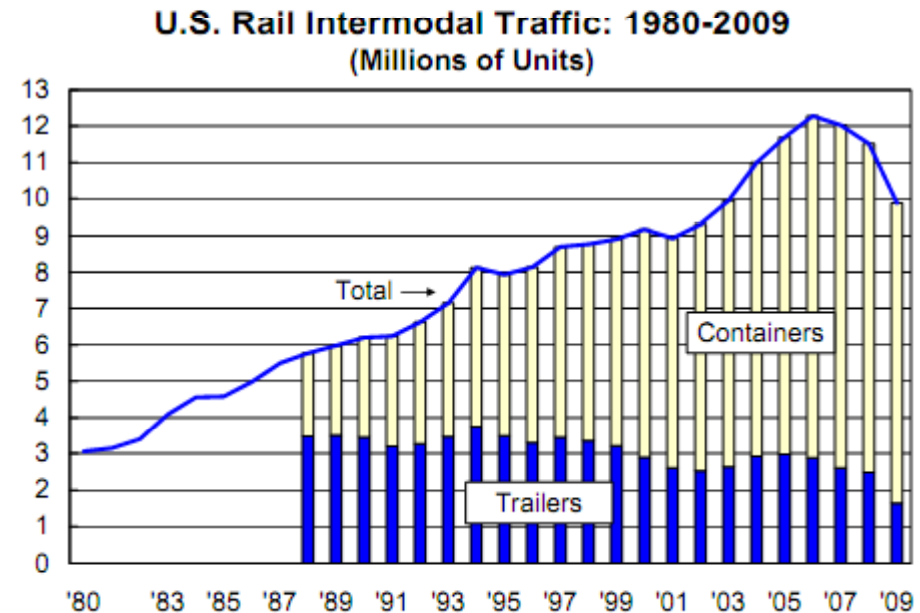


Source: E.K. Pentimonti, Maersk Inc.



Intermodal Shipping Trends

- Intermodal freight has grown more rapidly than any other sector in recent decades
- Improves efficiency while reducing congestion and environmental impacts
- Cost-effective alternative to truck-only freight transport

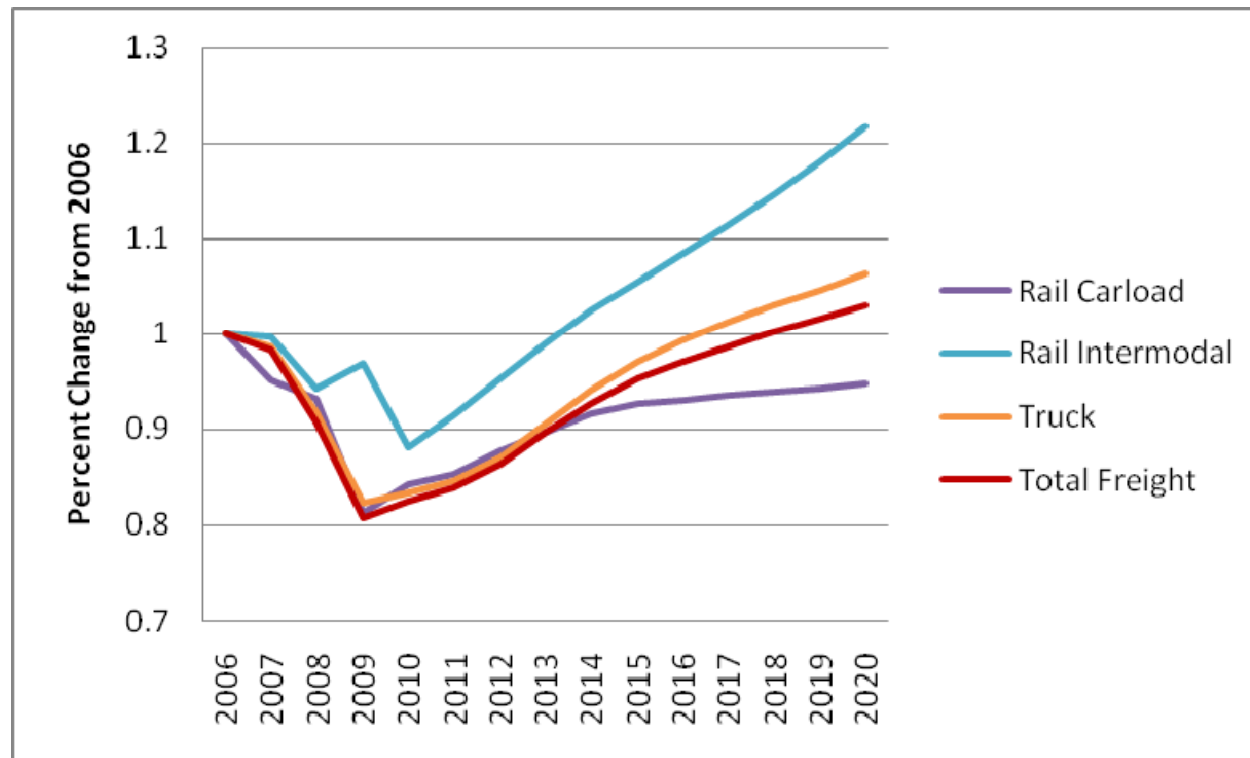


Source: Association of American Railroads, 2010



Intermodal Shipping Trends

- Intermodal shipping expected to continue growth relative to other modes

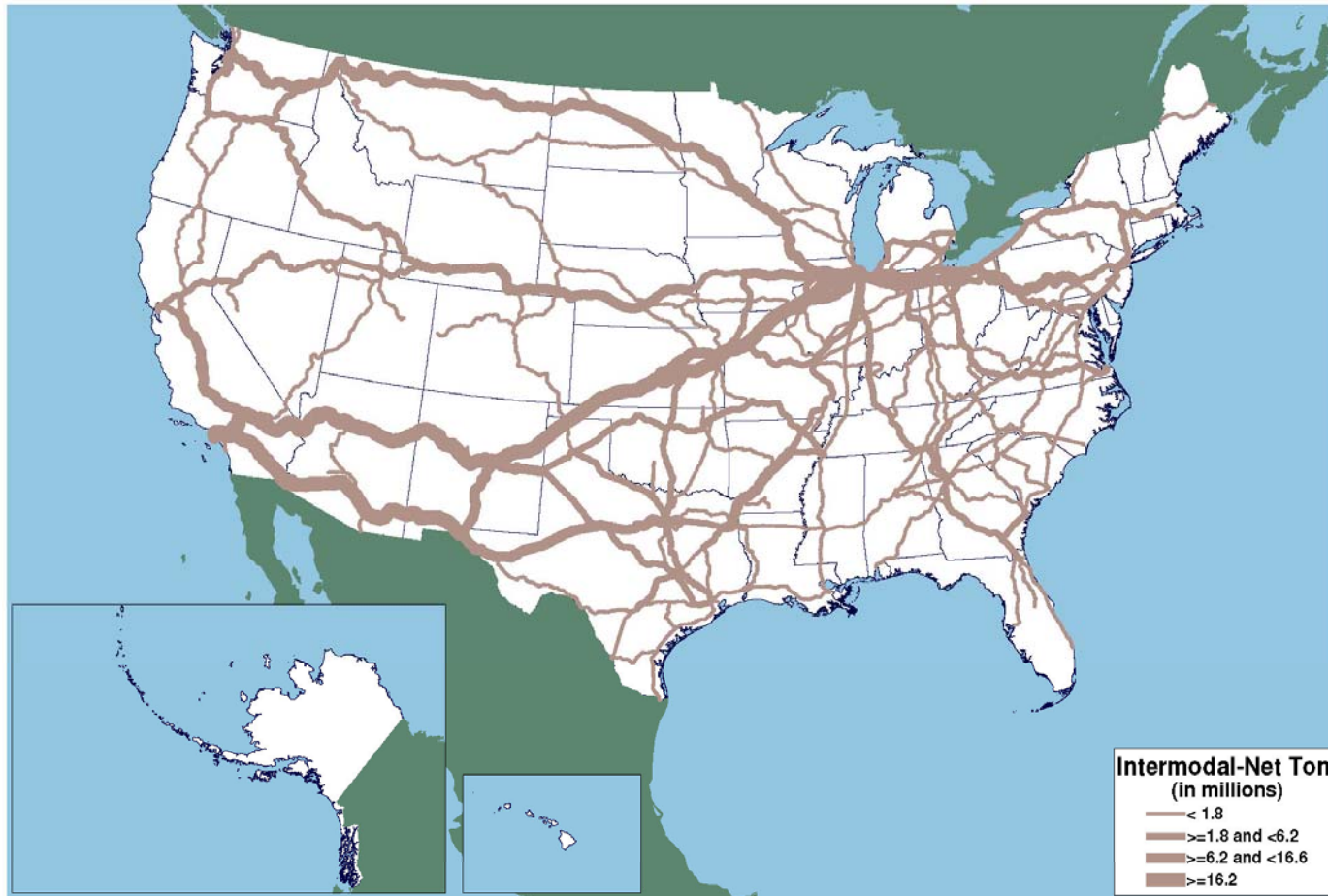


Source: IHS, Inc., 2011



Intermodal Shipping Trends

Tonnage of Trailer-on-Flatcar and Container-on-Flatcar Rail Intermodal Moves: 2008

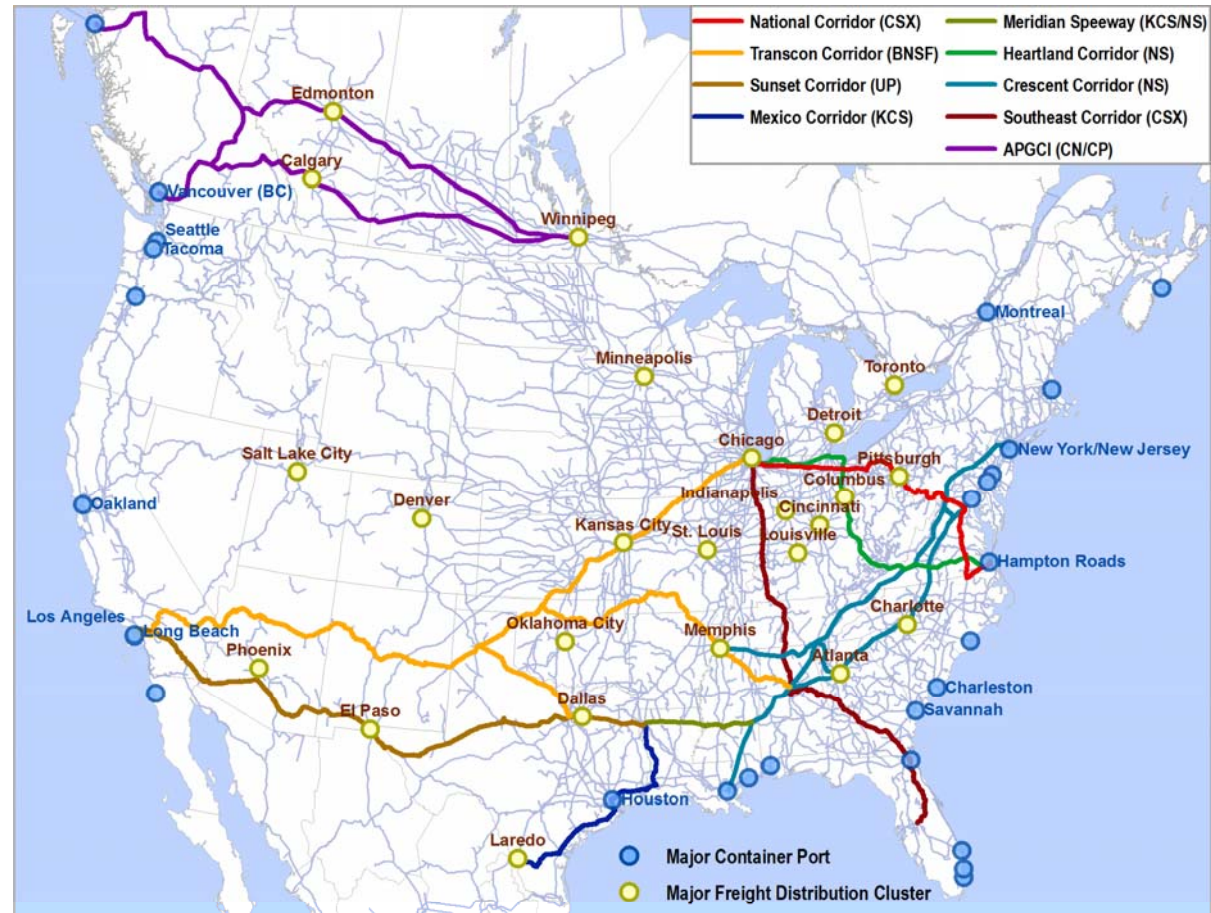


Source: U.S. Department of Transportation, Federal Railroad Administration, October, 2010



Intermodal Shipping Trends

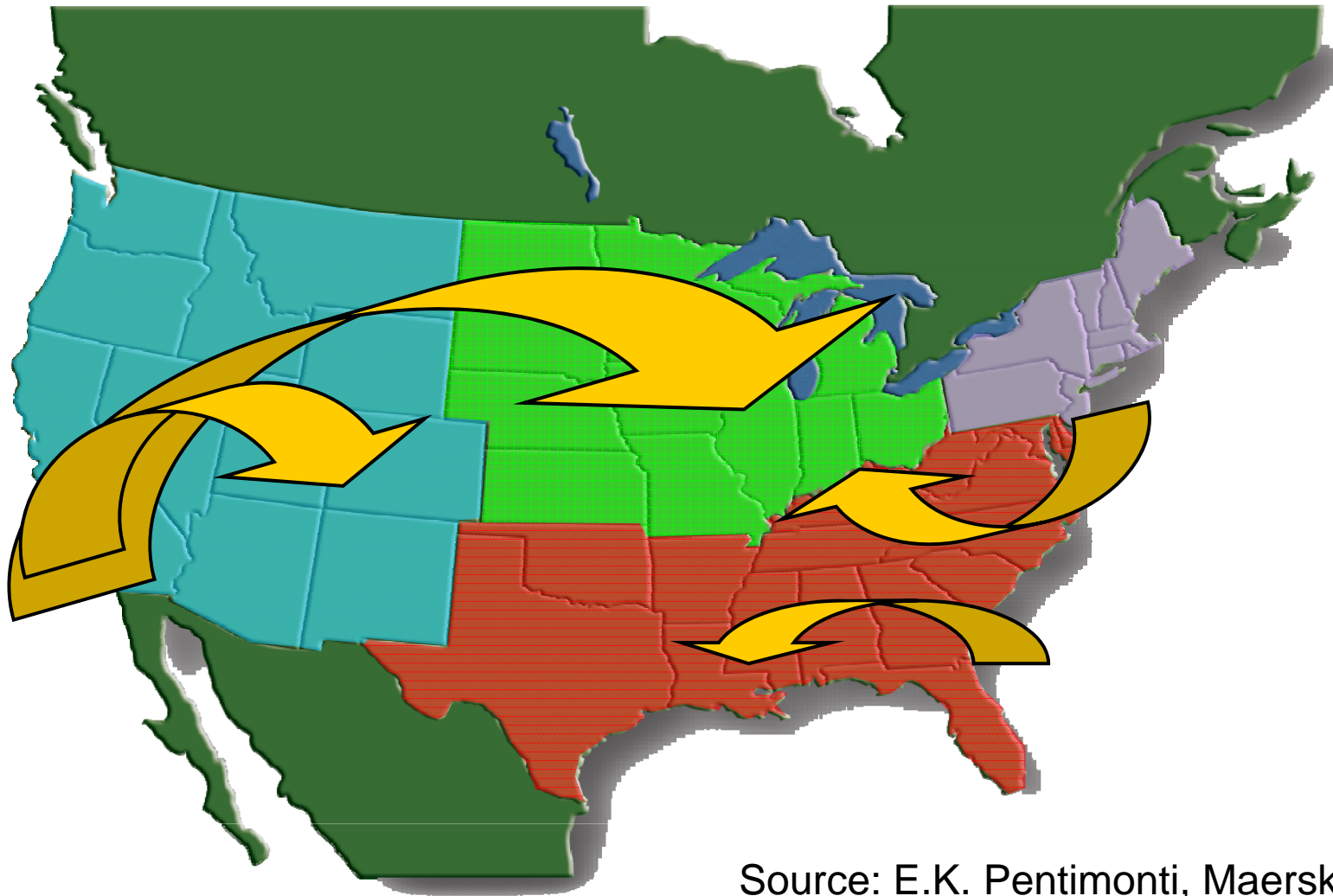
Recent Rail
Corridor
Improvements
(2000-present)



Source: Jean-Paul Rodrigue, Hofstra University



Intermodal Shipping Trends

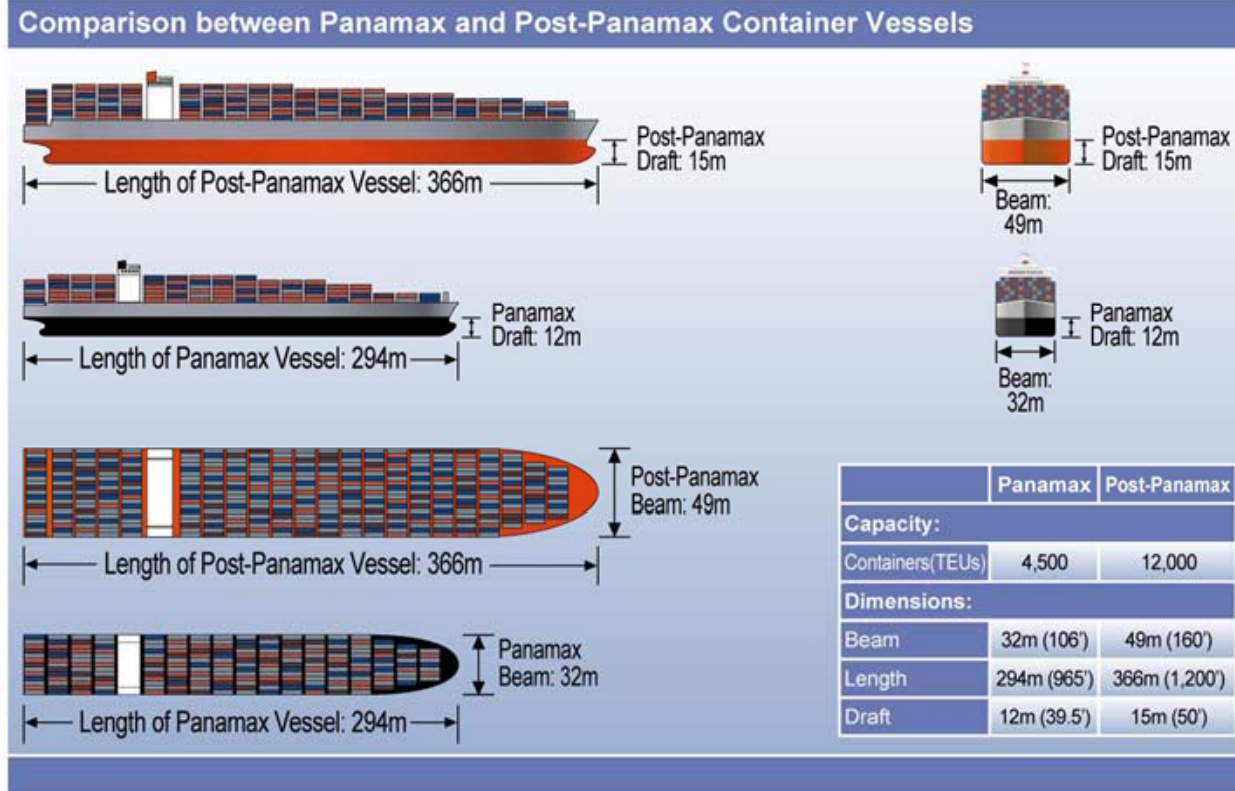


Source: E.K. Pentimonti, Maersk Inc.



Panama Canal Expansion

- High capacity third set of locks projected to open in 2014
- Improved prospects for intermodal trade via Gulf Coast ports



Source:
Panama Canal
Authority, 2007



Export Commodities

- Agricultural commodities
 - Identity preserved soybeans and grains
 - DDGs
 - In 2002, containerized products account for 15% of exports by weight but 52% by value
- Medical and scientific instruments
- Industrial and electrical machinery
- Furniture



Public Policy Solutions

- Why?
 - Obama Administration's National Export Initiative
 - AgTC estimates farm exports could be increased 20% with adequate equipment
 - Possible sea change in US import-export structure—*if* infrastructure can adapt
- Common-use container pool
- Improved information exchanges
- Public-private working groups
- Support for operations research & technology transfer



Common-Use Container Pool

- Private or public pool of equipment available to many carriers
 - Model: Consolidated Chassis Management (CCM) or TTX railcar pool
 - Minimize unnecessary movements incurred when containers are owned by a single carrier
- Public role?



Information Exchanges

- Information on repositioning needs can help minimize costs and maximize availability
- *Example: Cross-Town Improvement Project (Kansas City)*
 - Information sharing program to minimize unnecessary and unproductive truck moves of intermodal equipment
 - Congestion mitigation: goal of removing 3.7m truck VMT/year
 - Intermodal Move Exchange (IMEX)—coordinates activities of RRs, terminals, and trucking companies
 - Chassis Utilization Tracking (CUT)—management and tracking system for intermodal equipment
- Obstacle: privacy/liability concerns of carriers



Public-Private Working Groups

- Ports of Seattle/Tacoma have urged the Dept. of Commerce to “lead the effort” on finding solutions to the container problem
- Identify and pursue opportunities to enhance regional competitiveness, promote exports
- Model: Intermodal Freight Technology Working Group



Operations Research

- Recent work in logistics, industrial engineering, and operations research has addressed empty container allocation
 - Computational models increasingly account for uncertainty in fast-changing operational environments
- Public agencies should continue to support research and technology transfer



Potential Barriers

- Uncertain public funding
 - Possibility of container tax as revenue stream
- Public investment on behalf of private business
- Cost barriers to repositioning in low-margin markets
- Container production is primarily Chinese: total supply is out of our hands



Questions?

