The State of the U.S. Freight System:
Trends and challenges, 2000-2020

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National Surface Transportation Policy and Revenue Study Commission

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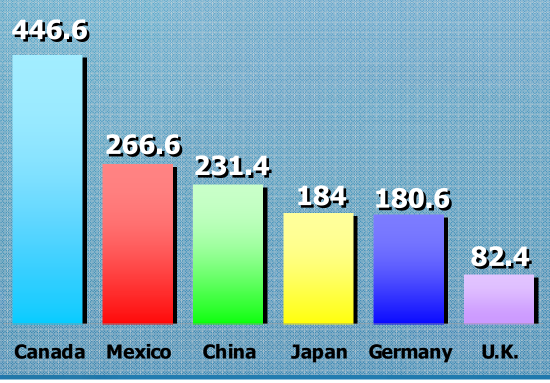
Outline

- Increasing freight flows
- Impacts on the freight system
- Challenges to increasing freight capacity
- Likely outcomes

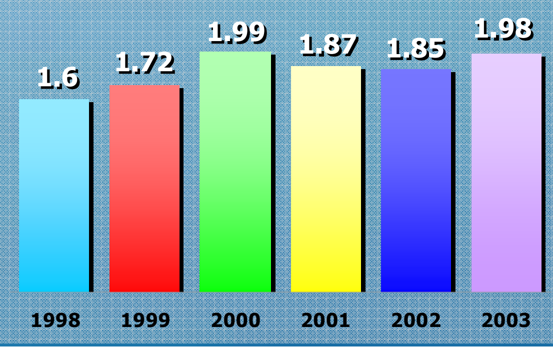
Increasing freight flows

U.S. international trade flows

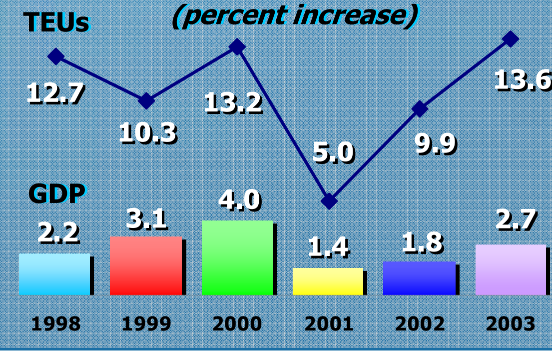
2004 U.S. Major Trading Partners
($ in billions)



U.S. International Trade in Goods, 1998-2003
($ in trillions)

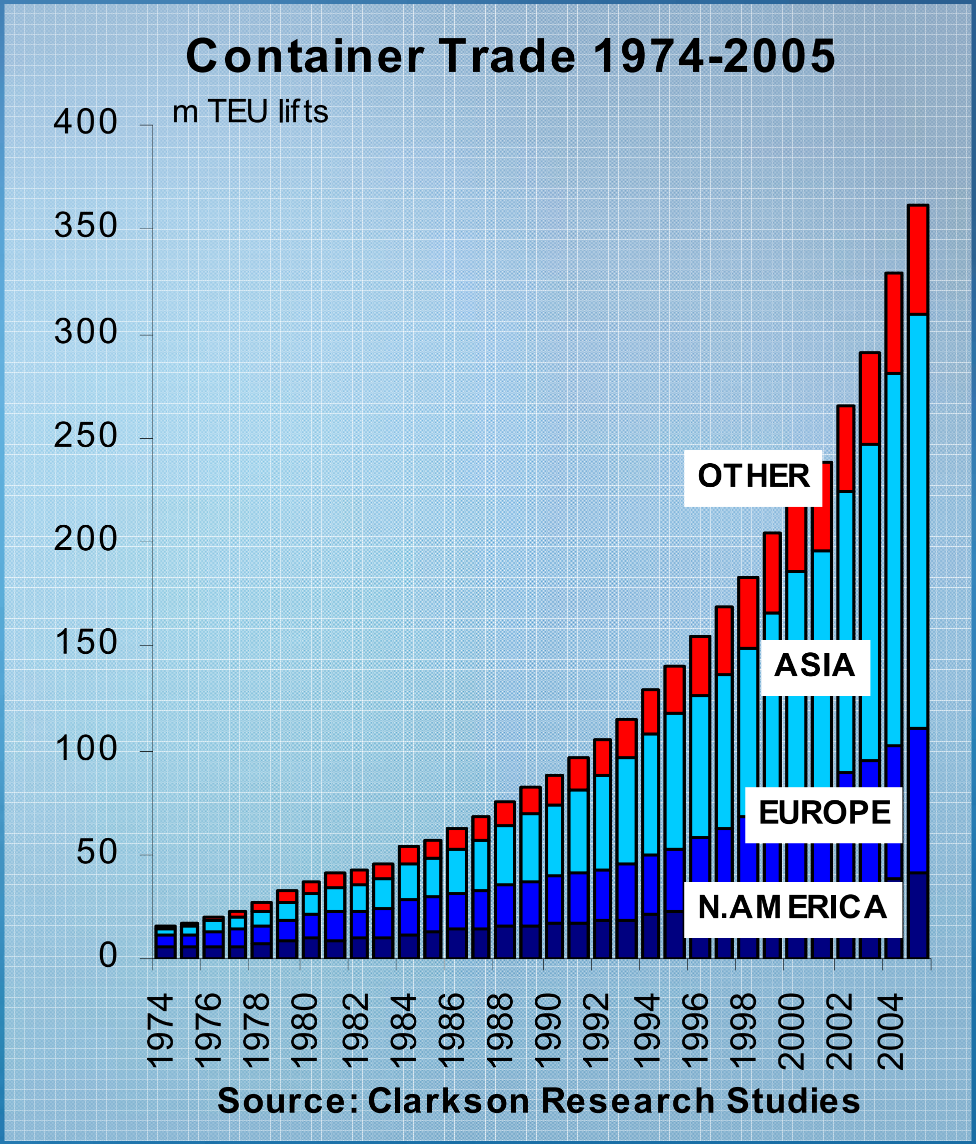


Growth in World GDP and Containerized Trade, 1998-2003
(percent increase)



Influence Of Sourcing Shift To China

- Container trade has expanded rapidly during the last 30 years
- Fundamental and permanent change in world trade and sourcing patterns
- Increasing dependence on manufacturing in China and other low-cost locations in Asia



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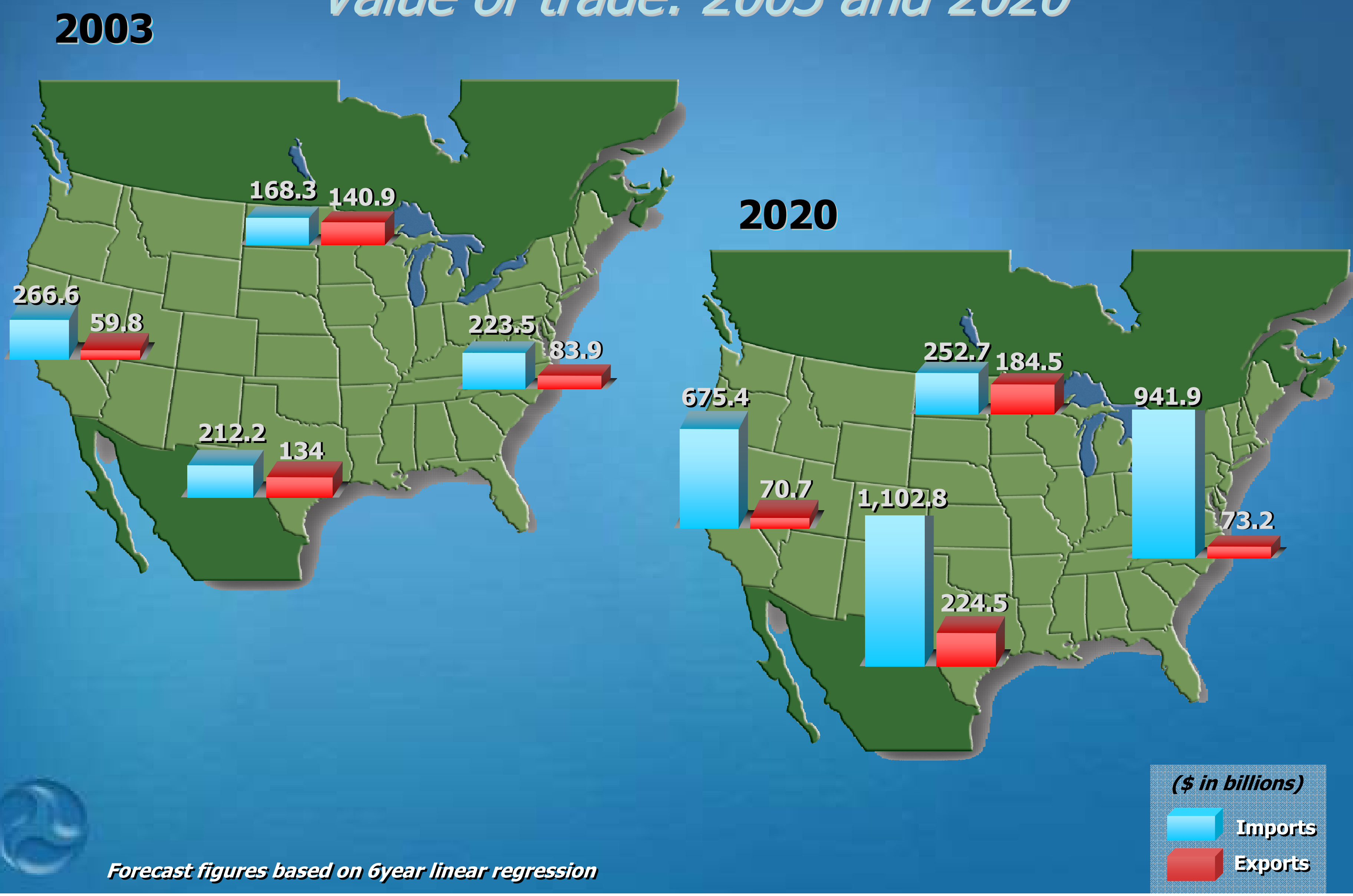
Dramatic increase in U.S. international trade

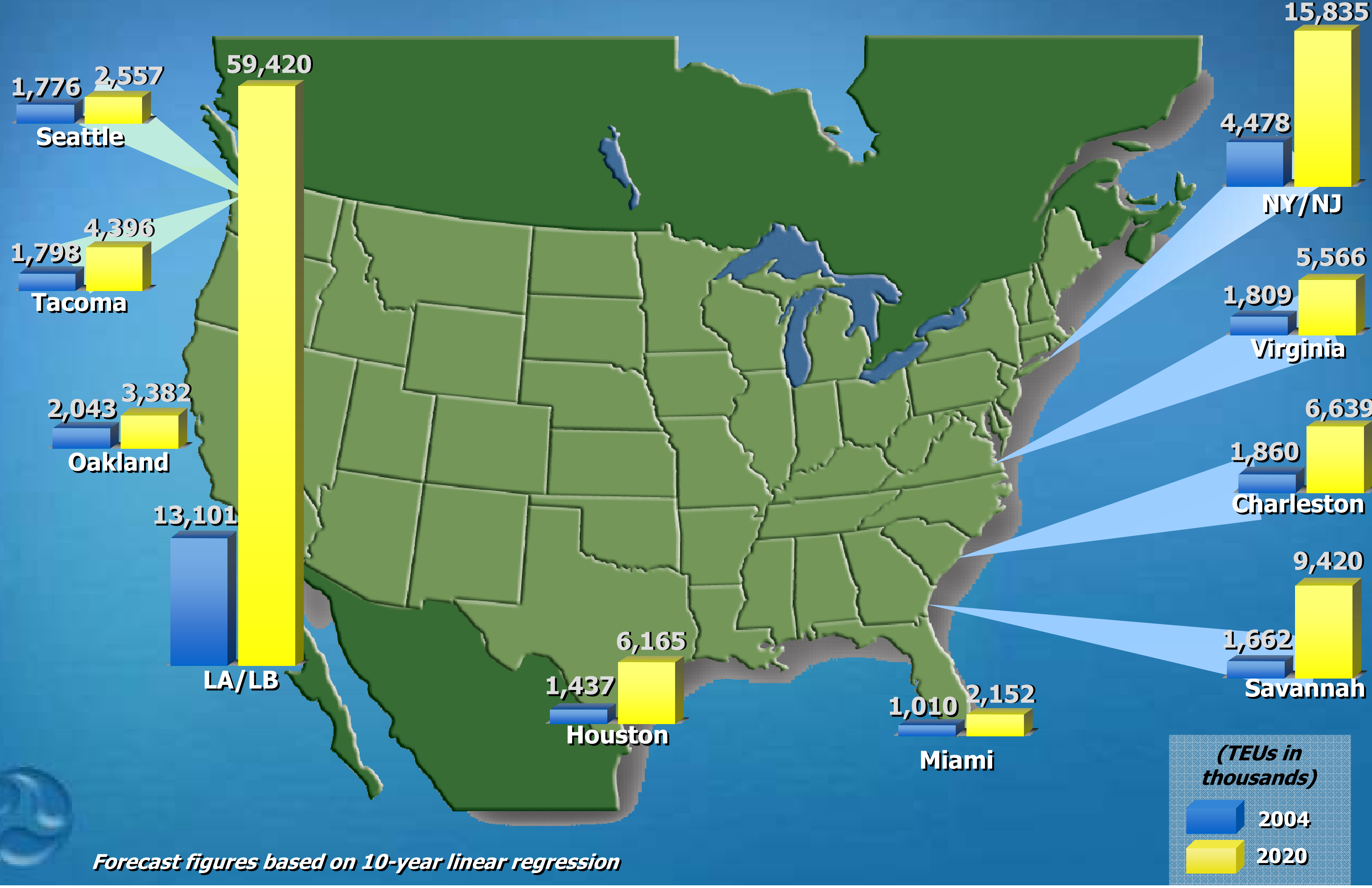
Value of trade: 2003 and 2020



Forecast figures based on 6year linear regression

Dramatic increase in U.S. maritime trade

Volume of trade: 2004 and 2020

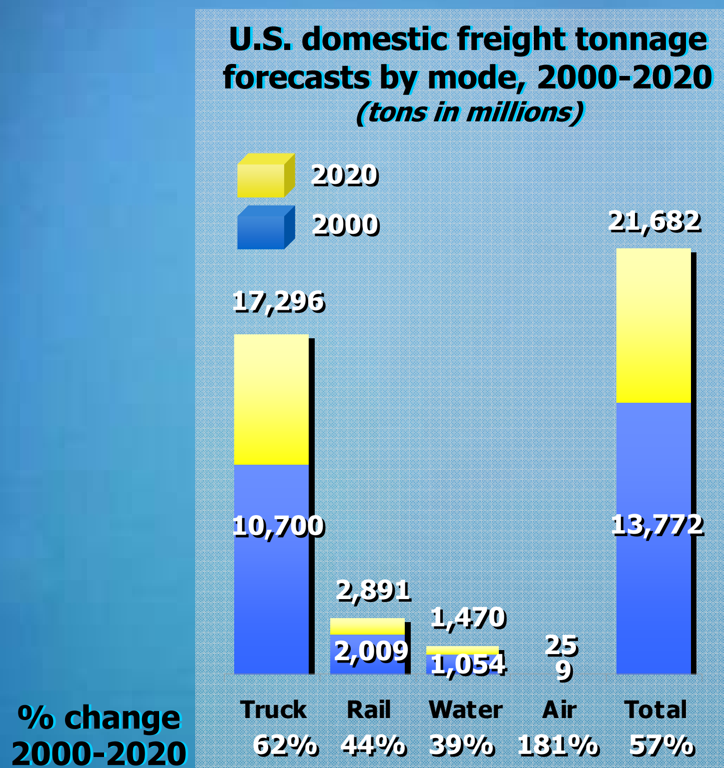


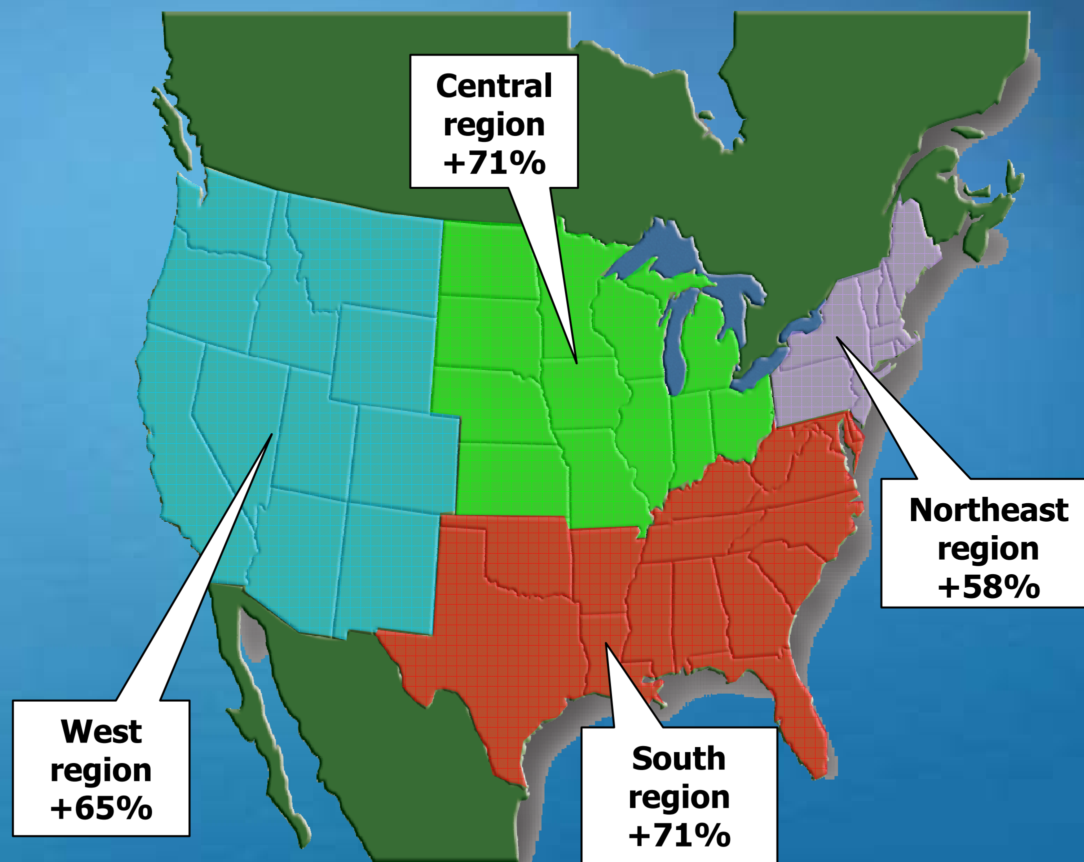
Forecast figures based on 10-year linear regression

Impacts on the freight system

More trade means more domestic freight movements....

U.S. domestic freight tonnage growth forecast, 2000-2020

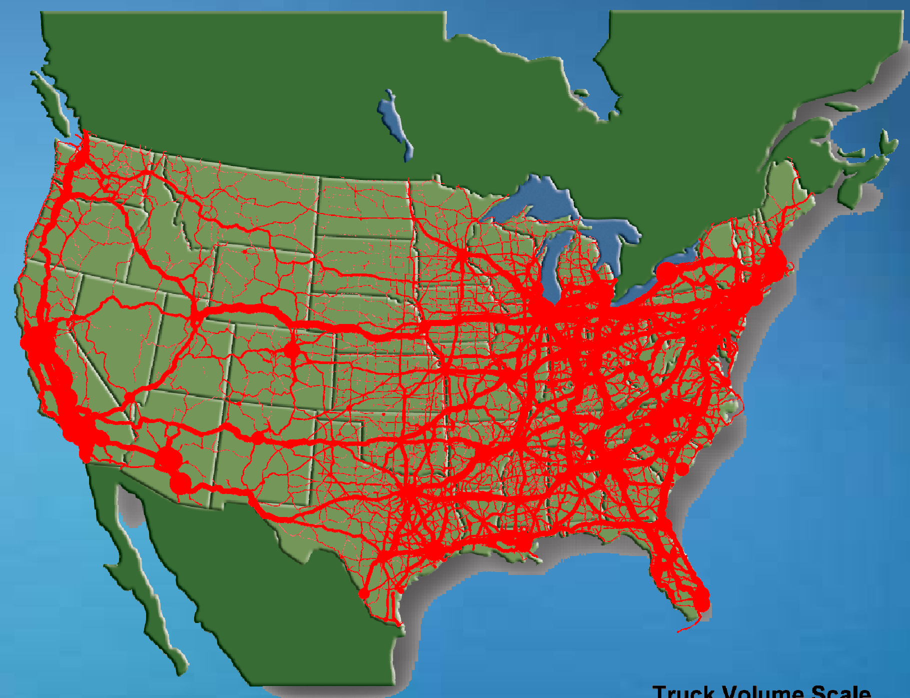




...more trucks on the highways...

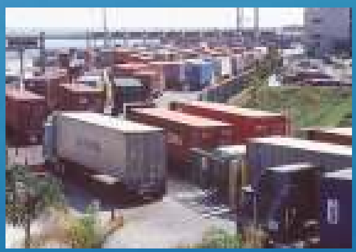
Truck Volumes: 1998

Truck Volumes: 2020

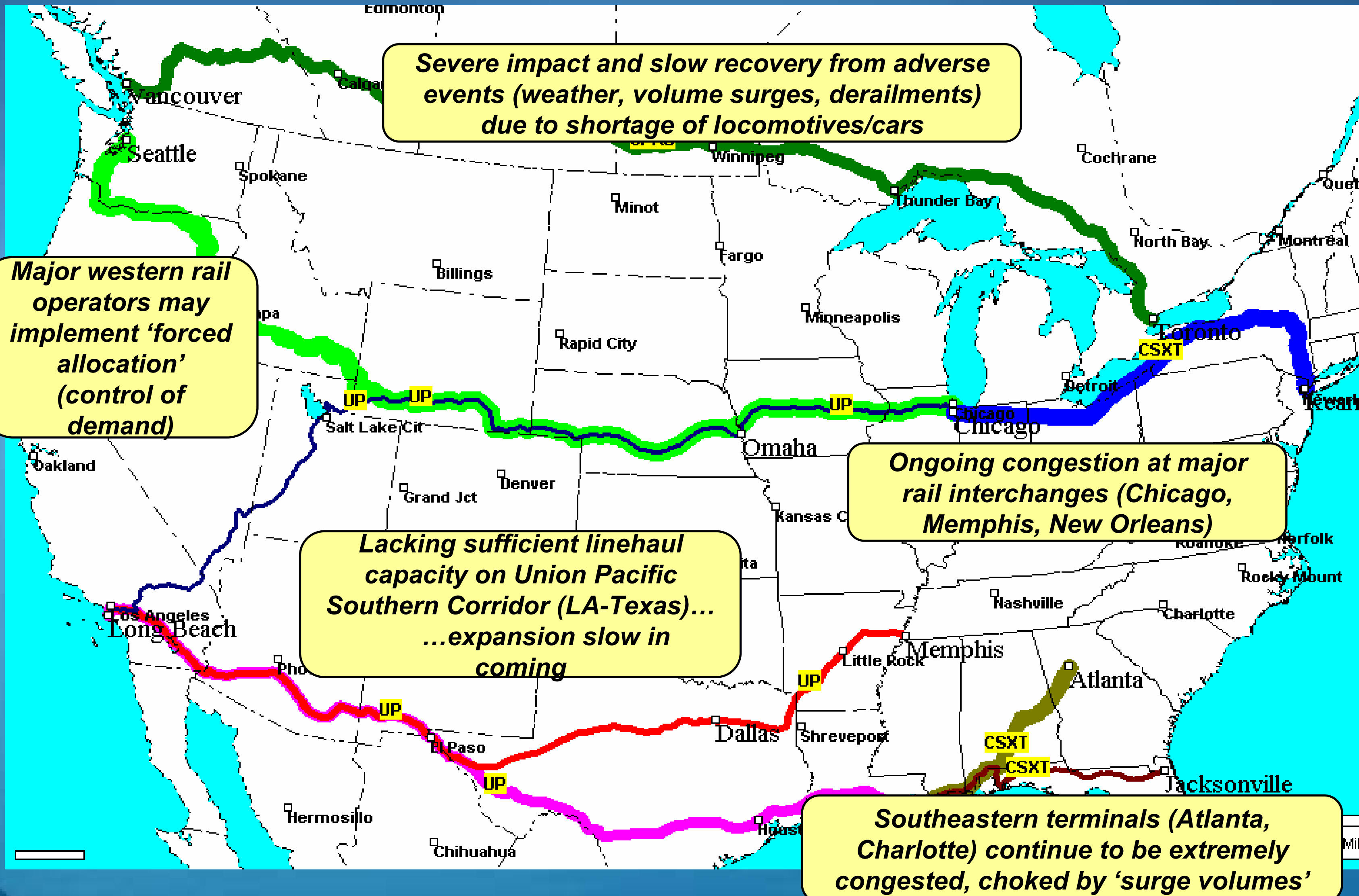


Truck Volume Scale

50,000 25,000 12,500
(trucks/day)



...more trains on a fragile rail network...



Slide courtesy of APL Ltd.

…and more congestion in urban areas

National Highway System Estimated Peak Period Congestion

1998

2020

Challenges to increasing freight capacity

Bottlenecks Across All Modes

- Ports/marine terminals
- Inland transport infrastructure – rail & trucking
  - Rail terminals near ports
  - Inland terminals
  - Rail line-haul infrastructure
  - Trucking capacity
- NAFTA border crossings

Pressures on ports & ocean carriers

- Over 150 8,000-9,200 TEU vessels due in East-West trades by 2008
- Most ports ill-equipped for larger vessels
- Longer vessel turn times, increased berthing delays, terminal congestion
- Flow impact on intermodal network

Pressures on the trucking sector

- Ongoing driver shortages
- Pay issues (drayage & long-haul returns are inadequate to ensure investment in new capacity)
- Environmental concerns, particularly in communities of high congestion (e.g., L.A.)
- New regulations (e.g., hours of service, hazardous materials) further restricting operators
- Implementation of the Transportation Worker Identification Card (TWIC)

Pressures on the rail sector

- Drowning in too much freight; competing internal rail commodity markets (e.g., grain/coal) for scarce resources
- 2-3 day transit delay the 'norm'; 4-6 days common (worse at the peak of congestion in '04)
- Wide swings in volume and asset velocity
- Any improvement in port transfer facilities (i.e., Alameda Corridor) pushes problems to next choke point
- Inland terminals suffer from insufficient capacity and bunching/surges of cargo
- Poor financial returns will restrict reinvestment in the business

Likely outcomes

- For the foreseeable future, increases in freight volumes will exceed increases in freight capacity
- Infrastructure congestion is not temporary – the challenges will become greater and be with us for years
- Transport and supply chain costs will continue to increase and flow through to U.S. consumers
- U.S. is exposed to a major breakdown in the flow of commerce that would significantly impact the U.S. economy

Implications for Commission

- Be sure freight isn't a "stepchild" in your deliberations about the future of our surface transportation system
- Address the need for intermodal solutions to the transportation financing challenge
- Examine the degree to which technological, operational, and/or regulatory changes might improve the intermodal network