RAIL RENAISSANCE
The Changing Dynamics of Freight Transportation

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Railroads are the Backbone of America’s Freight Transportation

- Nearly **140,000 MILES**
- Over **180,000 EMPLOYEES**
- Aggregate freight **REVENUE** of over $70 billion
- In the U.S., railroads account for approximately **40%** of all **FREIGHT** (more than any other transportation mode)
- **60%** of all **AUTOS** produced in America move by rail
- **30%** of all **U.S. GRAIN** moves by rail
- **70%** of all **COAL** is moved by rail which in turn produces nearly 40% of American electricity
- U.S. railroads move **34 million tons of WHEAT**, enough to provide **82 billion loaves of BREAD**

Source: American Association of Railroads (AAR) July 2014

* Measured in Ton Miles
Key Benefits of Rail Transportation

**FUEL EFFICIENCY**
On average, trains are more fuel efficient than trucks.

**HIGHWAY GRIDLOCK REDUCTION**
A typical freight train takes the equivalent of several hundred trucks off our highways.

**ENVIRONMENTAL FRIENDLINESS**
Freight railroads account for approximately 40% of the nation’s intercity freight volume but reduce greenhouse gas emissions by 75% compared to trucks.

**COST EFFICIENCY**
In general, shippers pay less for shipping via rail than for other forms of surface transportation.

Source: AAR April 2014
Here We Grow Again
Freight Levels Today Highest Since Before Recession

U.S. CARLOAD + INTERMODAL UNITS
AVG. WEEKLY ORIGINATIONS

Data are average weekly originations for each month, not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP.

Source: American Association of Railroads
With Growth Comes Challenges
U.S. RAIL TRAFFIC: FIRST HALF 2014 VS. FIRST HALF 2013

- Grain: +119,000
- Coal: +84,000
- Industrial sand: +41,000
- Food: +36,000
- Crude oil: +24,000
- Chemicals: +21,000
- Lumber & wood: +13,000
- Crushed stone: +11,000
- Autos & parts: +11,000
- Paper: +8,000
- Cement: +7,000
- Primary metal products: +6,000
- Waste & scrap: -3,000
- Metallic ores: -41,000

Intermodal containers & trailers: +372,000

Figures are originated carloads, except for lumber, paper, and autos, which are terminated carloads, and intermodal, which is originated containers and trailers.

Source: AAR Freight Commodity Statistics for carloads; AAR Weekly Railroad Traffic for intermodal.
What Are Railroads Doing to Solve the Problems?

- Process changes
- Improved information technology
- More people
- More locomotives and freight cars
- More physical plant

Source: American Association of Railroads
TOTAL CLASS I RAILROAD EMPLOYMENT

Source: STB, American Association of Railroads
RAILROAD SPENDING ON INFRASTRUCTURE AND EQUIPMENT* ($ BILLIONS)

- '05: $16.7
- '06: $19.3
- '07: $20.2
- '08: $21.5
- '09: $20.2
- '10: $20.7
- '11: $23.3
- '12: $25.5
- '13: $25.1
- '14p: $26.0

Higher Spending in Recent Years than Ever Before

Types of key projects:

- Main line, terminal and terminal through route upgrades
- Signal and control infrastructure
- Locomotive/freight car maintenance/servicing facilities
- Terminals and sidings
- Unit train servicing capabilities

Source: American Association of Railroads

p – AAR projection
*Capital spending + maintenance expenses.
Data are for Class I RRs.
Big Effort to Improve Chicago for Upcoming Winter

- Develop and test winter response plans earlier
- Trigger Chicago alerts automatically
- Improve routing protocols to use alternative gateways
- Deploy more weather resistant technology
- Investment in physical plant both through CREATE and individually
- More people

Source: American Association of Railroads
Adding more cars to this highway won’t help existing cars move faster. Same with railroads.

KEY GOAL: RESTORE VELOCITY

Source: American Association of Railroads
Changing Dynamics of Our Supply Chain
Peak-Period Congestion on the National Highway System: 2007

Notes: Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segments have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95. The volume/service flow ratio is estimated using the procedures outlined in the HPMS Field Manual, Appendix N.
Long-Term Demand for Freight Transportation Will Surge

BILLIONS OF TONS OF FREIGHT TRANSPORTED IN THE U.S.

<table>
<thead>
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<th>Year</th>
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<tr>
<td>2020p</td>
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<tr>
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<td>25.1</td>
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<tr>
<td>2040</td>
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The U.S. DOT expects total U.S. freight movements to rise from around 19.7 billion tons in 2012 to 28.5 billion tons in 2040.

Source: FHWA - Freight Analysis Framework, version 3.4
An Investment in Our Future
Since 1980, railroads have invested more than $5.75 billion, that's more than ... out of every revenue.

Source: American Association of Railroads
What we need:

• Freight mobility planning

• User-pays policy

• More private investment
What we need:

- Regulatory innovation
- Improved rulemaking
- Project permitting reform

Regulatory reform is a competitiveness issue
In Summary …

We are in the midst of a RAIL RENAISSANCE

- The U.S. supply chain needs an efficient freight rail system
- Growth is putting a strain on the U.S. highway system
- Rail is preparing to accommodate that growth through continued investment