

Rail - What Does the Future Bring?



Jeannie Beckett

Sr. Dir., Inland Transportation

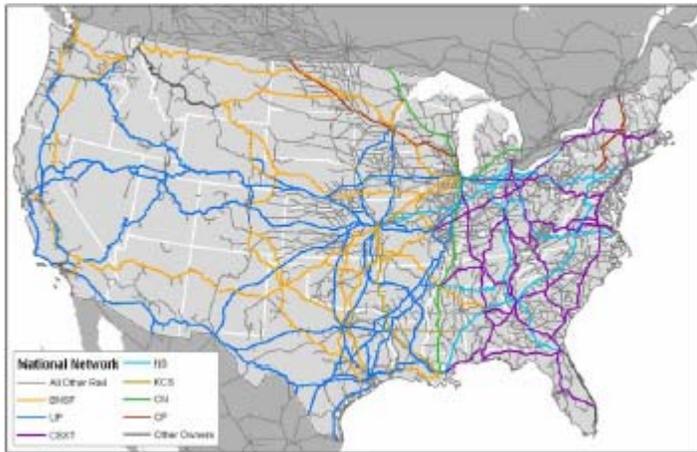
Port of Tacoma

Oct 18, 2007

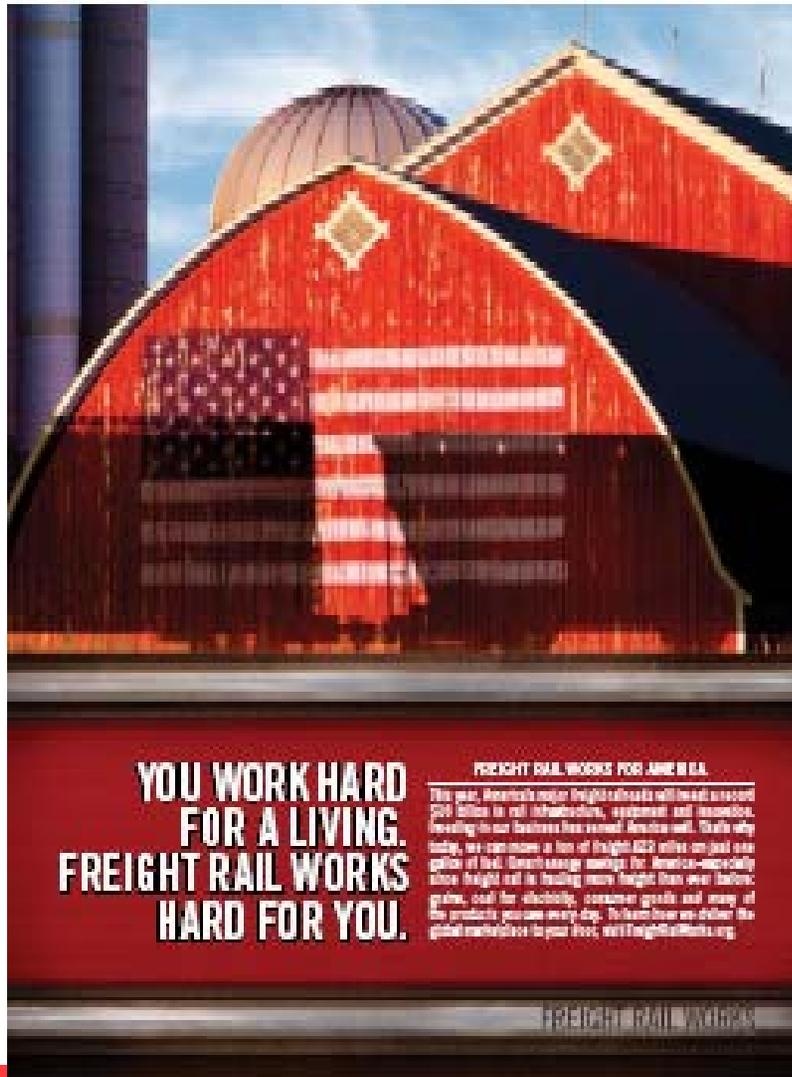


Marine Terminal Management Training Program

The Rail Networks



Railroads' Media Blitz



Print Ads

TV Ads

Radio Ads



D:\aapa\
RailroadsPSA.wmv

Let's Look at the Challenge

What will the Future Bring?

- Can we Meet the Cargo Projects and Still give out Communities Quality of Life?
- Are there Alternatives to Congestion?



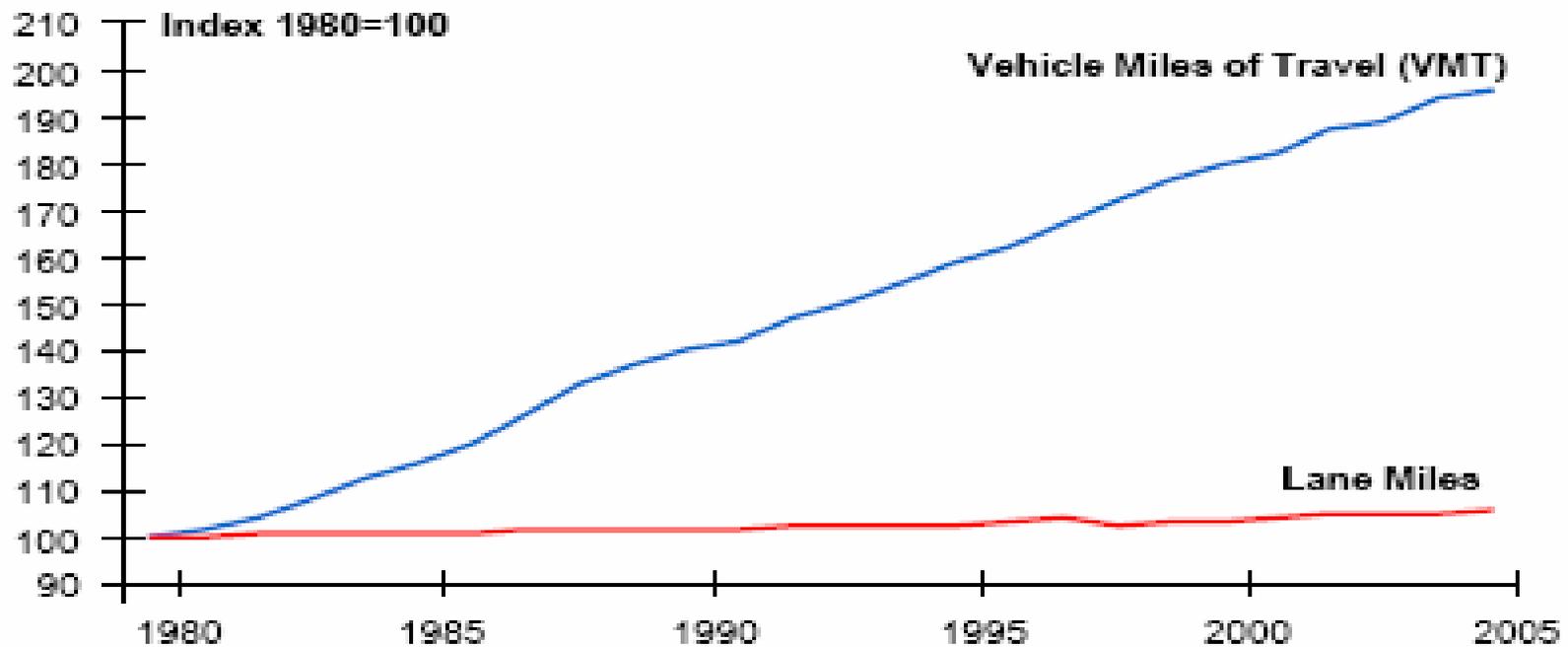
I-710 Under Normal Conditions



I-710 During Ports Shutdown

As cost of Highway Congestion goes up...

Figure 2.1 Vehicle Miles of Travel and Lane Miles
1980 to 2005

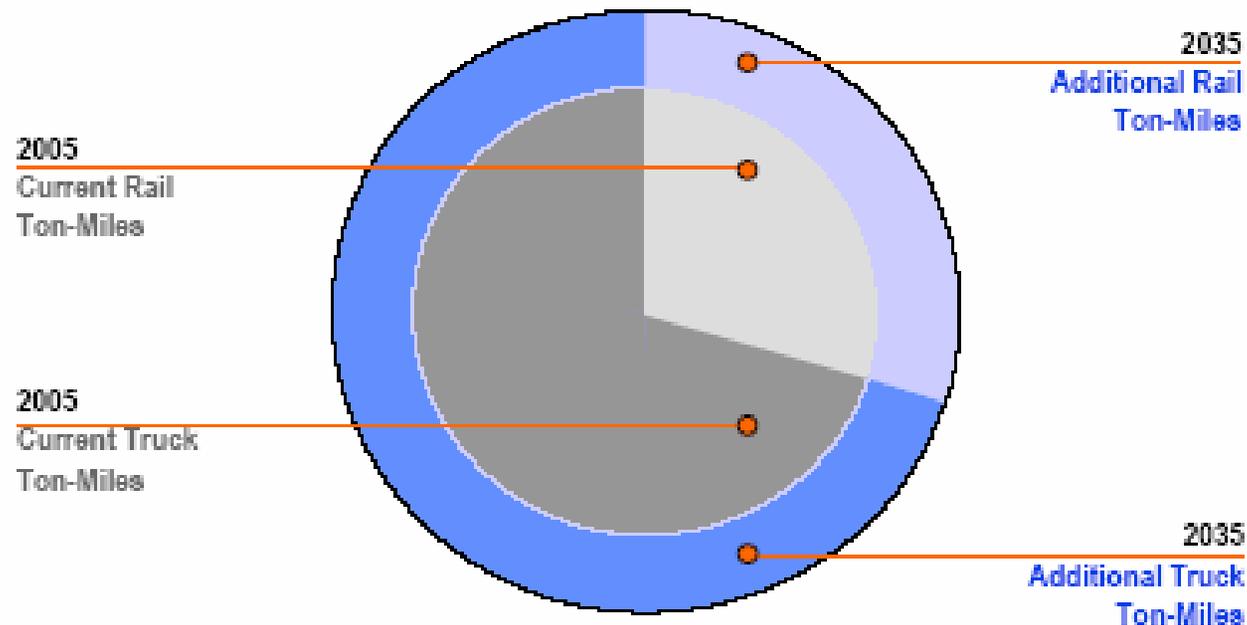


Source: Federal Highway Administration, *Highway Statistics*.

Railroads help carry more Freight...

Rail moves 30% of our Freight

Figure 2.4 Truck and Rail Market Shares in Ton-Miles
2005 and 2035



Source: Cambridge Systematics, Inc., based on Global Insight, Inc. freight demand forecasts.

Many different types of Rail

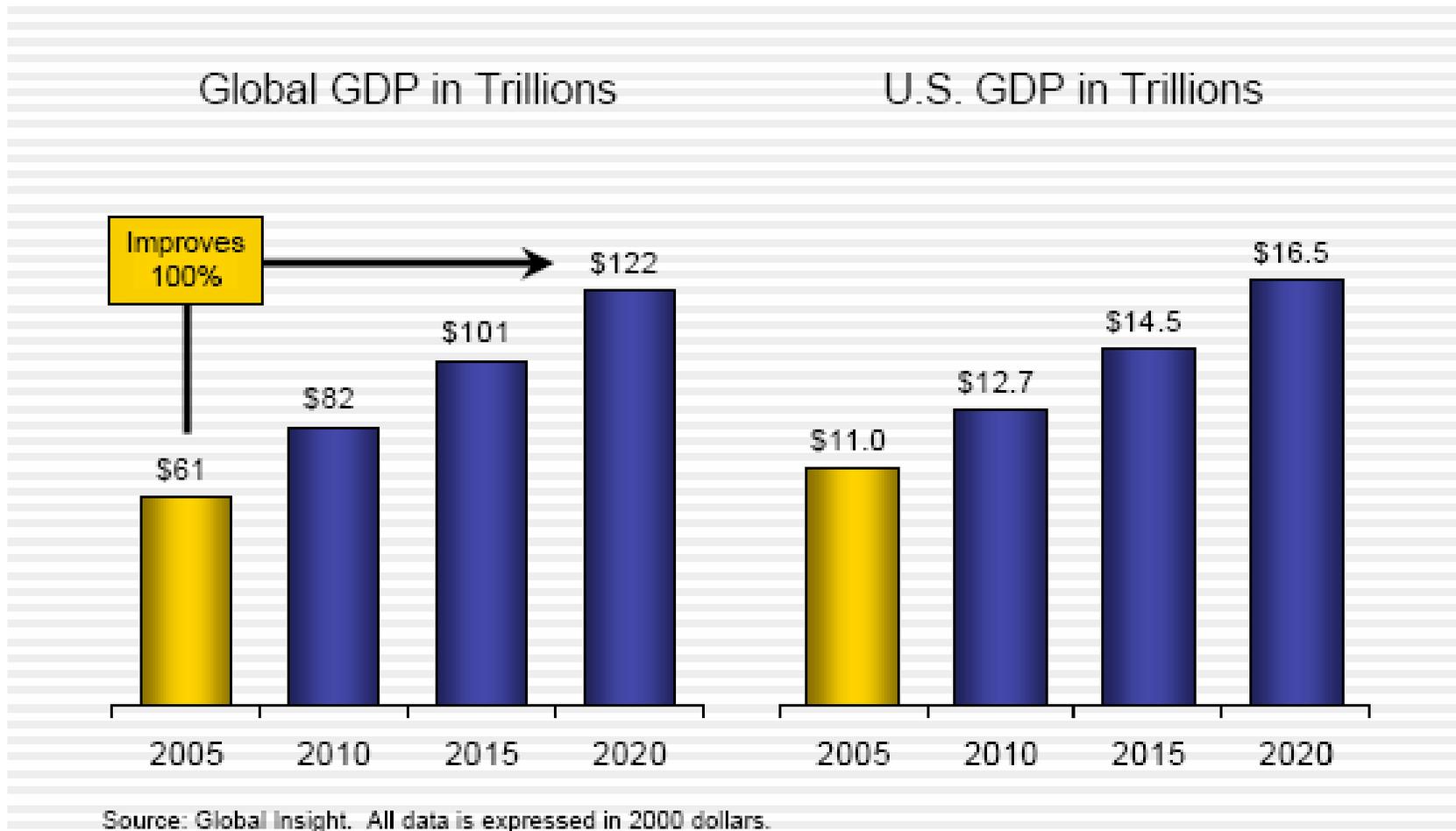
Recognizing the different needs of each Business Unit



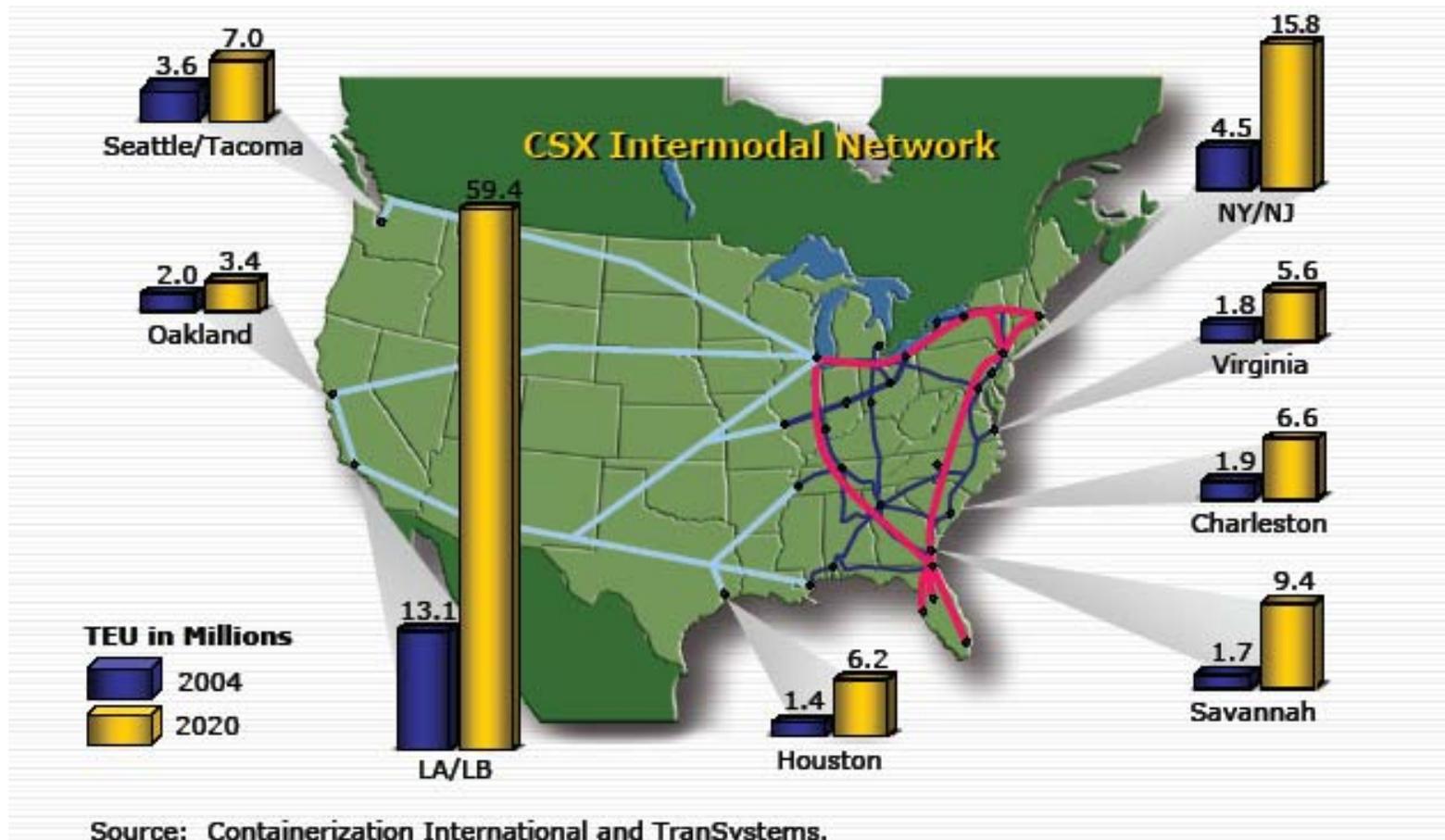
Customers a Seamless Solution
to the marketplace –

“An Expressway to your customers’ door”

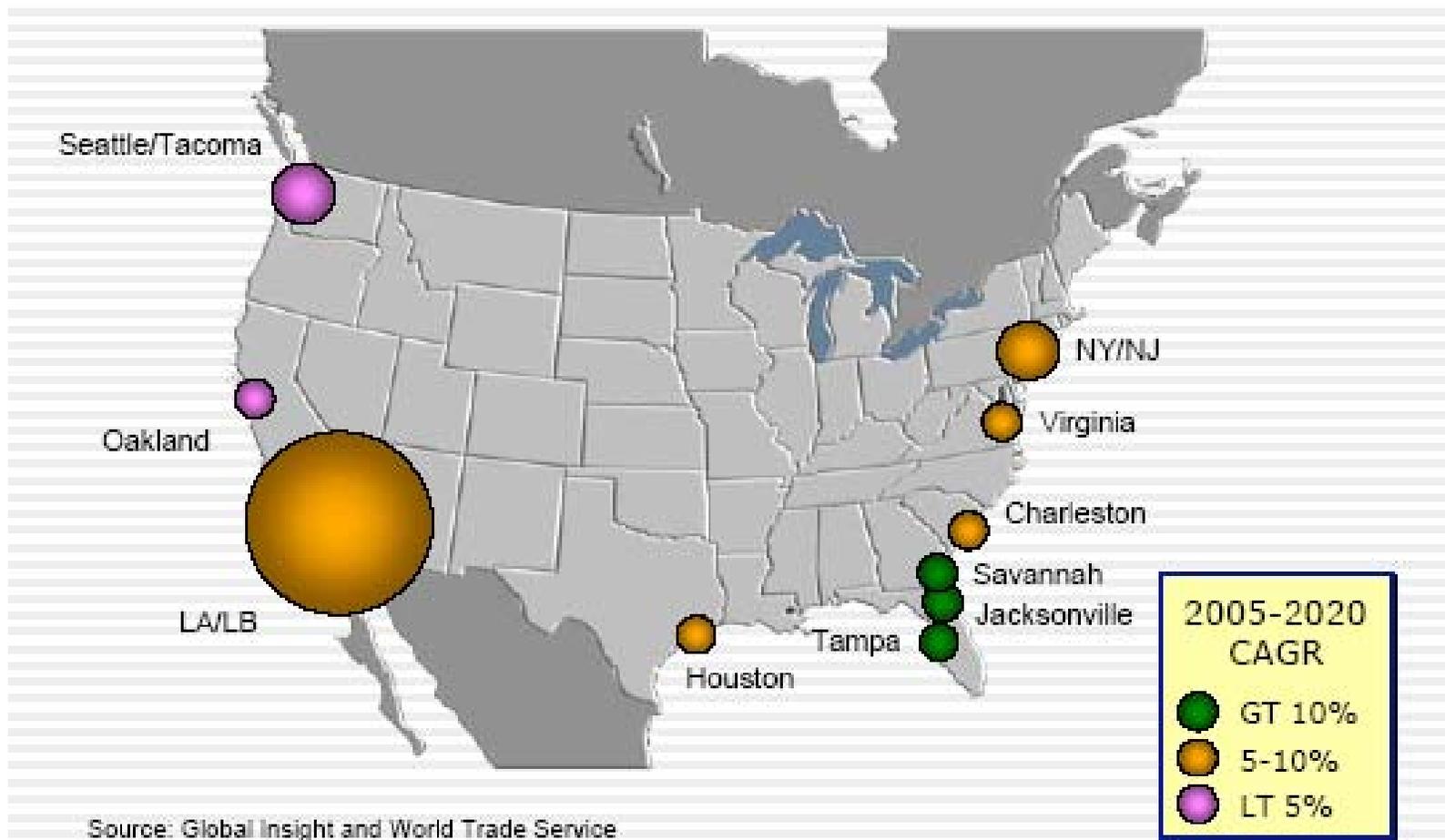
Global Economy to double by 2020



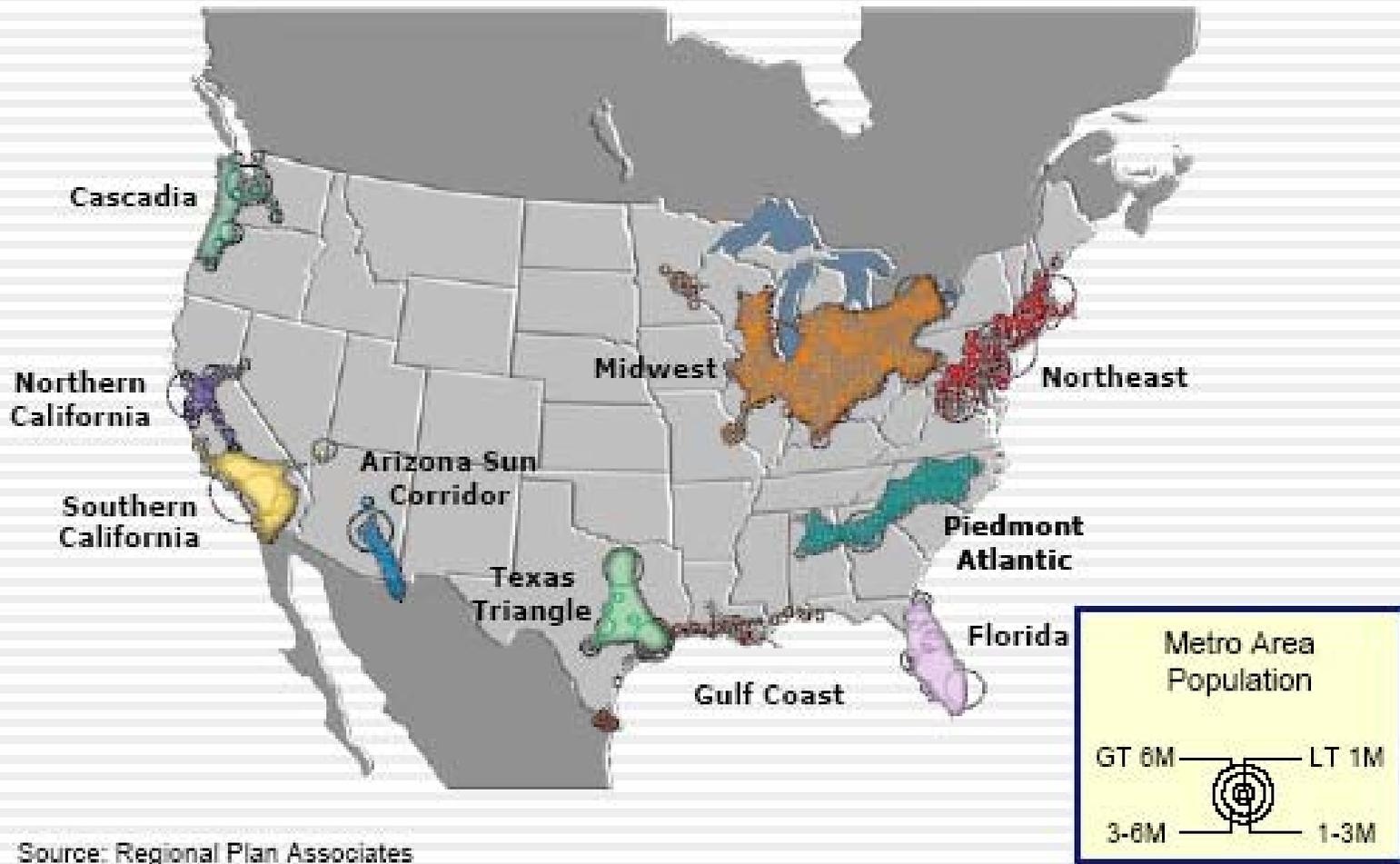
Volume will continue to go to Gateway Ports



Gateways continue to Grow

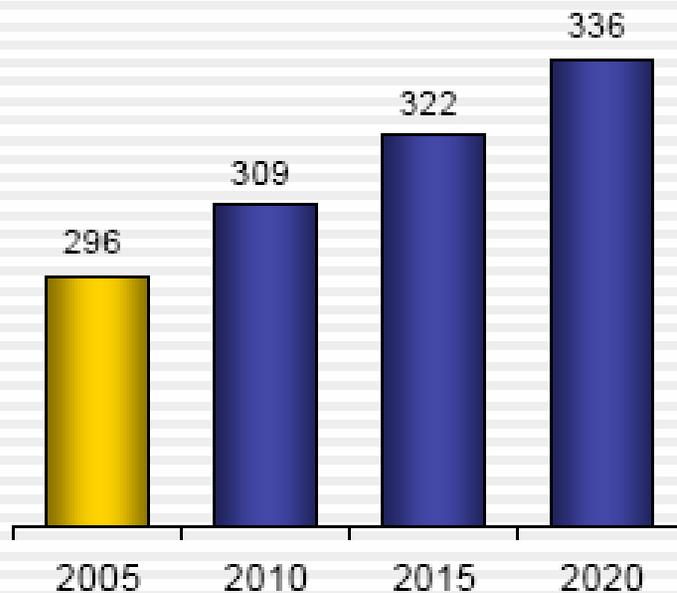


Chicago and NE continues to Grow

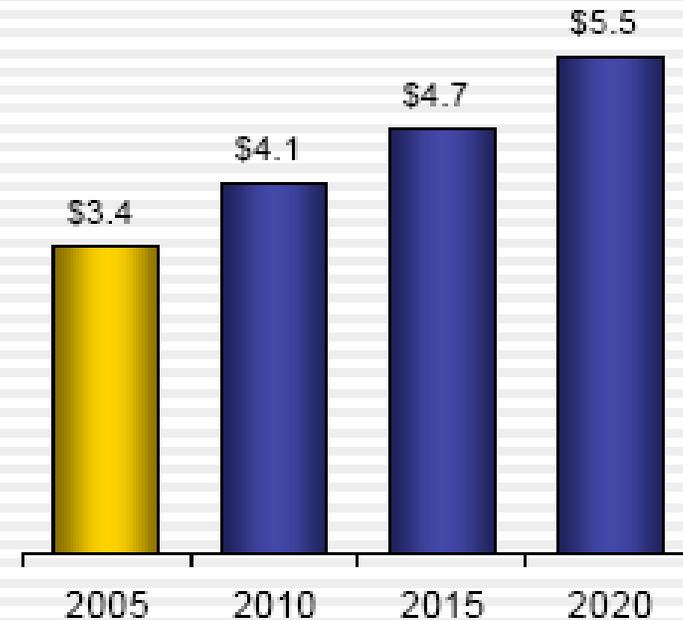


Consumption driven by Population growth

U.S. Population in Millions



U.S. Consumption in Trillions

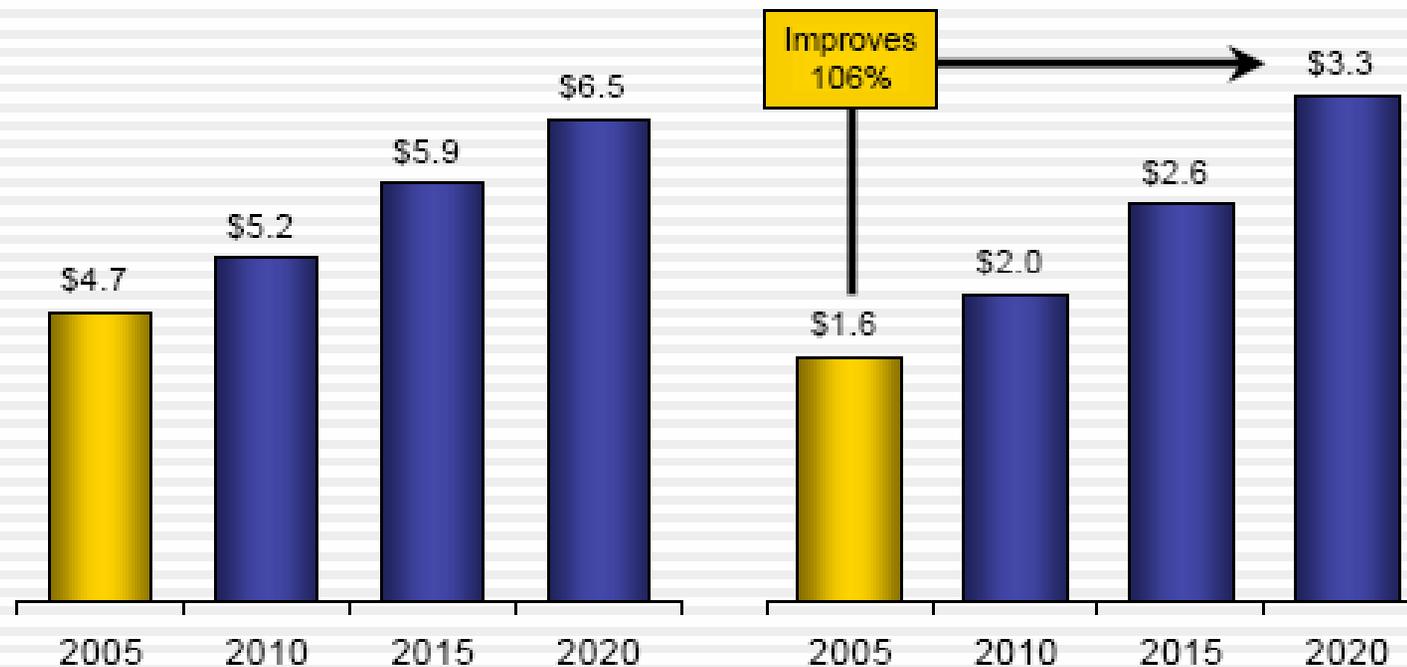


Source: Global Insight. Consumption is expressed in 2000 dollars.

Industrial Production continues to Grow

U.S. Industrial Production in Trillions

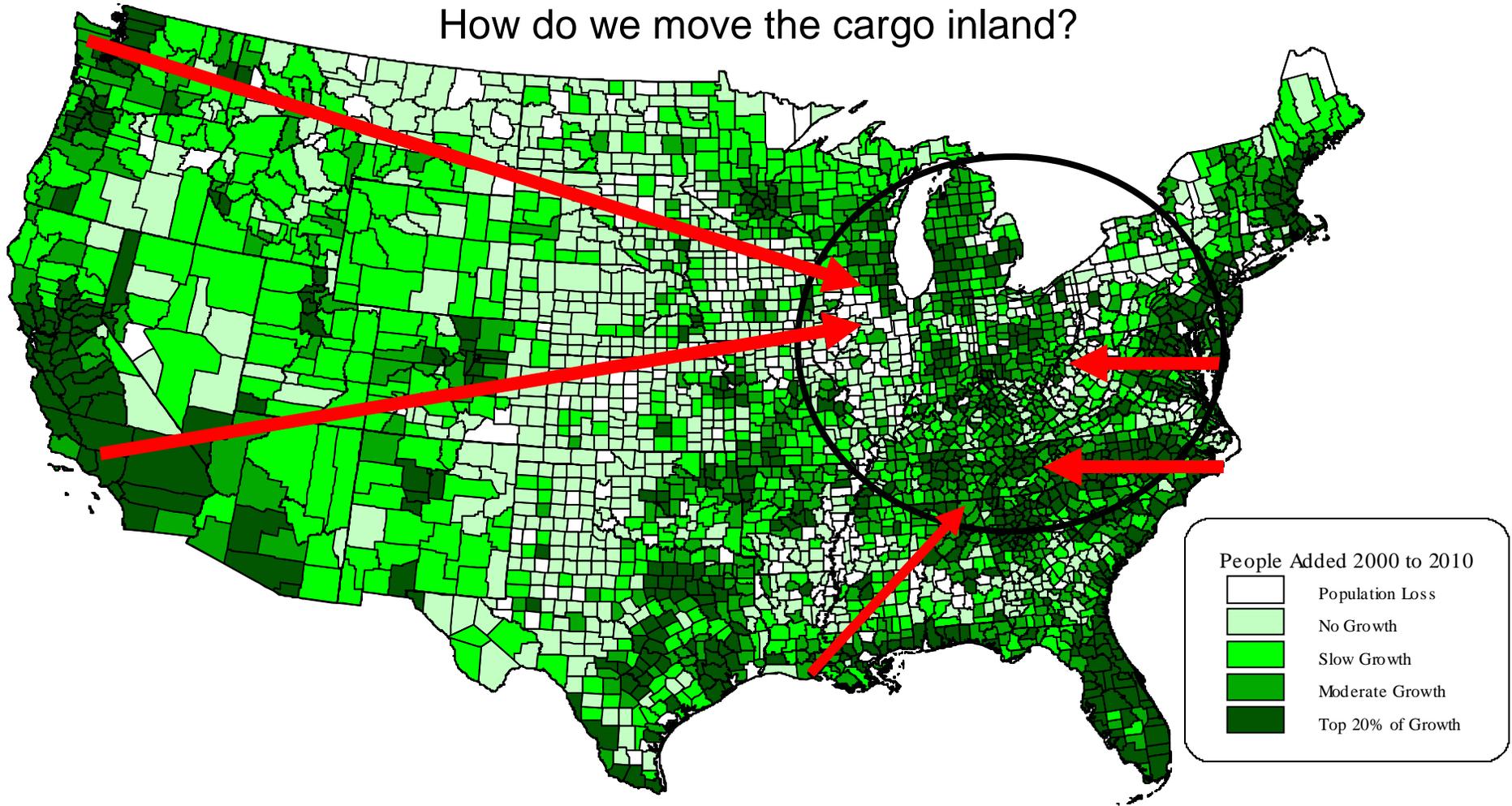
U.S. Imports in Trillions



Source: Global Insight. All data is expressed in 2000 dollars.

Consumption follows Population Growth

How do we move the cargo inland?



Will the Gateways be able to meet Projections?

Marketplace drivers . . .

Global Trade

- Global economies double by 2020
- Creates more transportation demand

Population

- Growth drives more consumption
- Shifting population into the southeast

Environment

- Safe and secure handling of products
- Rails are more environmentally friendly

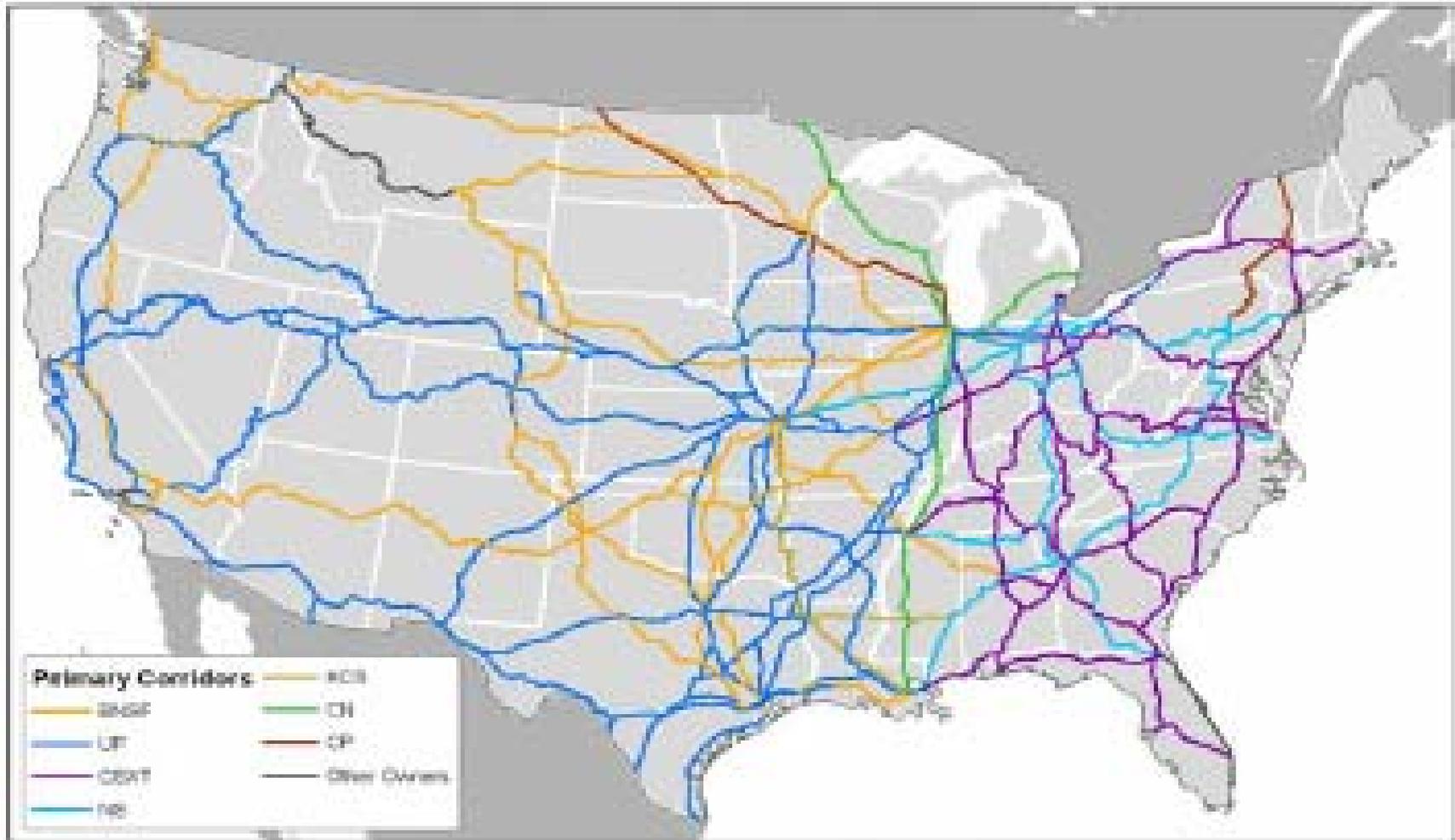
Competition

- Highway congestion is getting worse
- Driver shortages and hours of service
- Fuel costs have escalated

Regulations

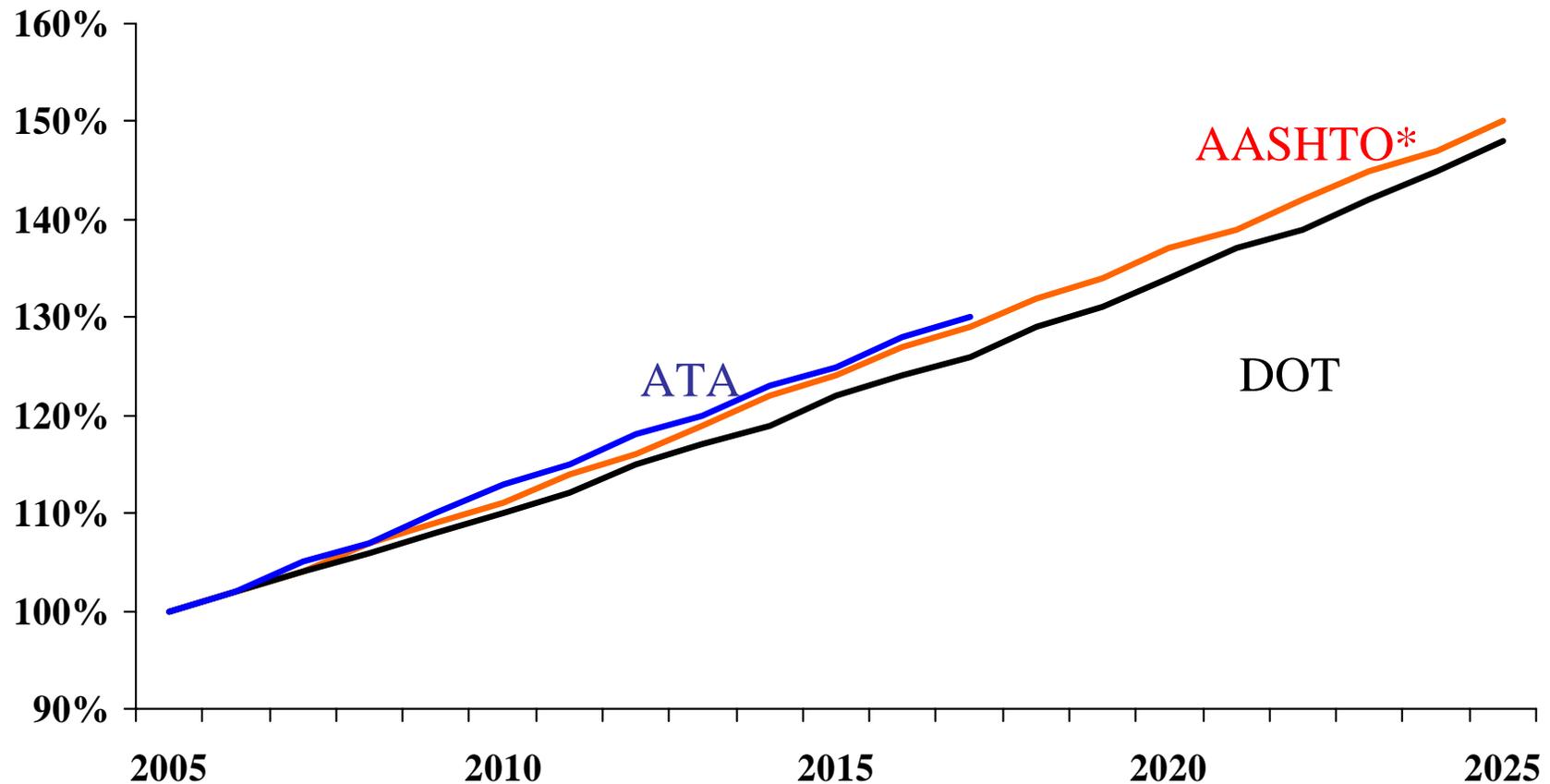
- Balanced regulatory solutions required

Primary Rail Corridors



Source: Cambridge Systematics, Inc.

Major Freight Growth Projected (Domestic Tons All Modes)

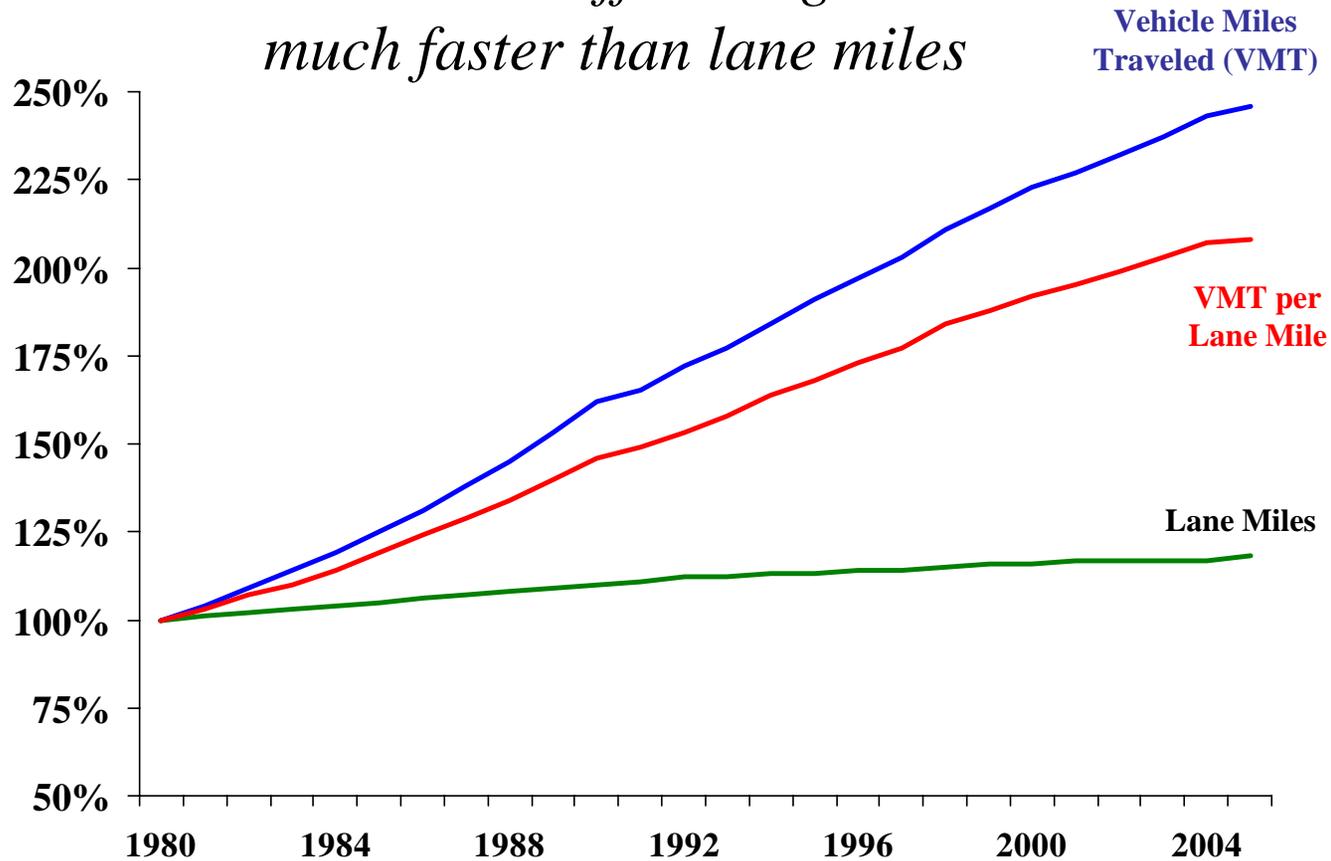


All figures indexed with each source's 2005 traffic levels equal to 100 percent

*AASHTO: American Association of State Highway and Transportation Officials

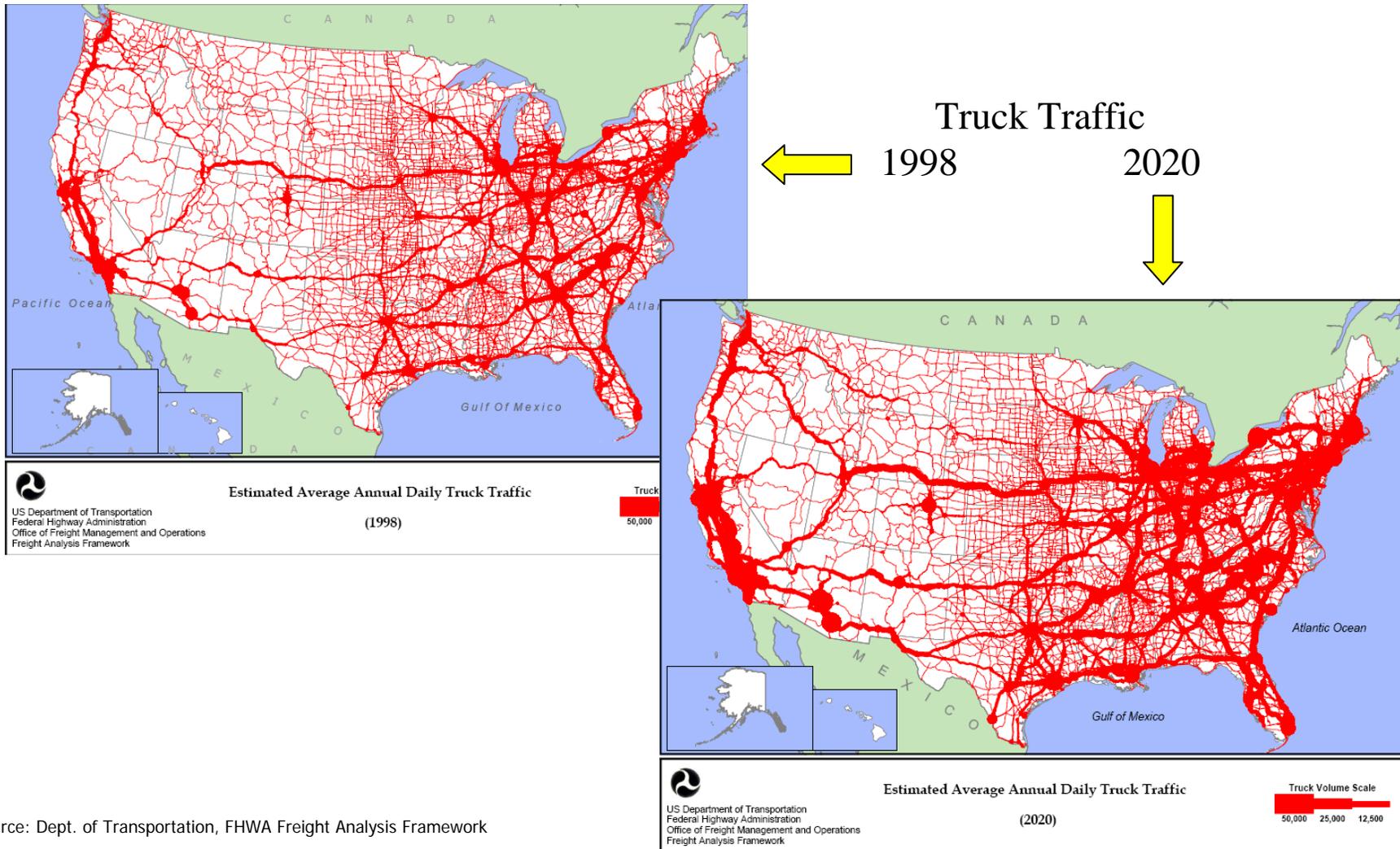
Highway Capacity Already Strained

Interstate traffic has grown much faster than lane miles



Source: Dept. of Transportation, National Transportation Statistics

More Highway Gridlock Coming



Source: Dept. of Transportation, FHWA Freight Analysis Framework

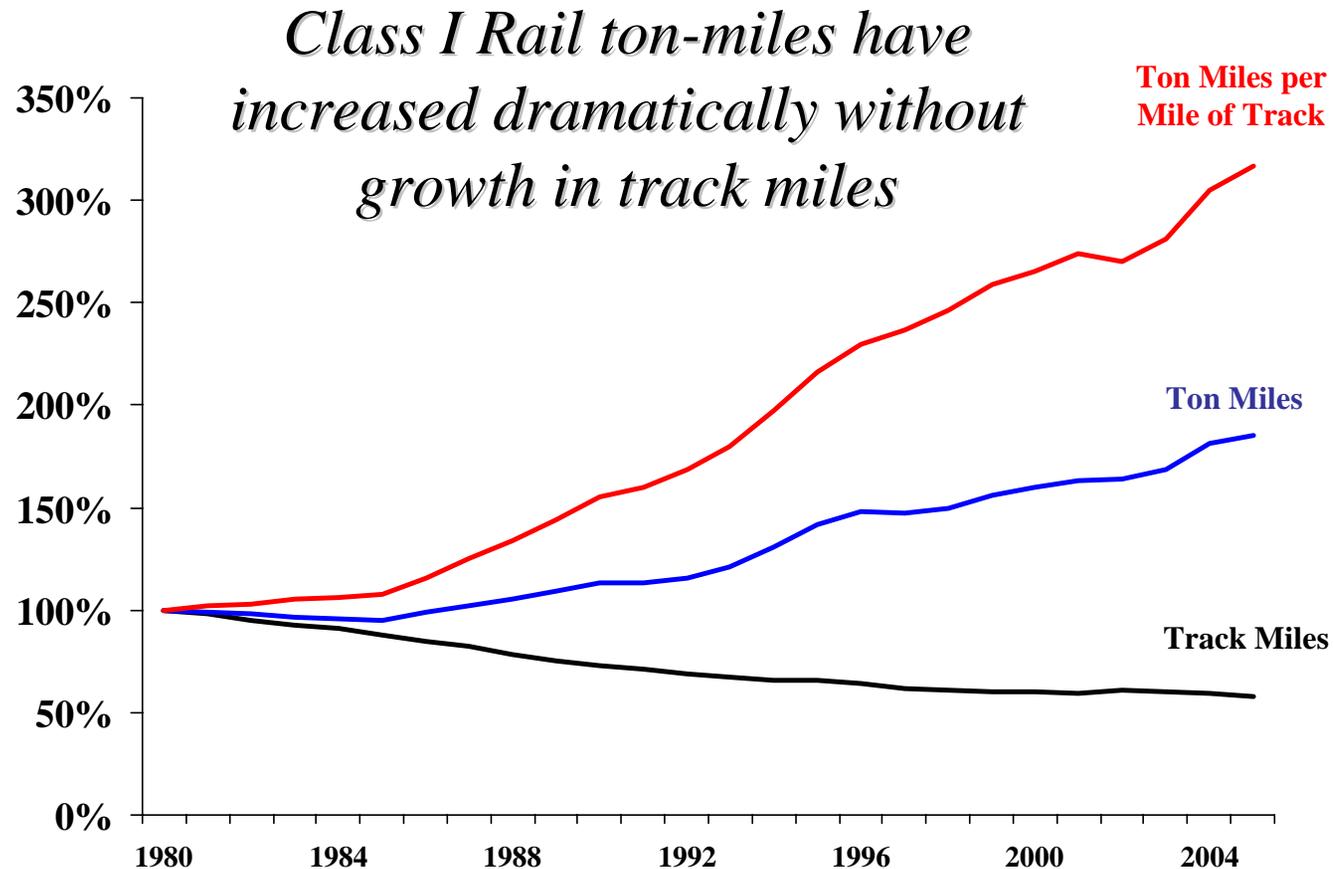
Benefits of Rail

A single intermodal train can remove up to 280 trucks from roadway travel ...



... saving lives and fuel; reducing congestion, pollution and greenhouse gases

Rail has become more productive

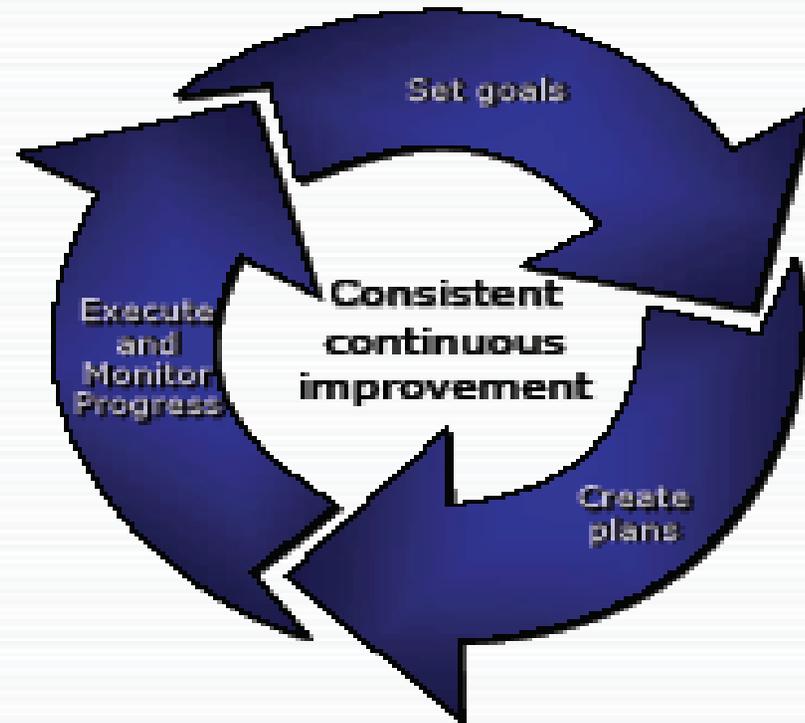


Source: Dept. of Transportation, National Transportation Statistics

Main Line Targets

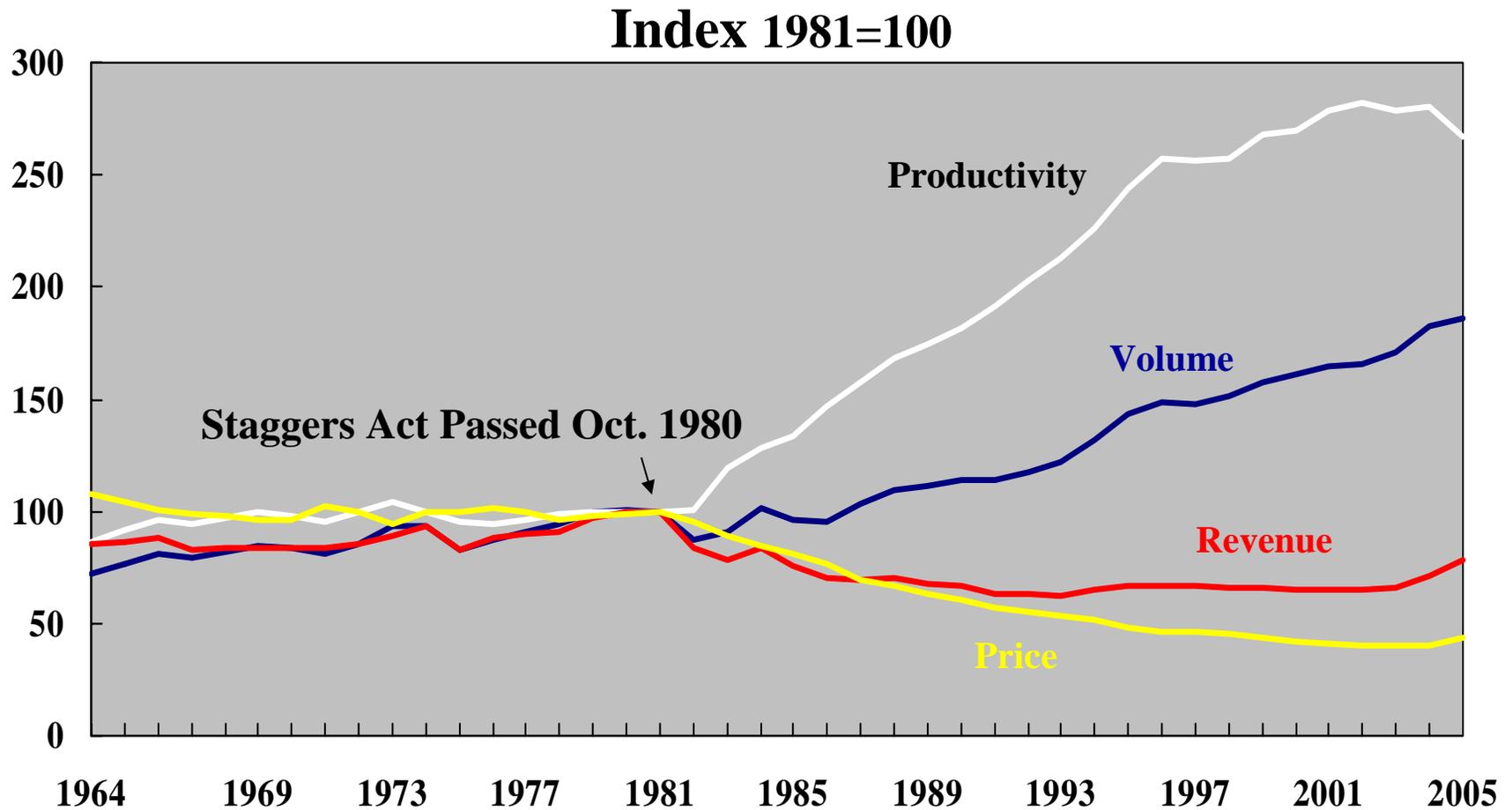
New targets established through 2010

	2007–2010 CAGR
Surface Transport Operating Income	10%–12%
Earnings Per Share	15%–17%
Free Cash Flow*	10%–12%
Operating Ratio	Mid-low 70's
ROIC	Exceed COC



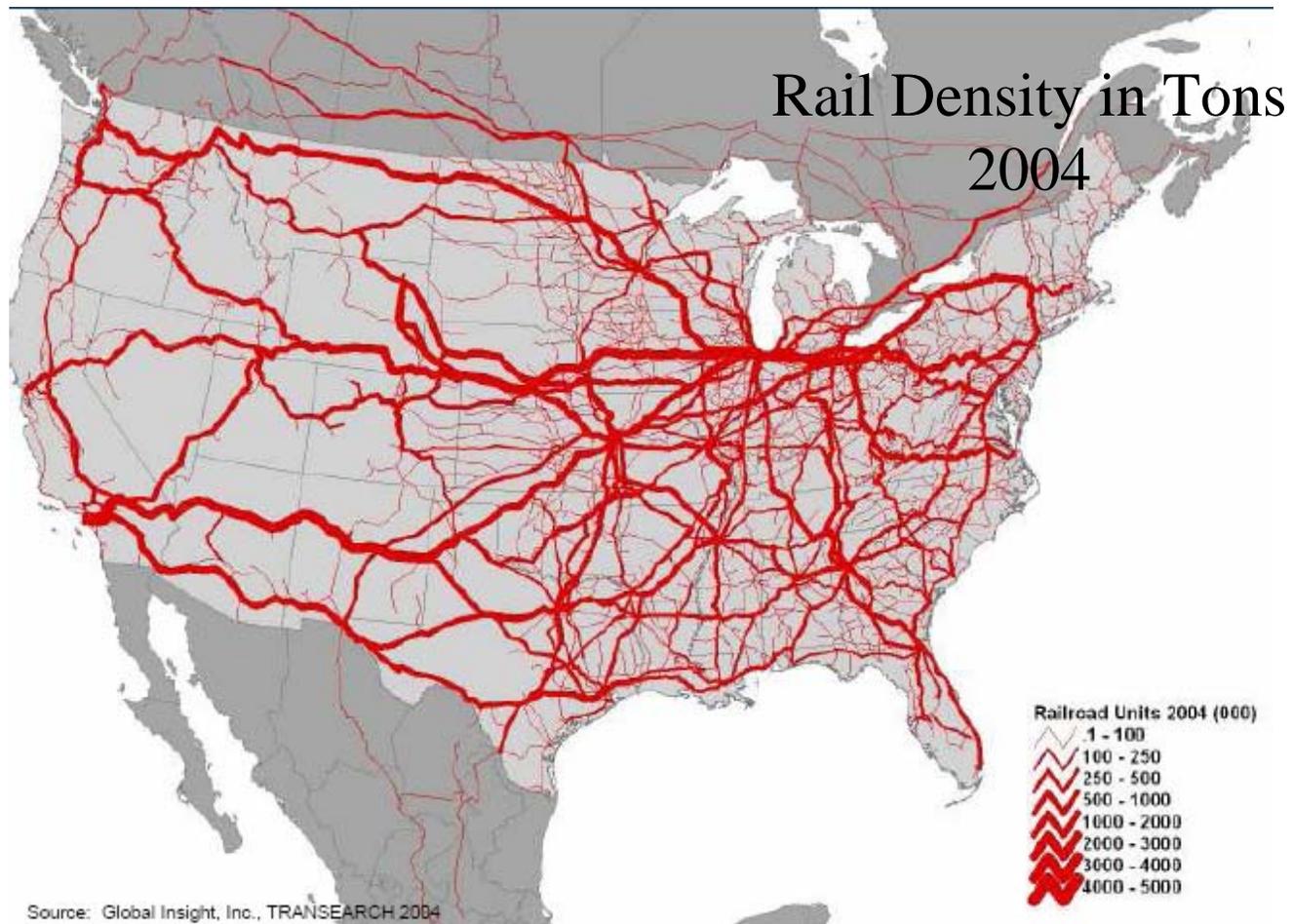
Note: Free Cash Flow growth remains unchanged from the targets established in August 2005

U.S. Freight Railroad Performance Since Staggers



Source: AAR

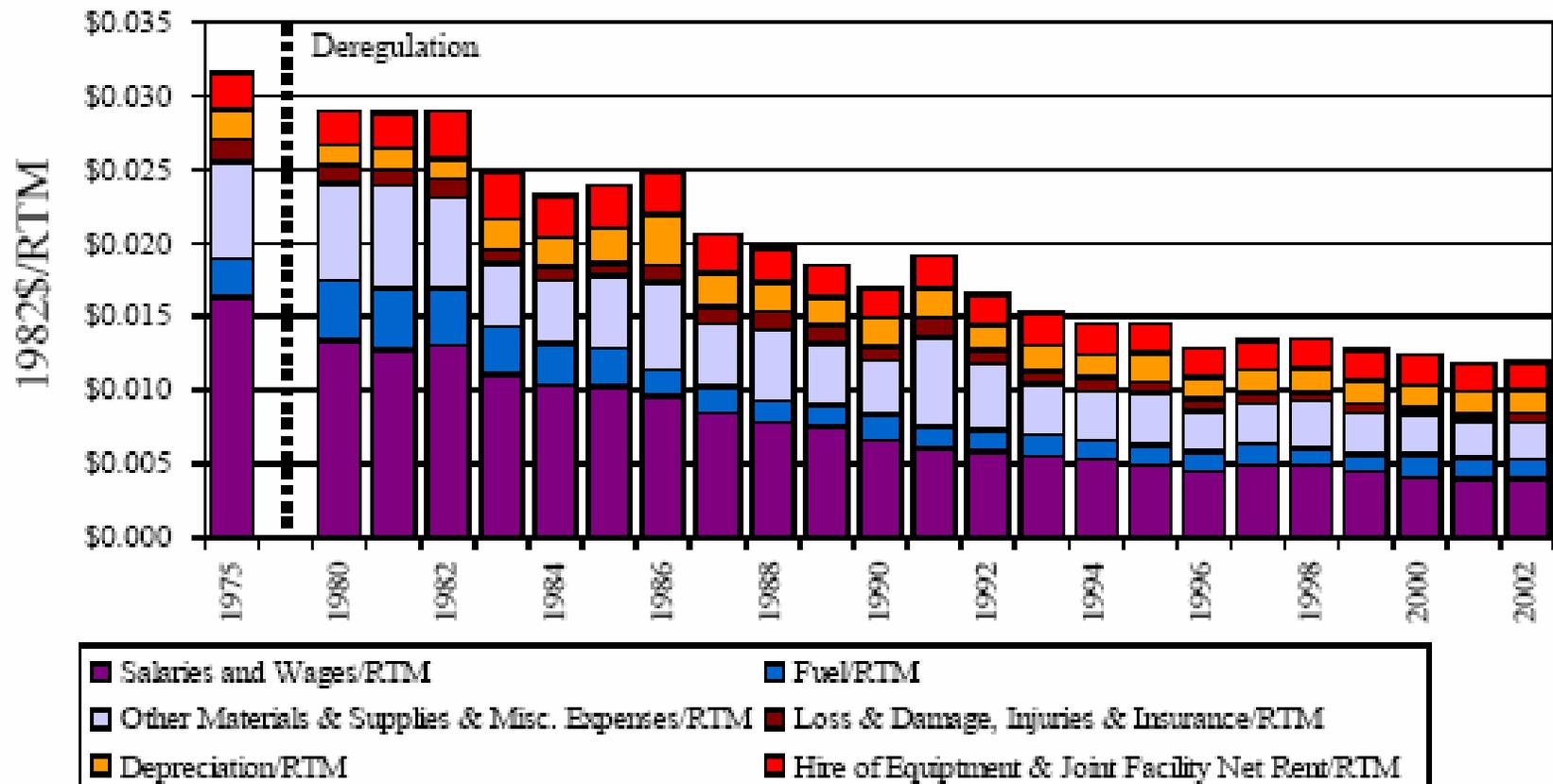
Rail Density is Growing



Source: Dept. of Transportation, FHWA Freight Analysis Framework

RR have more than halved their cost / revenue per ton mile since deregulation

Railroad Expenditures per Revenue Ton Mile (1982\$)

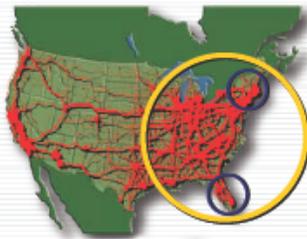


Tighter Capacity + Better Service

Tight capacity and strong service drive pricing

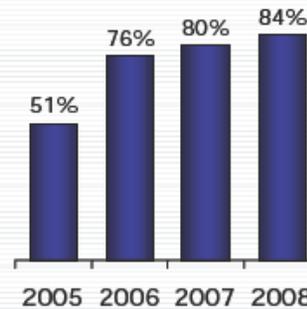


Future Highway Congestion

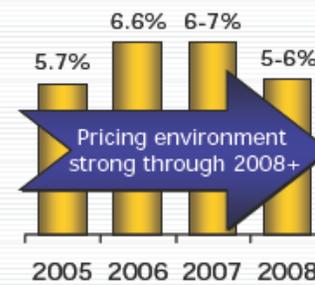


CSX Territory

On-time Originations



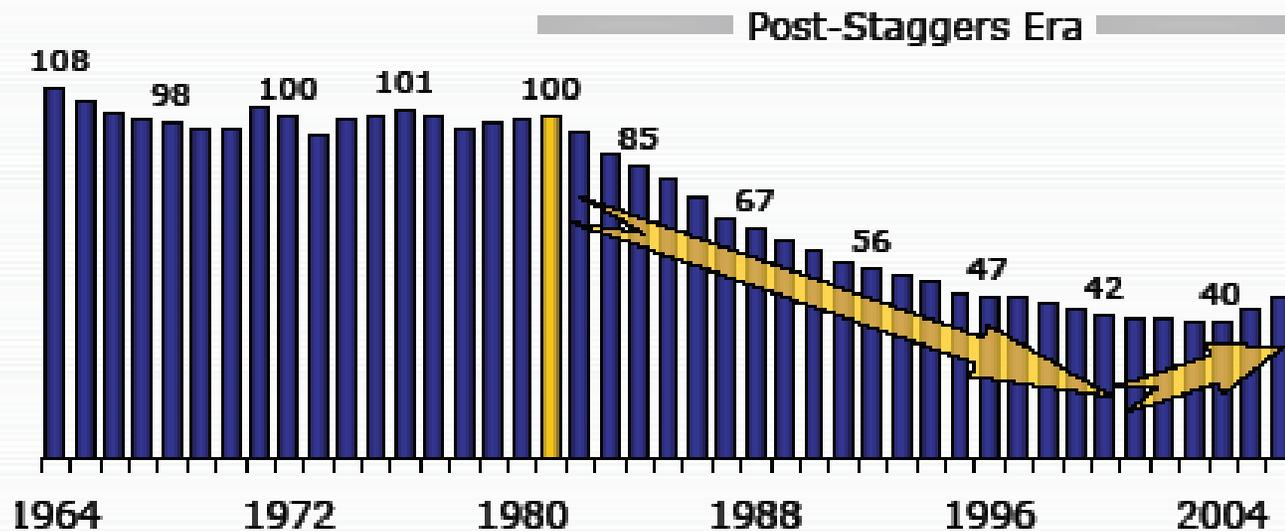
"Same Store Sales" Price Increase



Rail Pricing continues Up

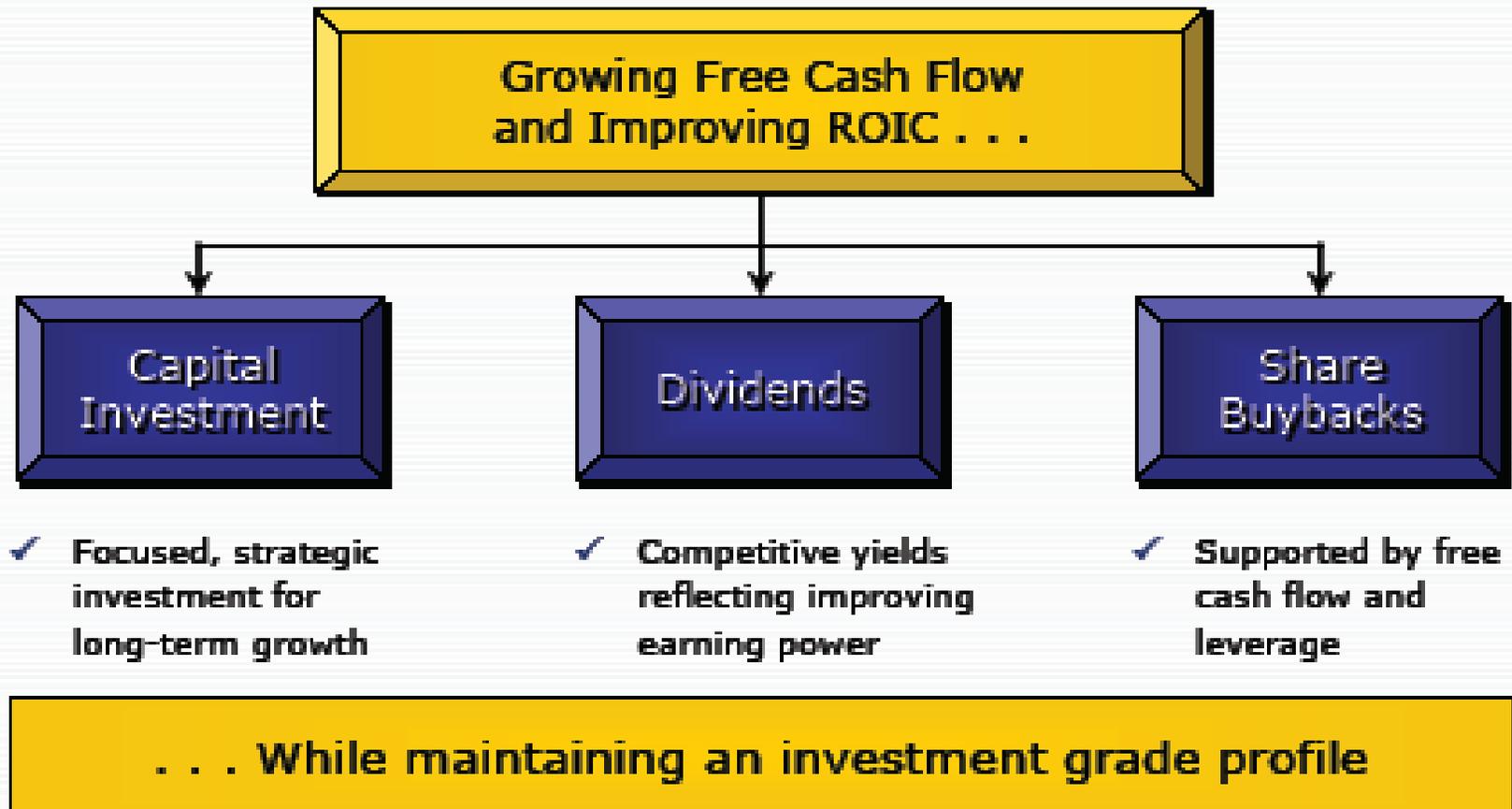
Rail pricing still in the early stages of recovery

Railroad Freight Rates
Indexed: 1981=100 Inflation Adjusted



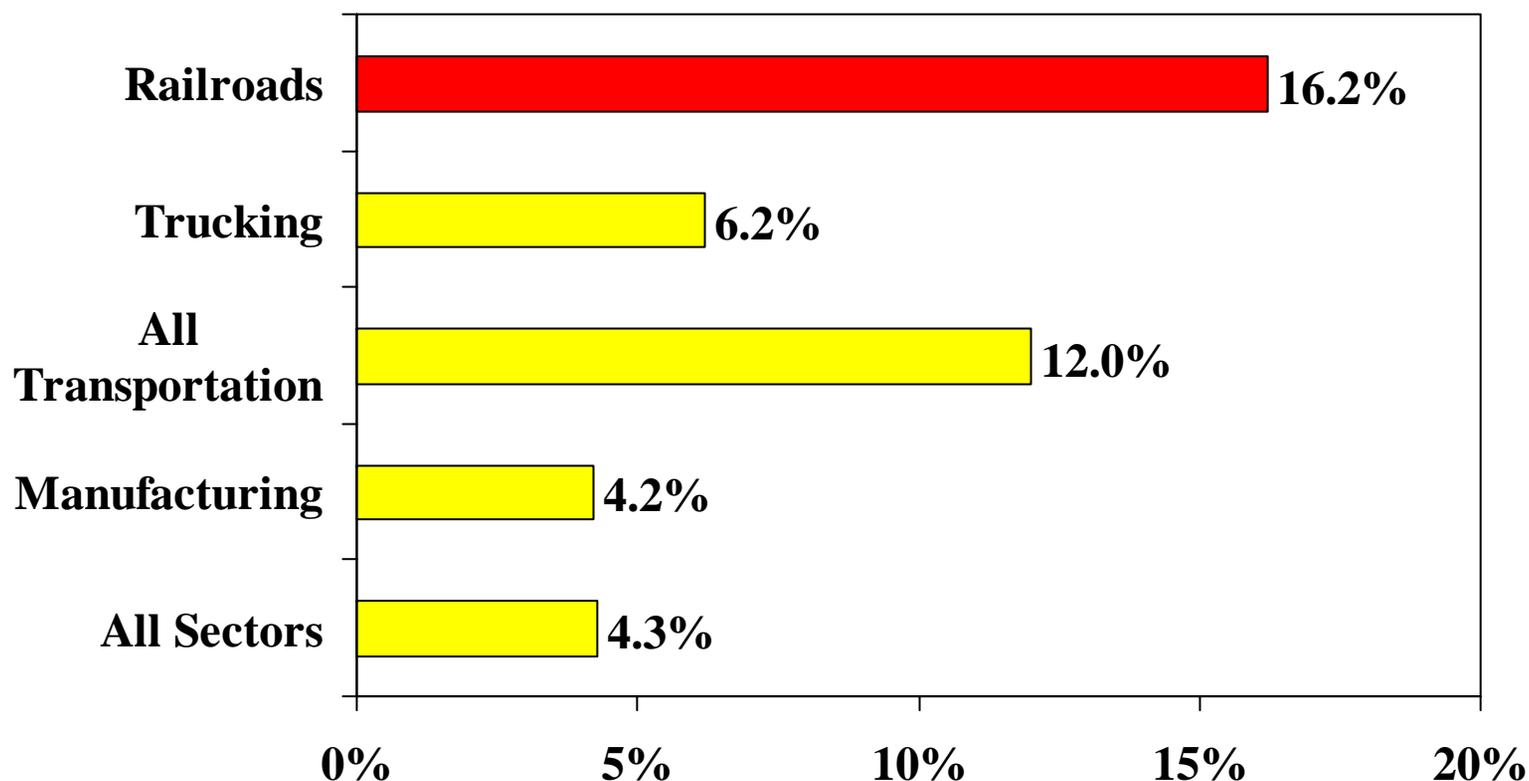
Source: Association of American Railroads

Balancing Shareholder Needs



Railroads Are Highly Capital Intensive

Capital Investment as a % of Revenue



Source: Census Bureau, STB

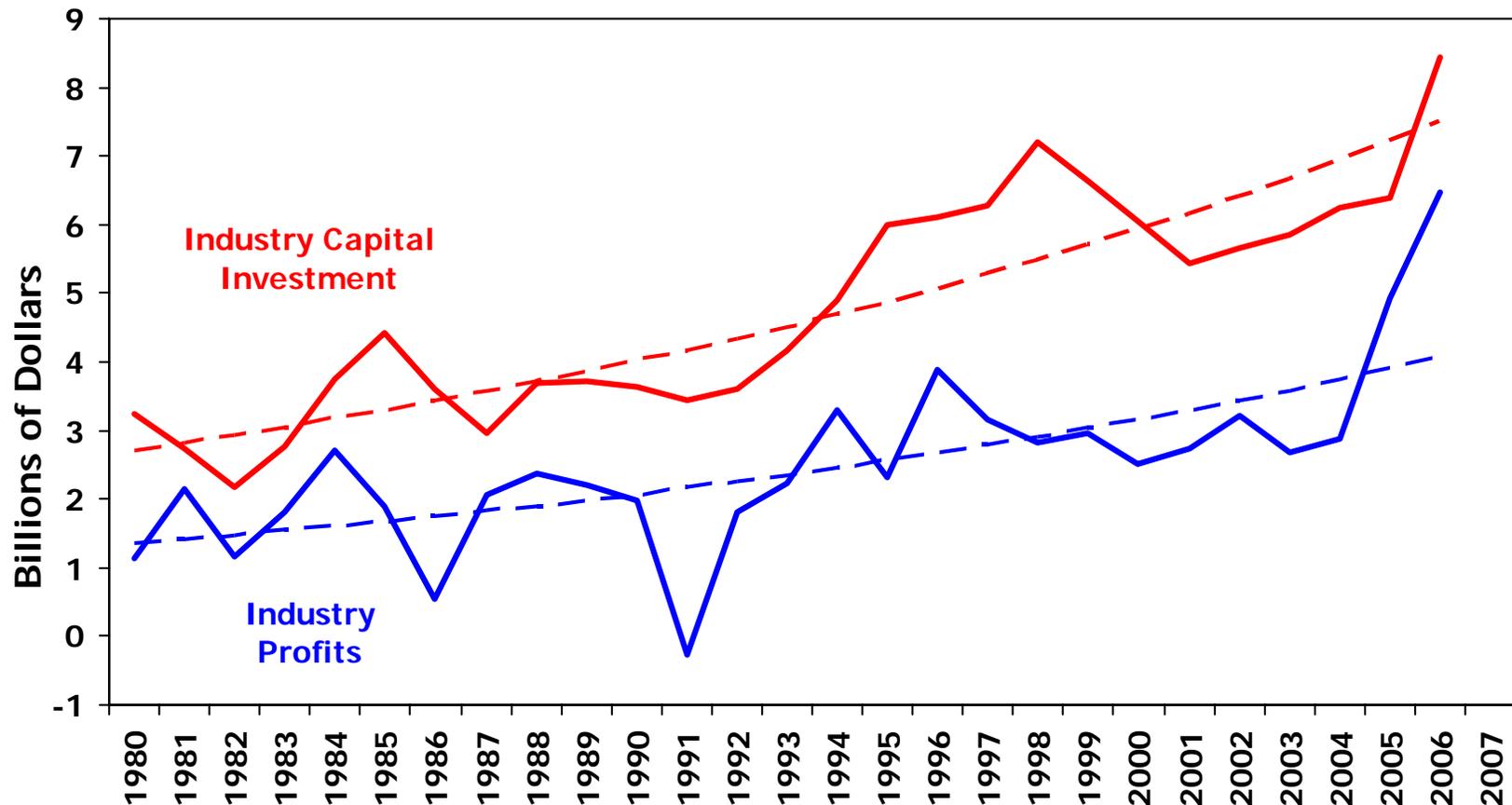
All figures based on 2002 economic census except railroads and trucking

All transportation includes NAICS 48 industries including: air, rail, trucking, water and pipeline transportation

Trucking figures are 1999-2005 average for NAICS 484 based on Census Services Annual Survey

Railroad figures are 1999-2005 average based on STB R-1 filings (Class I railroads cash capital)

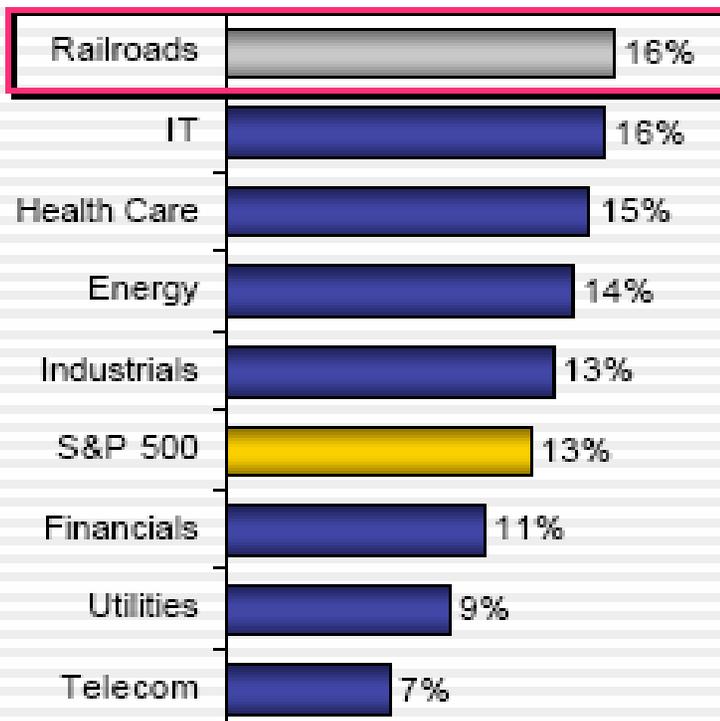
Capital Investment Has Grown in Tandem with Profitability . . . but . . .



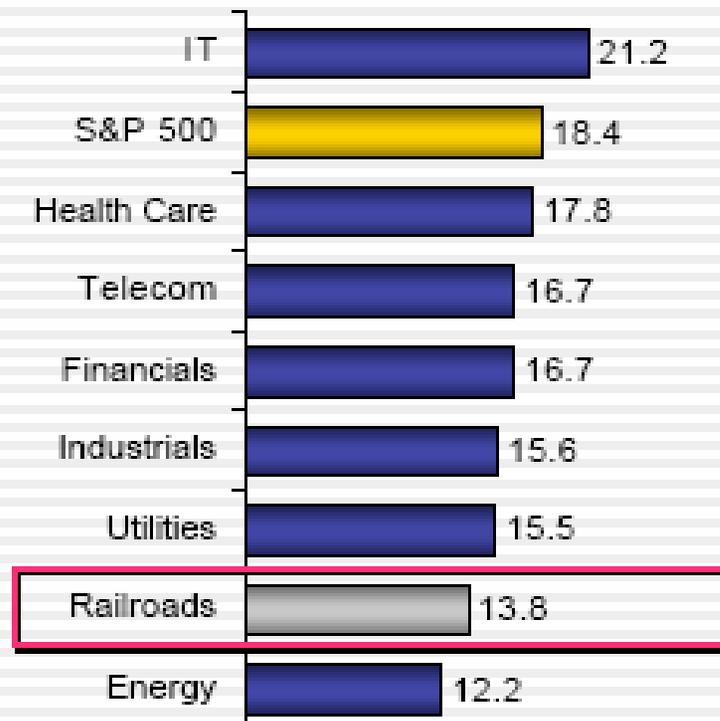
Historical nominal dollars invested based on STB R-1 filings (Class I railroads cash capital)
Industry profits based on R-1 filings of Class I railroads

Growth is not being Rewarded

Long-term Growth



Price-to-Earnings Ratio



Source: Standard & Poor's as of August 31, 2007

RR Capital Investment Reality

If ROI > cost of capital: →

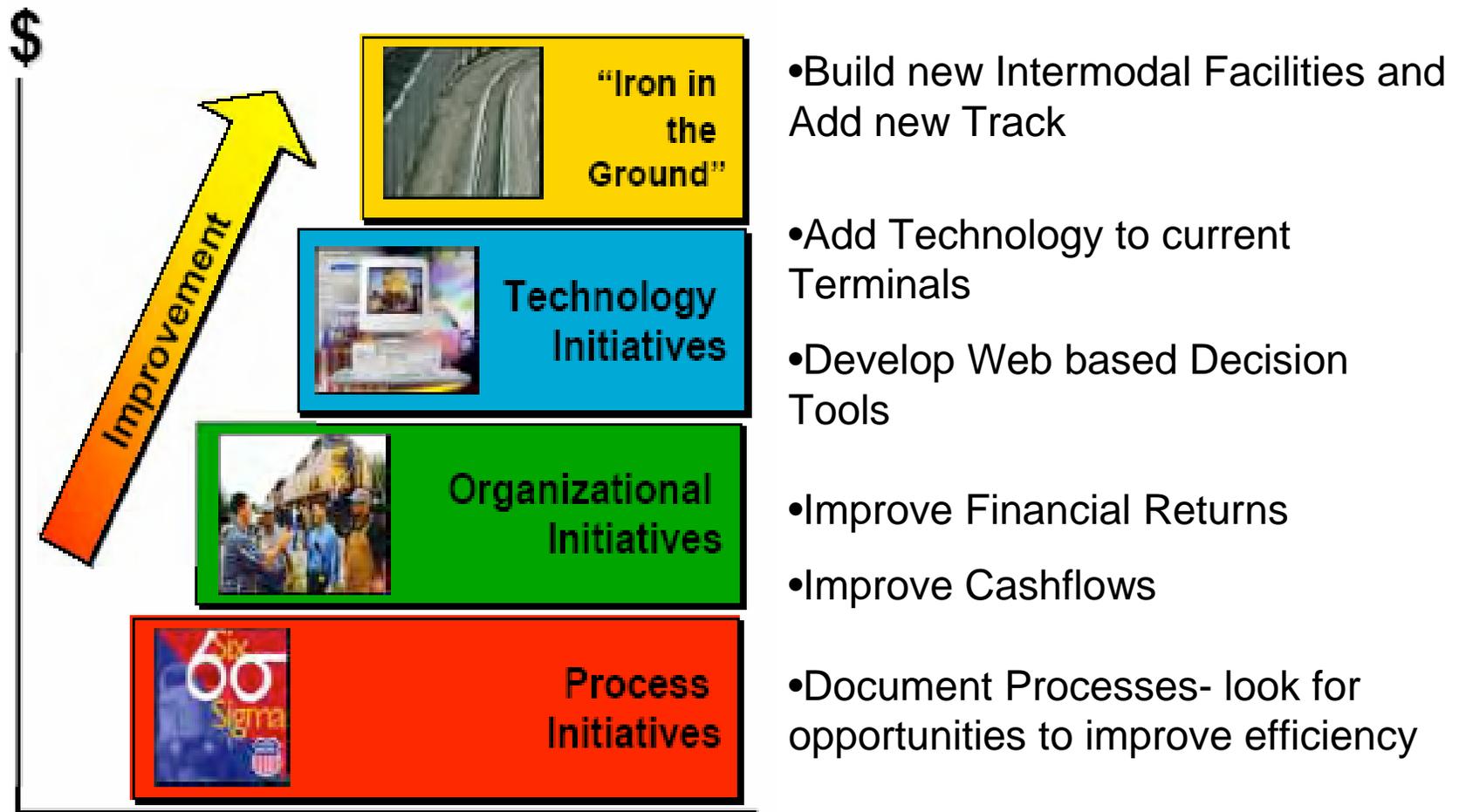
- Faster, more reliable service
- Sustainability
- Stronger physical plant; more and better equipment
- Capital spending expands



If ROI < cost of capital:

- Lower capital spending
- Weaker physical plant, equipment
- Slower, less reliable service
- Lower capital spending

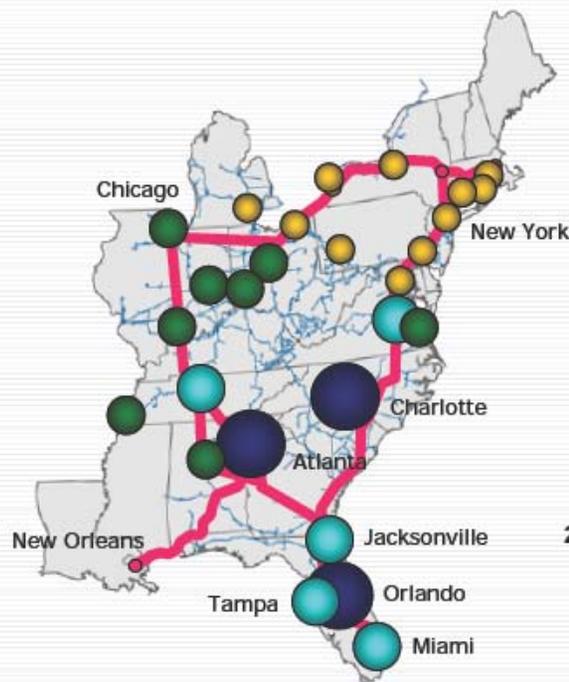
Capacity Improvement Process



Courtesy of UPRR

Capital Investment must be Focused

Capital investment is strategic and focused



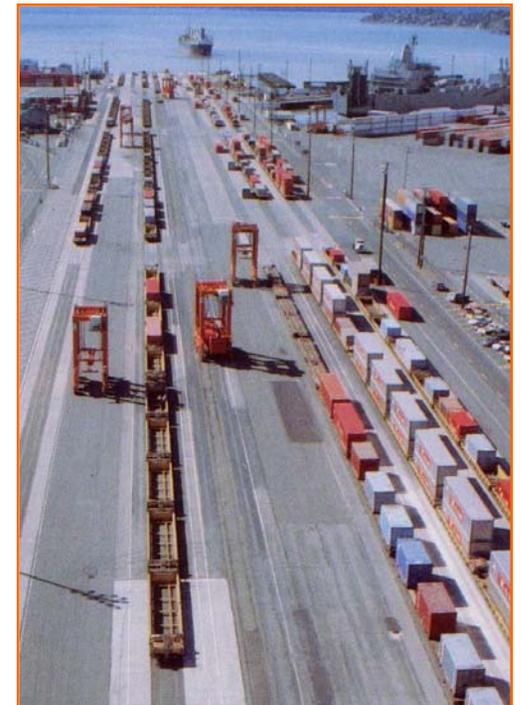
- Infrastructure spending supports safety/reliability
- Facility, locomotive and car spending support growth
- Technology supports safety and productivity
- Overall spending supports company, customers, communities

2006-2011 Population Growth in Major Metropolitan Areas

- 10% or greater
- 5% – 9.9%
- 2% - 4.9%
- Less than 2%

Increasing Capacity at Ports

- Balancing Port Capacity –Land Use
 - Container Yard Acres
 - Intermodal On-dock Acres
 - What is the right formula?
- Balancing Densification of Storage with Velocity of Rail
 - Decrease the Dwell & Increased Capacity
 - Do you stack it higher, or move it faster?
 - Off-site support



Increasing Capacity

↑ Velocity

↑ Density by Destination

=↑ Capacity & Reliability



... results in
More Throughput
And Better
Customer Service

Alternative Loading Schemes/Geometry

What is the right Equipment Mix?



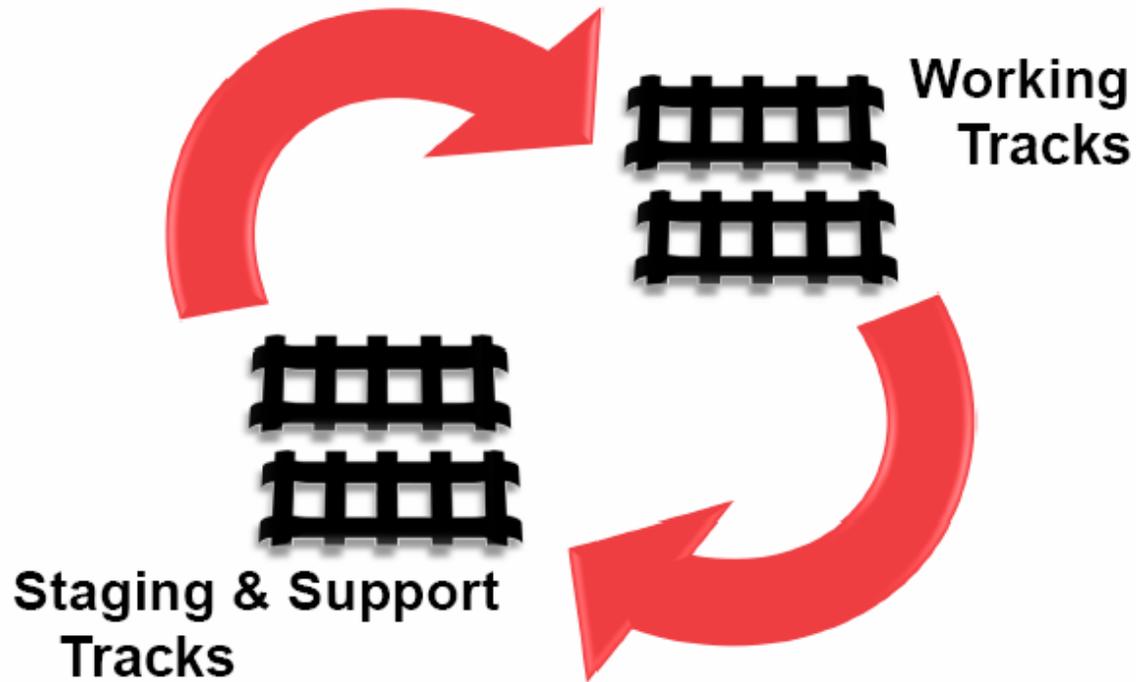
Today's Rail Capacity

Described multiple ways

- On – Dock Ramp Capacity
 - Support Track Capacity
 - Port Rail Capacity
 - Connector Capacity
 - Mainline Capacity
-

Correct Formula

Intermodal One:One Relationship



* KEY CONCEPT FOR MANAGING FLOW & CAPACITY

Train Lengths

Table 4.1 Typical Number of Cars or Intermodal Units by Train Service Type

Type of Train Service	Eastern Railroads	Western Railroads
Auto	57.0	63.9
Bulk	86.0	112.4
General Merchandise	82.0	80.7
Intermodal (TOFC/COFC count)	110.7	154.3

Source: Class I railroad data.

Today's Rail Capacity

Total Port On-Dock Ramp Capacity

- ❖ All Yards working 24/ 7
- ❖ 5 year Forecast compared to Capacity
- ❖ Balanced Flow East and West bound

Support Yard Capacity

- ❖ 1:1 Support track to Loading

Tideflats Capacity

- ❖ Short line Crews and Engines
 - ❖ Ability of Partners/ Connectors meet Productivity Goals
 - ❖ Open Running Track
-

Operational Improvements

- [..\tac rail video\KLineOverUP.wmv](#)
 - [..\tac rail video\KLineOverBNSF.wmv](#)
 - [..\tac rail video\UPLocoPull.wmv](#)
-

Today's Rail Capacity

Port Access Capacity

(The Connection to the Outside World)

- ❖ Total train slots per day through this connector

Mainline Capacity

- ❖ Windows/ Spacing of Trains on to the Mainline
 - ❖ Assets Utilization including Power and Crew
 - ❖ Lengths of Trains
 - ❖ Mainline Track Capacity to your Market
 - ❖ Off-Port Arrival & Departure Tracks
 - ❖ Length of Sidings
-

Off-site Near Port Holding Area



Maytown Property

- Port of Tacoma
- Port of Olympia



**Tacoma Rail
Mountain Division**



Challenges

- Demand Continues to Grow
 - Growth is uneven year to year
 - Infrastructure takes up to 10 years to build
 - Who should pay for the infrastructure?
 - Who truly benefits from the infrastructure?
 - Funding is always an issue
-

Capital Investments

Capital

First Half 2007 Highlights



Sunset Corridor Expansion

- Sunset Double Track
- Terminal Improvements

SPRB Capacity Additions

- Joint Line Progress
- Central Corridor CTC

Maintenance

- Sunset '07 Season - Complete
- I-5 Tunnel Project - In Process
- Central Corridor - In Process

New Locomotives

- 210 of 300 Units Delivered



Railroad Capacity - Tracks

- Most track is single track that requires one train to pull over to have another pass
- On Heavy traffic areas there are double tracks so 2 trains can move at once
- US has limited triple tracked areas



Track Controls Improve Capacity



Automatic Block Signaling (ABS) is a signal system that controls when a train can advance into the next track block. A block is a section of track with traffic control signals at each end.

Centralized Traffic Control (CTC) and Traffic Control System (TCS) are systems that use electrical circuits in the tracks to monitor the location of trains, allowing railroad dispatchers to control train movements from a remote location, typically a central dispatching office.

Types of Trains Group 1



Merchandise/carload trains and bulk coal and grain trains.

These trains tend to haul heavier, bulkier commodities such as coal, grain, gravel, and phosphates, and operate at slower speeds.

Group 2



Intermodal trains and multilevel auto carriers hauling assembled automobiles.

These trains tend to operate at higher speeds because they are lighter than merchandise and bulk trains and are run to more exacting schedules.

Group 3



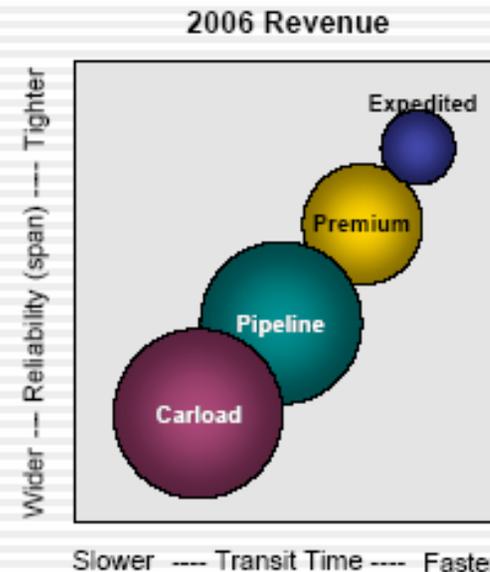
Passenger trains such as Amtrak's long distance trains and local commuter rail trains. Passenger trains operate at high speeds and on fixed schedules, similar to the speeds and schedules of intermodal trains.

They require close control to ensure safe operation and stopping distances, especially when operating along corridors carrying merchandise trains or a mix of merchandise and intermodal trains. By Law Passenger Trains have priority over all other Rail

Example of Service Types

Four service products define CSX's business . . .

Service	Characteristics
Expedited	■ Fastest scheduled service directly integrated into customers' supply chain
Premium	■ Train service coordinated with handoffs
Carload	■ Multiple handlings of cars, including pick-up/delivery
Pipeline	■ Unit train service focuses on inventory stockpiles



Level of Service

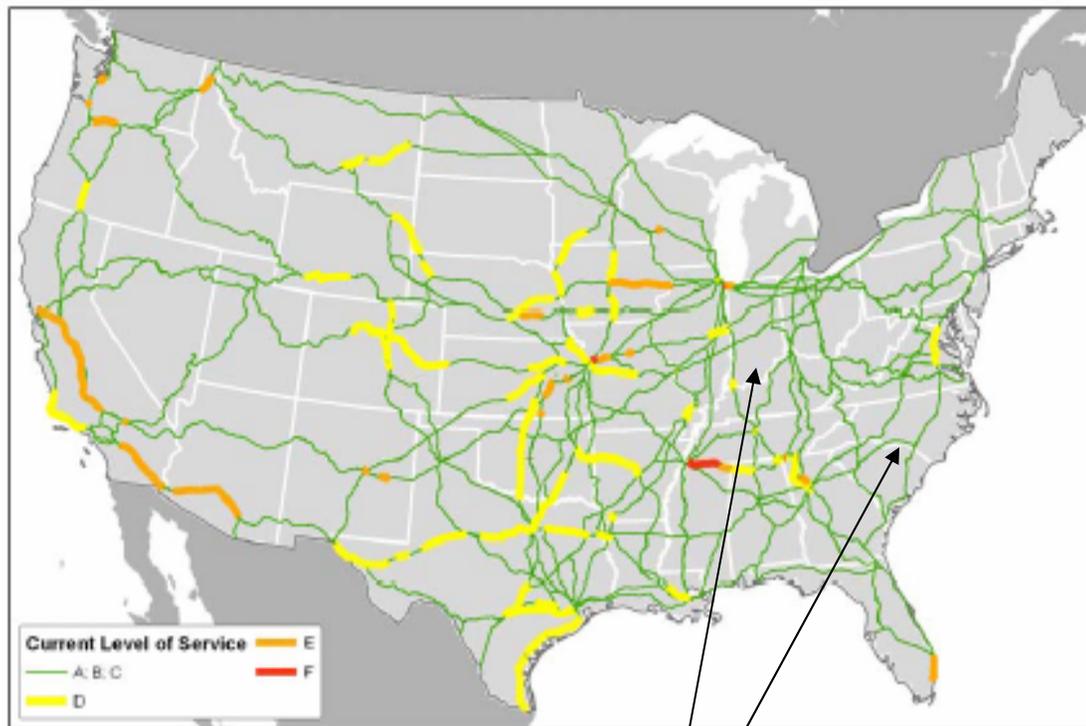
Table 4.3 Volume-to-Capacity Ratios and Level of Service (LOS) Grades

LOS Grade	Description	Volume/Capacity Ratio
A B C	Below Capacity	Low to moderate train flows with capacity to accommodate maintenance and recover from incidents
		0.0 to 0.2
		0.2 to 0.4
D	Near Capacity	Heavy train flow with moderate capacity to accommodate maintenance and recover from incidents
		0.4 to 0.7
E	At Capacity	Very heavy train flow with very limited capacity to accommodate maintenance and recover from incidents
F	Above Capacity	Unstable flows; service breakdown conditions
		0.7 to 0.8
		0.8 to 1.0
		> 1.00

Source: Cambridge Systematics, Inc.

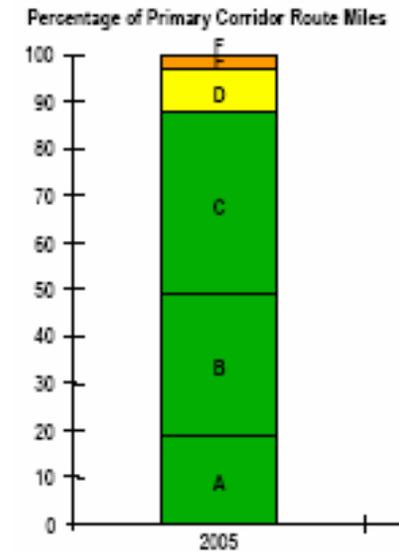
Capacity Today

Figure 4.4 Current Train Volumes Compared to Current Train Capacity



Source: Cambridge Systematics, Inc.

Note: Volumes are for the 85th percentile day.



Source: Cambridge Systematics, Inc.

Red indicates Only 2 areas (108 miles) over capacity

Joint Services

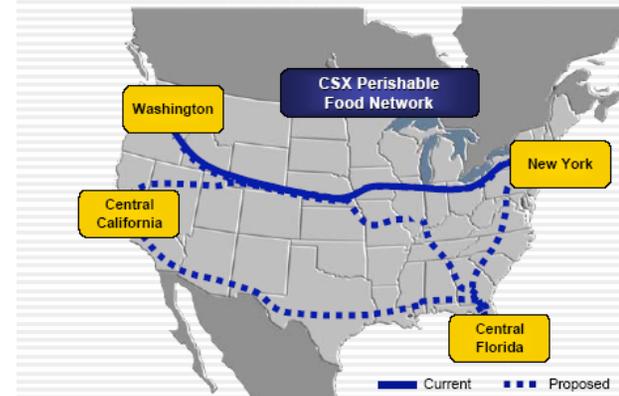
New CSX/BNSF service leverages that trend



- February 26th start-up
- Enhanced PSW-SE service
- Seamless connectivity

delivering **CSX**

CSX will create a network of unit trains



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New Service

Blue Streak Truck-Competitive Product



Premier Service Route:

- New Service via Meridian Speedway May 21, 2007
- Shreveport Gateway
 - 130 miles shorter than Memphis Gateway
 - Over 200 miles shorter than New Orleans Gateway

Performance Improvements:

- Premium Service – 12 hours
- Standard Service – 24 hours

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BUILDING AMERICA

New Ports



Enter the Port of Prince Rupert

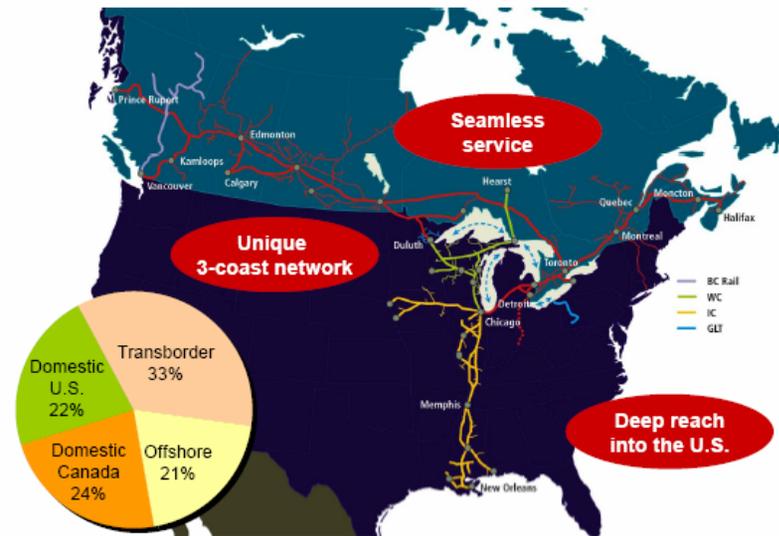


Slide 9

Precision
Railroading



Great North American Franchise

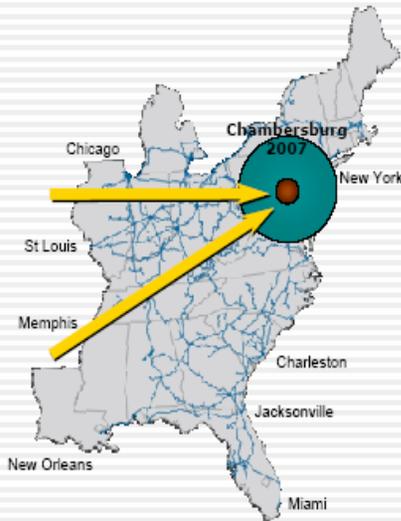


Slide 1

Precision
Railroading

New Facilities and Partnerships

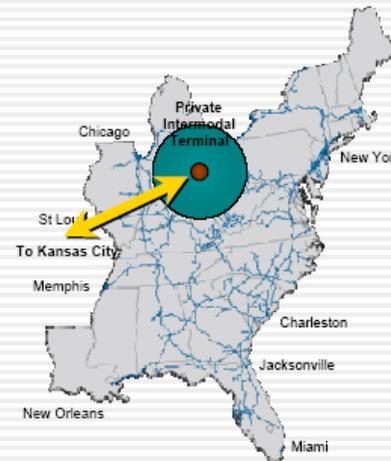
Chambersburg Intermodal terminal opens



- Intermodal distribution center in Pennsylvania
- Serves major northeast distribution hubs
- Leverages western gateways

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Future growth from rail-truck partnerships



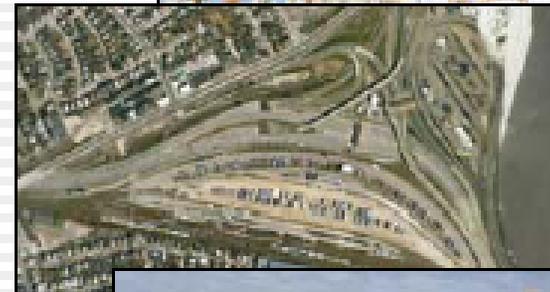
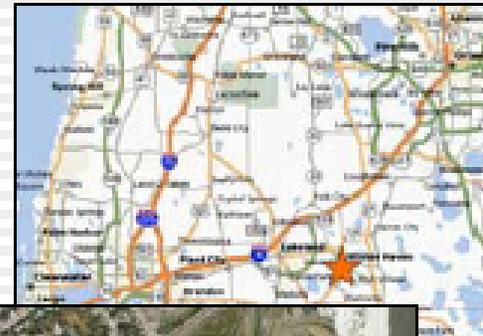
CSX Benefits

- Dedicated service
- Private equipment
- Private terminal
- Uses existing capacity

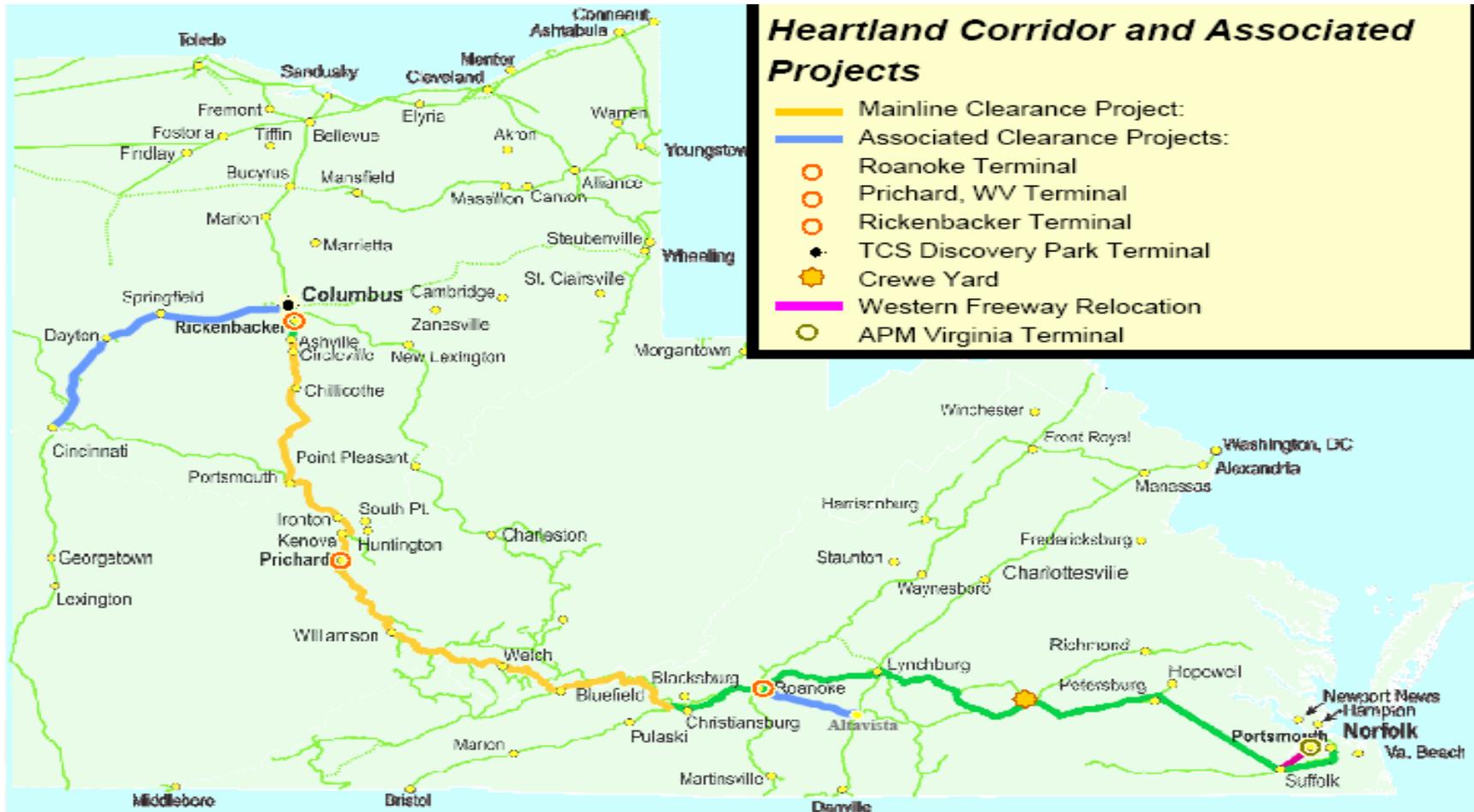
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New Public Private Partnerships

- Central Florida Partnership
 - Florida Department of Transportation
- New England Partnership
 - Commonwealth of Massachusetts
- National Gateway Initiative
 - Federal DOT and several states



Improved Corridors



Clearing of Tunnels

The Heartland Corridor Project Requires “Clearing” 28 Tunnels



New Corridors



Summary

- Freight demand growing rapidly; more rail infrastructure needed
 - More rail infrastructure would produce substantial public benefits
 - Both public and private investment will be required to meet future rail infrastructure needs
 - Federal tax incentives being requested from the Railroads
-

Questions?



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