

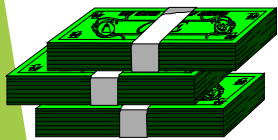
# Topics Requested by AmCham

- ▶ Brief overview of the U.S railway transportation system;
- ▶ Transformation of the U.S. railway market in conditions of liberalization by:
  - ▶ highlighting the stages of railway transport market reforming through the scope of appropriate regulation;
- ▶ Particularities of private traction regulation via U.S. perspective;
- ▶ The features of tariff system formation for access to railway infrastructure through U.S. experience.
- ▶ Principles of the transport process under conditions of equal access to railway transport.

# North American Rail Network



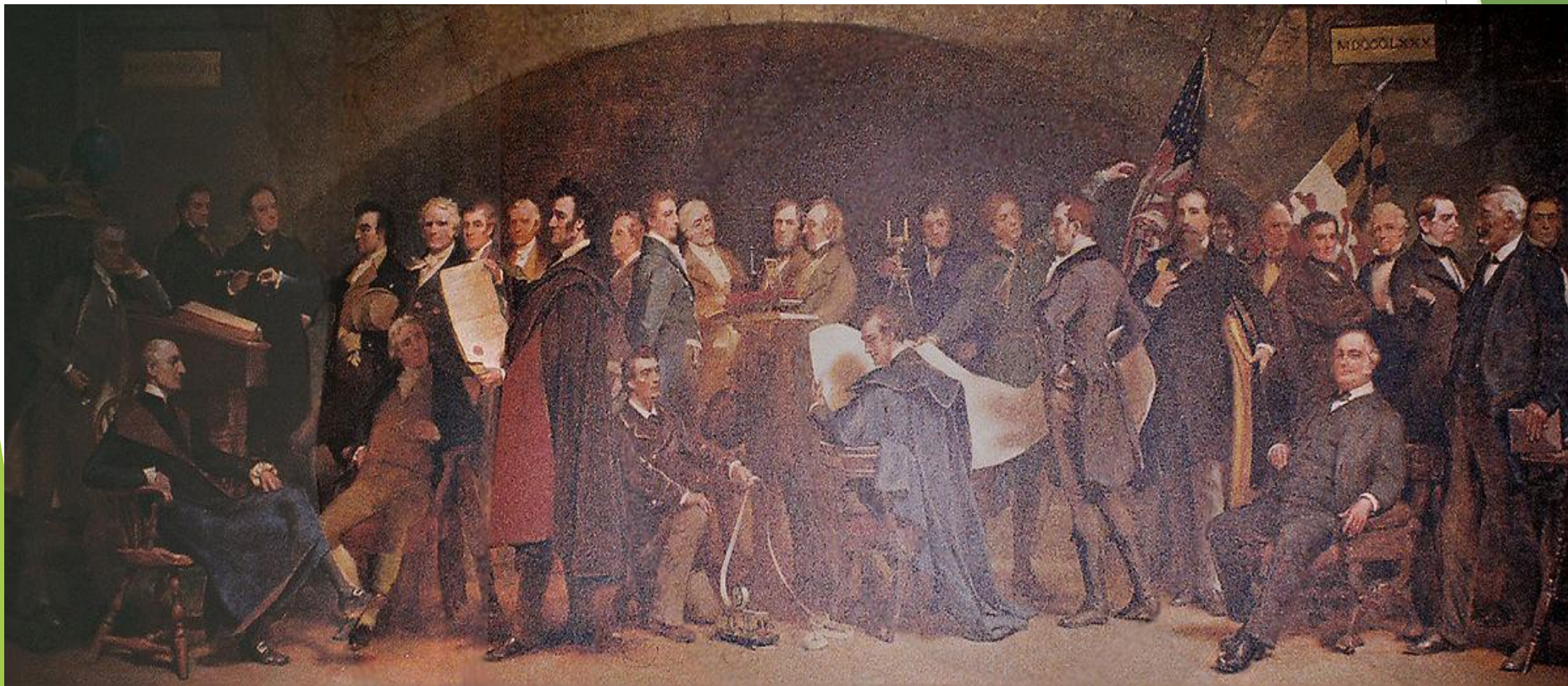
## Selected 2006 Rail Freight Statistics



- ▶ 140,490 miles of road owned by railroads
- ▶ **23,732 locomotives**
- ▶ 1.3 million rail freight cars\*
- ▶ **99 average tons per carload**
- ▶ 186,957 workers
- ▶ **2.0 billion ton-miles carried**
- ▶ 32.1 million freight cars originated
- ▶ **\$52.2 billion annual operating revenue**
- ▶ 11.3% rate of return on shareholders equity\*

\* Class I only

# The Beginning in America 1826-1828



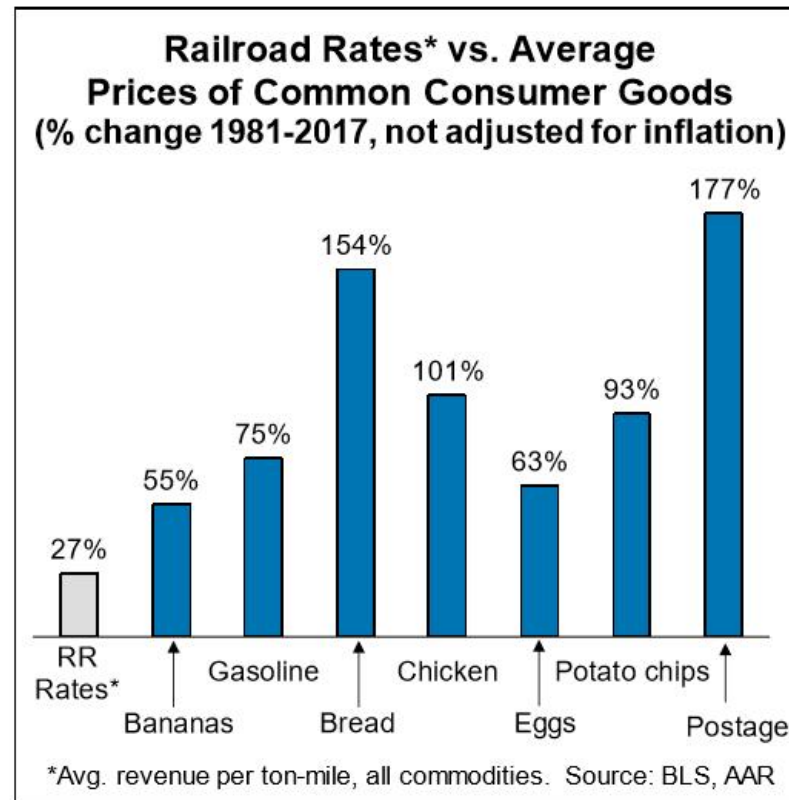
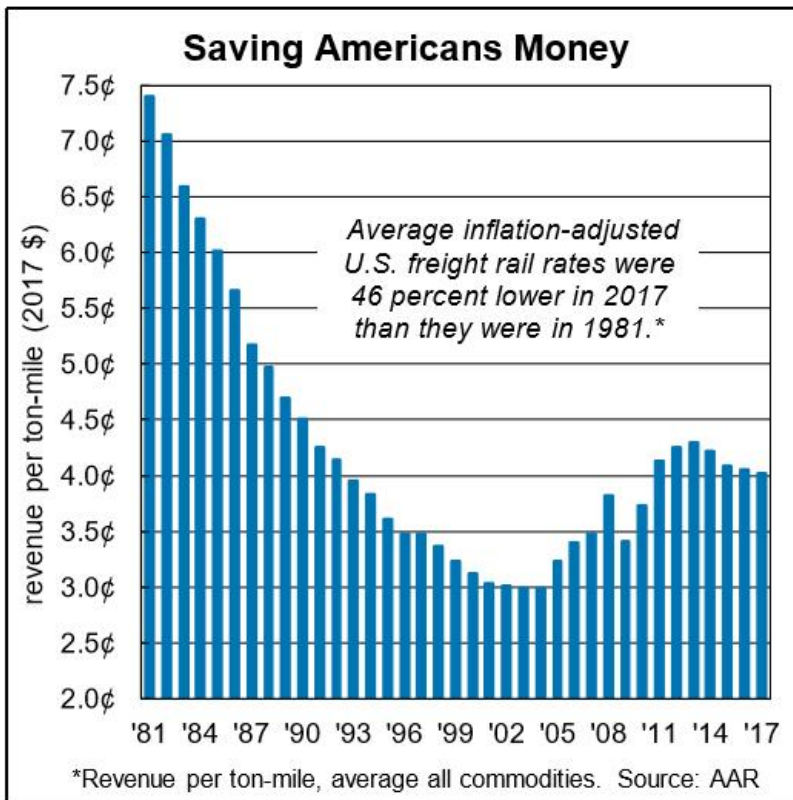
# The Rapid Expansion in America 1860 - 1890



# The Modern Network in America 1970 - 2000

- ▶ Formation of the Surface Transportation Board (STB)
  - ▶ Supreme Court for Shippers & Railways
  - ▶ Revenue / Variable Cost < 1.80
  - ▶ Revenue Adequacy - Returns > Cost of Weighted Capital
  - ▶ No "Directives" like EU
- ▶ Increase Role of Federal Railway Administration
  - ▶ Determines Licenses for Operators
  - ▶ Establishes "*Minimum*" Safety Requirements
  - ▶ Collects Railway Data and Employee Data for Safety
  - ▶ Collects Injuries, Derailments, Statistics Predicting
  - ▶ Oversight Positive Train Control (Europe = ETRMS)

# Tariffs decline as Efficiency Gains

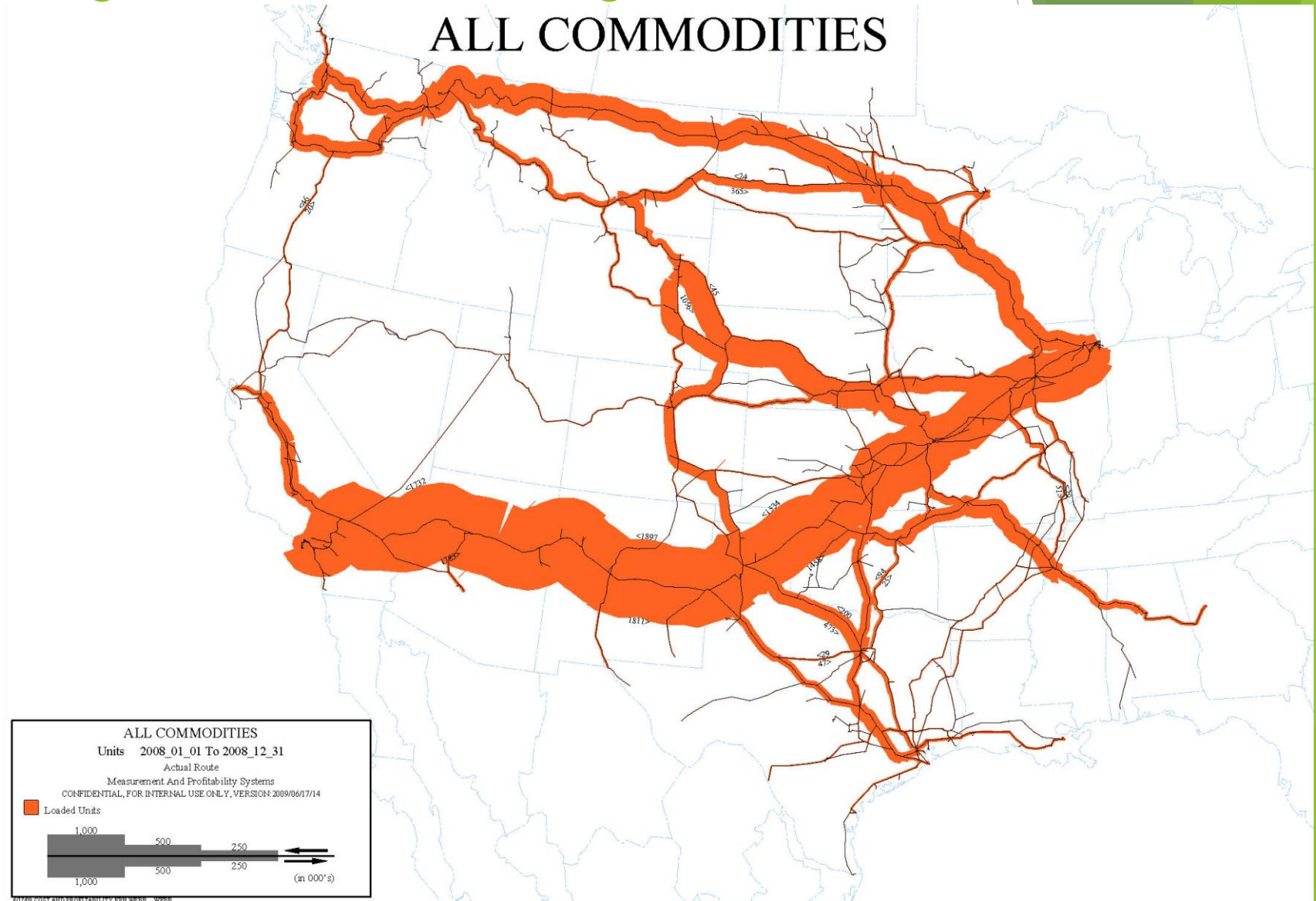


# Example Railway Network

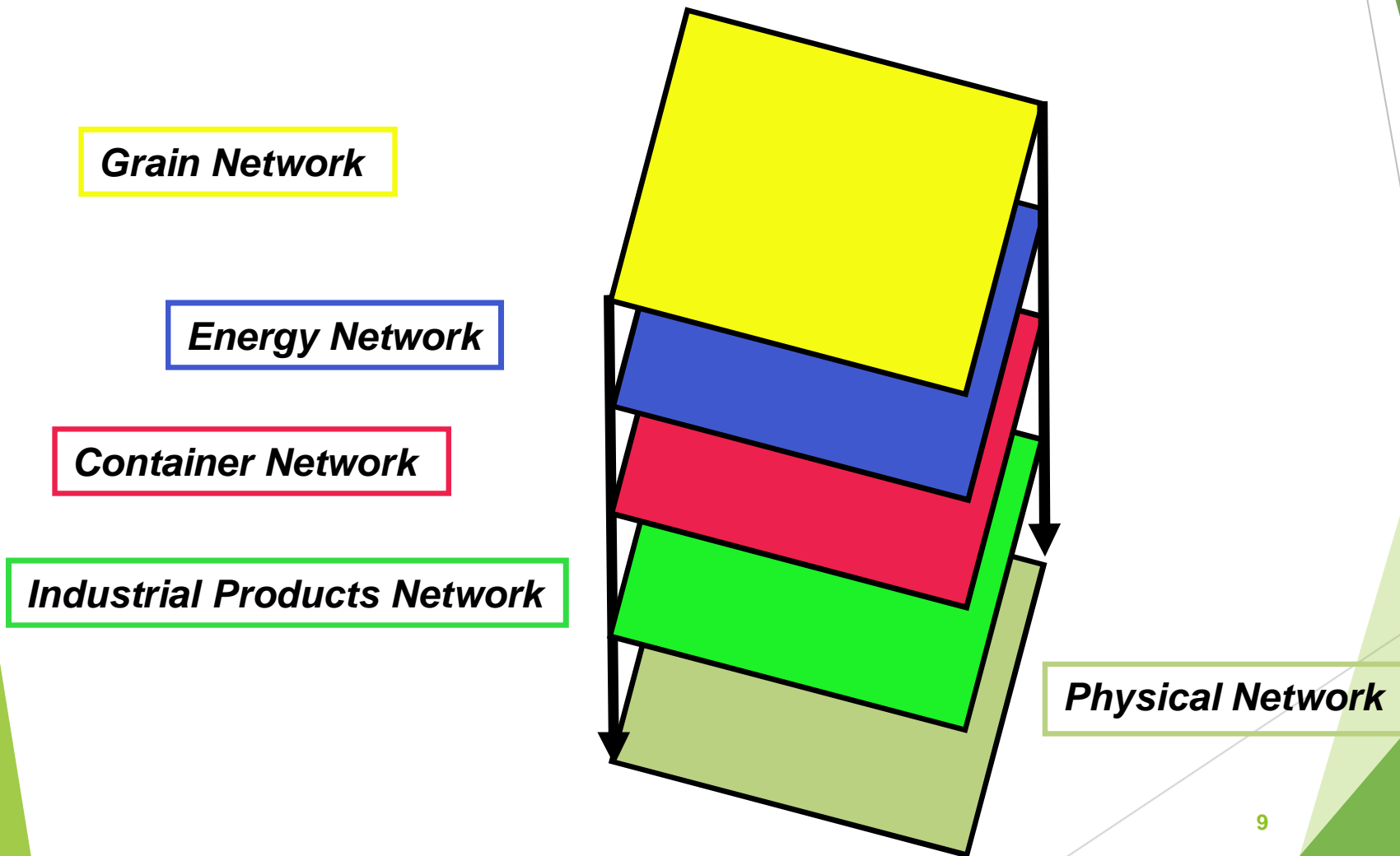




# Railway route density



# Network Planning & Operations



# Grain Business

## Ag Products...

**4,700+ customers**

**2,100+ origins**

**Shuttles = 110 cars**

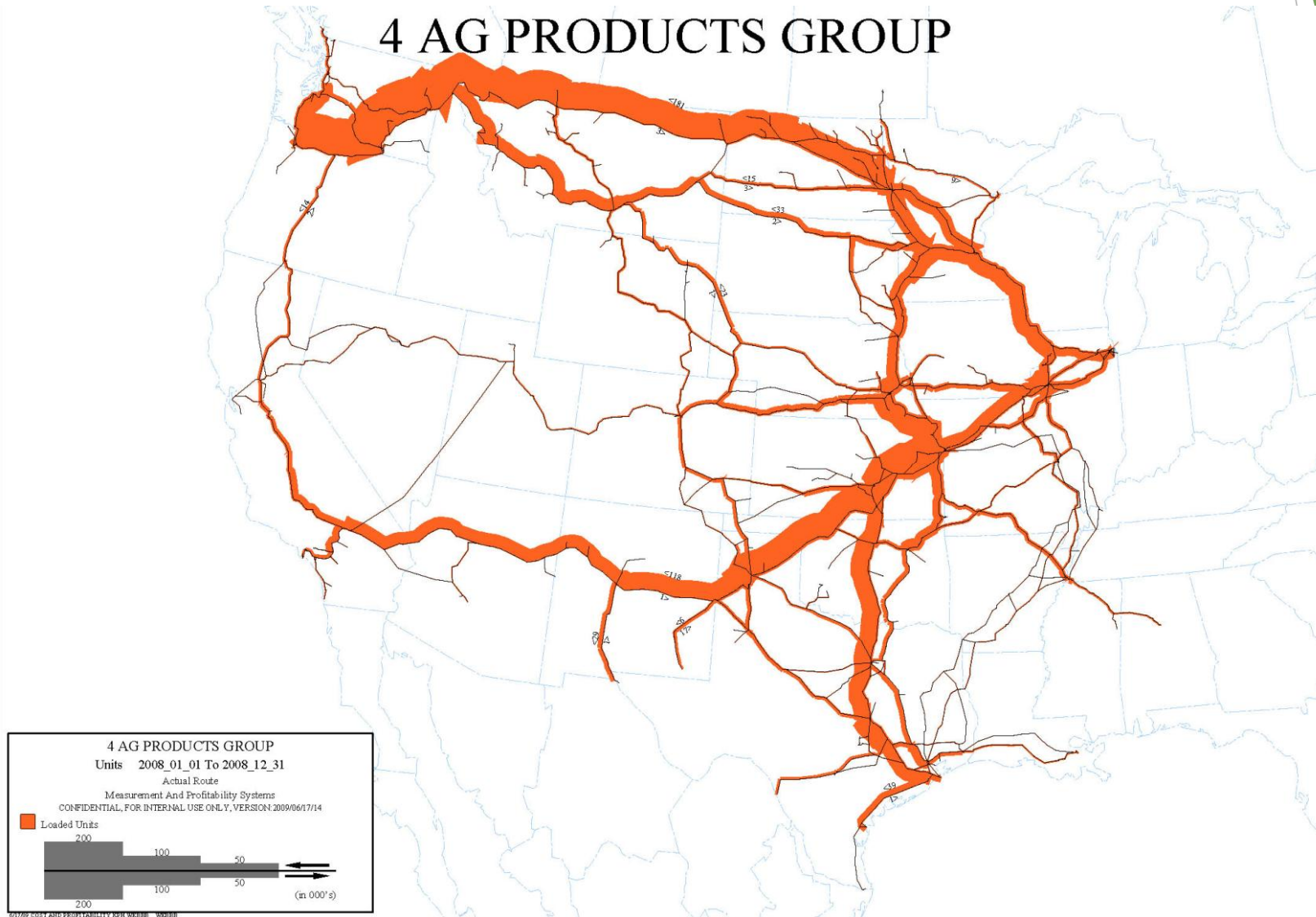
**2.5 trips/month**

**120 shuttles running**



# Grain Routes density

## 4 AG PRODUCTS GROUP



# Energy Business

## Coal...

**10 customers = 60%**

**400+ train sets**

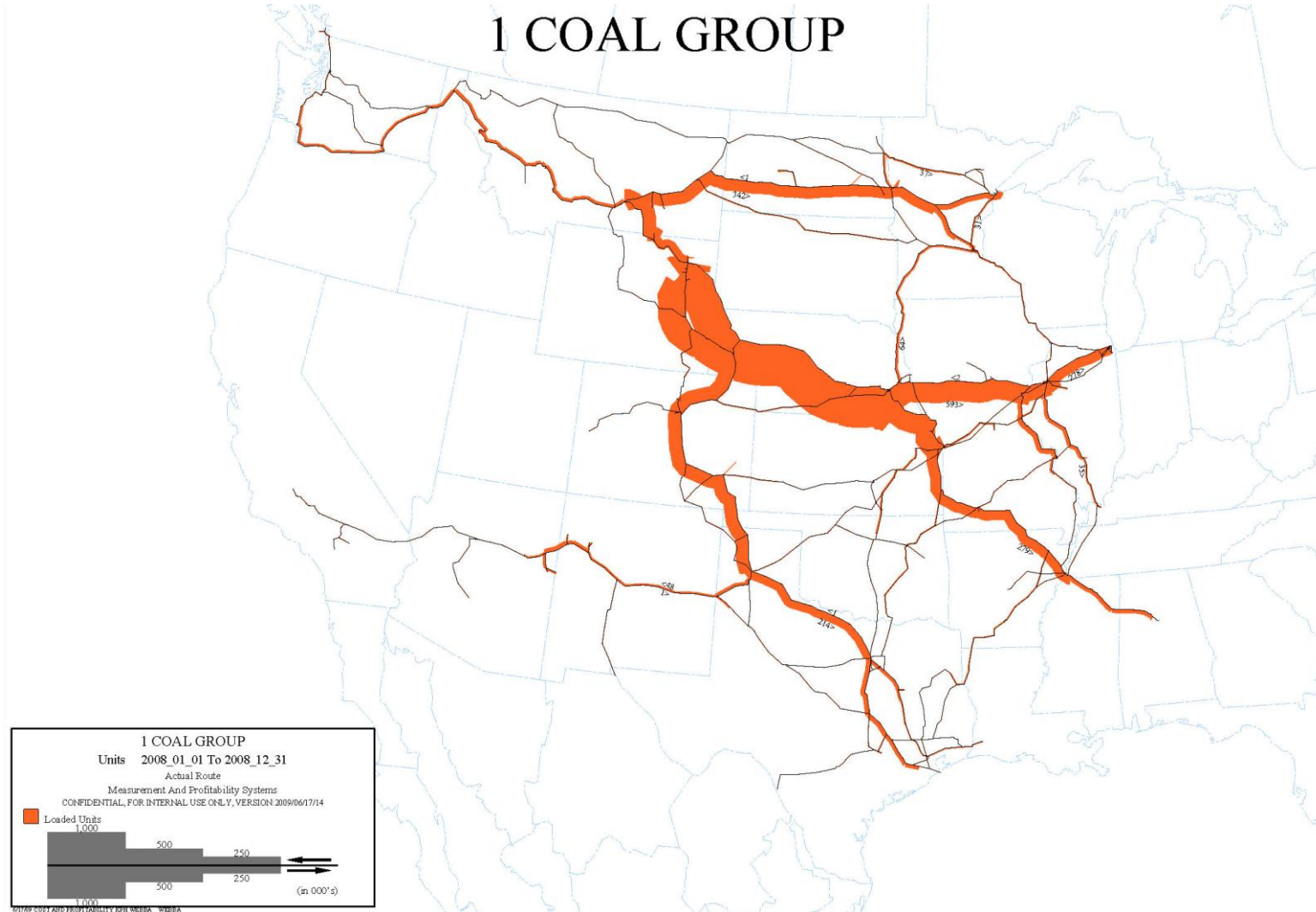
**14,400+ tons/train**

**50+ trains loaded/day**

**Powder River Basin  
output has doubled  
over the last decade**



# Energy Routes



# Container Business

## Consumer Products...

**Many Customers**

**Concentrated Origin**

**and Destination**

**Intermodal Facility**

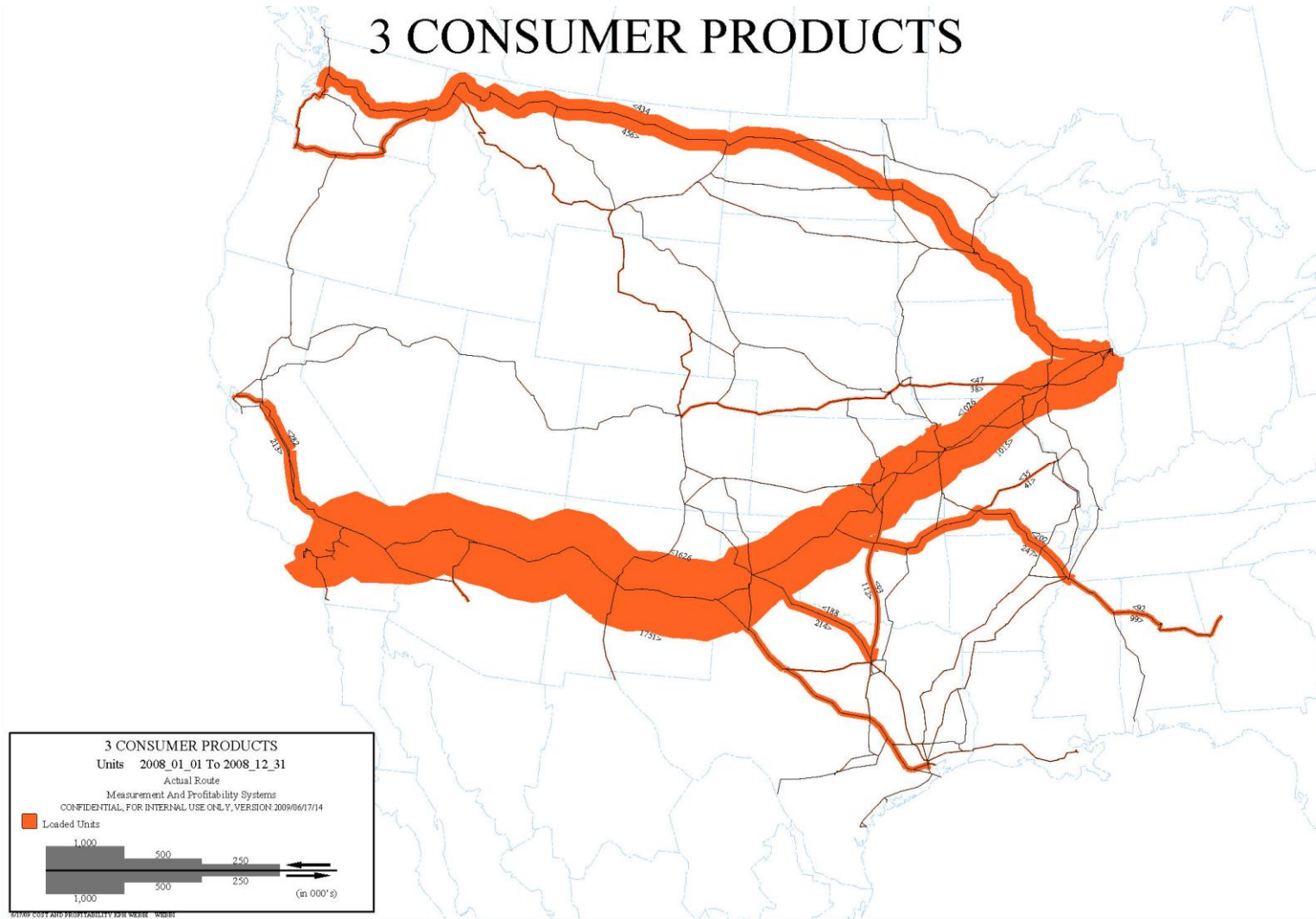
**Network**

**Train = 280+ units**

**3-5 day trips**



# Container Routes





# Industrial Products Business

## Merchandise...

**6,000+ Customers**

**Diversified Origins  
and Destinations**

**Large Gathering and  
Distribution Network**

**Many Intermediate  
yards**

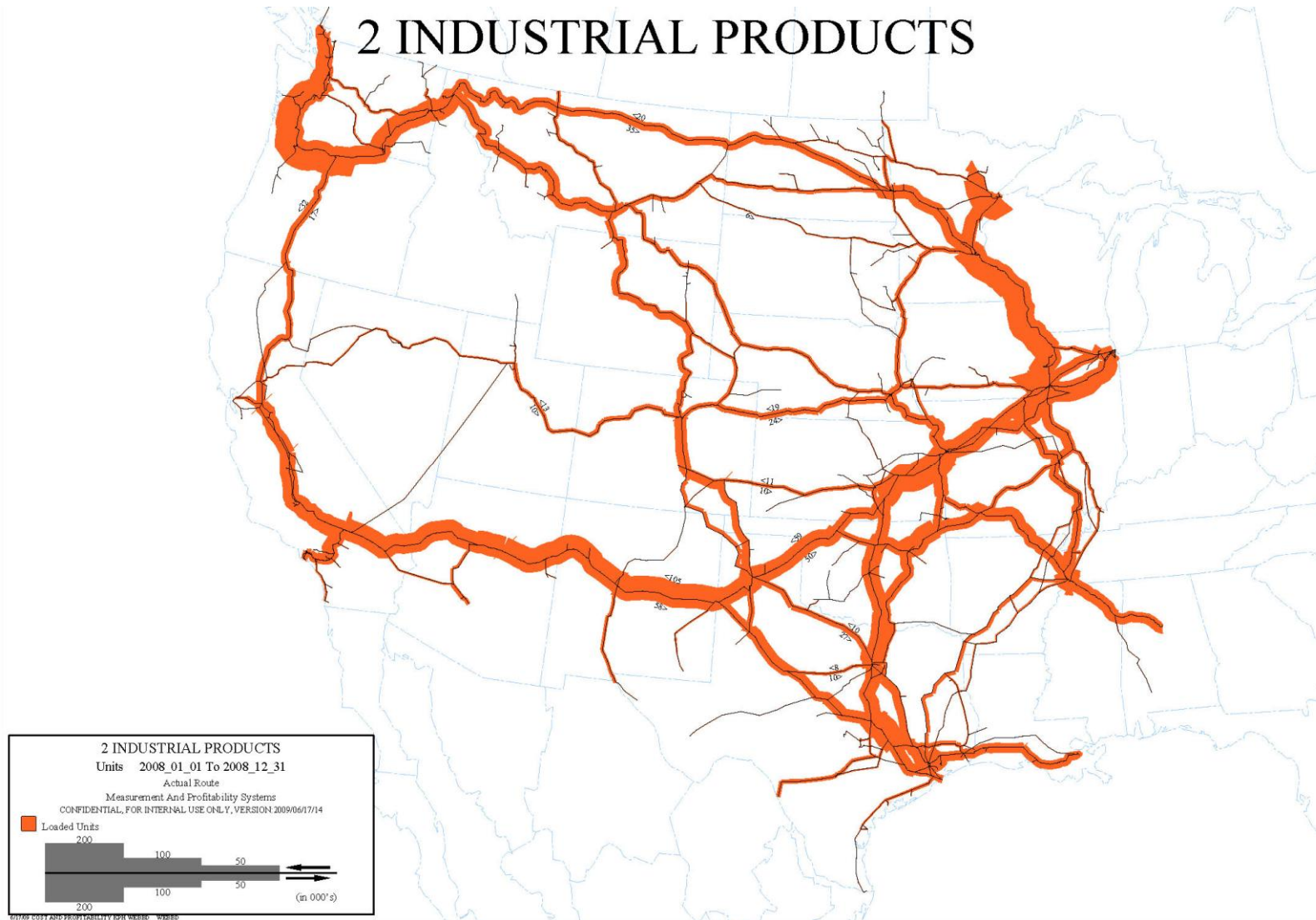
**10-13 day trips**

**25-30 day cycles**



# Industrial Products Routes

## 2 INDUSTRIAL PRODUCTS



# Service Planning Overview

## Long Range Economic Outlook

**Shipper  
forecast  
input**

### Industrial Products

- Customer
- Commodity
- Origin-Destination desired

### Energy

- Mine to Plant

### Grain Products

- Corridor to Corridor
- Commodity (Grains)

### Container Products

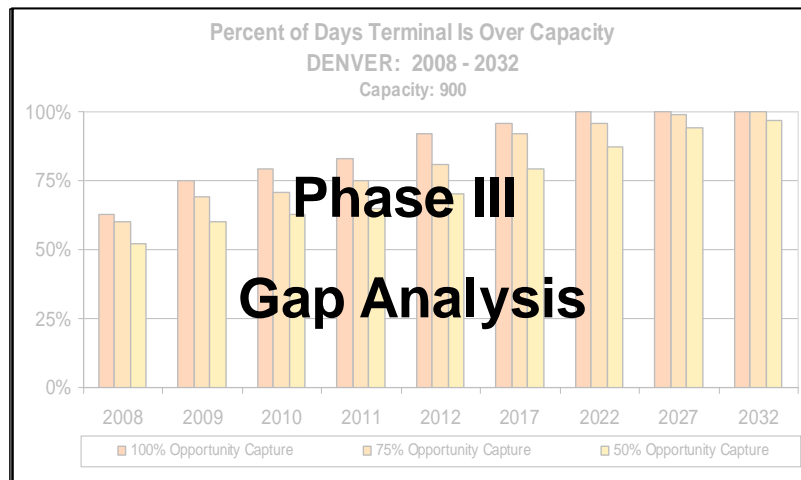
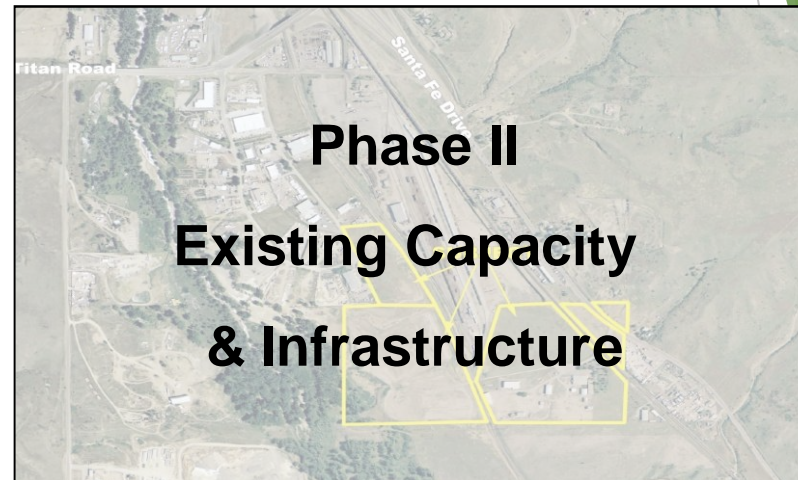
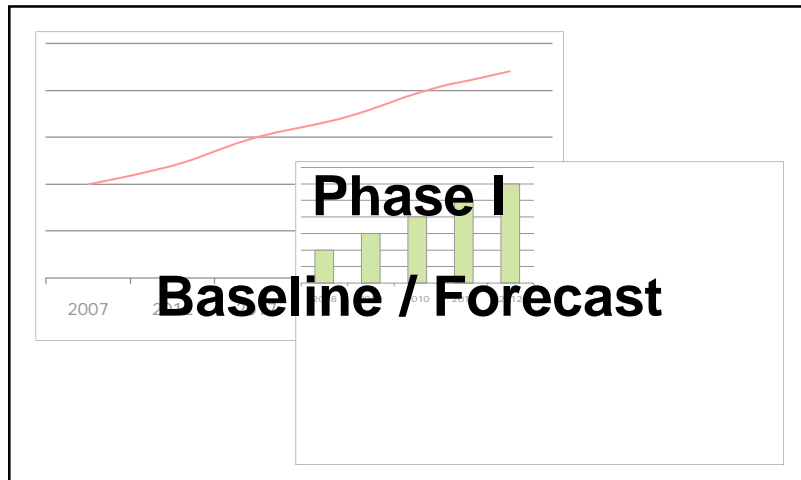
- Hub to Hub
- Customer
- Equipment
- Mkt Segments

Operating  
Plan:

- Forecast group, volume
- Revenue, tons
- Wagon type
- Corridor, lane

- Origin Destination
- Ports/Borders

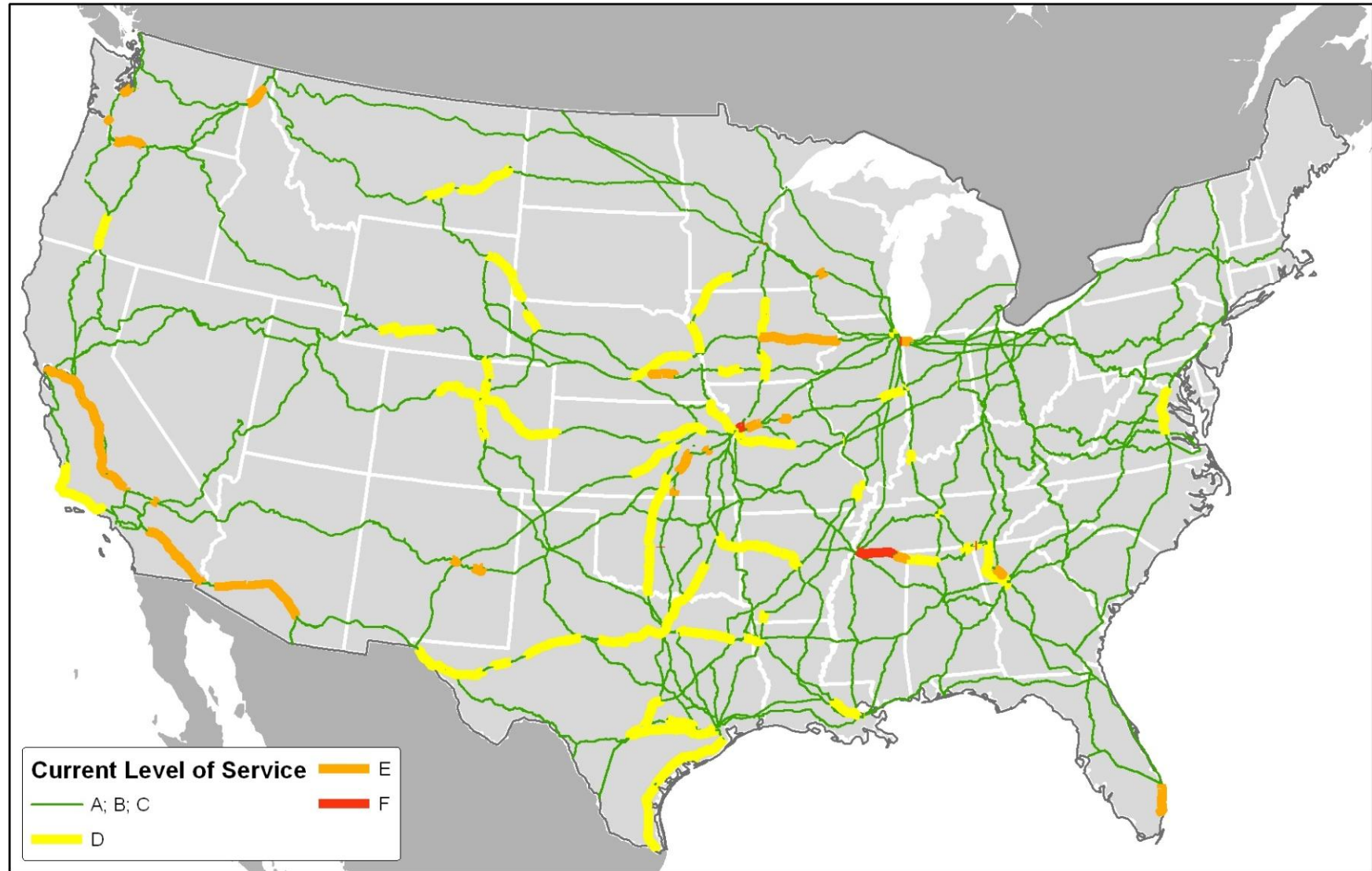
# Four Phases



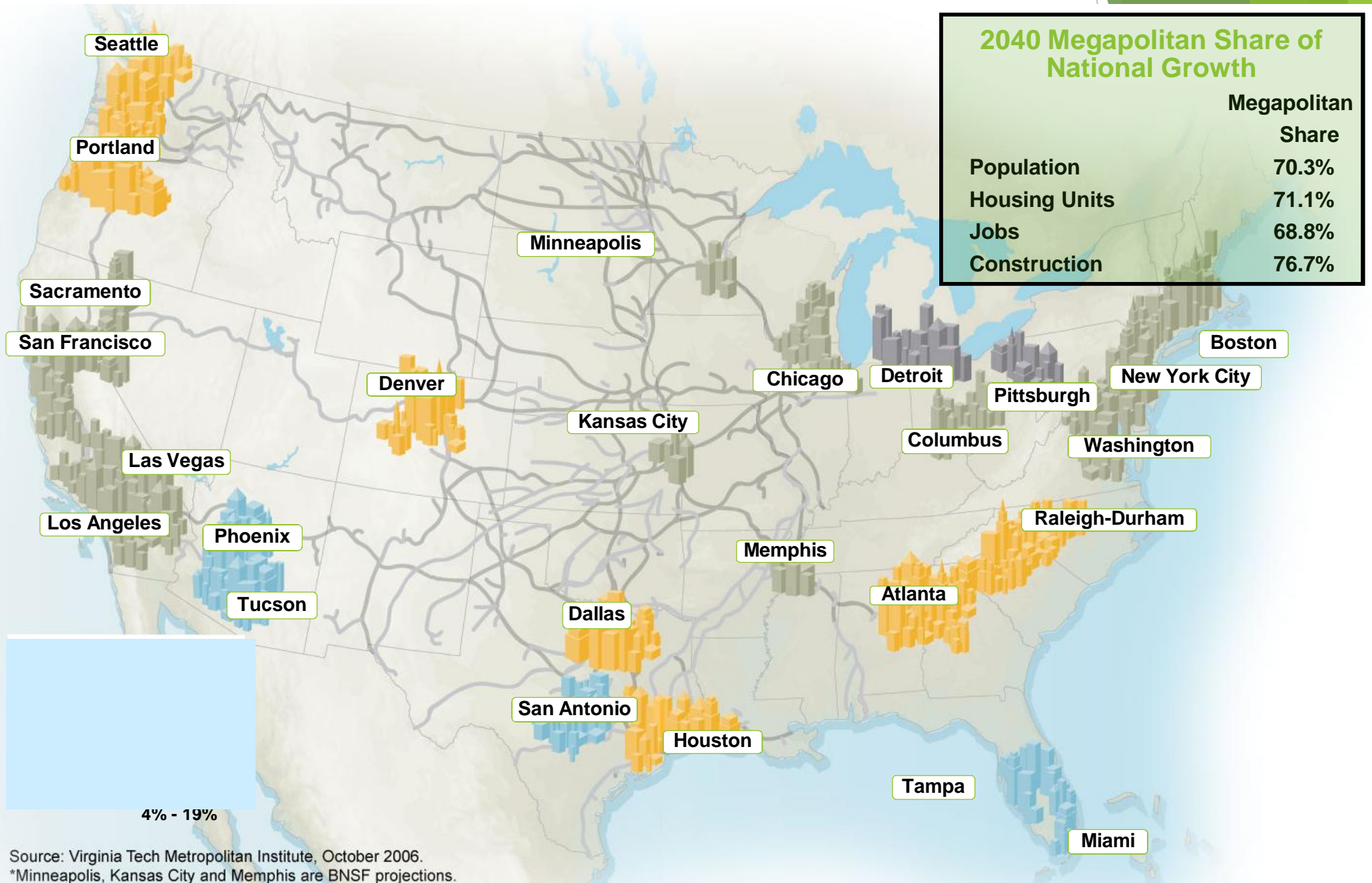
**Phase IV**  
**Recommendations**

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# Majority of Routes Operating Below Capacity Levels

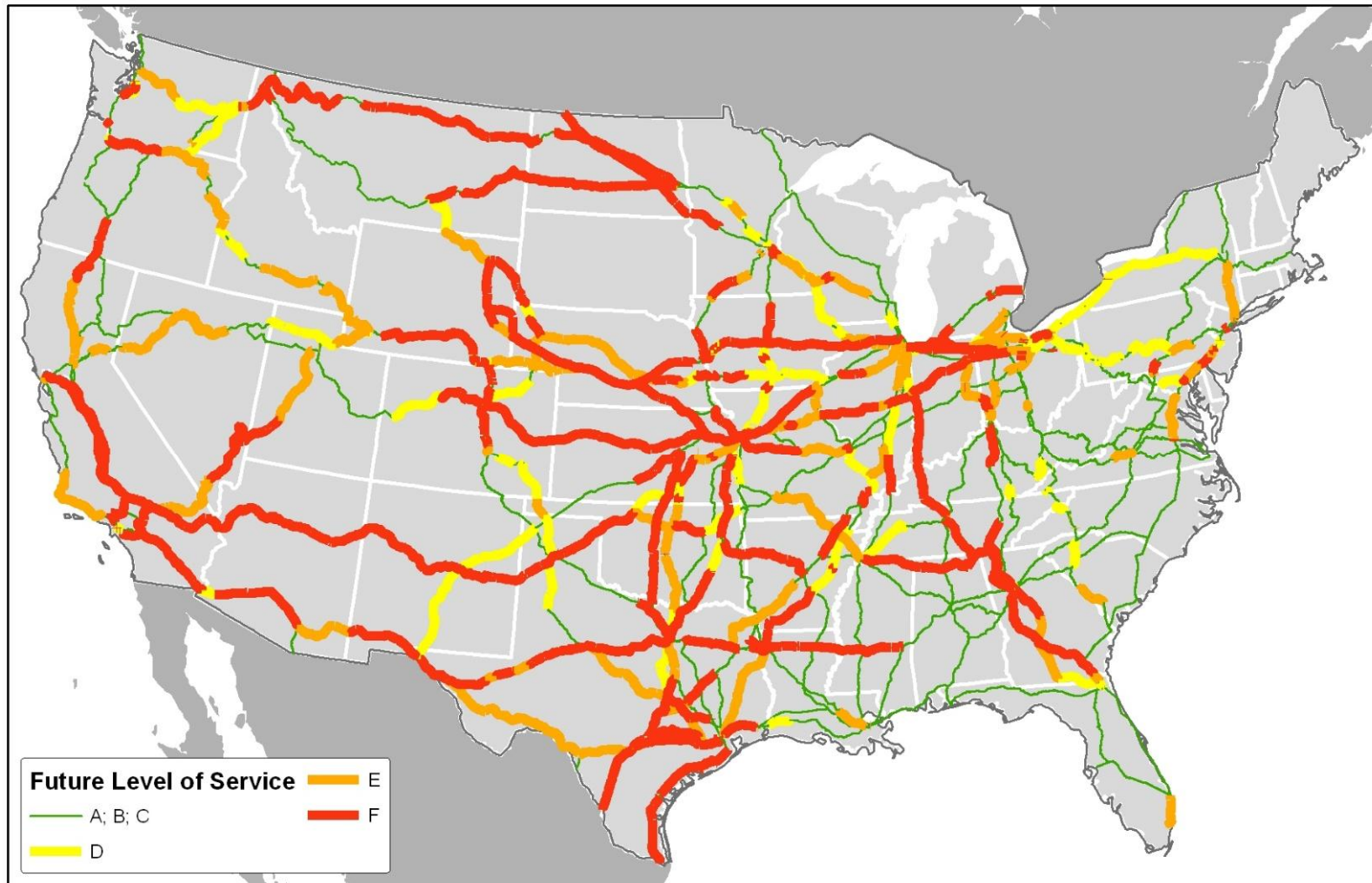


# 70% of Growth in Megapolitans



# If No Improvements, Congestion Affects Every Region of the Country

## 2035 Without Improvements

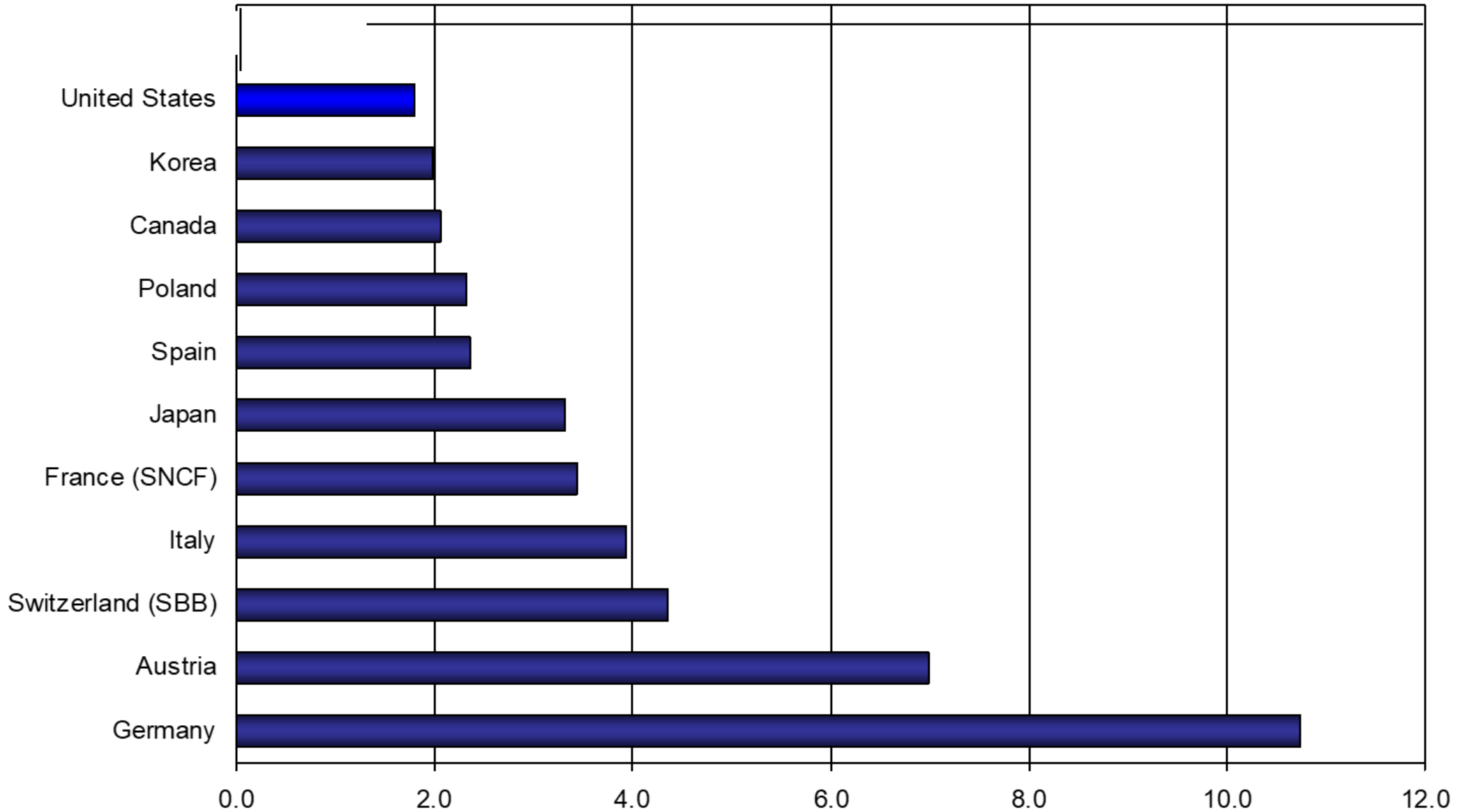


# Locomotive Traction

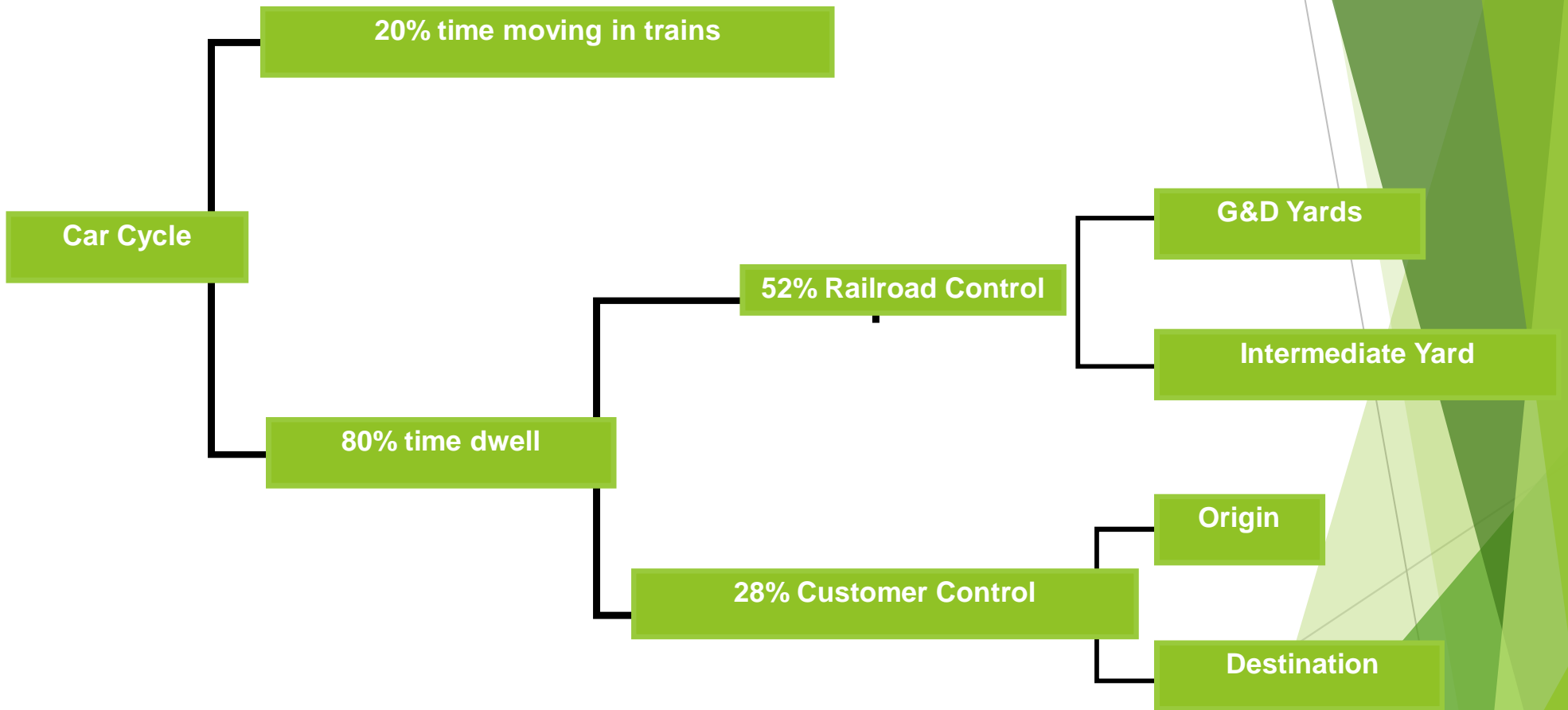
- ▶ Requires Certification by Regulatory Authority
- ▶ Ownership by Railway Operators
- ▶ Ownership by Shippers / Companies
- ▶ Lease Pool - available per day per unit
- ▶ Maintenance - 12 year bumper to bumper warranty
- ▶ Tariff to reflect provision of Traction
- ▶ American "Trackage Rights" - \$ 0.30 - 0.50 per rail car mile (locomotive, train and driver provided) - cost is for incremental track maintenance fee & dispatch
- ▶ American "Haulage Rights" - \$ 0.75 - 1.50 per rail car mile (only rail car provided)



## Comparative International Rail Freight Charges (US cents per tonne-kilometer)



# Rail Car Wagon - Life Cycle



# Steps to the Future

- ▶ Railway Law? - Copy Austrian or other EU Laws to allow Open Access, Private Operators, Liberalize Private Rolling Assets
- ▶ Spin-Off Passenger/Sub-Urban/Commuter Trains from Freight > Becomes "Public Services"
- ▶ Baseline Actual Costs to Index tariffs to Variable Costs split between Track Infrastructure and Private Operators
- ▶ Transition Manufacturer of Wagon and Traction Supply
- ▶ O/D train-load quantities for Express Shuttles
- ▶ Regulatory Oversight for Tariffs / Licenses / Safety
- ▶ Remove Political "Ownership"