Minnesota Comprehensive Statewide Freight and Passenger Rail Plan

Freight Technical Advisory Committee

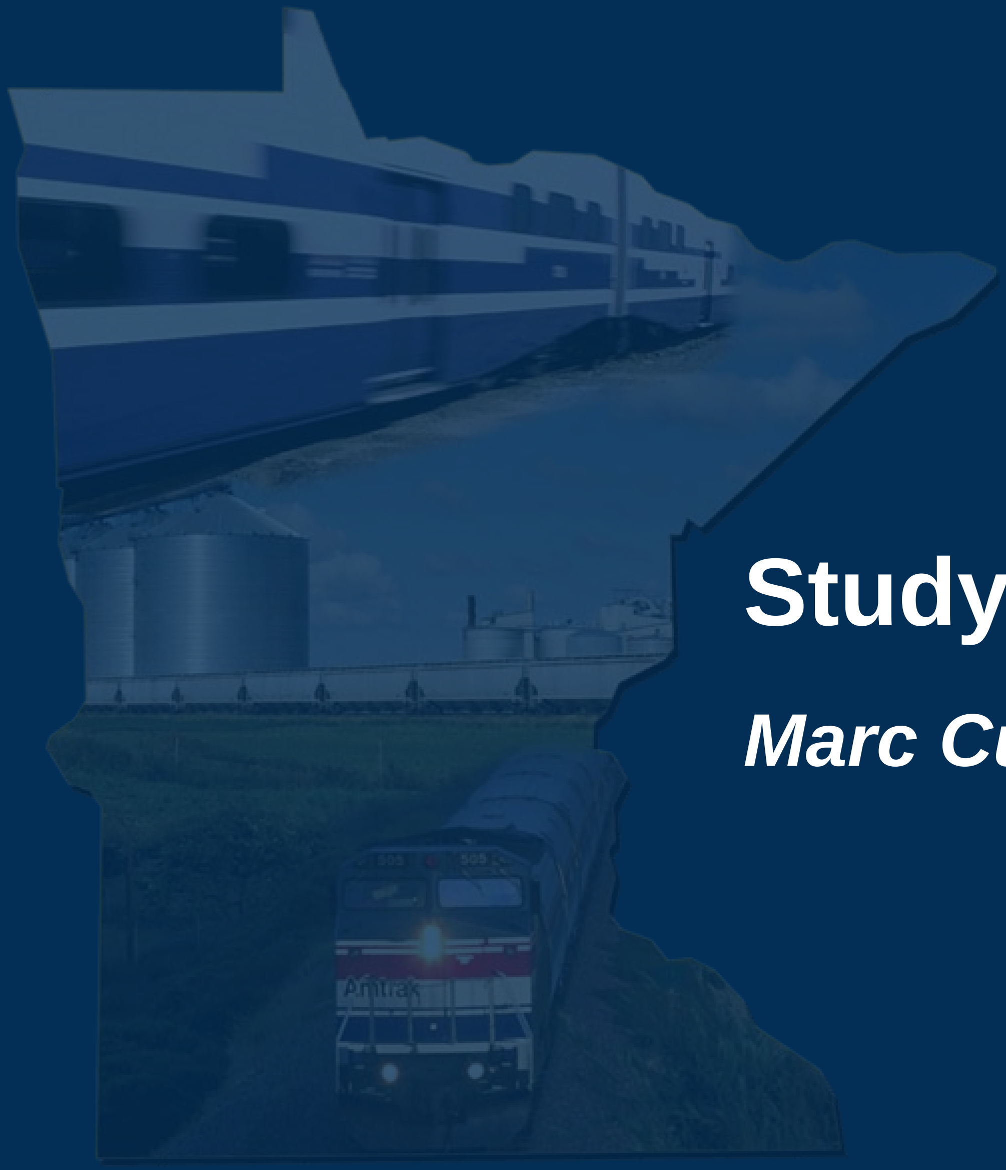
August 13, 2009

presented by

Cambridge Systematics, Inc.
Kimley-Horn and Associates, Inc.
TKDA, Inc.

Agenda

- Introductions and Opening Comments
  - Bill Gardner – Co-Project Manager, MnDOT
- Presentation on State Rail Plan, Cambridge Systematics, Inc.
  - Study Overview, Marc Cutler
  - Outreach Update, Randy Halvorson
  - Freight Rail Demand, Andreas Aeppli
  - Passenger/Freight Integration, Paul Danielson
  - Performance Measures, Erika Witzke
  - Next Steps, Marc Cutler
- Discussion – Randy Halvorson



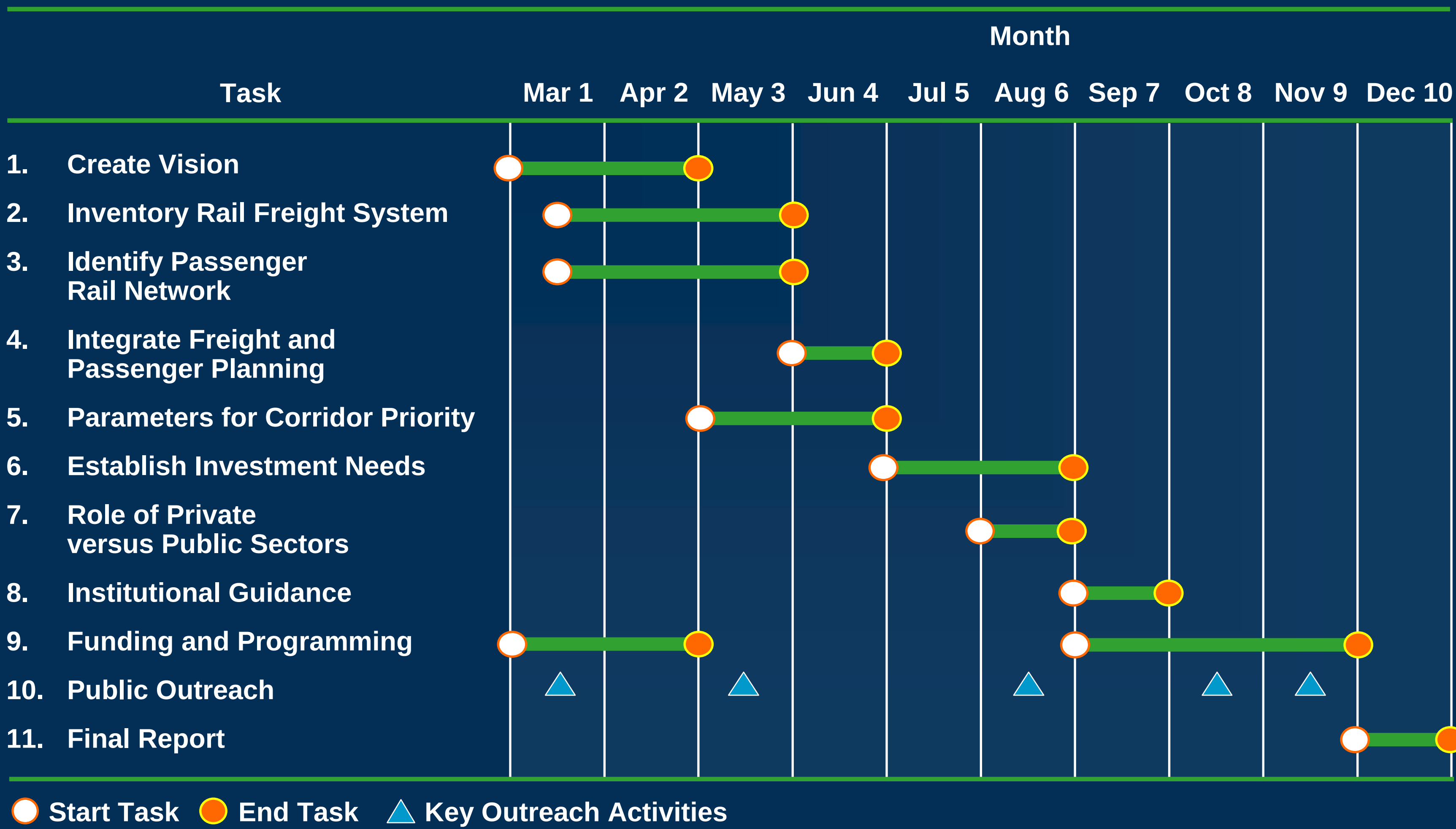
Study Overview

Marc Cutler

Project Phases

Project Phase	Description	Task
Phase I	Rail Vision	Task 1
Phase II	Inventory Freight System and Passenger Rail Plans	Tasks 2 and 3
Phase III	Integration of passenger and freight planning, and development of performance criteria	Tasks 4 and 5
Phase IV	Plan Development – Needs, Institutional Arrangements, Programs, Financing	Tasks 6-9
Continuous Public Outreach		Task 10
Final Report		Task 11

Schedule


Month
Task
Mar 1
Apr 2
May 3
Jun 4
Jul 5
Aug 6
Sep 7
Oct 8
Nov 9
Dec 10
1. Create Vision
2. Inventory Rail Freight System
3. Identify Passenger Rail Network
4. Integrate Freight and Passenger Planning
5. Parameters for Corridor Priority
6. Establish Investment Needs
7. Role of Private versus Public Sectors
8. Institutional Guidance
9. Funding and Programming
10. Public Outreach
11. Final Report
Start Task
End Task
Key Outreach Activities

Public Outreach

Randy Halvorson, Facilitator

Outreach Activities Since Open Houses and Last PAC/TAC Meetings

- Minnesota HSR Commission – June, July, August
- Joint Meeting – St. Paul, June 26
  - Fresh Energy
  - Housing Preservation Project
  - Transit for Livable Communities
  - Growth and Justice
  - Sierra Club
  - 1,000 Friends of Minnesota
- Minnesota Regional and Shortline Railroads Annual Conference – Grand Rapids, July 12-14
- United Transportation Union (UTU) – St. Paul, July 15
- Twin Cities and Western RR – Glencoe, July 15
- Railroad shippers – West Central MN, August
- Individual stakeholder meetings

Upcoming Meeting Dates

- PAC meeting
  - November 13
- Freight and passenger TAC meetings
  - November 12
- Open houses – second round
  - October 5-15

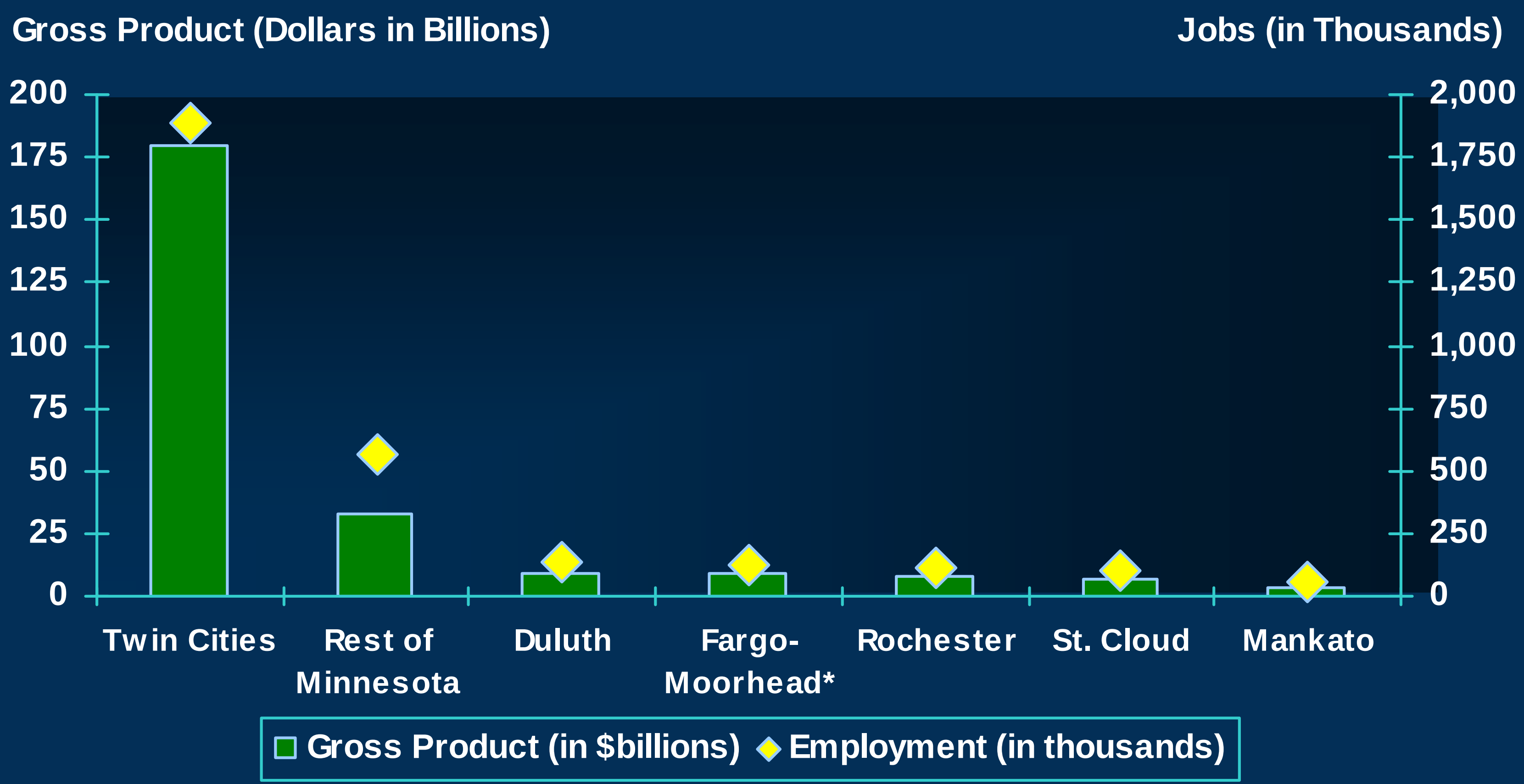
Freight Rail Demand

Andreas Aeppli

Freight Rail Demand

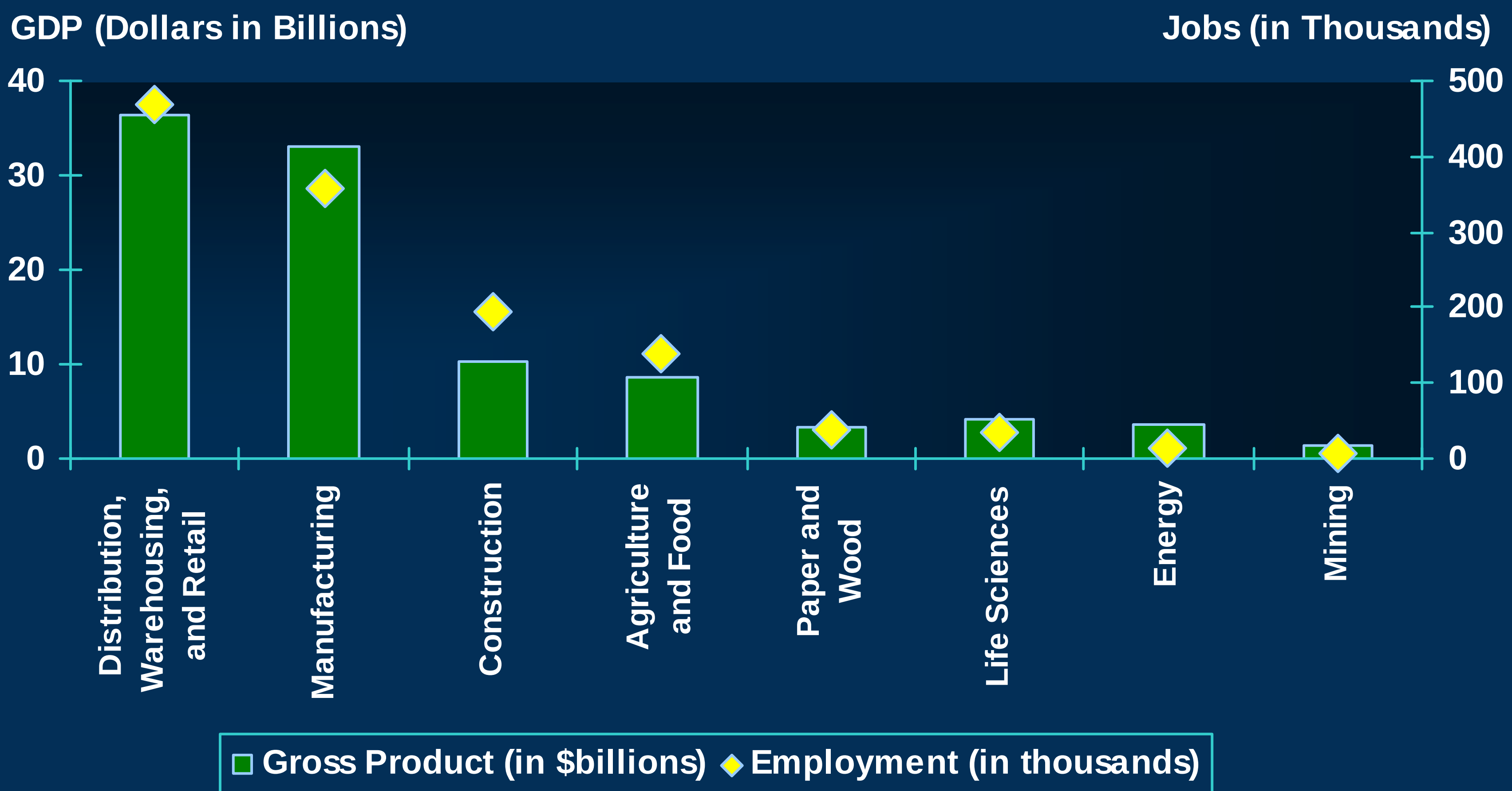
- What drives demand for freight – Minnesota’s economic structure and future industry prospects
- Minnesota’s multimodal freight system
- Future trends

Economic Size of Leading Minnesota Metros
Jobs and Gross Product



Source: Bureau of Economic Analysis; *Moorhead component of Fargo-Moorhead included in "Rest of Minnesota".

Key Minnesota Industries
Jobs and Contribution to Gross State Product



Sources: Bureau of Economic Analysis and Bureau of Labor Statistics.

Key Minnesota Industries
Long-term Trends

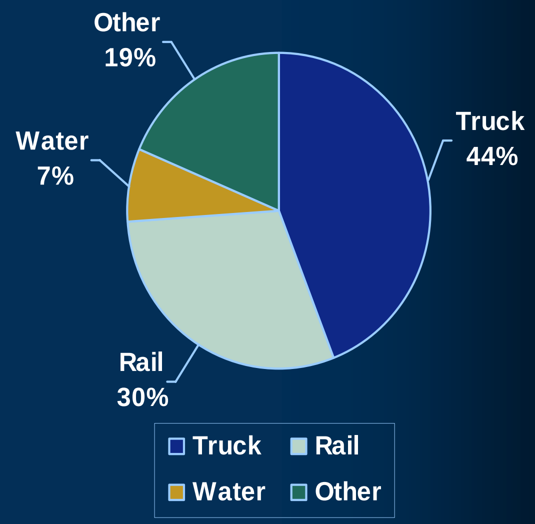
Industry	Outlook	Explanation
Distribution, Warehousing, Retail	→	State remains excellent location for North-Central logistics; Retail to recover with economy
Manufacturing	→	Output steady as jobs decline; technically-advanced players will compete successfully
Construction	→	Industry will recover with economy, but not to 2004-2006 levels
Agriculture and Food	→	E15 decisions to affect corn production; soybeans stable; uncertainties for dairy
Paper and Wood	→	Expansions at existing paper facilities; Exports balancing low domestic demand
Life Sciences	↑	Recognized world leader in medical equipment and advanced healthcare
Energy	→	Population and jobs to increase energy demand; fuel types and origins may change
Mining	→	Growing interest in Iron Range; expanding to steel; new markets for taconite tailings

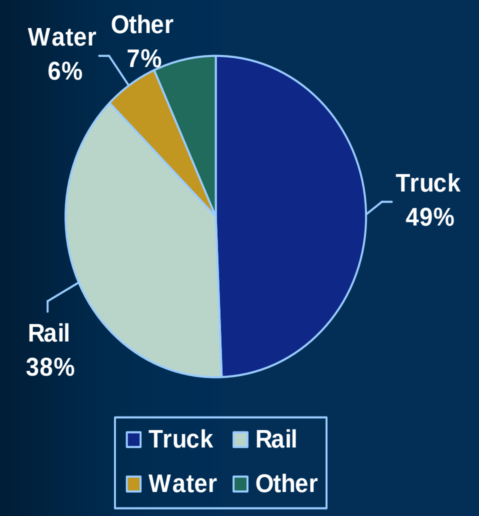
U.S. and Minnesota Modal Usage

Overall U.S.

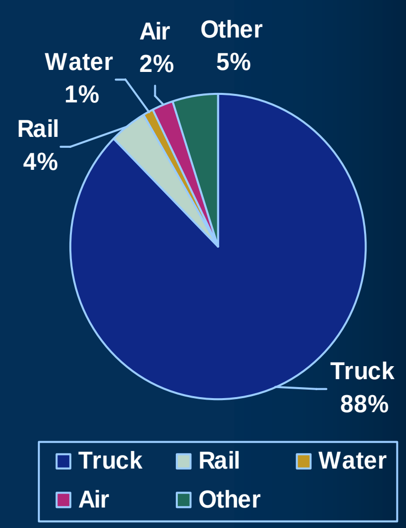
Minnesota

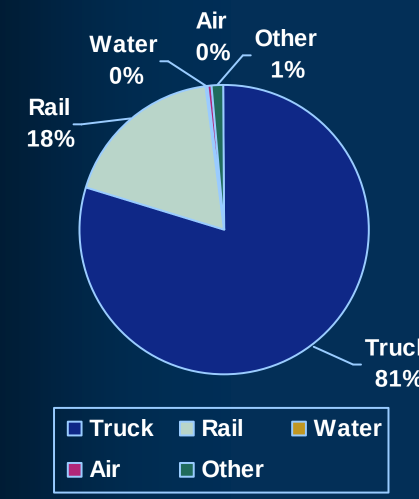
Tonnage





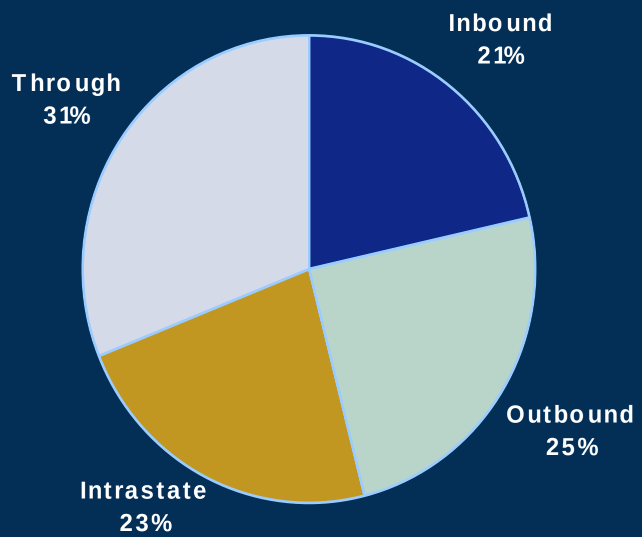
Value



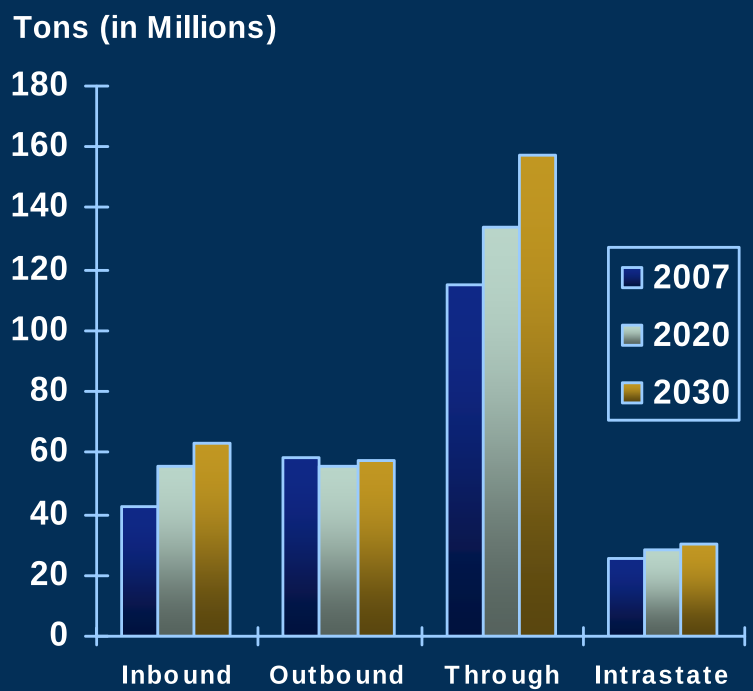


Traffic Characteristics Vary Greatly Between Rail and Other Modes

All Modes – 2007

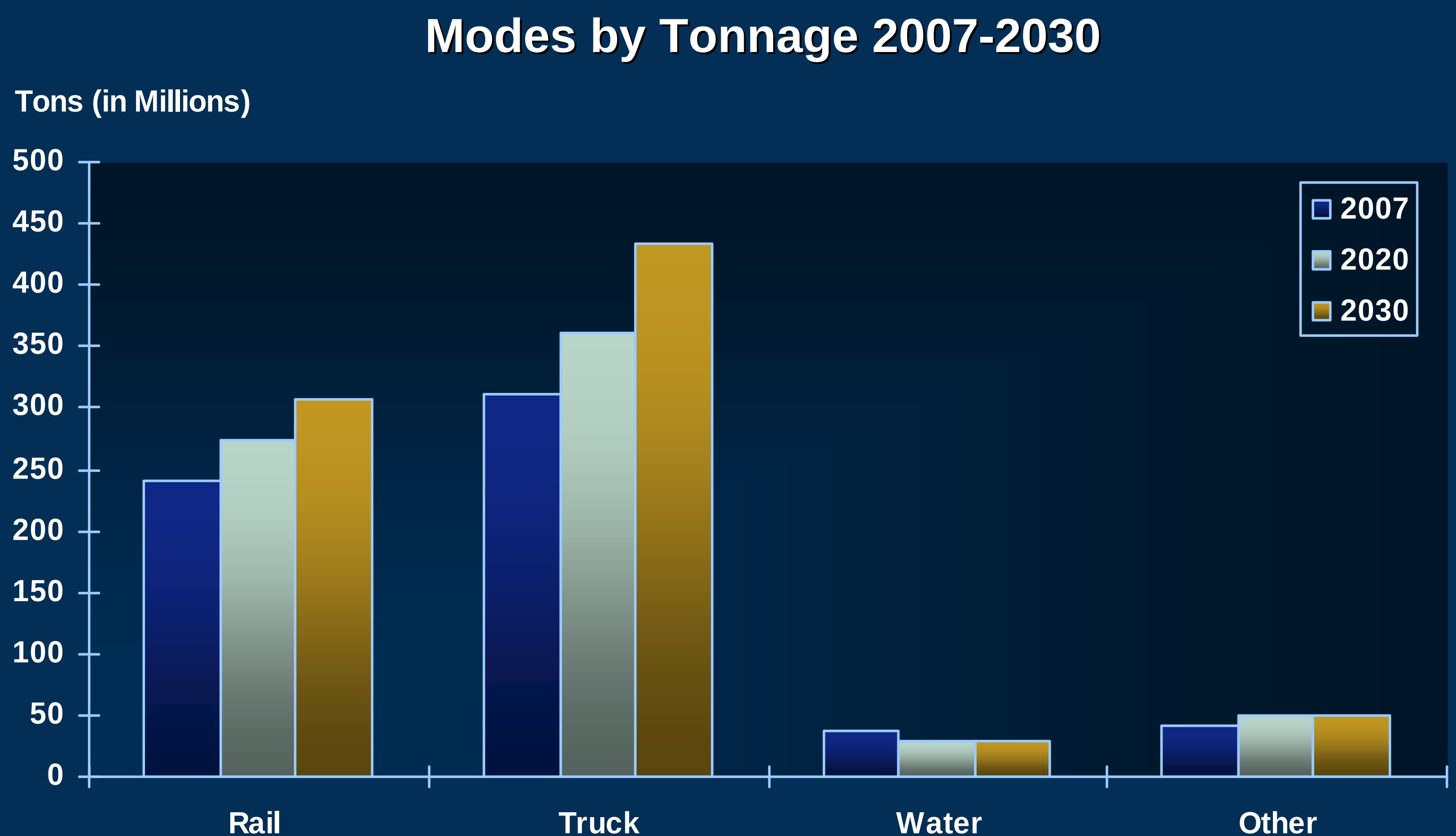


Rail



- **10% of rail versus almost 50% of truck tonnage moves intrastate**
- **Only 13% of all truck tonnage moves through the state**

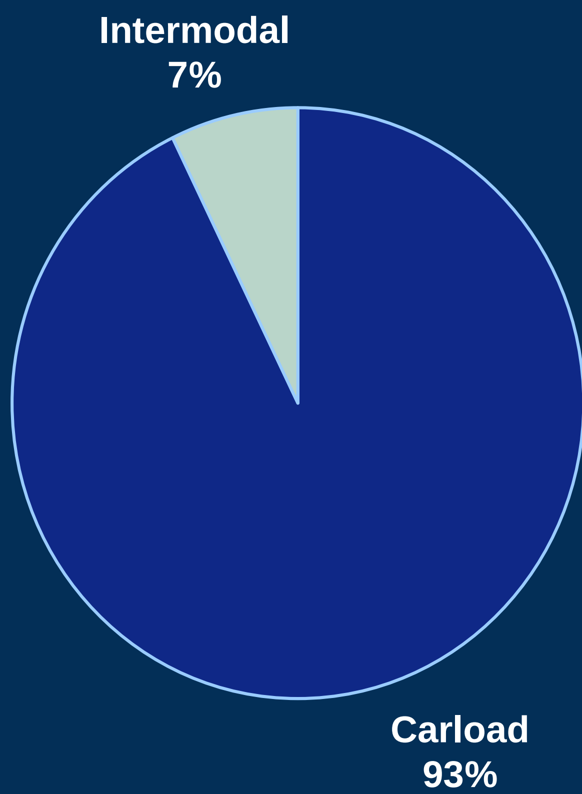
Trucking Will Continue to Dominate



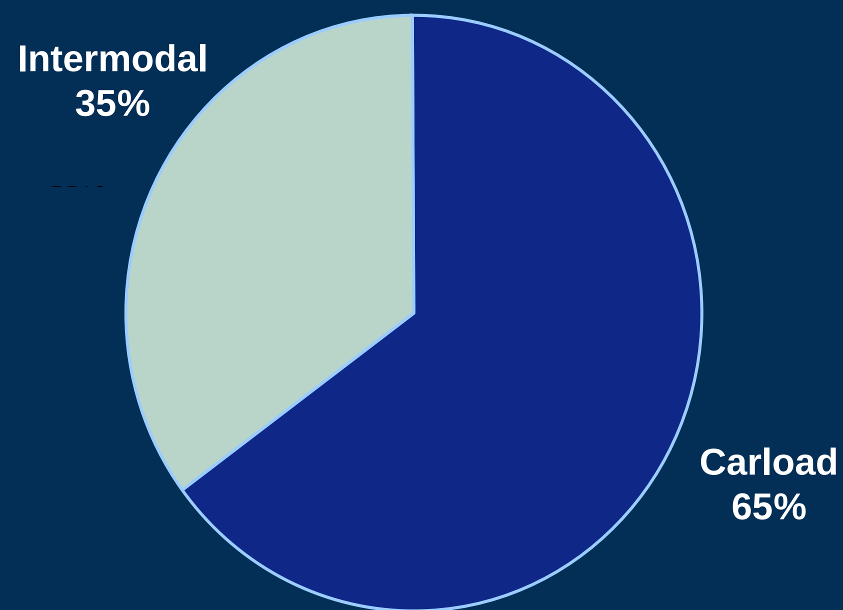
Source: IHS-GI Transearch 2007.

Intermodal Units Constituted 1/3 of Rail Traffic in 2007

Split by Tonnage



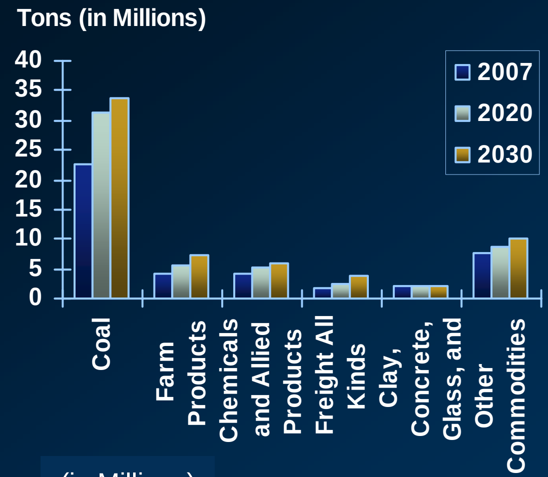
Split by Units



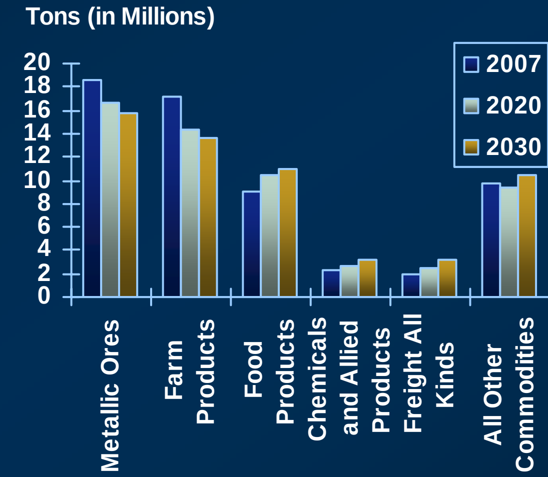
Source: IHS-GI Transearch 2007.

Top Rail Commodities by Tons

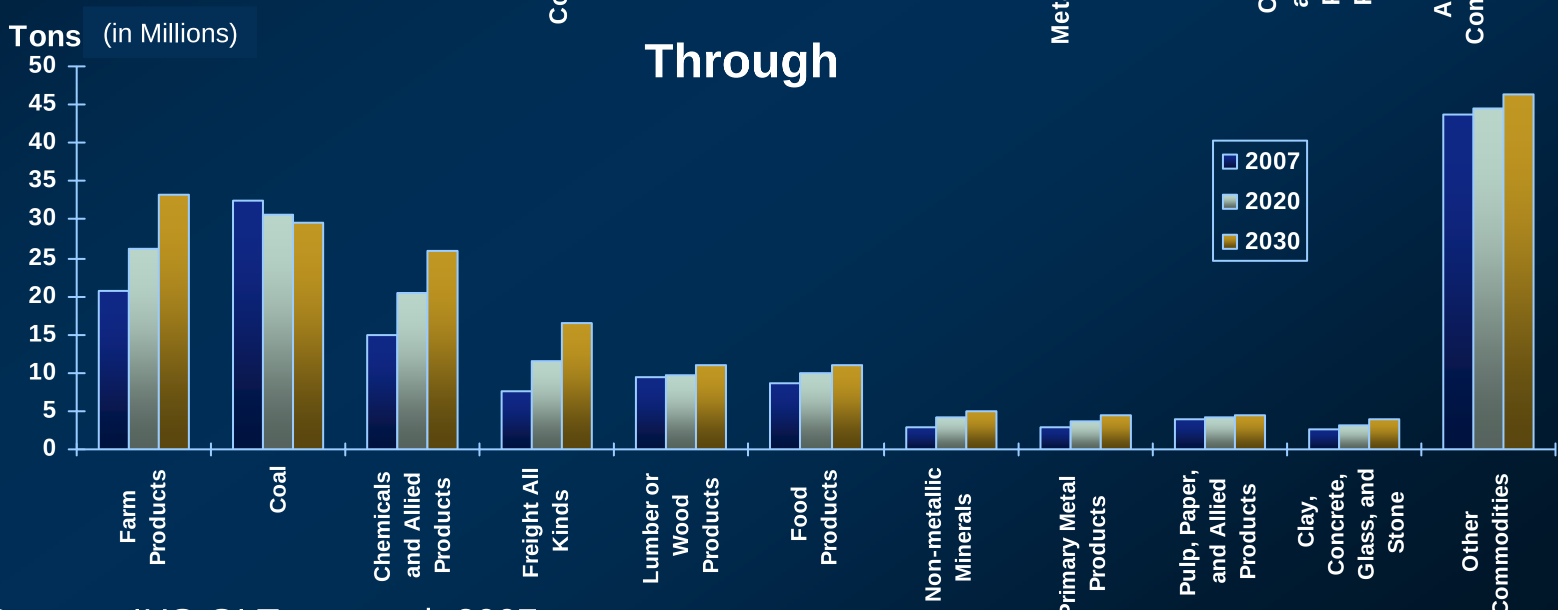
Inbound



Outbound



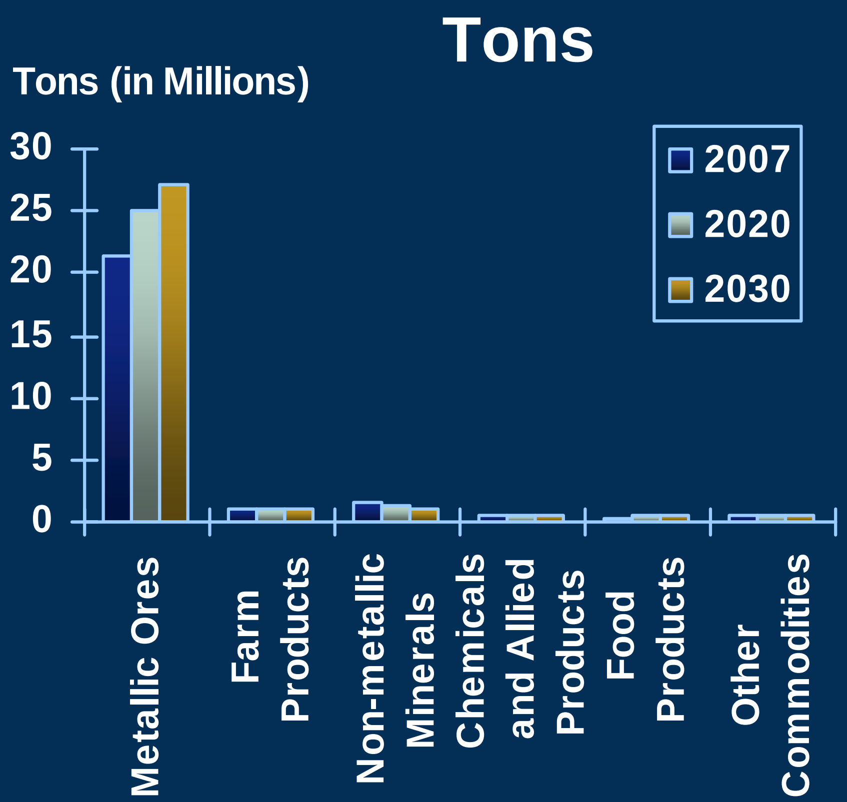
Through

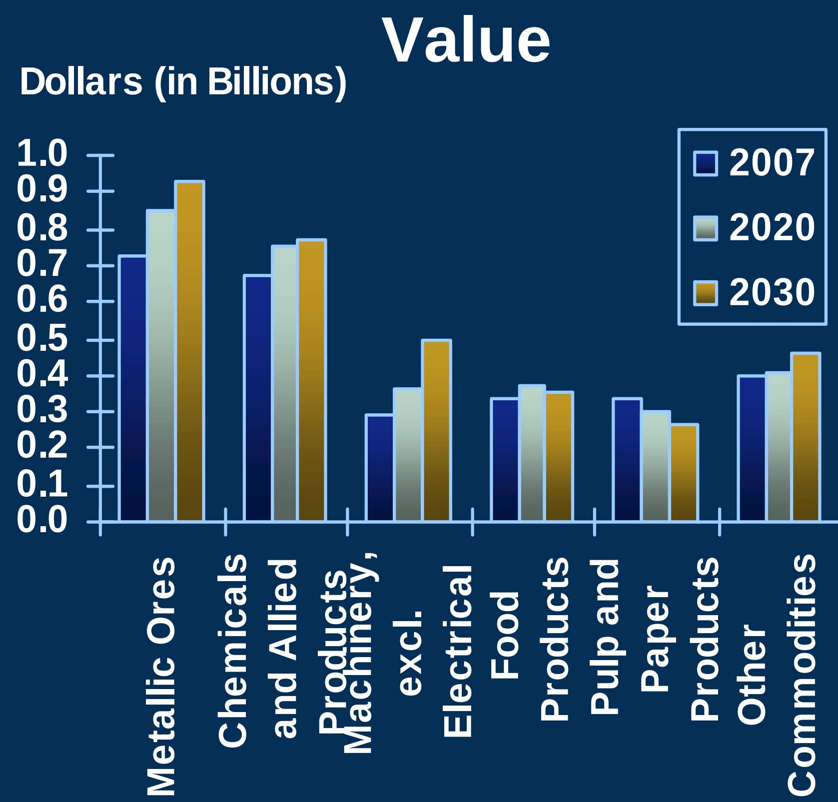


Source: IHS-GI Transearch 2007.

Intra-Minnesota Rail Traffic

- Tons dominated by ores, commodities diverse by value

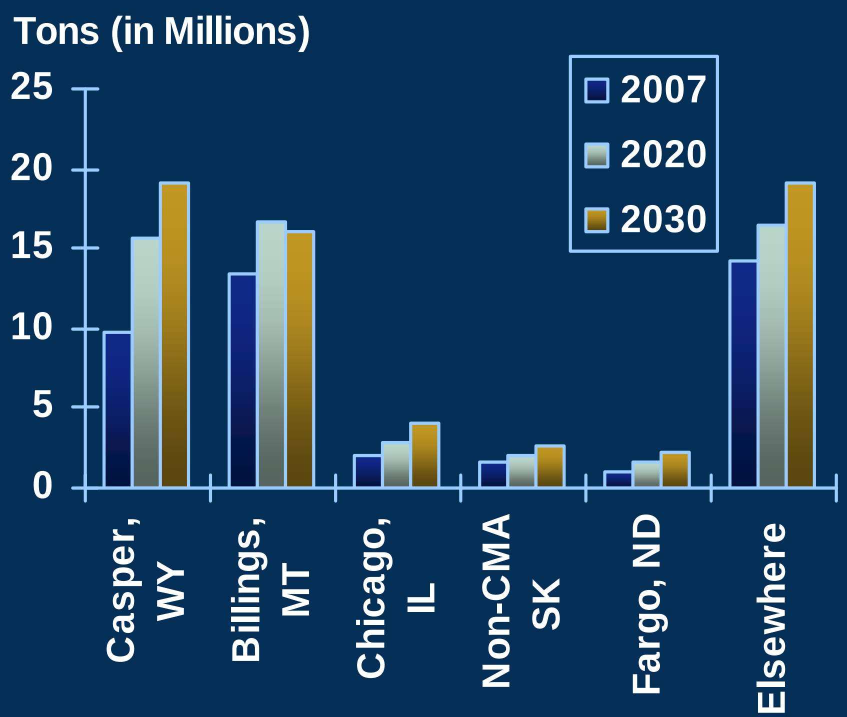




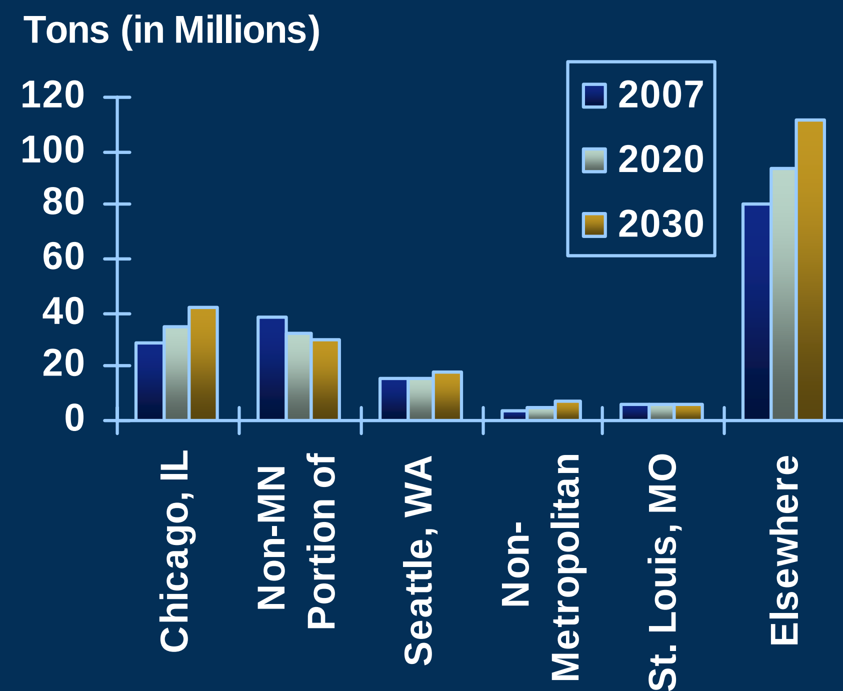
Source: IHS-GI Transearch 2007.

Rail Trading Partners by Tonnage

Top BEA Origins

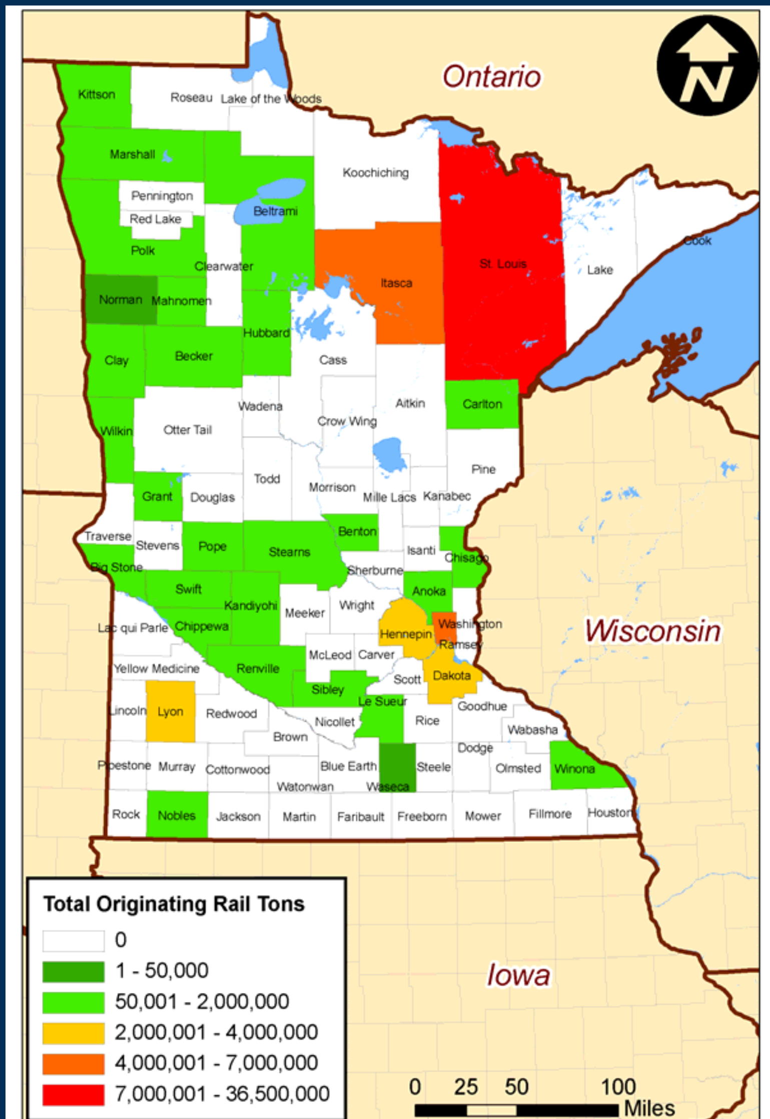


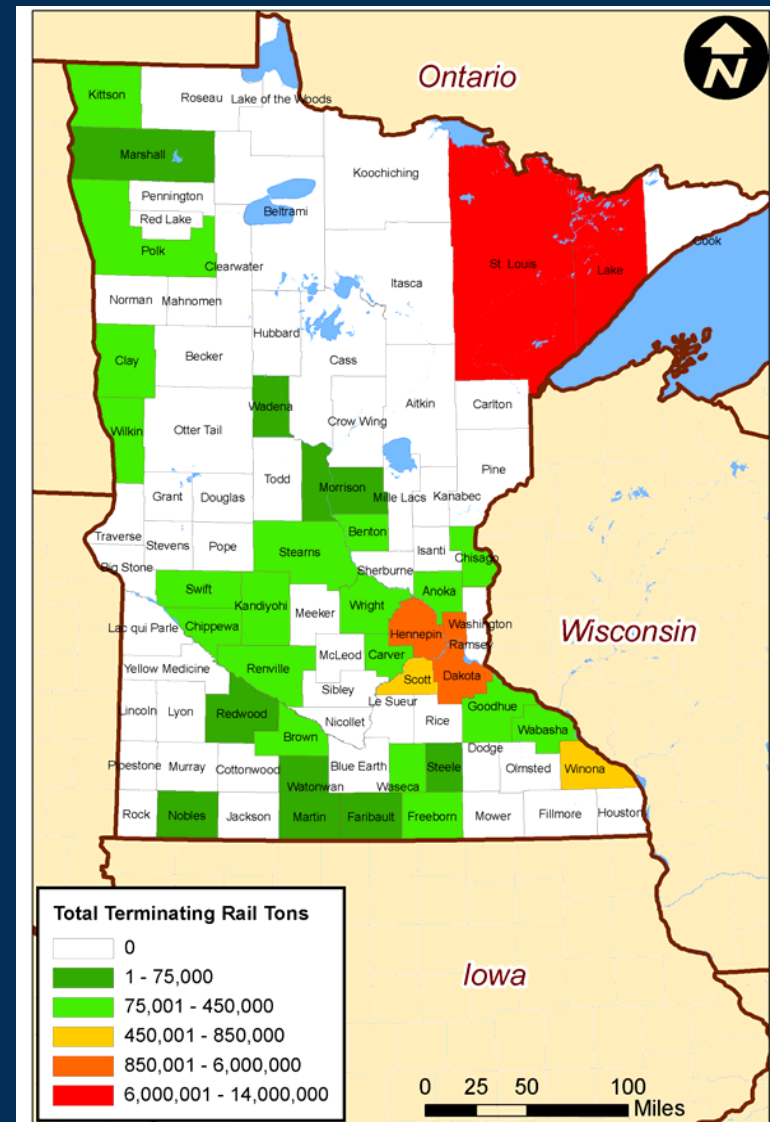
Top BEA Destinations



Source: IHS-GI Transearch 2007.

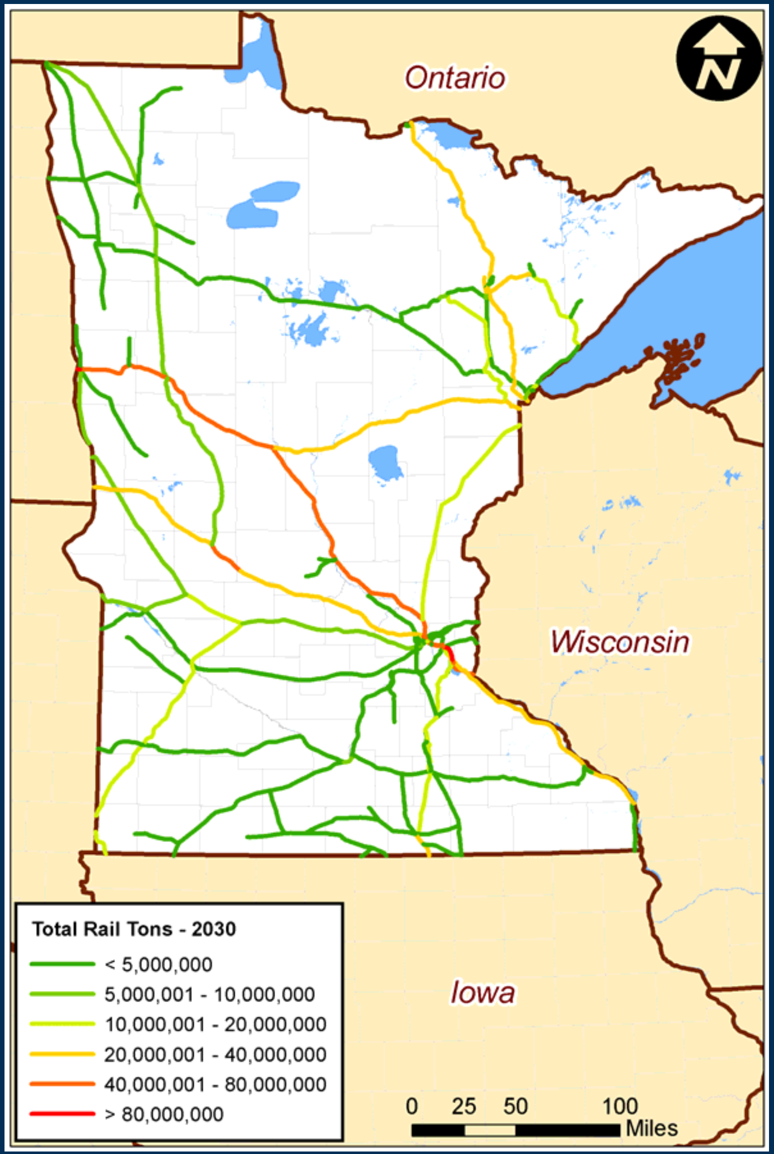
Rail Traffic Originations and Terminations





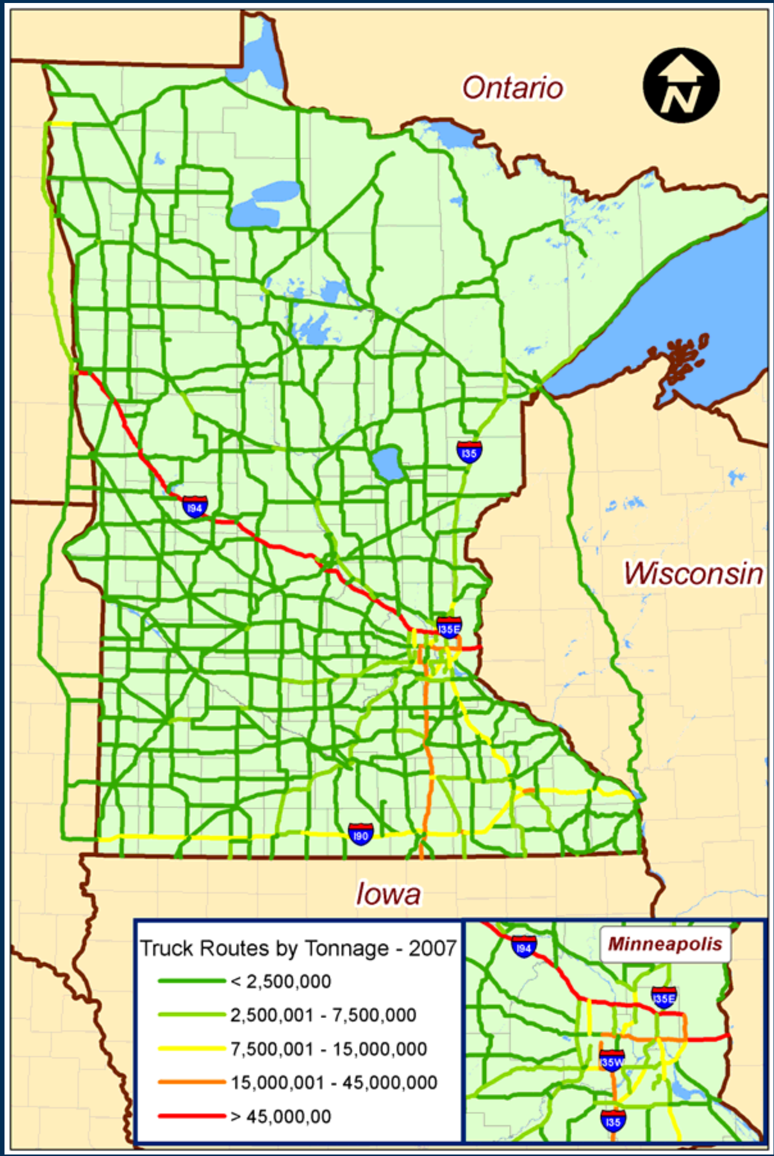
Source: STB Waybill

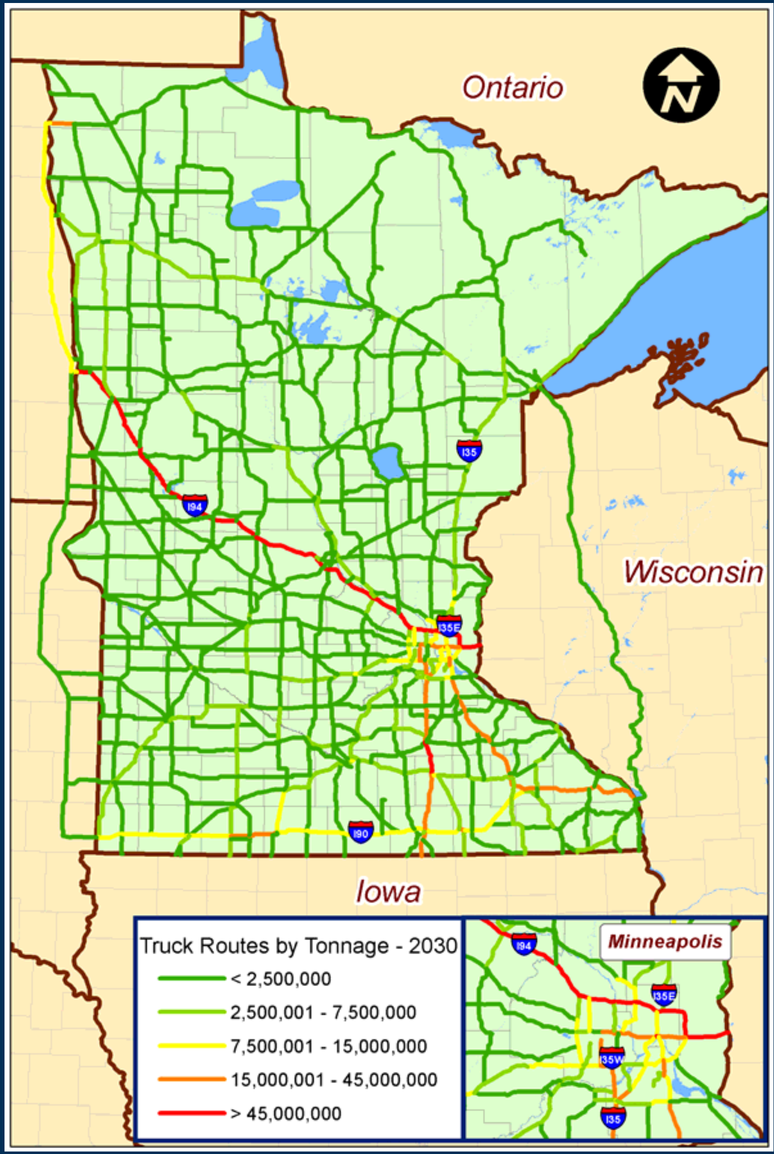
Future Growth in Tonnage on Minnesota's Rail Network – 2007 and 2030



Source: IHS-GI Transearch 2007.

Future Growth in Tonnage on Minnesota's Highway Network – 2007 and 2030





Source: IHS-GI Transearch 2007.

Smaller Railroads are Important to Minnesota

Traffic Type	Non-Class I Carloads (2007)	All Railroads	% of Total Carloads
Inbound	17,615	412,594	4.3%
Outbound	46,724	567,736	8.2%
Through	38,601	1,083,600	3.6%
Intrastate	7,266	316,727	2.3%

- Smaller railroads handled 4.6% of all traffic, 5.5% of traffic that has a Minnesota origin or destination.

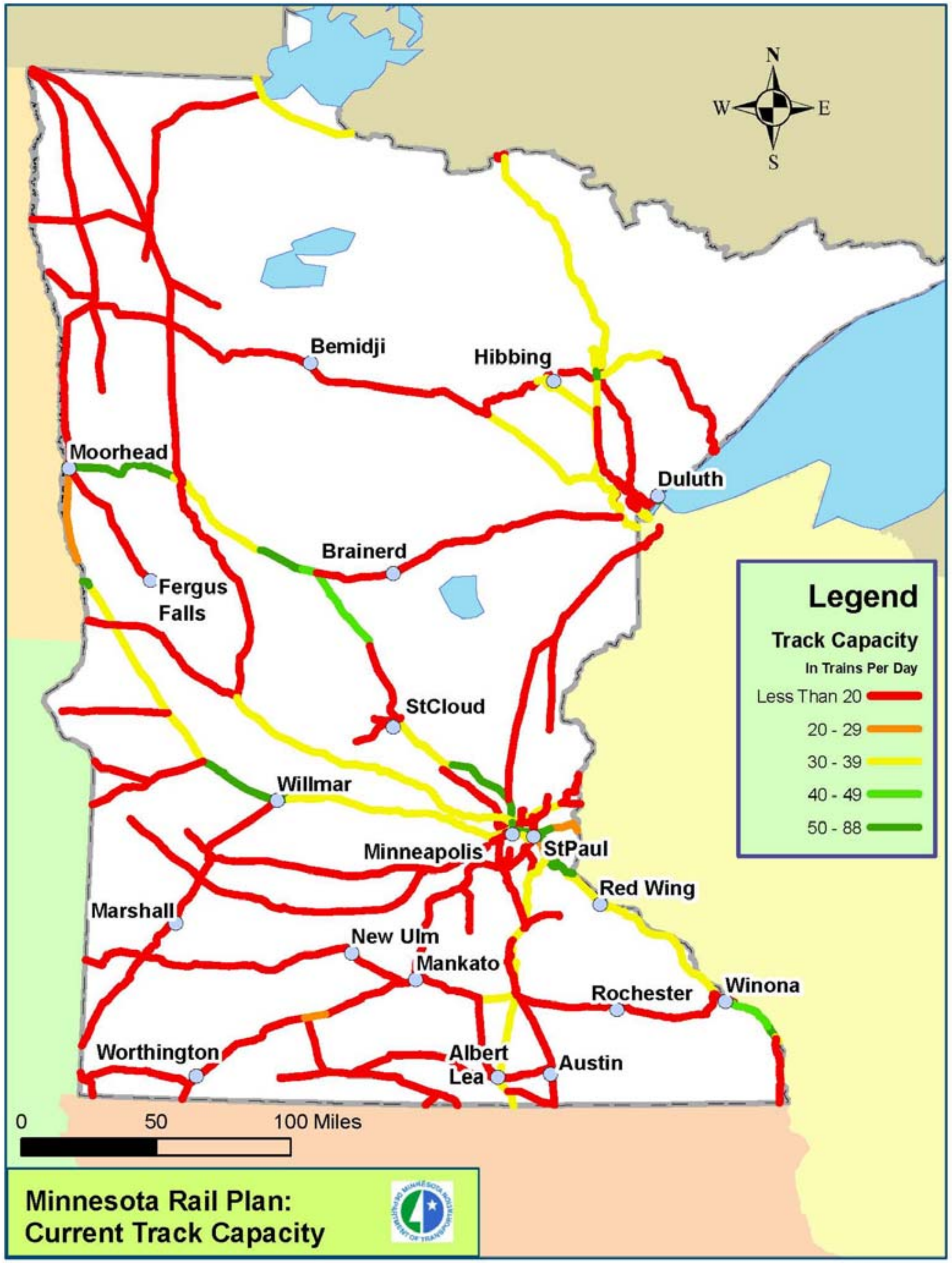
A Few Conclusions for Freight

- As in most regions, at 81% of value and 49% of tonnage, highways handled the majority freight traffic
- But, at 19% for value and 38% of tonnage, rail is a very important component of Minnesota's multimodal freight system
- Mix of industries and geography play to railroad's strengths of handling high volumes over long distances
- IHS-Global Insight forecast predicts 25% growth in rail tonnage through 2030. However, while it attributes substantial growth to intermodal, anticipated growth in coal is questionable
- Cross-border traffic with Canada is significant, accounting for 18% of all tonnage in 2007, and expected growth of 61% by value through 2030.
- 8.2% of originated carloads start their trip on a short line.

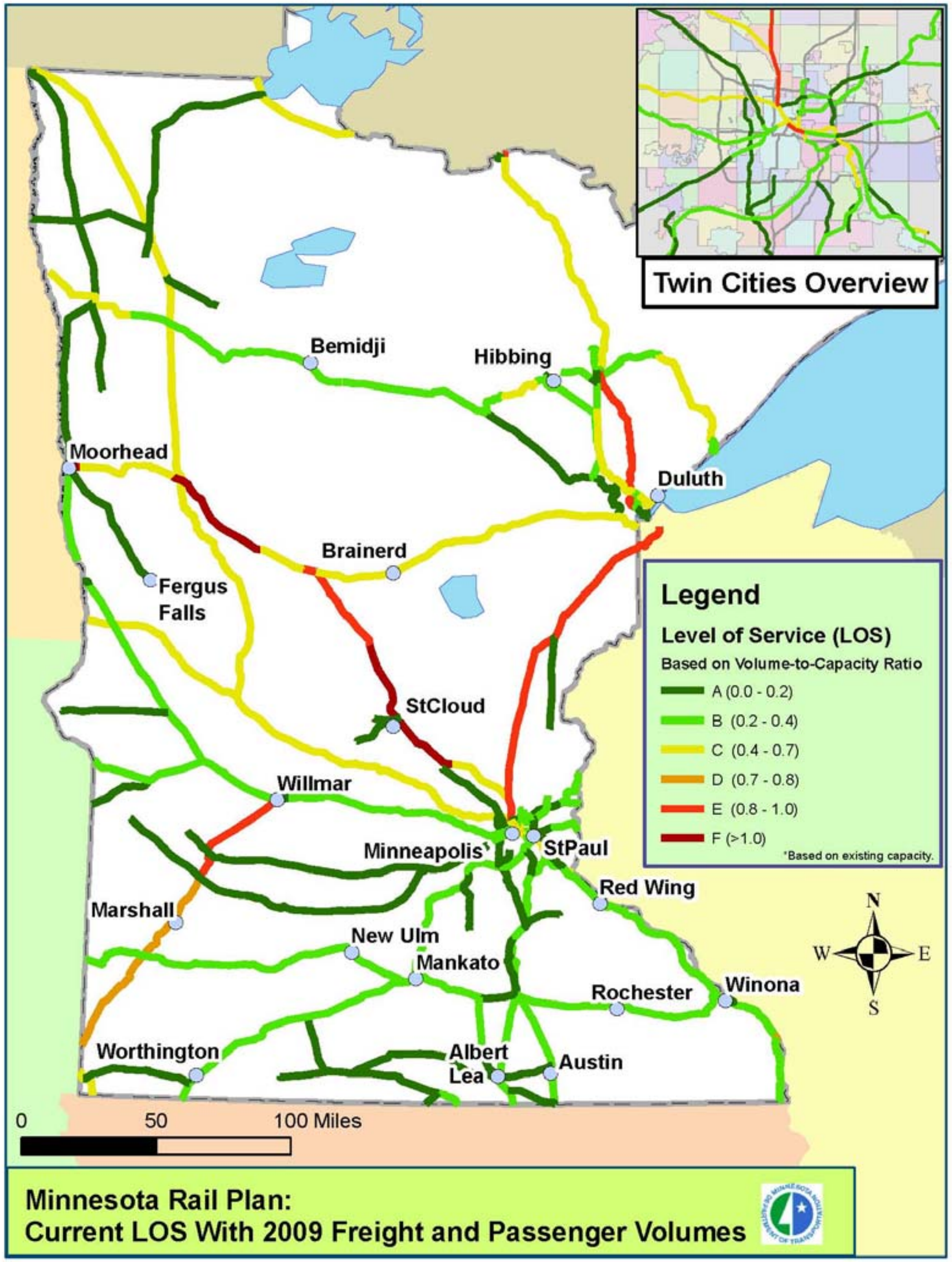
Passenger/Freight Integration

Paul Danielson

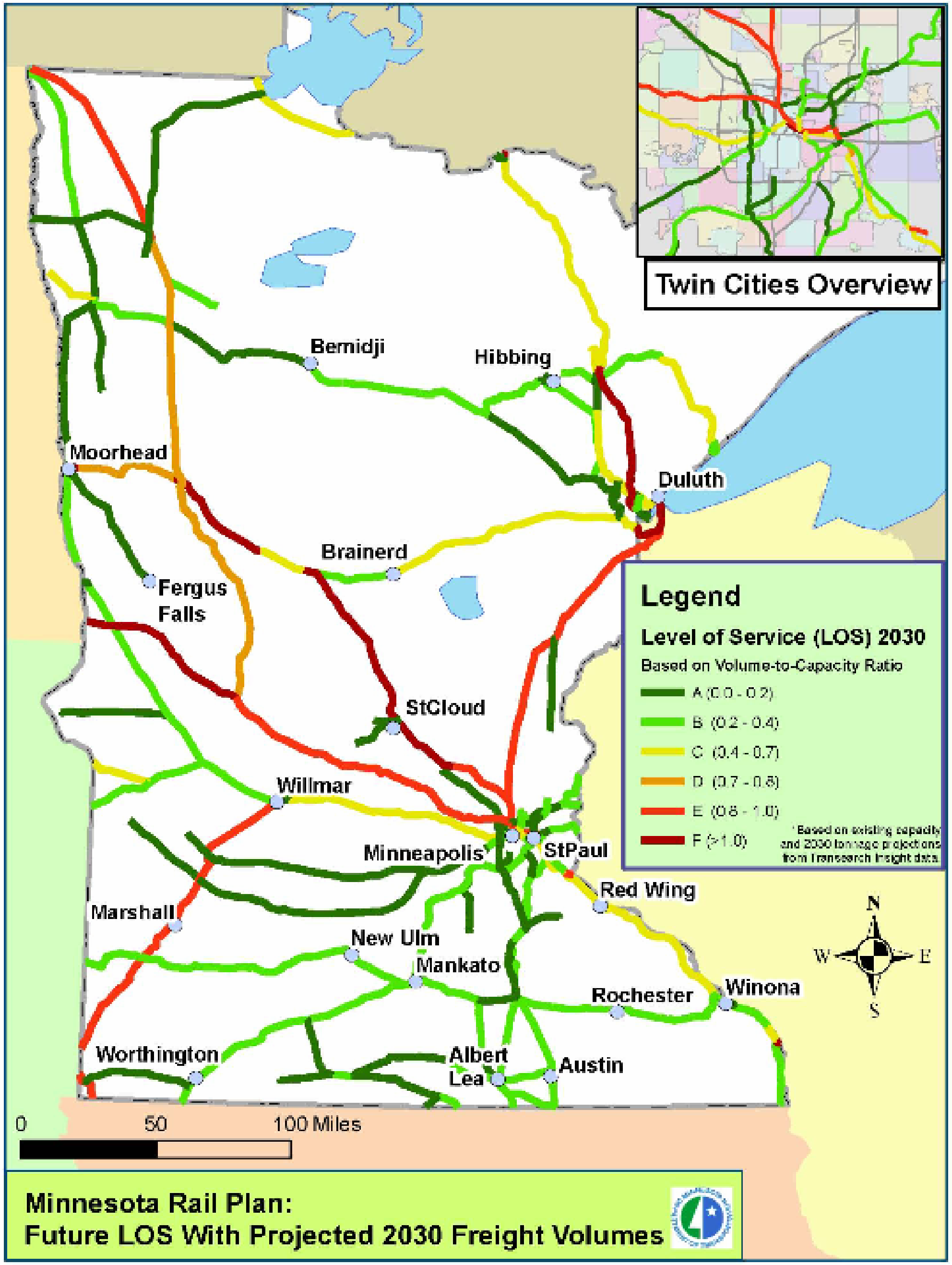
Passenger/ Freight Integration
Track Capacity



Passenger/ Freight Integration
Current LOS



Passenger/ Freight Integration
Future LOS



Passenger/Freight Integration
PTC

- The Rail Safety Improvement Act of 2008 requires widespread installation of Positive Train Control (PTC) systems by 2015 for all Class I railroads and those entities providing regularly scheduled intercity or commuter rail passenger service.

- PTC systems utilize integrated command, control, communications, and information systems technologies to prevent train-to-train collisions, casualties to roadway workers and damage to their equipment, and overspeed derailments.

- The systems can vary in complexity and sophistication.

Passenger/Freight Integration
Corridor Conditions – Tier I

Corridor	Potential Ridership	Track Condition	Available Capacity
Coon Rapids – Big Lake	High	Good	Medium
Big Lake – St. Cloud	High	Good	Low
Minneapolis – Willmar	Medium	Fair	High
Minneapolis – St. Paul (BNSF)	High	Fair	Medium
Minneapolis – St. Paul (CP)	High	Fair	Medium
St. Paul – Hastings	High	Fair	High
Hastings – Winona	High	Fair	High
St. Paul – Northfield	Medium	Fair	High
Northfield – Albert Lea (Kansas City)	Low	Good	High
Minneapolis – Mankato	Medium	Fair	High
St. Paul – Eau Claire, WI	Medium	Fair	High

Passenger/Freight Integration
Corridor Conditions – Tier II

Corridor	Potential Ridership	Track Condition	Available Capacity
Minneapolis – Coon Rapids	High	Fair	Low
St. Cloud – Fargo/Moorhead	Medium	Good	Low
Coon Rapids – Cambridge	Medium	Good	Low
Willmar – Fargo/Moorhead	Low	Fair	High
Willmar – Sioux Falls, SD	Low	Good	Medium
Mankato – Worthington (Sioux City)	Low	Fair	High

Passenger/Freight Integration
Corridor Conditions – Tier III

Corridor	Potential Ridership	Track Condition	Available Capacity
Cambridge – Duluth	Medium	Fair	Low
Rochester – Owatonna – St. Paul	Low	Fair	High
Rochester – Owatonna – Minneapolis	Low	Poor	High
Rochester – Winona	Low	Poor	High
Minneapolis – Norwood/Young America	Low	Poor	High
Norwood/Young America – Montevideo	Low	Poor	High

Performance Measures

Erika Witzke

Performance Measures
Methodology

- Identified relevant topics/issues for evaluation
- Reviewed planning efforts by MnDOT
- Literature search on other DOTs, Amtrak, other rail operators, FRA efforts
- Assembled separate measures for freight and passenger rail
- Developed common list of performance measures

Rail Performance Measures

- System Performance – capacity, speed, annual production of ton/miles, ridership
- System Condition – track, bridges, crossings
- Connectivity/Accessibility – proximity to users, commercial terms, modes
- Safety & Security – at-grade crossings, hazmat
- Environmental – positive and negative impacts of construction and operations
- Financial/Economic – Capital costs, operations, taxes, jobs, economic development, cost/benefit comparisons

Developing Criteria for Public Rail Investment

- Ability of private sector to contribute to project funding
- Acceptable Cost versus Public Benefits
- Significant Utility – Good Ridership, New Service Access
- Addresses a Verified Need – Accommodates new passenger service, freight growth, or corrects bottleneck
- Exhibits Multiple Benefits – combination of intercity passenger, local/commuter, and freight operations and capacity
- Contributes to State's Priorities – Environmental and green growth goals, reduced energy use, safety, enhanced land use, improved travel options, life style and competitiveness
- Timeliness of Implementation

Next Steps

Marc Cutler

Phase IV Tasks

- Task 6 – Establish Investment Needs
  - Estimate benefits versus performance measures
  - Estimate high-level costs
- Task 7 – Determine Public versus Private Sector Roles
- Task 8 – Provide Public Sector Institutional Guidance
- Task 9 – Funding and Programming
- Task 10 – Outreach
  - Second round of Open Houses – Oct
  - Final PAC/TAC meetings – Nov

Discussion

Randy Halvorson, Facilitator