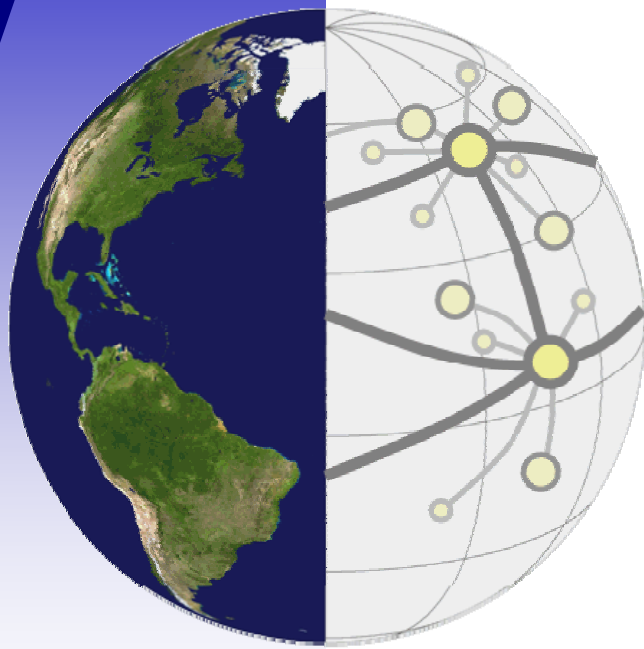




New York Metropolitan Transportation Council,
Brown Bag Seminar, April 16 2007



Intermodal Transportation and Commodity Chains: New York and the Global, Regional and Local Nexus

Jean-Paul Rodrigue

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Geography, Hofstra University, New York,
USA

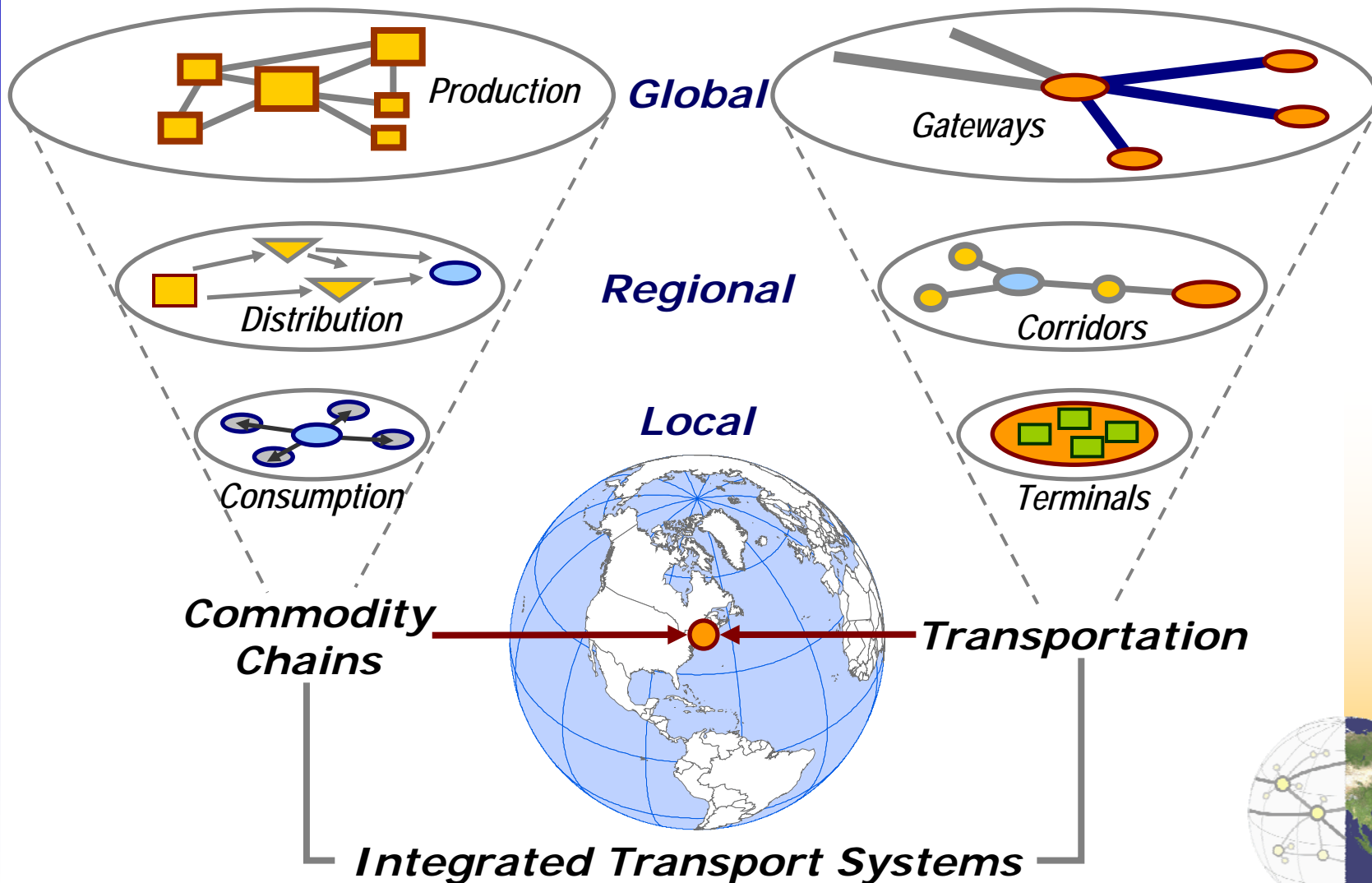
Email: ecojpr@hofstra.edu

Paper available at:

http://people.hofstra.edu/faculty/Jean-paul_Rodrigue



New York as a Nexus: Commodity Chains and Transportation





The Global Nexus: Commodity Chains and Global Production Networks

1

Global Production Networks
Container Ports as Gateways
Integrated Transport Systems

UPS Willow Springs Distribution Center, Chicago





Spaces, Networks and Flows in a Global Economy

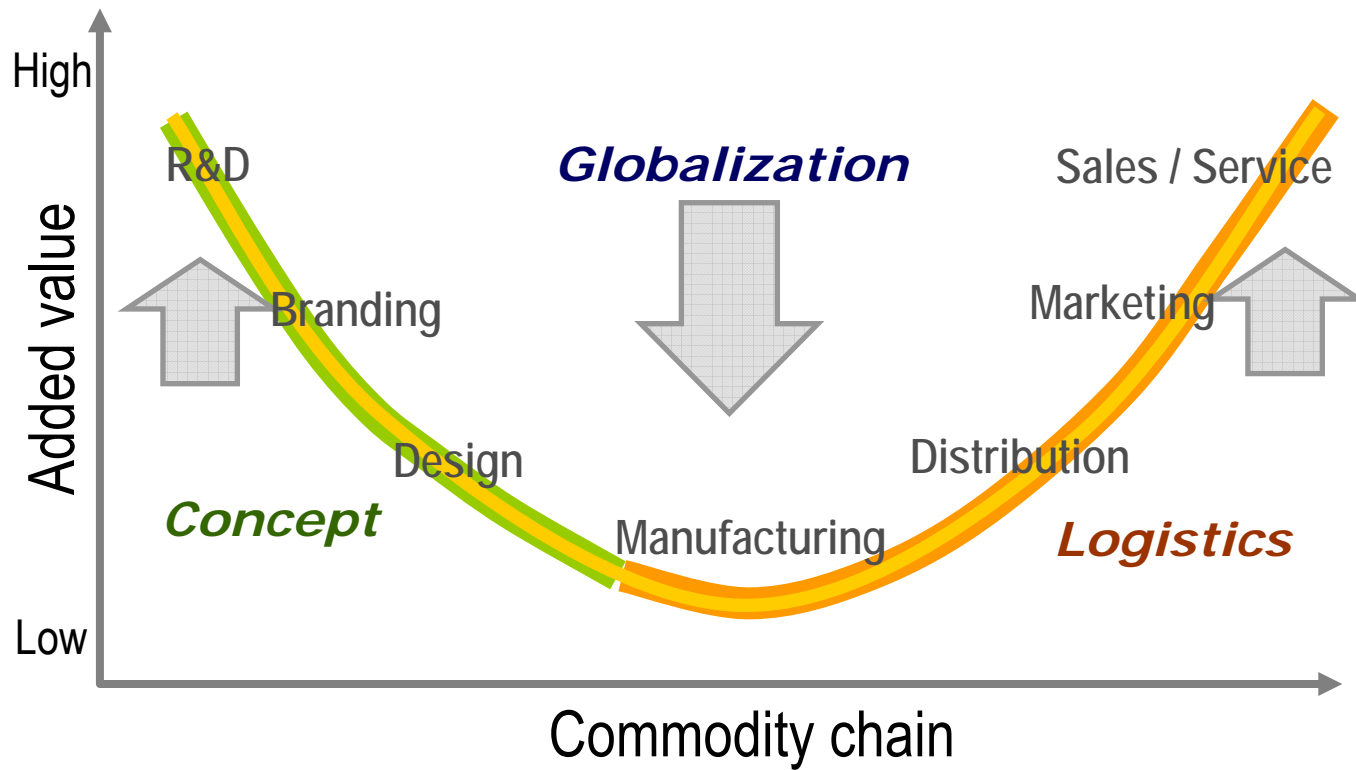


- Globalization; a clustered and spatially diffused process
 - In terms of production and consumption.
 - Distribution is reconciling spatially diverse demands for raw materials, parts and finished goods.
- The backbone of globalization
 - Networks are established to support distribution.
 - Nodes are regulating the flows within networks.
 - As international trade increases, nodes have become strategic locations.



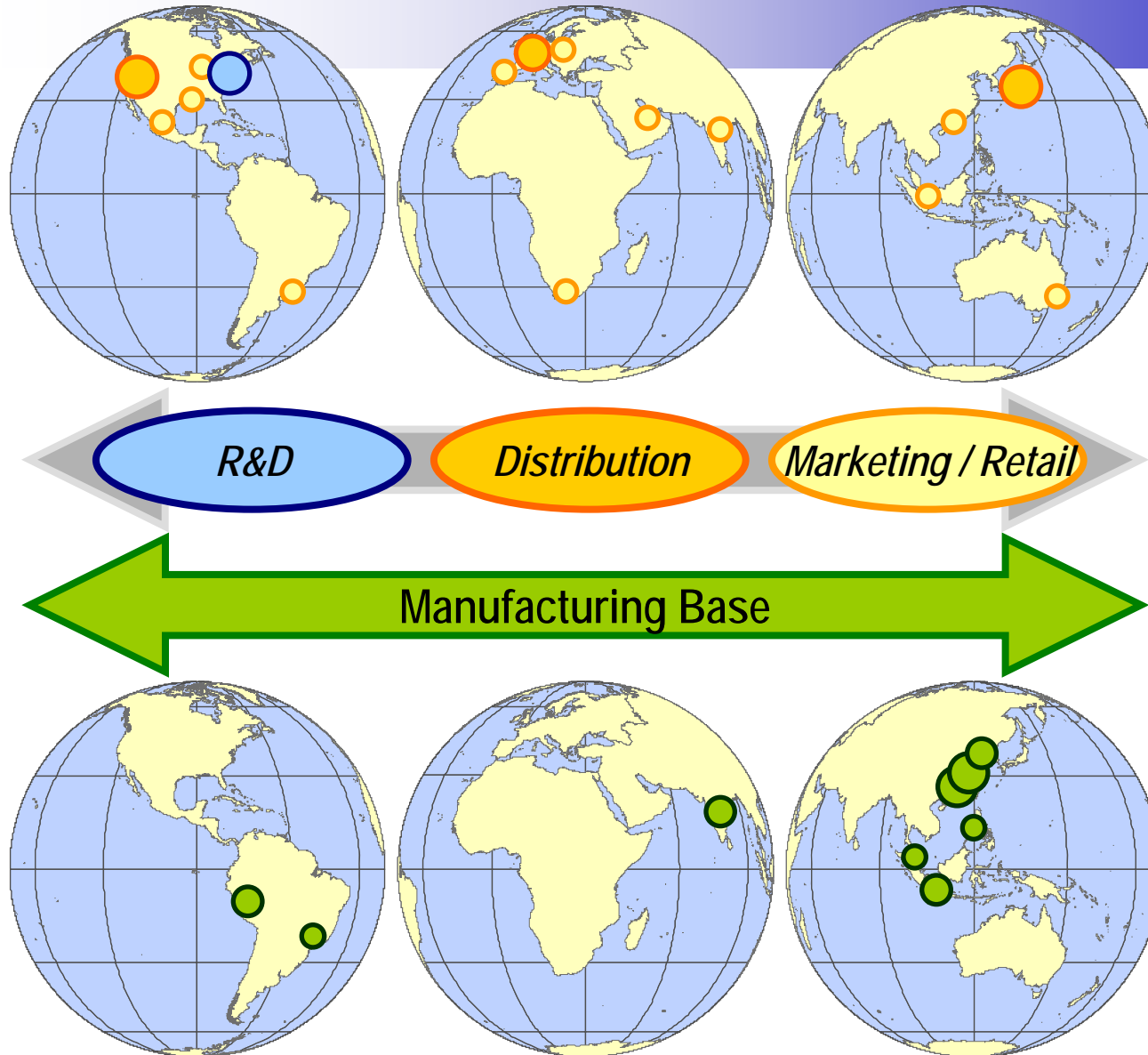


Commodity Chains and Added Value



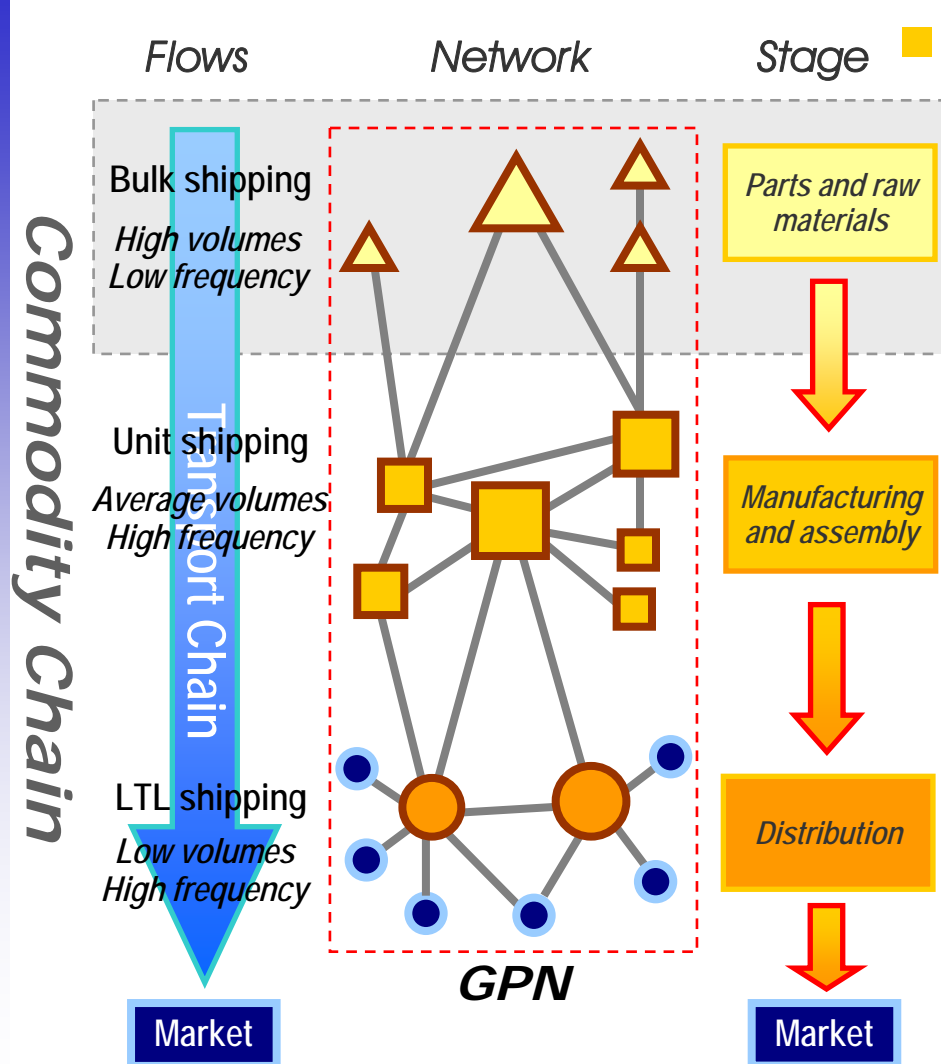


Disconnection of Global Production and Distribution





The Emergence of Global Production Networks



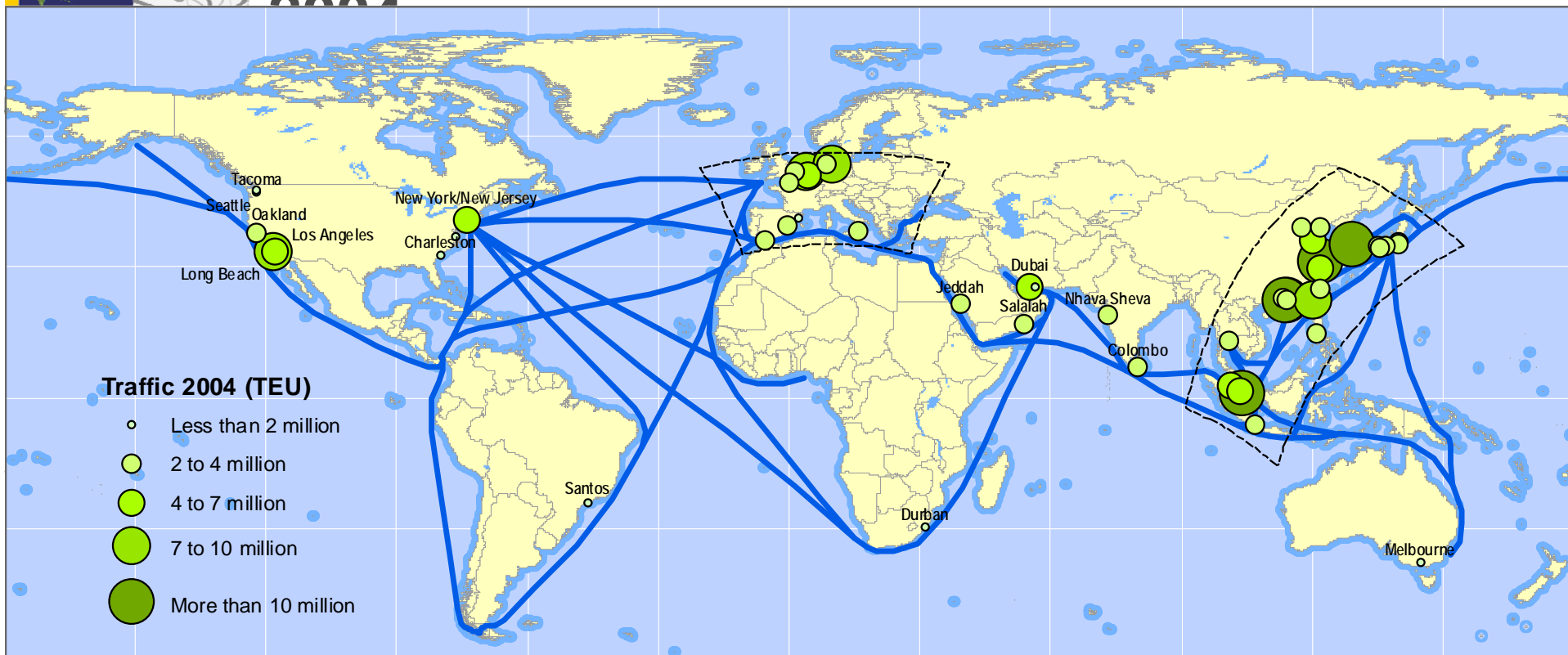
The Logistical Nexus

- Fast growth of international trade with the full realization of comparative advantages.
- Geographical and functional integration of production, distribution and consumption.
- Commodity / Supply Chains.
- Transportation integrated in the production / retailing process.
- Global Production Networks (GPN).
- Logistical poles where value added activities are performed.
- Entirely new nodal locations.





Traffic at the 50 Largest Container Ports, 2004



Traffic 2004 (TEU)

- Less than 2 million
- 2 to 4 million
- 4 to 7 million
- 7 to 10 million
- More than 10 million



Pacific Asia

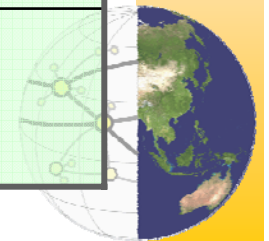


Europe



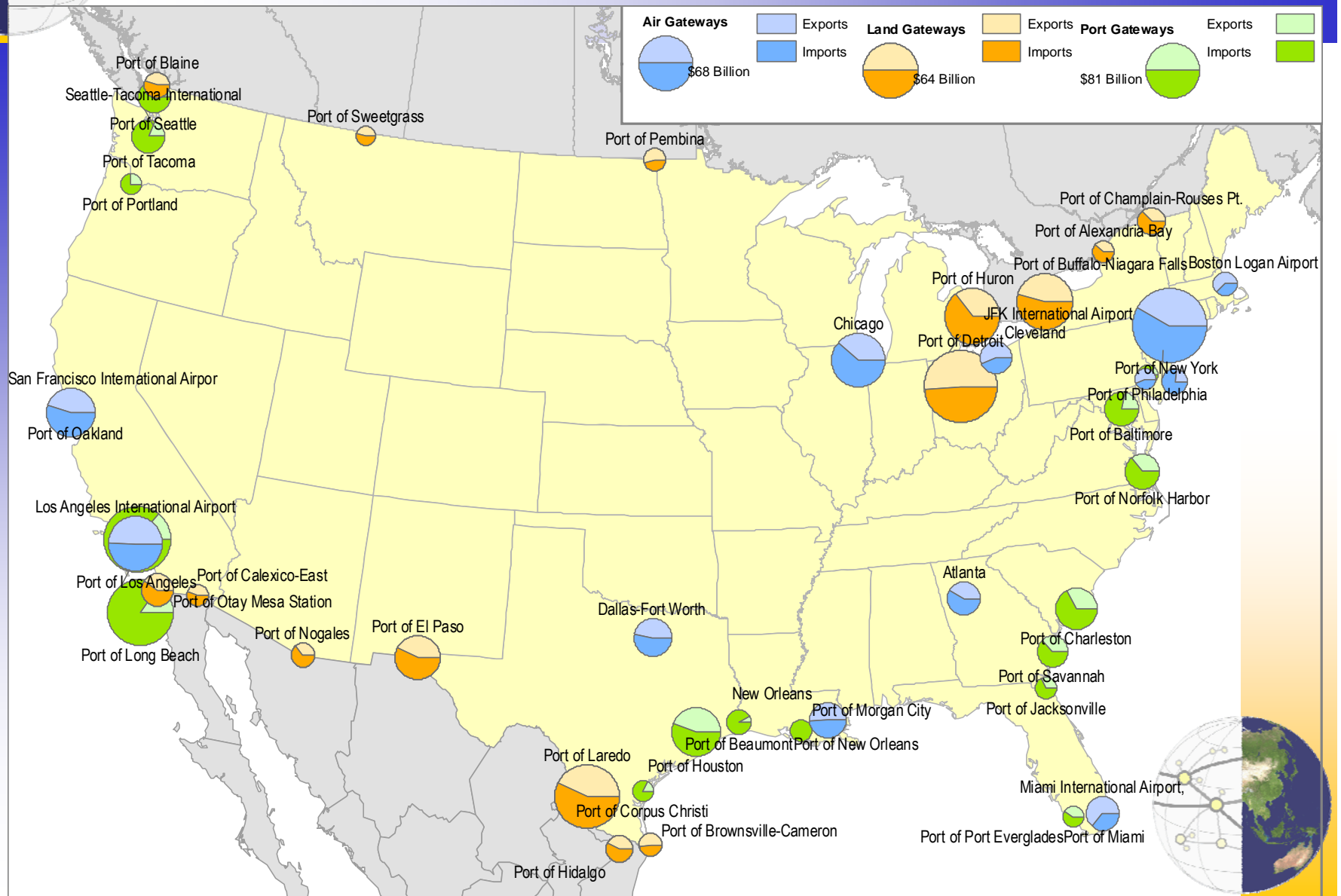
Integrated Transport Systems: From Fragmentation to Coordination

Factor	Cause	Consequence
Technology	Containerization & IT	Modal and intermodal innovations; Tracking shipments and managing fleets
Capital investments	Returns on investments	Highs costs and long amortization; Improve utilization to lessen capital costs
Alliances and M & A	Deregulation	Easier contractual agreements; joint ownership
Commodity chains	Globalization	Coordination of transportation and production (integrated demand)
Networks	Consolidation and interconnection	Multiplying effect





Major US Modal Gateways, 2004





The Three Main Gateways of North America

Gateway System	Gateways	Total share (%)	Imports / Exports (\$ billions) 2004	
Southern California	Port of Los Angeles, Port of Long Beach, Los Angeles International Airport, Otay Mesa (Port of Entry)	18.3%	\$255.9	\$77.8
New York / New Jersey	JFK International Airport, Port of New York / New Jersey	13.1%	\$163.0	\$75.8
Detroit	Detroit (Port of Entry), Huron (Port of Entry)	9.8%	\$97.9	\$81.8





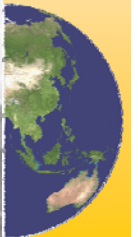
The Regional Nexus: Freight Distribution, Gateways and Corridors

2

Intermodalism and Transmodalism Corridors

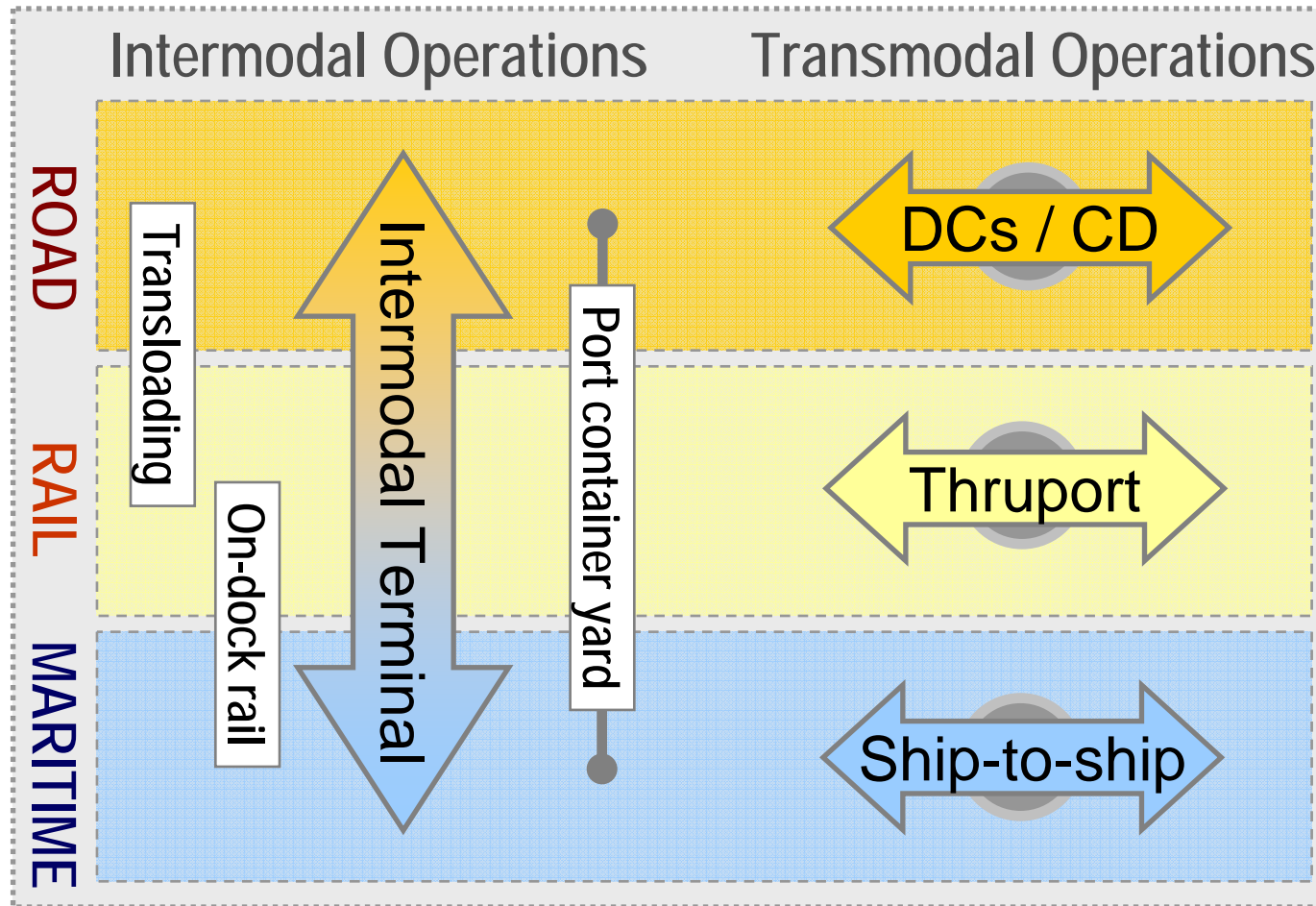


Translift crane, NS Rutherford yard, PA



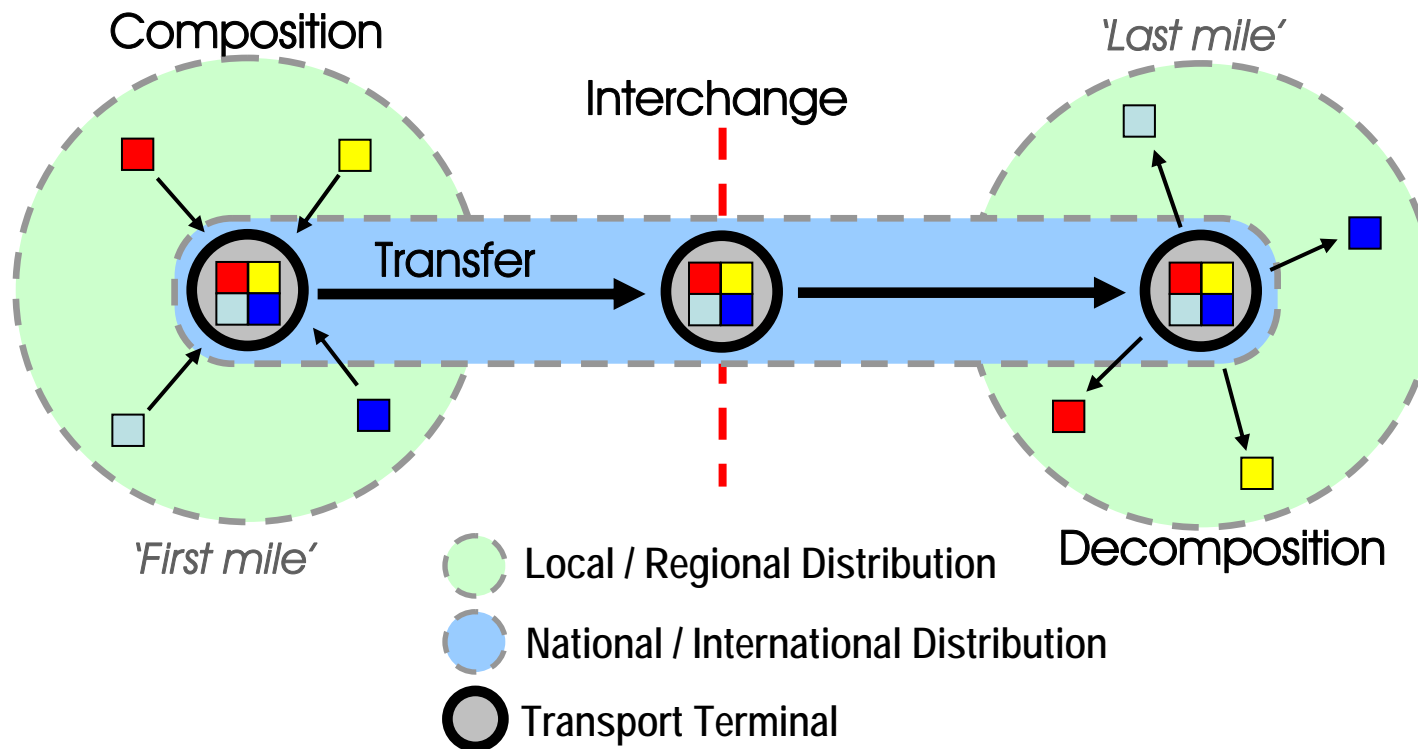


Intermodal and Transmodal Operations



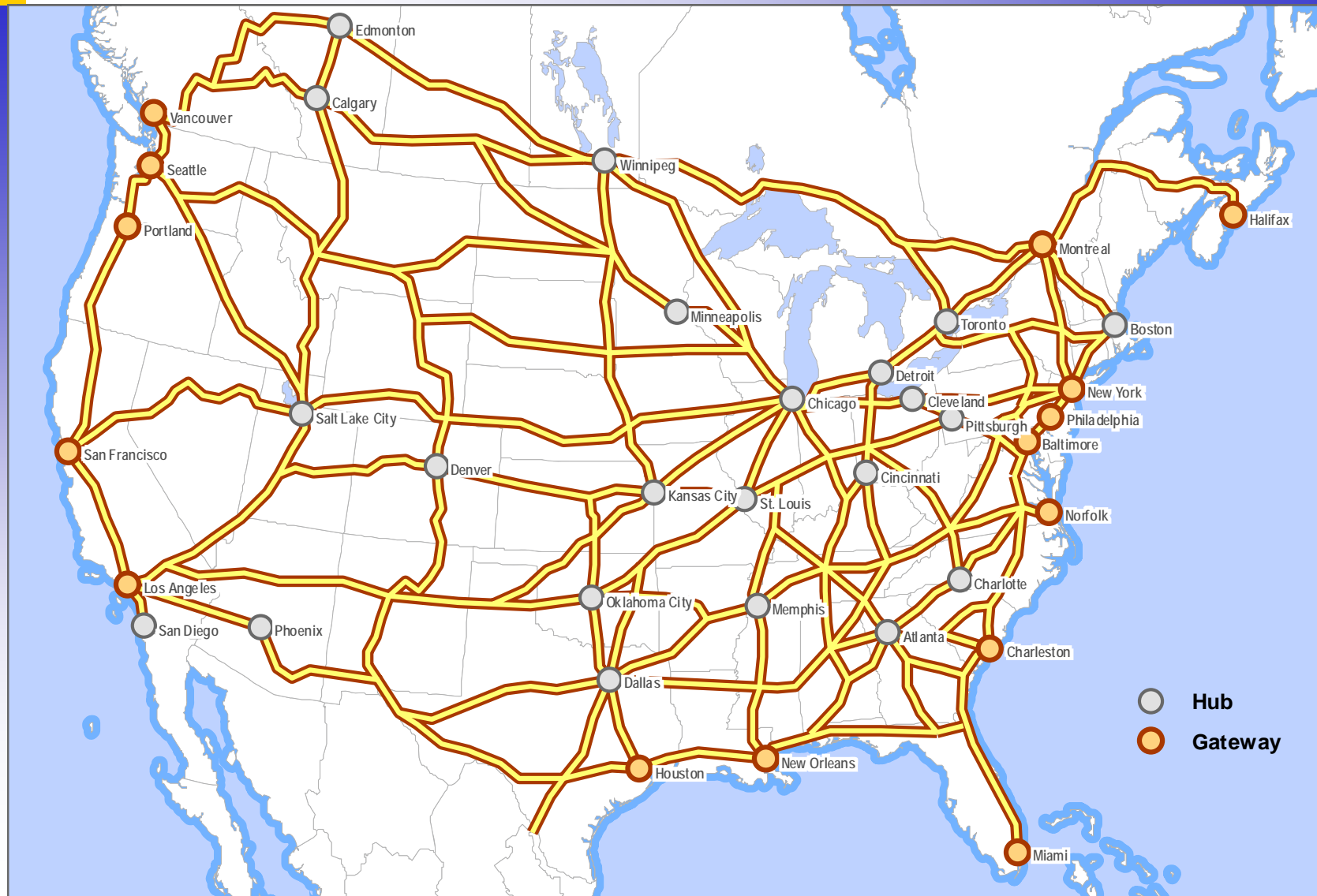


Intermodal Transport Chain



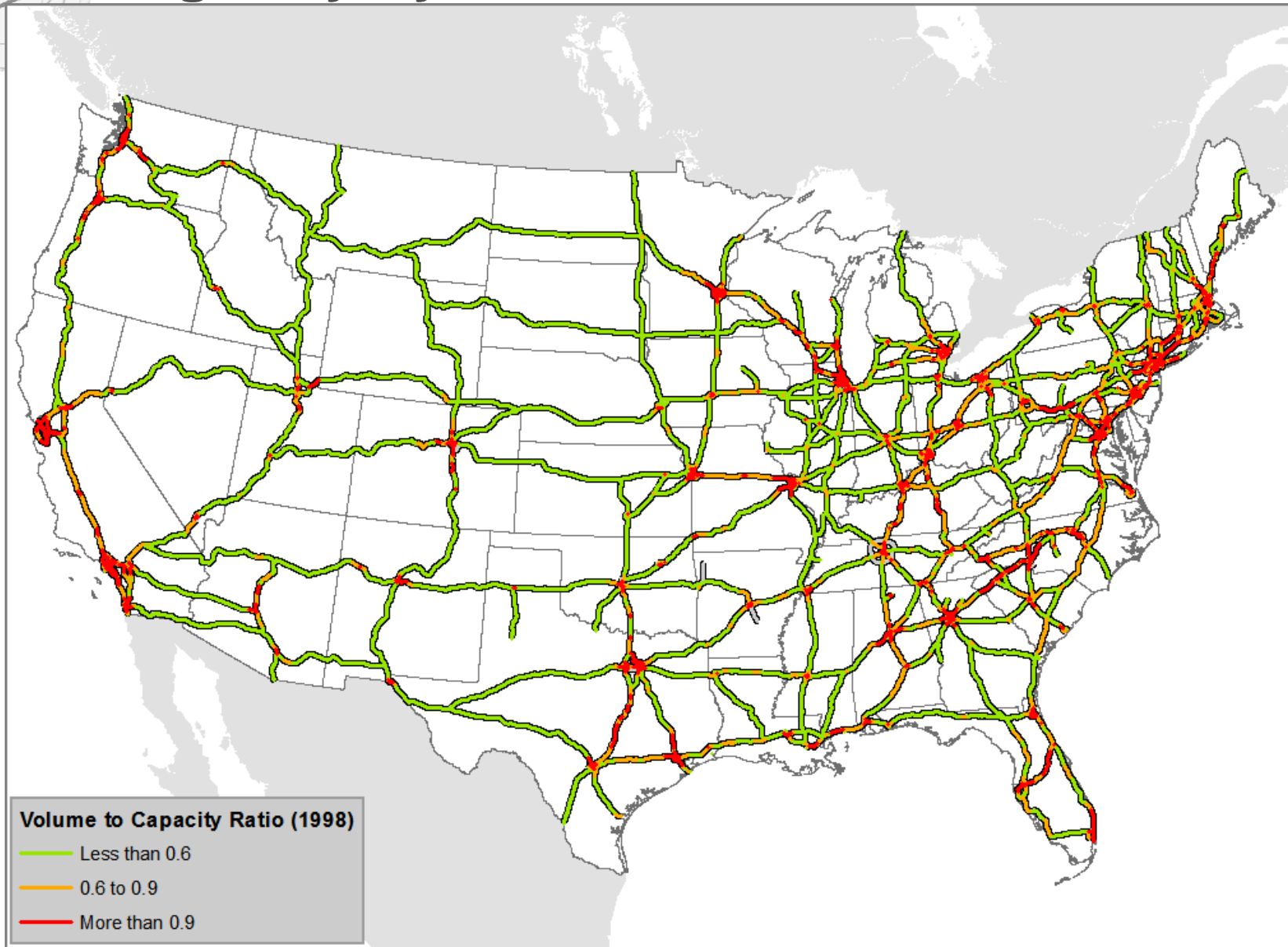


Main North American Trade Corridors and Metropolitan Freight Centers





Level of Congestion of the Interstate Highway System





The Local Nexus: Terminals

3

Terminalization of Ports Port Regionalization

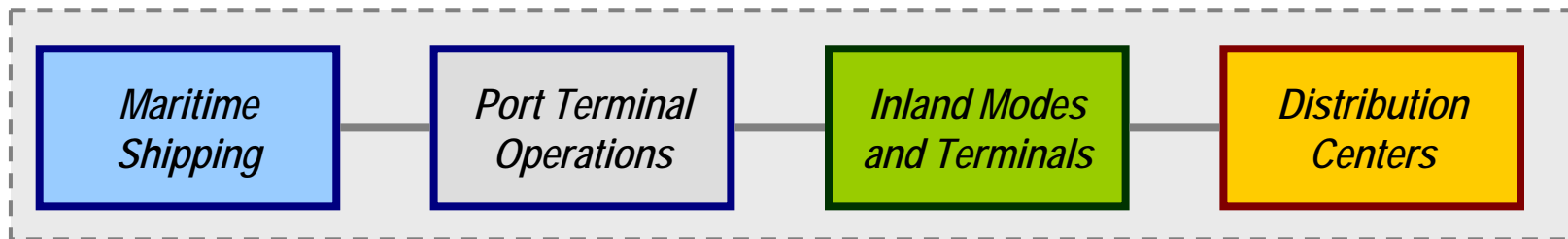
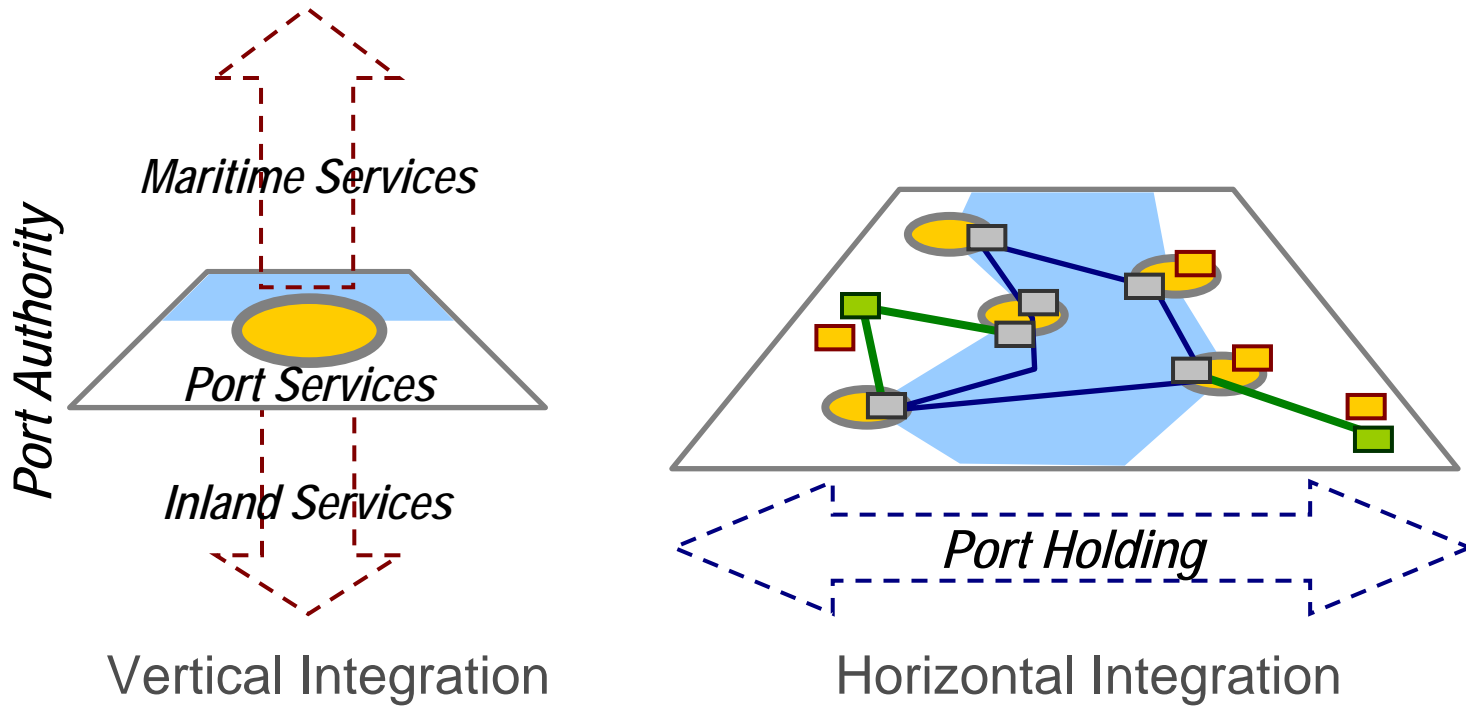


APL "Australia" entering San Francisco Harbor





The Value Capture Process along Commodity Chains

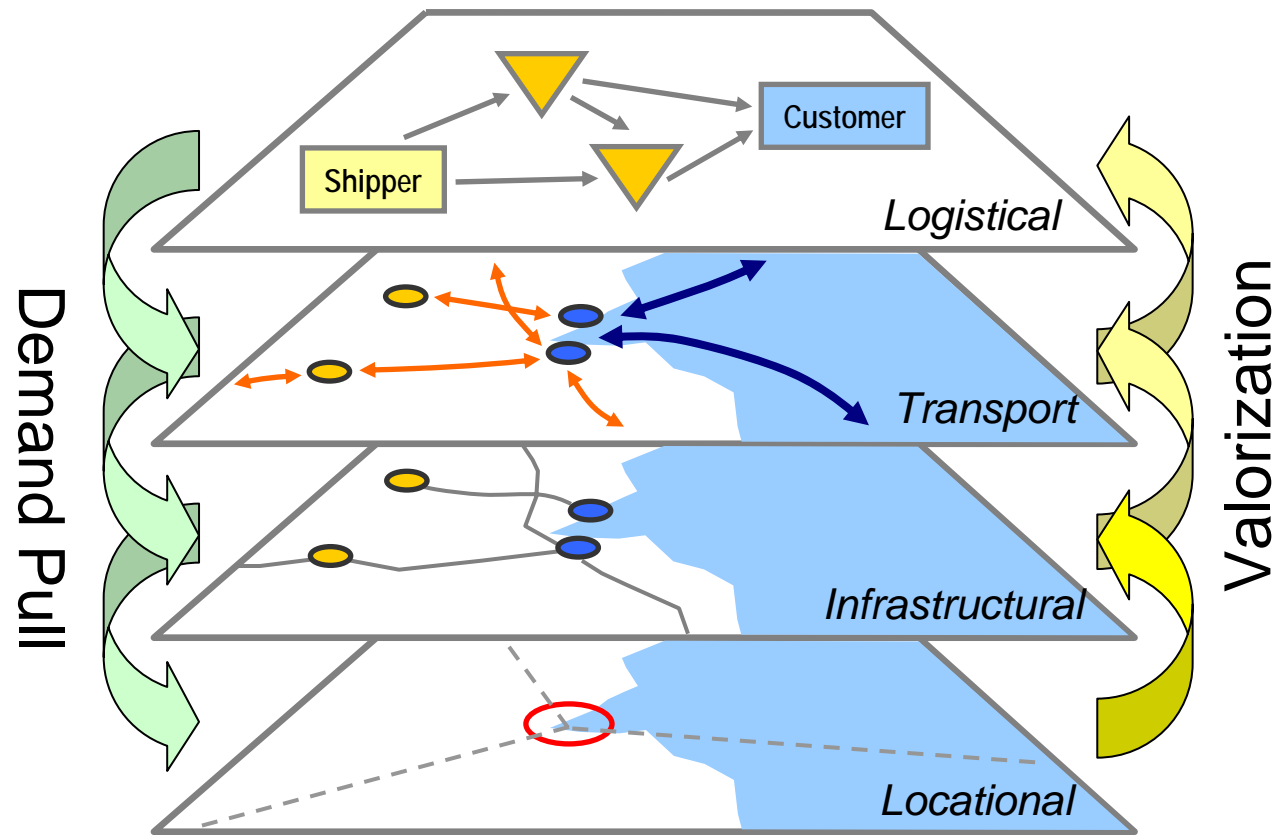


Commodity Chain





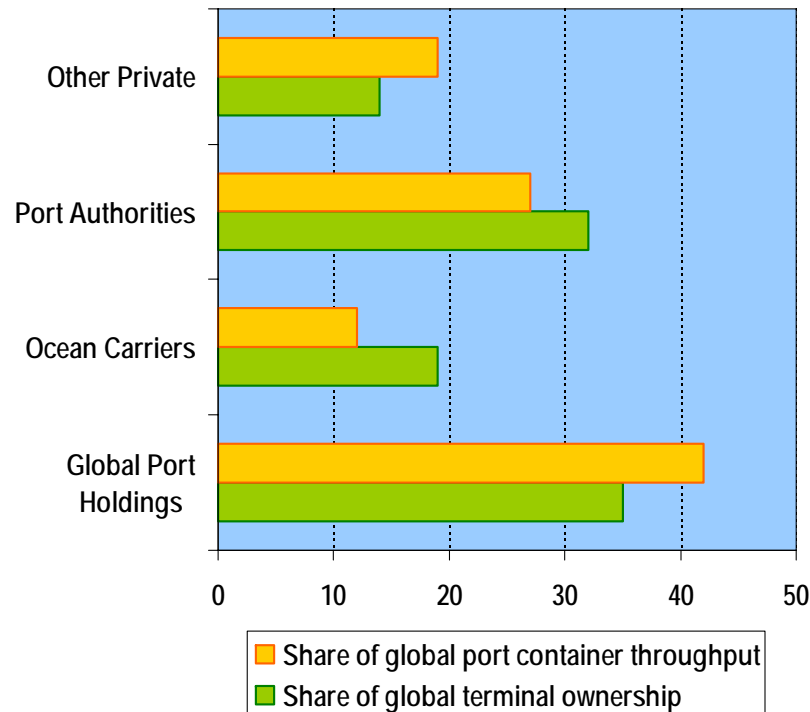
Logistics: Soft Pressures on Hard Assets





Port Holdings as Elements of the Maritime / Land Interface

Global Port Terminal Ownership, 2001



■ Horizontal integration using fixed assets

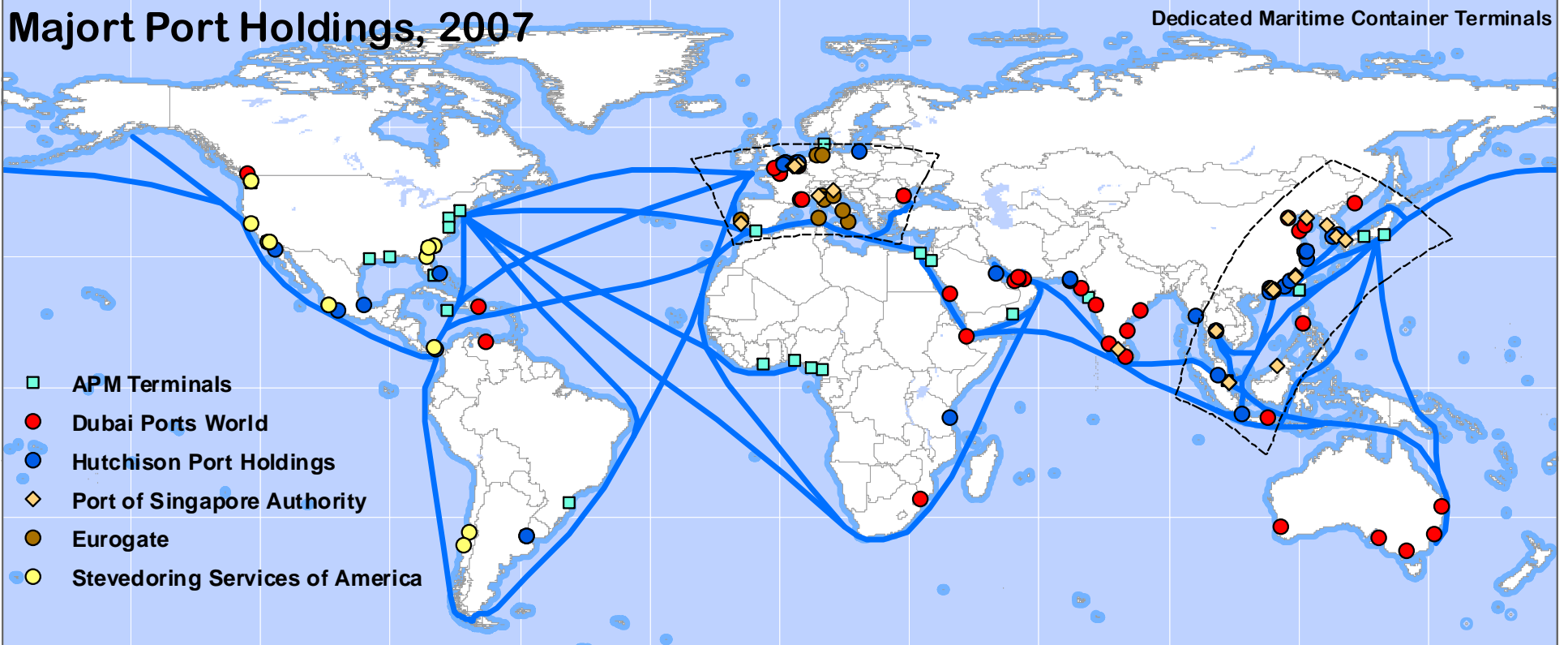
- More than 40% of global containerized traffic (2006).
- Gain a foothold in a wide variety of markets (strategic positioning).
- Financial assets.
- Managerial expertise.
- Gateway access.
- Leverage.
- Traffic capture.
- Global perspective.



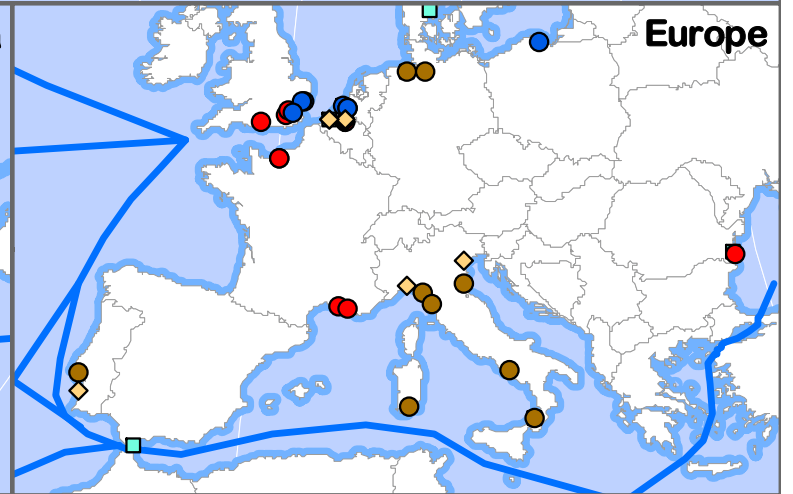


Major Port Holdings, 2007

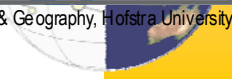
Dedicated Maritime Container Terminals



Pacific Asia

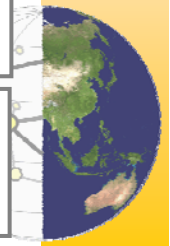
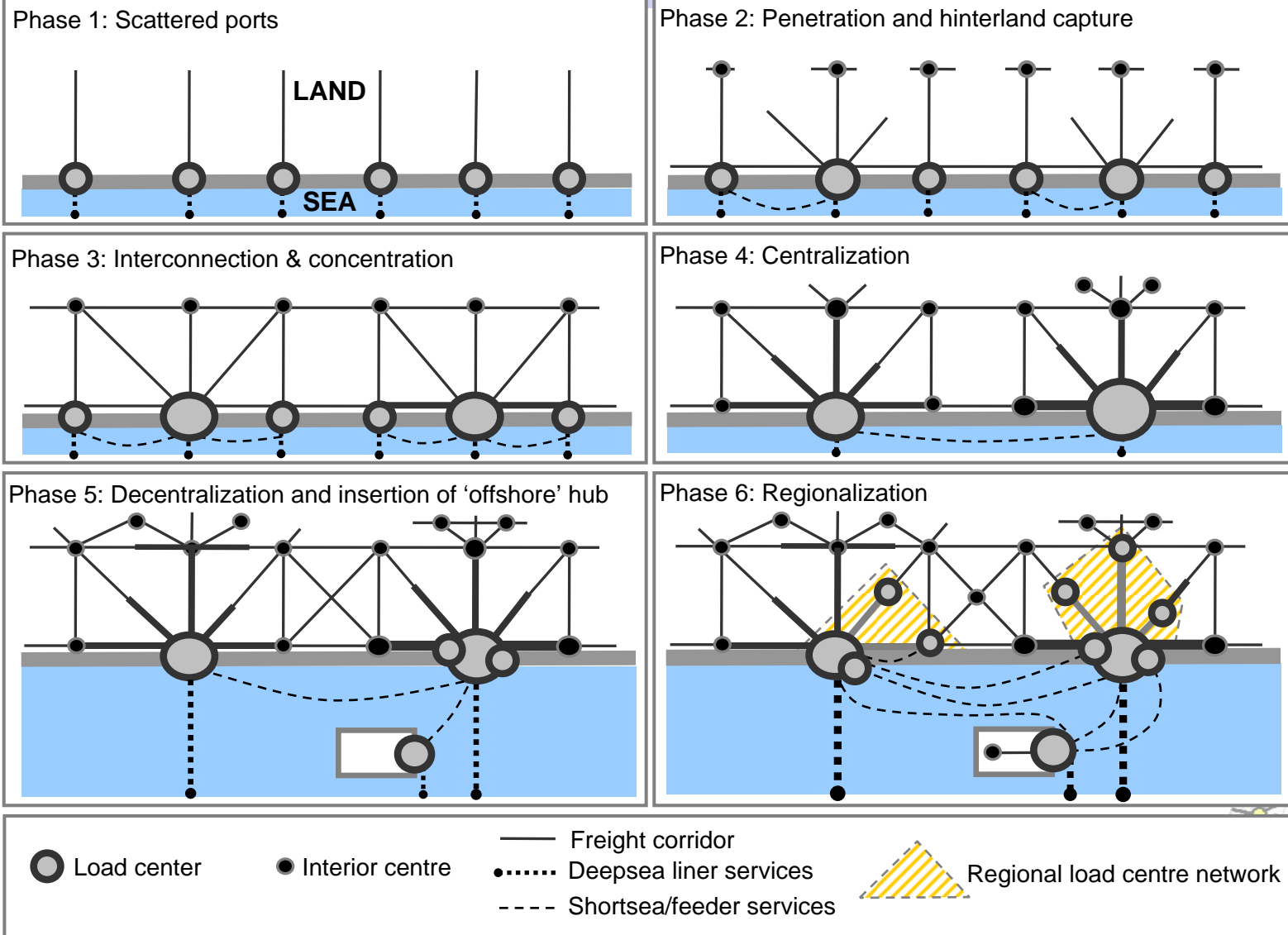


Europe



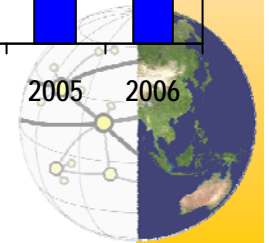
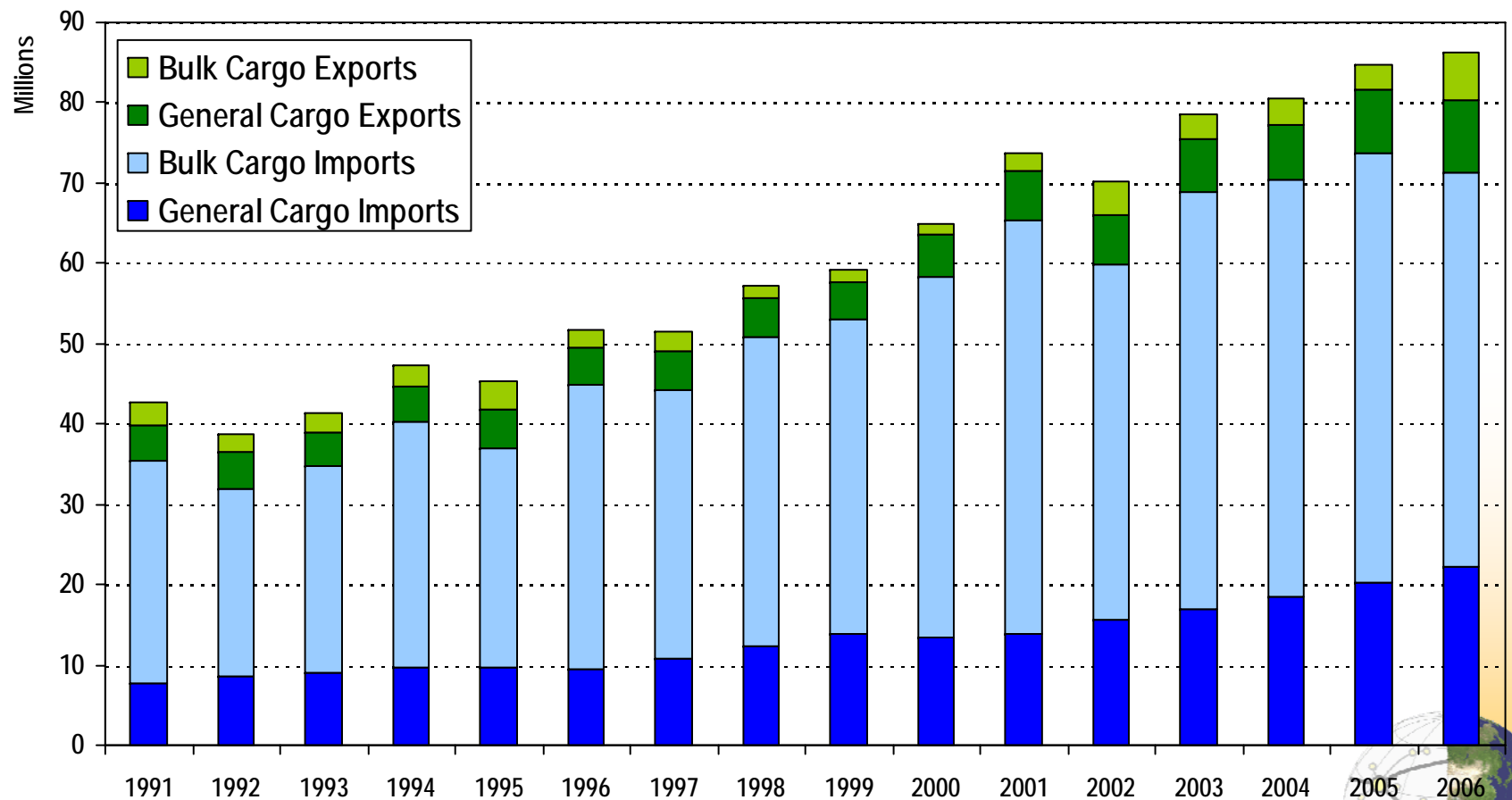


The Spatial Development of a Port System: Towards Regionalization



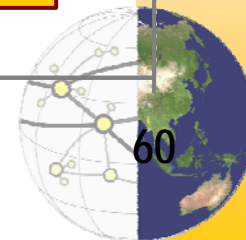
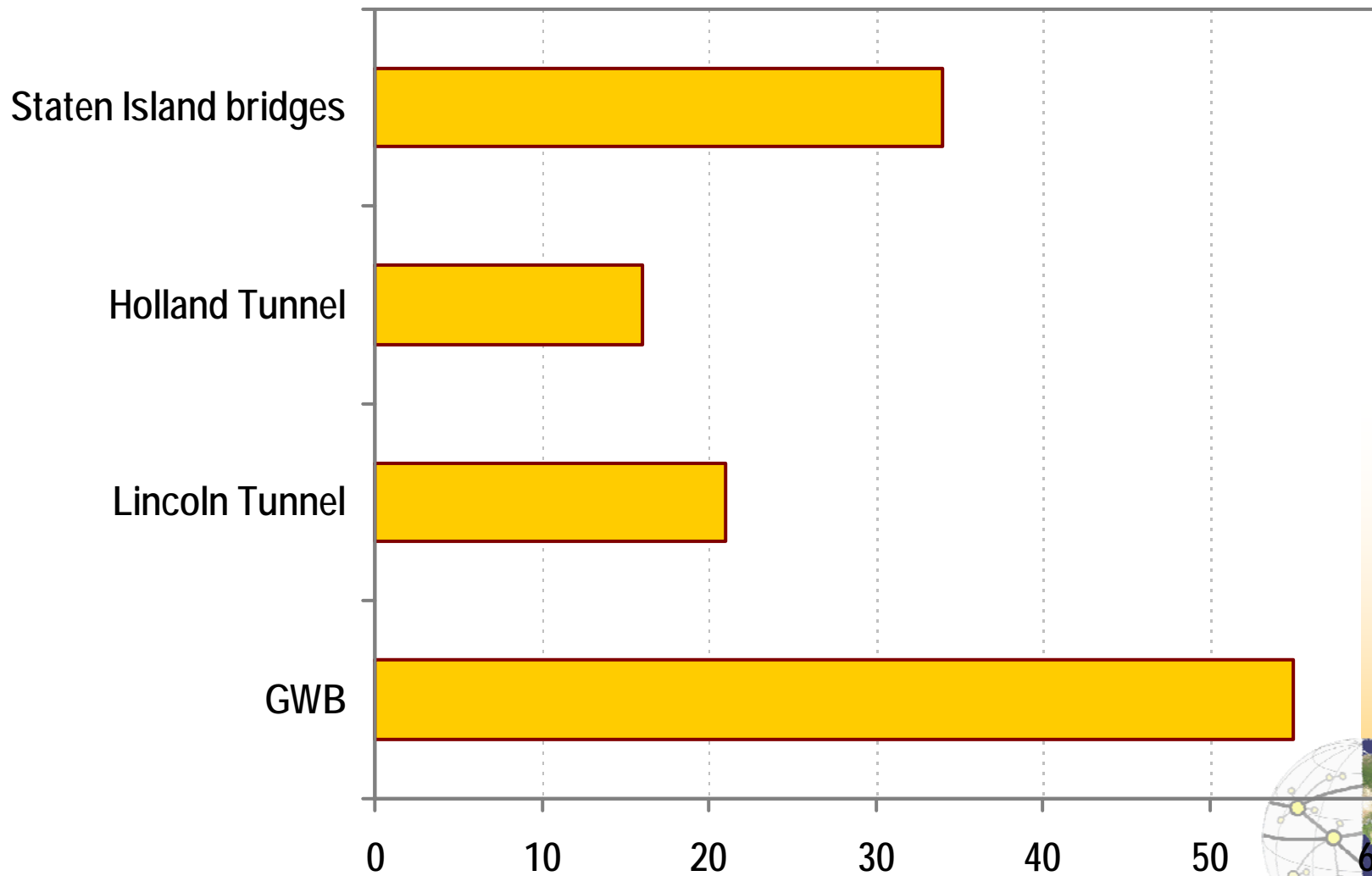


Cargo Handled by the Port of New York, 1991-2006 (metric tons)



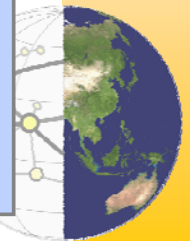
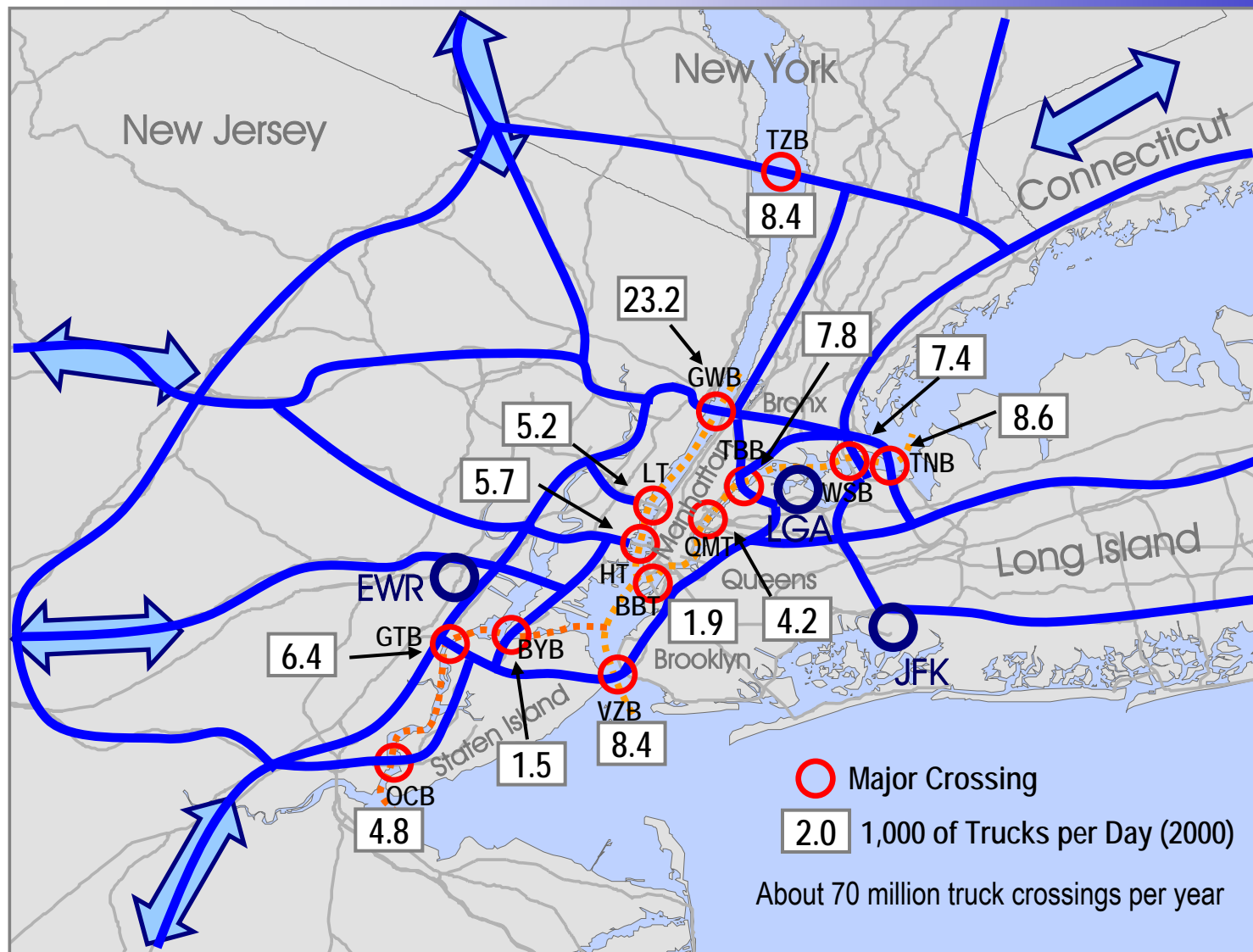


Annual Traffic at Some NY / NJ Crossings, 2005 (millions of vehicles)



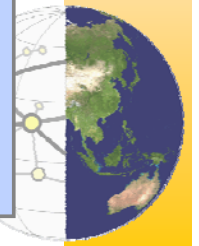
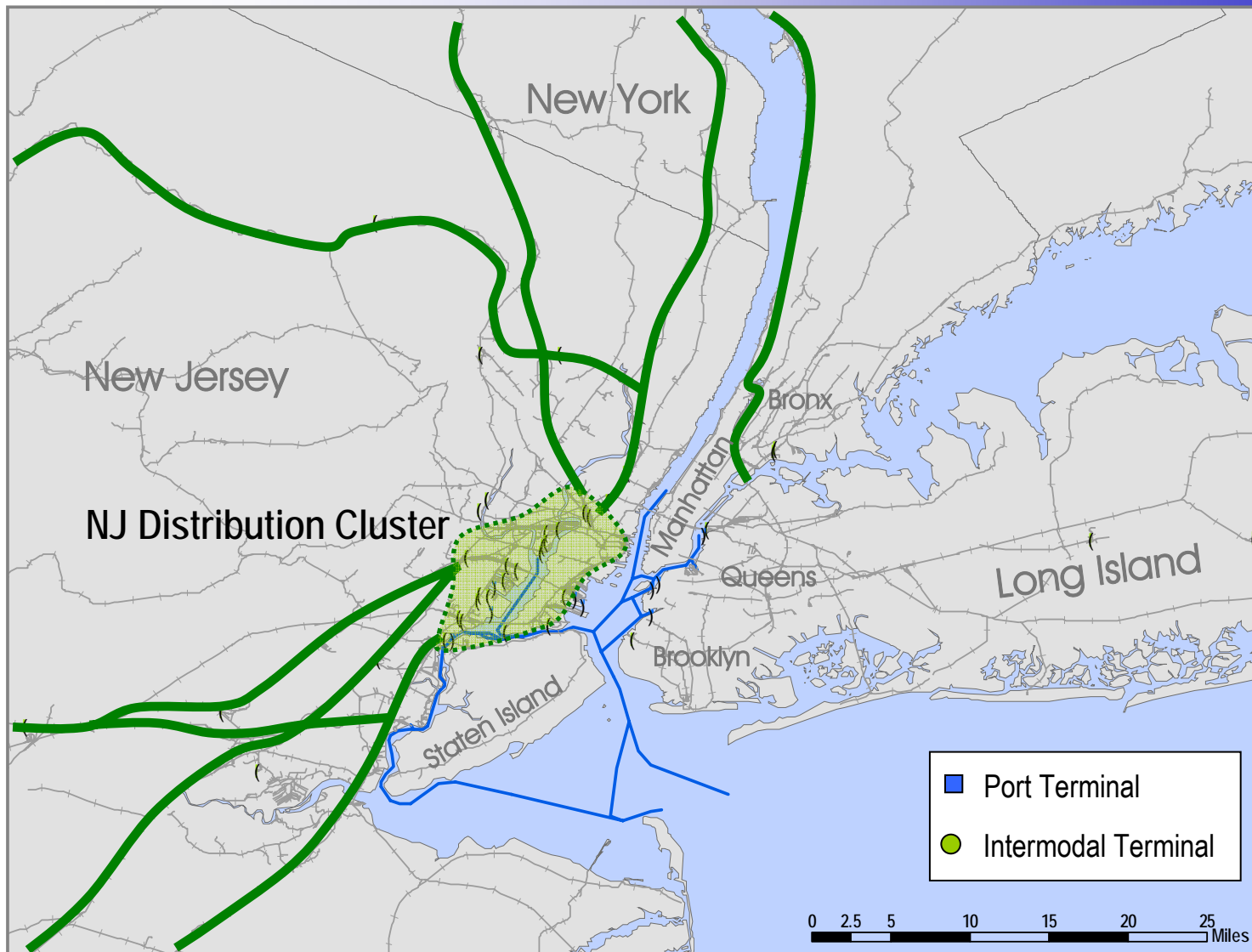


Truck Freight Corridors



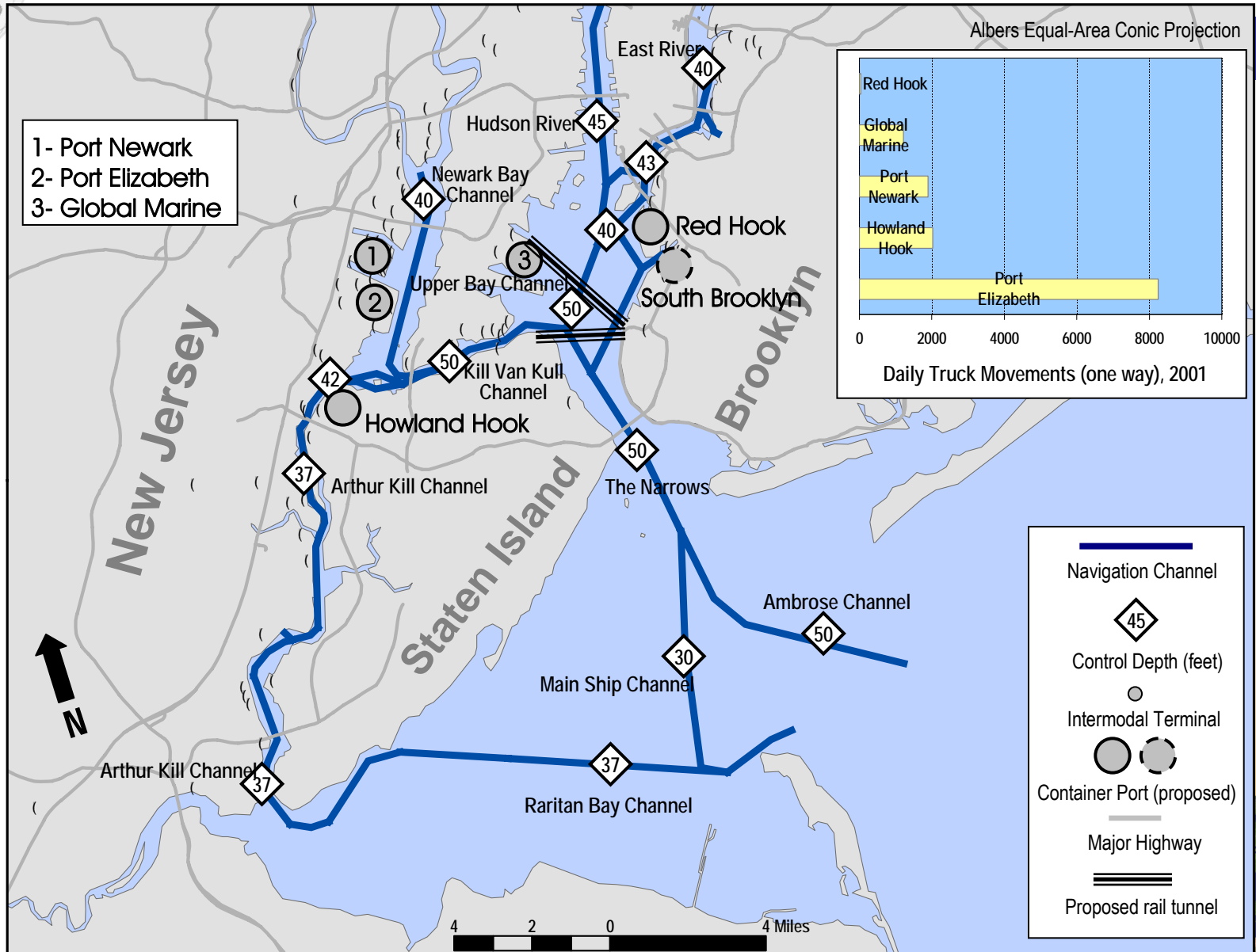


Rail Freight Corridors and Port Facilities





Intermodal Facilities and Navigation Channels of the Port of New York, 2007





The Regina Maersk Could Barely Make it but The Emma Maersk Cannot...

