

Components of an Attractive Minnesota Freight Market

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White Paper Objective

- To identify key aspects of an optimally competitive and attractive Minnesota freight market
- Over 30 interviews with shippers, carriers, 3PLs, planners, regulators, researchers & experts
- Accessible for policymakers and non-experts

Players

- **Shippers**
 - long-haul trips
 - seek balance between cost and capacity – specifically, low rates with as little as same-day notice
 - flexibility and responsiveness are incredibly important to supply chain management and just-in-time delivery
- **Carriers**
 - short-haul trips
 - value predictability and an even flow of freight over respective modes
 - planning routes and optimizing trips allows for efficiency and economies of scale
- **Retailers**
 - need affordable, reliable, and timely delivery to compete within increasingly attractive and popular online alternatives

Players

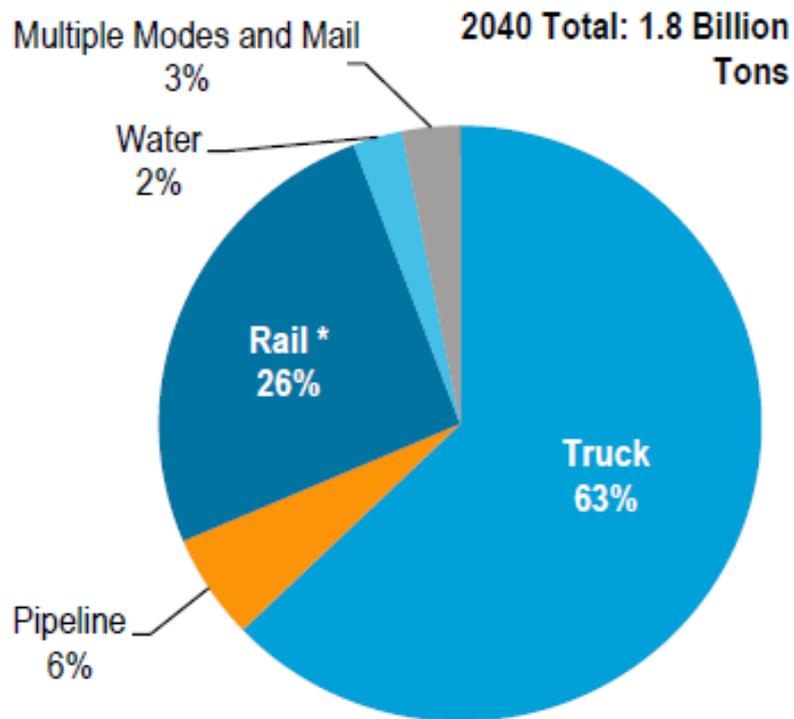
- Consumers
 - seek wide selection, affordability, and convenience as they weigh traditional in-store purchases against online alternatives
 - tend to be indifferent to freight transportation and can view trucking and rail as a nuisance or safety hazard
- Regulators
 - safe modes of travel
 - well-maintained transportation infrastructure
 - proper load securement for perishable food and potentially hazardous freight
 - responsible use of resources such as land, water, and air

Stakeholder Groups

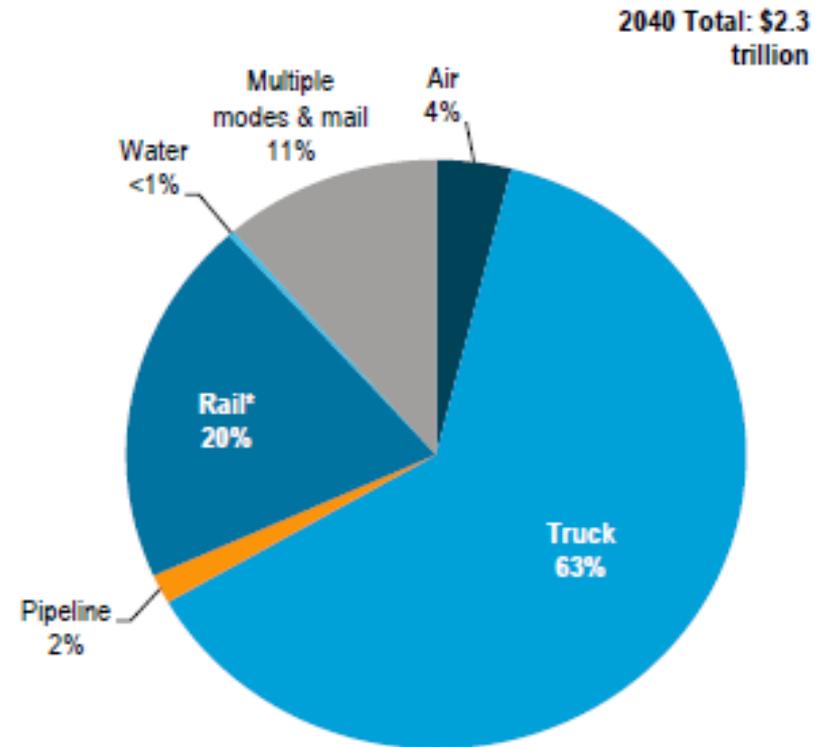
- Midwest Shippers Association
- Minnesota Trucking Association
- Minnesota Grain and Feed Association
- Transportation Club of Mpls and St Paul
- Minneapolis-Saint Paul Council of Supply Chain Management Professionals

Making Sense of Modes

Freight Mode Share by Weight (2040)



Freight Mode Share by Value (2040)



Profile of Truck Freight

Technological advances, pressure for increased efficiency, and predominant market forces have resulted in a freight environment that favors the flexibility and first-mile/last-mile responsiveness of trucking products to market. While Minnesota and the Minneapolis Saint Paul metropolitan area see considerably truck traffic, volumes are modest compared to other regions and corridors.

Profile of Rail Freight

For Minnesota's largest Class 1 carrier, rail freight leaving Minnesota is comprised of agricultural products (40.3 percent) like grain, industrial products (36.2) including forest products, chemicals, and metals, and consumer products (23.5) such as vehicles – which, in total, accounted for over 350,000 carloads and intermodal units in 2016. As for what's coming in by train, consumer products (40.1 percent), coal (37.3), industrial products (13.4), and agricultural products (9.2) comprised the nearly 250,000 carloads and intermodal units destined for Minnesota in 2016.

For their part, Minnesota's 13 short line railroads play an important role in bringing agricultural products such as grain and ethanol to market or transfer to other modes, and, in return, fertilizer and other agricultural inputs to rural communities. These short lines feed Minnesota's Class 1 carriers, play an important role for integrating services, and factor into car supply placement.

Profile of Air Freight

Air is the preferred mode for highly perishable goods – such as flowers or seafood – and compact, relatively lightweight, high-value products – such as medical devices. An imperative for timely delivery is the greatest factor driving decisions to ship by air, but delivery by truck can compete with air on time between many markets.

Profile of Water-Based Freight

Minnesota's agriculture producers depend upon barge and ship traffic to take grain to markets domestic and abroad. The Twin Ports predominately export grain, taconite, and timber, while river barge traffic from ports in Savage, Saint Paul, Red Wing and Winona cycle grain, ethanol, and aggregate out and fertilizer, salt, urea, and potash in to the state. According to one large agriculture shipper, barge traffic is "efficient, simple, and big when the river works."

Barge tows can move large volumes of product great distances at competitive rates, making it an attractive option for bulk goods such as aggregate, grain, and fertilizer. Although trucking has become the dominant mode for most other products due to its reliability and first/last mile agility, there's no ignoring the capacity of rail and to a greater extent barge and maritime modes to move large volumes of slower-moving product.

Economic Drivers in Freight

Freight decisions typically are not made at the local level. Due to consolidation of operations, globalization, and a push for greater efficiency, freight decision making is increasingly centralized and automated, with computer systems in logistics operations making bids to the nearest nanosecond on an open market. Terms of sale and other factors can vary depending upon the country of origin, destination, and bid.

- Supply chain management
- Technology
- Changing automobile use
- Demographics
- Infrastructure Investment

Role of Regulation

- Federal standardization & “regulatory harmonization”
- Differences among states
- Local control over zoning and land use

Who Needs What and Why

Trucking	More drivers, more rest stops and parking options, more reliable travel times – particularly through the metro area, and smoother road conditions, more river crossings
Rail	Class 1: Longer sidings and more attention to the economic benefits of rail in policy discussions. Short line carriers: funding for maintaining critical corridors and incorporating technology; state assistance (loans, competitive grants, or capital investment bonding)
Water	Maintenance & investment for ports, locks and docks
Air	Maintenance & investment at regional and international airports
Producers	Efficient transportation systems allow Minnesota producers to survive in an increasingly competitive global economy

An Attractive Freight Market

- Increasingly efficient supply chain management
- Stronger balance between inbound and outbound freight movement
- Additional options for shippers, including improved access to rail and to a lesser extent water modes through new or improved intermodal terminals
- Sufficient investment in transportation infrastructure and congestion mitigation
- Improved career pathways and geographically-balanced labor supply
- Consistent regulation and policies that promote technology adoption, public-private partnerships, and private investment

Additional Considerations

- Concerns over containers
- Intermodal options
- New opening to Asia?
- Test bed for self-driving trucks?

Questions?

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