

Understanding and Enhancing the Value of the Freight Economy in Minnesota

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Study Goals

- The purpose of this study is to focus the nation's attention on the economic role of freight system in the US.
- The focus of the study is on industry clusters in Minnesota and the relationship of these clusters to the freight rail system.
- The study has interwoven research and outreach elements.

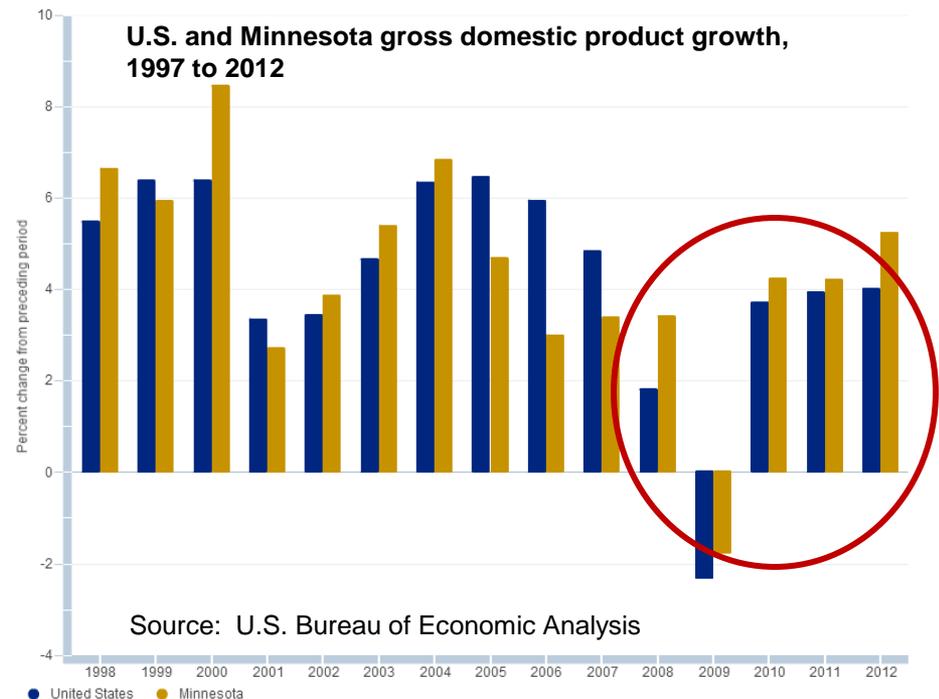
Study Methods

- **Economic and Related GIS Data Analysis**
 - Industry cluster, GSP shift-share, and GIS analysis
- **National and Regional Expert Interviews**
 - Class 1 and shortline railroads; federal, state and local policymakers; system users; economic development officials.
- **Report Reviews and Synthesis**
 - Various sources: NCFRP, SHRP, economic research, Minnesota state freight and rail plans.
- **Outreach and Feedback**
 - Interim/ Final Presentations, TPEC Advisory Committee.

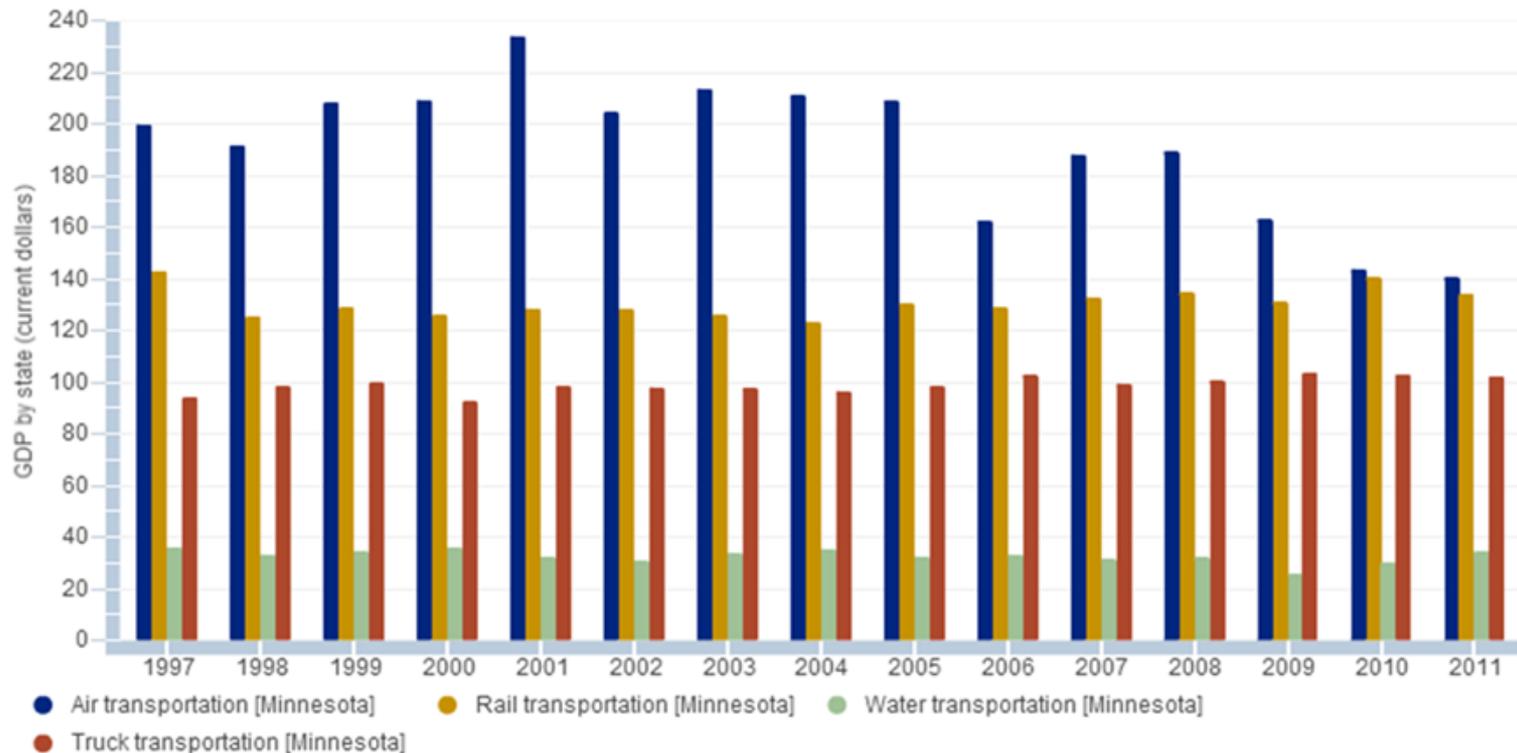
Economic Competitiveness and Freight Rail

Minnesota's Gross State Product (GSP) growth has been stronger than the national average each year during the economic recovery in several key industries dependent on rail:

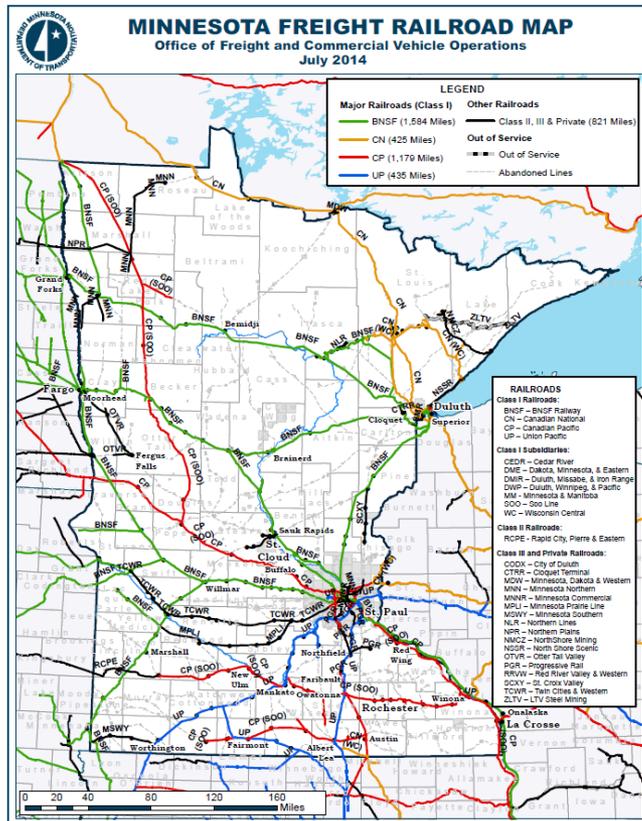
- Mining grew 16.7% a year in MN compared to 2.3% for U.S. from 2007 to 2012
- Agriculture grew 9.4% a year in MN compared to 3.1% for U.S. from 2007 to 2012
- Manufacturing grew 4.3% a year in MN compared to 1.9% for U.S. from 2007 to 2012



Minnesota's GDP share specialization in rail transportation is nearly 40% higher than the national average



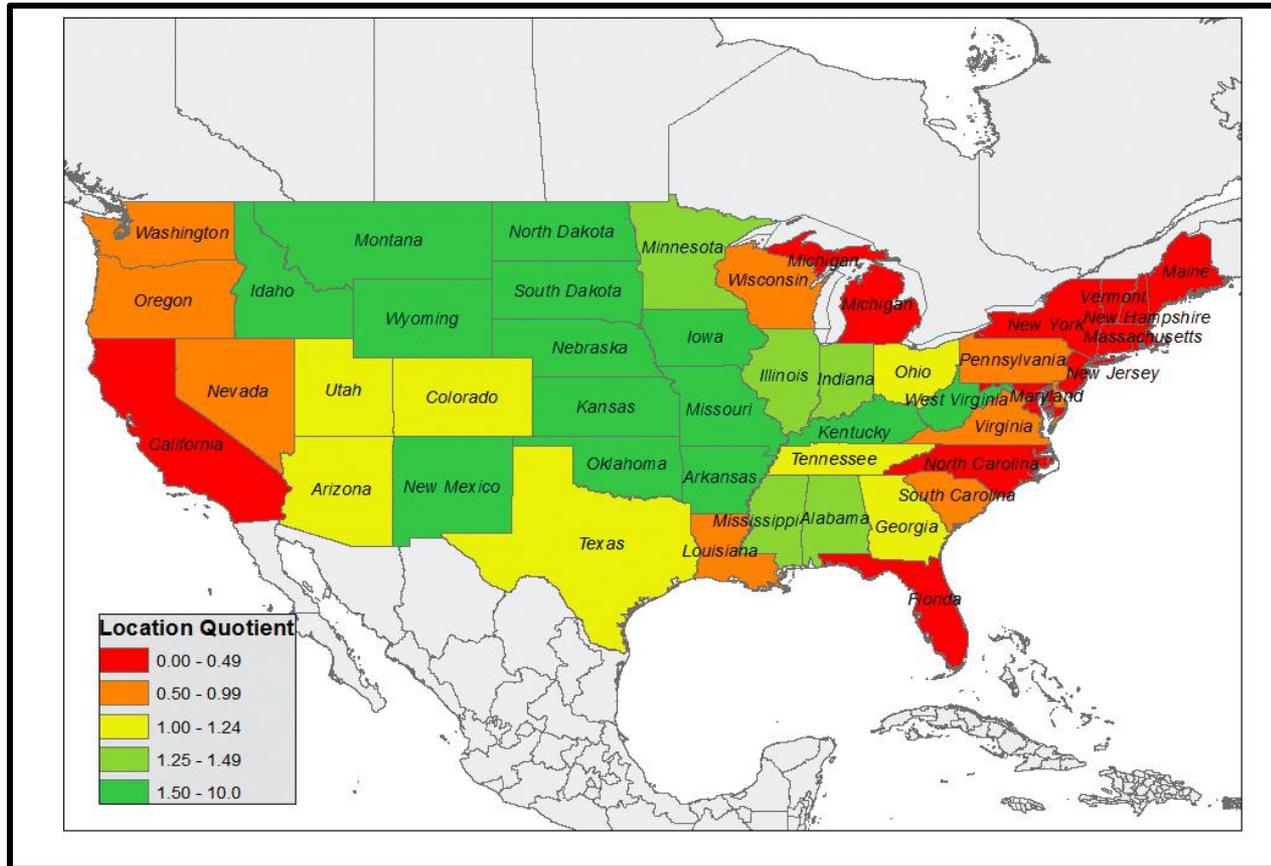
Freight Rail Network Serves Key Industries in Minnesota



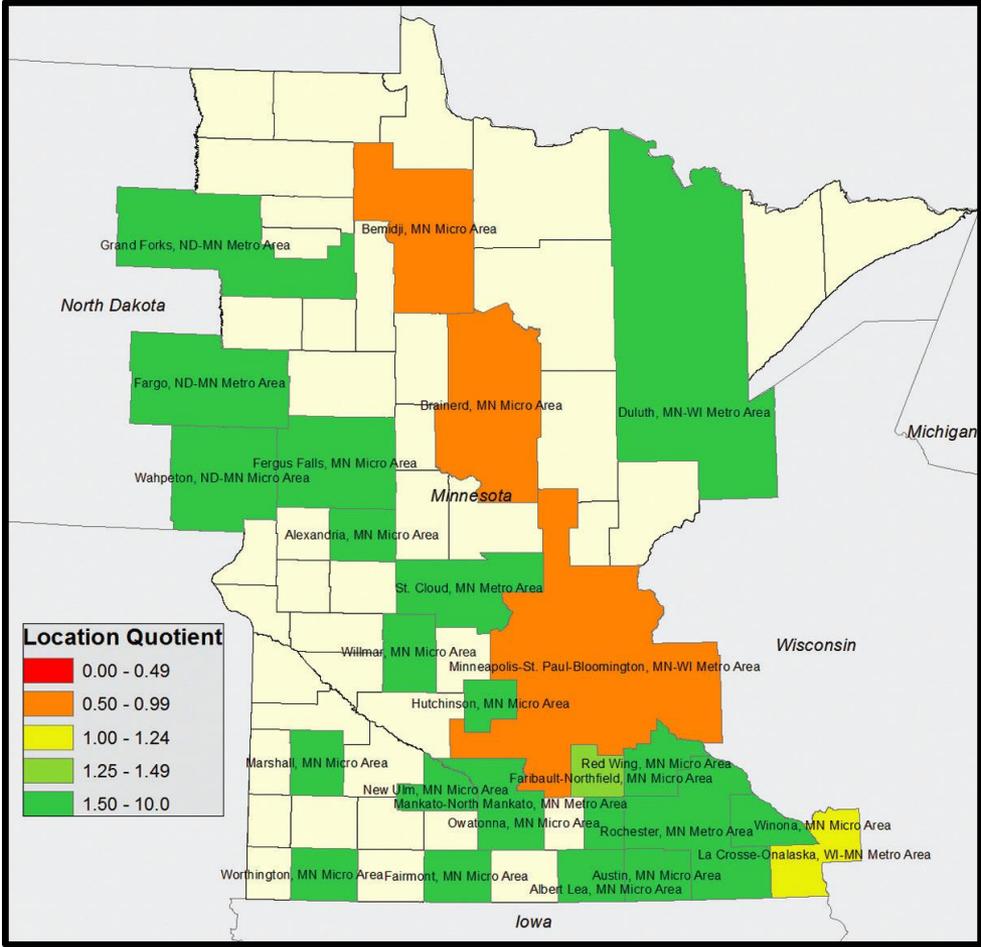
- By rail, Minnesota is first in the nation in the movement of iron ore, third in the movement of farm products, and fourth in the movement of food products.
- Minnesota's most abundant natural resources—fertile farmland, iron ore deposits, as well as some of its industries—value-added food processing, heavy machinery, and more—rely on freight rail to keep their supply chains efficient and effective.
- Minnesota is seventh in the nation in exports.

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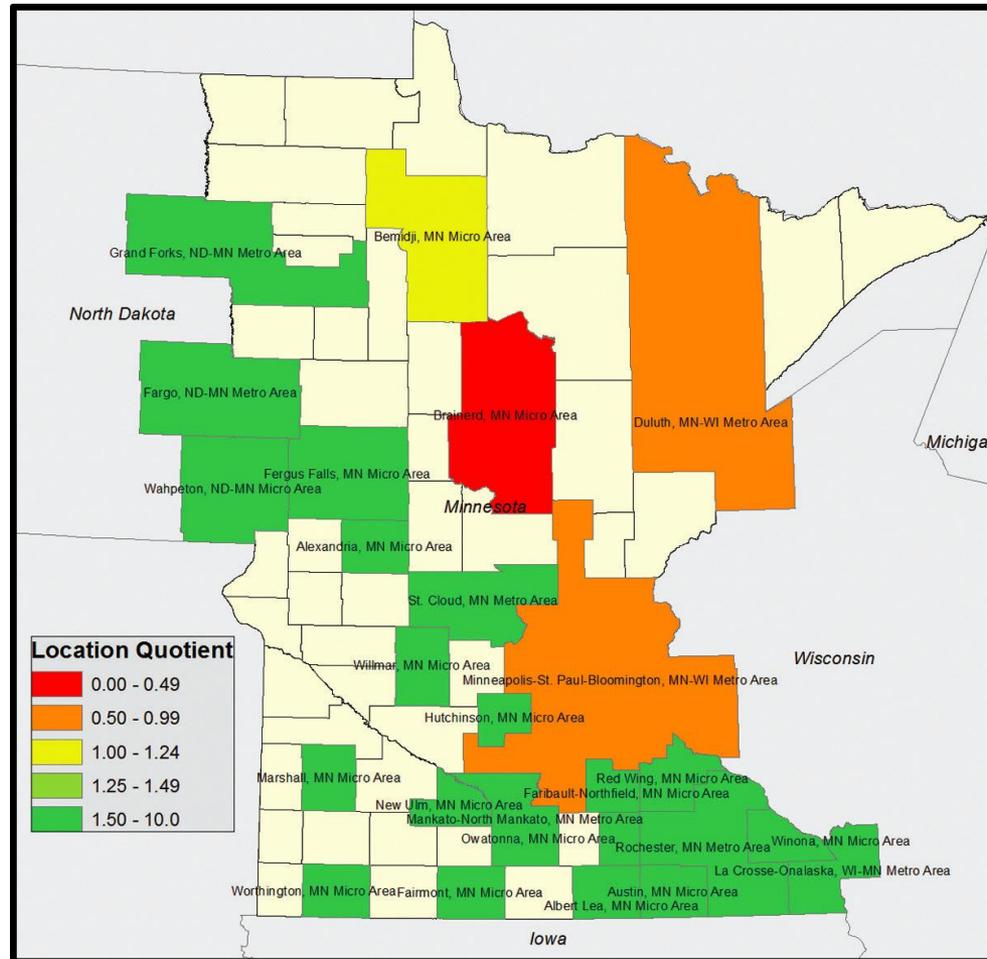
Midwestern states much more rail dependent than the coasts



Agricultural Products

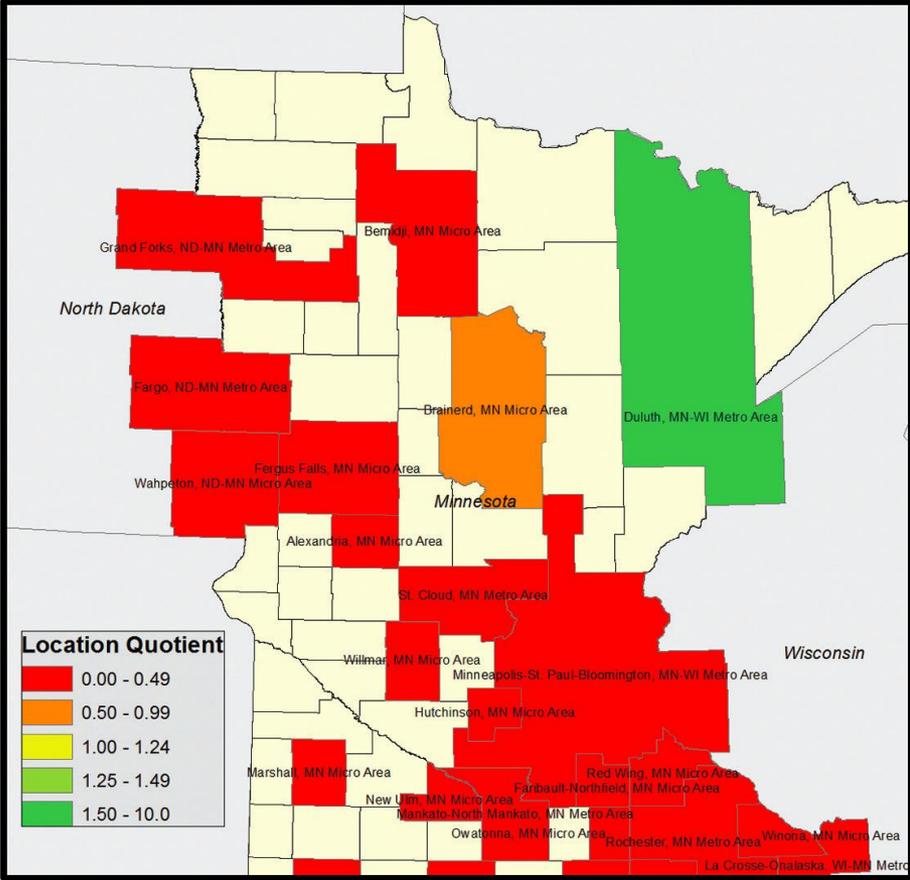


Processed Food

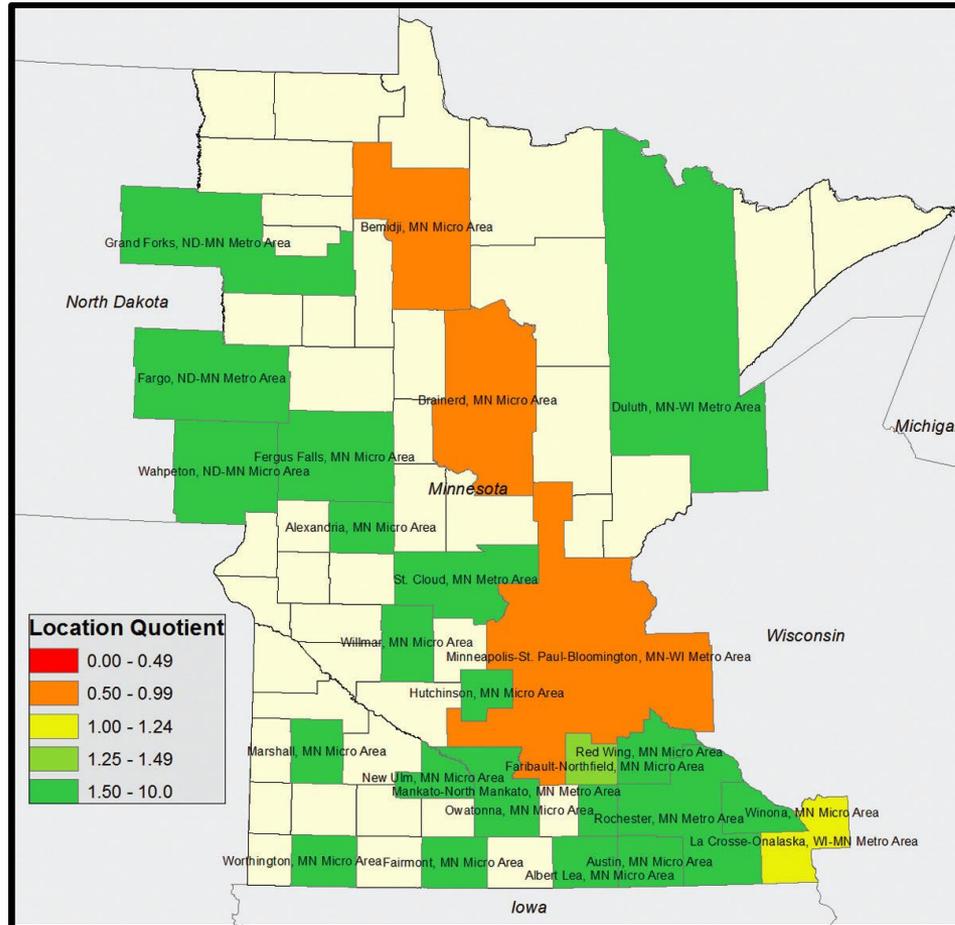


From Map to GIS/StoryMap....

Metal Mining



Heavy Machinery



From Maps to ...

Minnesota Industry Cluster Story Maps



Metal Mining Industry Cluster

Iron ore has been one of Minnesota's most abundant natural resources for many years...

[Click to open story map](#)



Agriculture Industry Cluster

Agricultural products have been a staple of the Minnesota economy...

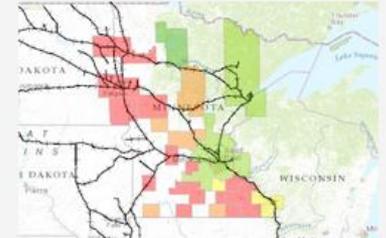
[Click to open story map](#)



Food Processing Industry Cluster

The food processing industry of Minnesota is one of the most competitive industries...

[Click to open story map](#)



Interactive Atlas

Visit our interactive map, loaded with data about freight rail's impact... (high bandwidth required)

[Click to open interactive atlas](#)

From Story Maps to Atlas

The screenshot displays an interactive story map interface. The main map area shows a map of North America (USA, Canada, Mexico) with numerous purple lines representing shipping routes. The routes are dense in the eastern United States and spread out across the continent. The map includes labels for 'CANADA', 'UNITED STATES', 'MEXICO', 'Pacific Ocean', 'Atlantic Ocean', 'Rocky Mountains', 'Gulf of Mexico', 'Hudson Bay', and 'Labrador Sea'. In the top left corner, there are navigation controls: a plus sign for zoom in, a house icon for home, and a minus sign for zoom out. In the bottom left corner, there are social media sharing icons for Twitter, Facebook, and YouTube. A central black navigation bar contains the title 'Turkey Products From US Port To Final Destination' with a question mark icon, left and right arrow icons, and icons for print and search. To the right of the navigation bar, there are logos for 'UNIVERSITY OF MINNESOTA Driven to Discover', 'Data Providers; amyne', 'STRATEGY FOR SUSTAINABILITY', and 'POWERED BY esri'. Below the map, there is a yellow text link: 'Click here to get a full screen story map.'

Finding 1: Economic Linkages

- An efficient freight rail system is vital to economic competitiveness. Freight rail provides a key, privately funded, transportation link to many of Minnesota's most significant industry clusters located in differing regions of the state, including agriculture, iron ore, heavy machinery, and processed food.
- As Minnesota's economy continues to rebound, new pressures exist for ensuring the efficient and safe functioning of freight rail transportation.

Finding 2: Shortlines

- The partnership between Class 1 and shortline railroads is essential for the economic growth of Greater Minnesota. Short-line railroads serve as important feeders to Class 1 railroads.
- Because many shortlines operate with older, under-maintained tracks, investment from the state or federal government may be important to prevent abandonment of some of these economic lifelines.

Finding 3: Public-Private

- Because rail infrastructure is generally the business of the private sector, the nature of the public–private partnership is unique as compared to other infrastructure elements (e.g., highways)
- In 2013 the rail industry invested over \$25 billion in maintenance and capacity improvements, with BNSF investing \$95 million in Minnesota that year.
- Even with freight rail’s strong private sector orientation, success public-private partnerships have been pursued where needed, such as the CREATE program in Chicago.

Finding 4: Intermodalism

- As the economy improves, all modes of transportation will be required to move goods efficiently, thus establishing facilities for the easy transferring of freight from truck to train or train to truck, well- maintained tracks, and highway systems that connect with trains and/or ships.
- And in the logistics arena, Eden Prairie-based C.H. Robinson, for example, is an industry leader with 2013 revenues of \$12.8 billion, 45,000 customers, and access to more than 63,000 transportation providers worldwide.
- It is essential to find ways to fund intermodal improvements through private investment, the development of public–private partnerships, and transportation funding for related public infrastructure.

Finding 5: Public Dialogue

- The freight transportation community needs to maintain an ongoing dialogue with the public on freight rail. In comparison to highway or transit programs, freight rail is less fully understood by the public. “
- A mutual ongoing dialogue on freight rail economic value, performance, and issues will provide an important foundation for meaningful participation on freight rail topics and choices for economic growth.

The Freight Economy Project

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Conclusions

- Industry clusters are an important means to analyze how economic growth will impact the efficiency of freight rail and the development of other intermodal transportation services. This type of spatial analysis will help us identify opportunities to provide the kinds of connections and transportation infrastructure to help the Minnesota economy grow.
- Industry clusters produce much of this “freight” that rail serves. Consequently, in addition to promoting and enhancing intermodal connections, policymakers need to monitor and analyze how the state’s industry clusters are developing and the implications of this growth on freight rail and other intermodal transportation services.

And The Final Word.

- *"Transporting our goods from the point of production to the point of consumption is the great challenge of our country. If we do not address it, we will slip back into decline."*

--Former Congressman James L. Oberstar (1934-2014), September 20, 2013



Thank You!

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