

Transportation Planning to Support Economic Development in Minnesota

Mapping the Midwest's Future Conference

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September 29, 2014



**CLUSTER
MAPPING**

State and Local  *Policy Program*

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Applications of US Cluster Mapping Tool in Minnesota

- Regional Council of Mayors and DEED
 - CEO to CEO Conversations
- MSP Regional Cluster Study – UMN Metro Consortium
- DEED and GREATER MSP
 - Water Technology Cluster Initiative
- Transportation and Clusters
 - Freight Rail Economy – BNSF Foundations
 - Manufacturing Clusters in MnDOT Districts 8 and 4
 - Transportation Planning to Support Economic Development - MnDOT

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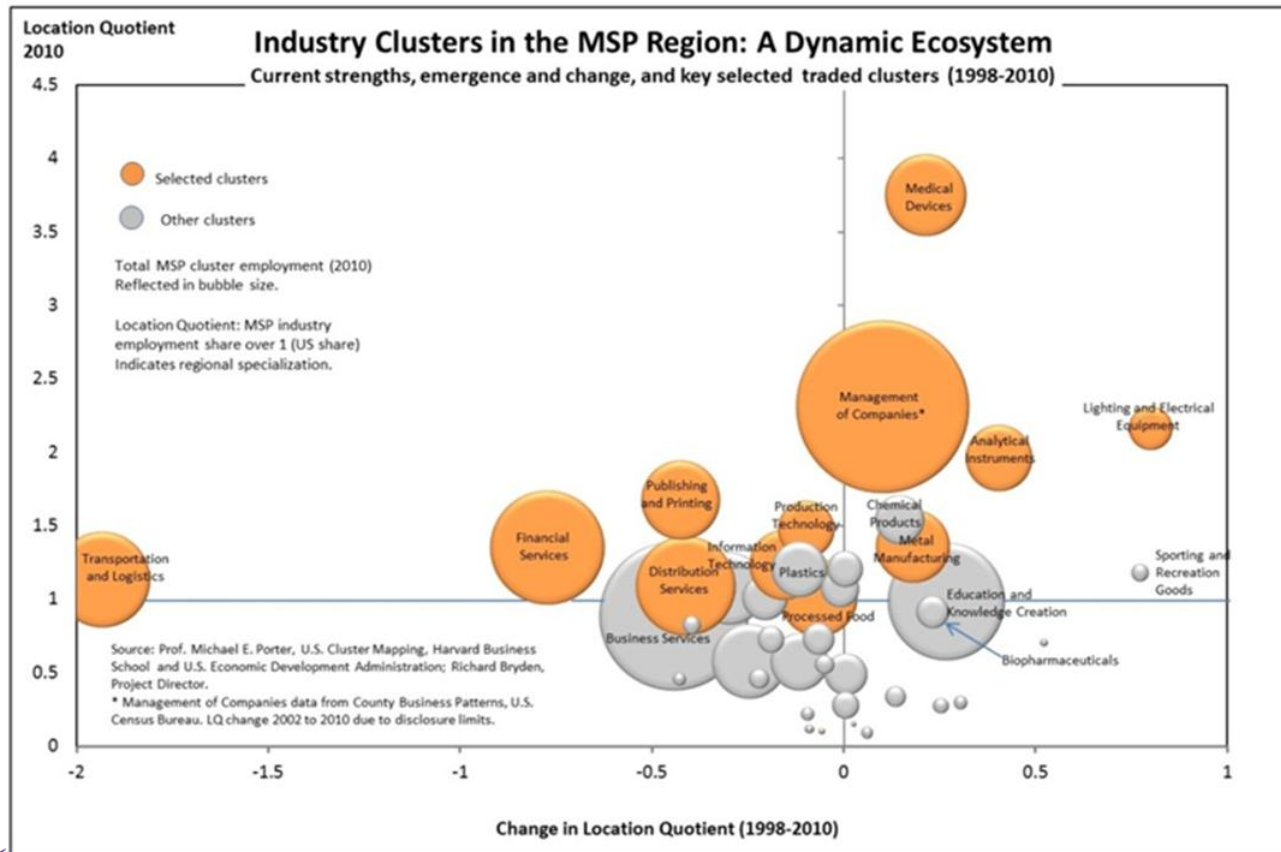
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MSP Regional Cluster Competitiveness Study



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Four Emerging Clusters in Greater MSP

- Water Technology
- Robotics
- 3D Printing
- Biorenewables

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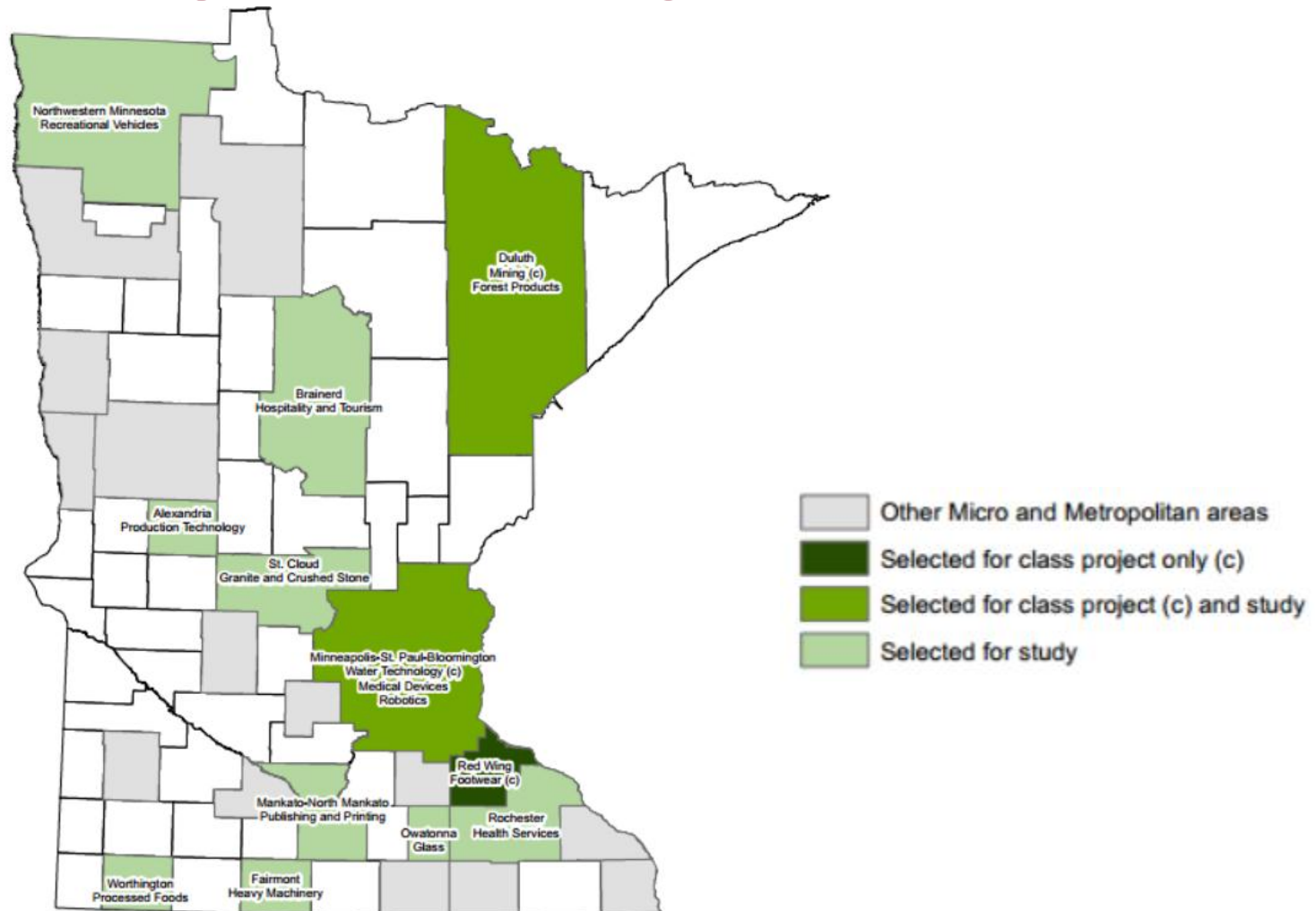
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Selected Clusters



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Regional Cluster Interviews



Glass (Owatanna)

- Interviews with Viracon, Sage Electrochromics, & LiteSentry



Granite (St. Cloud)

- Interviews with Coldspring Granite and Sunburst Memorials



Processed Food (Worthington)

- Interviews with JBS Co, Merck Animal Health, and New Vision Co-op



Publishing and Printing (Mankato)

- Interviews with Taylor Corp, Coughlan (Capstone), and The Creative Company

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Recreational Vehicles (Automotive)

Kittson, Marshall, Pennington, and Roseau Counties (NW Minnesota)



Notable companies from within the cluster include Polaris, Arctic Cat, and Mattracks

Transportation themes include__

2011

Number of Employees

2,215

Northwest Minnesota had the second highest Automotive employment in Minnesota

Location Quotient

17.22

Automotive employment was more than seventeen times as concentrated in Rochester than in the USA

Average Wages

N/A

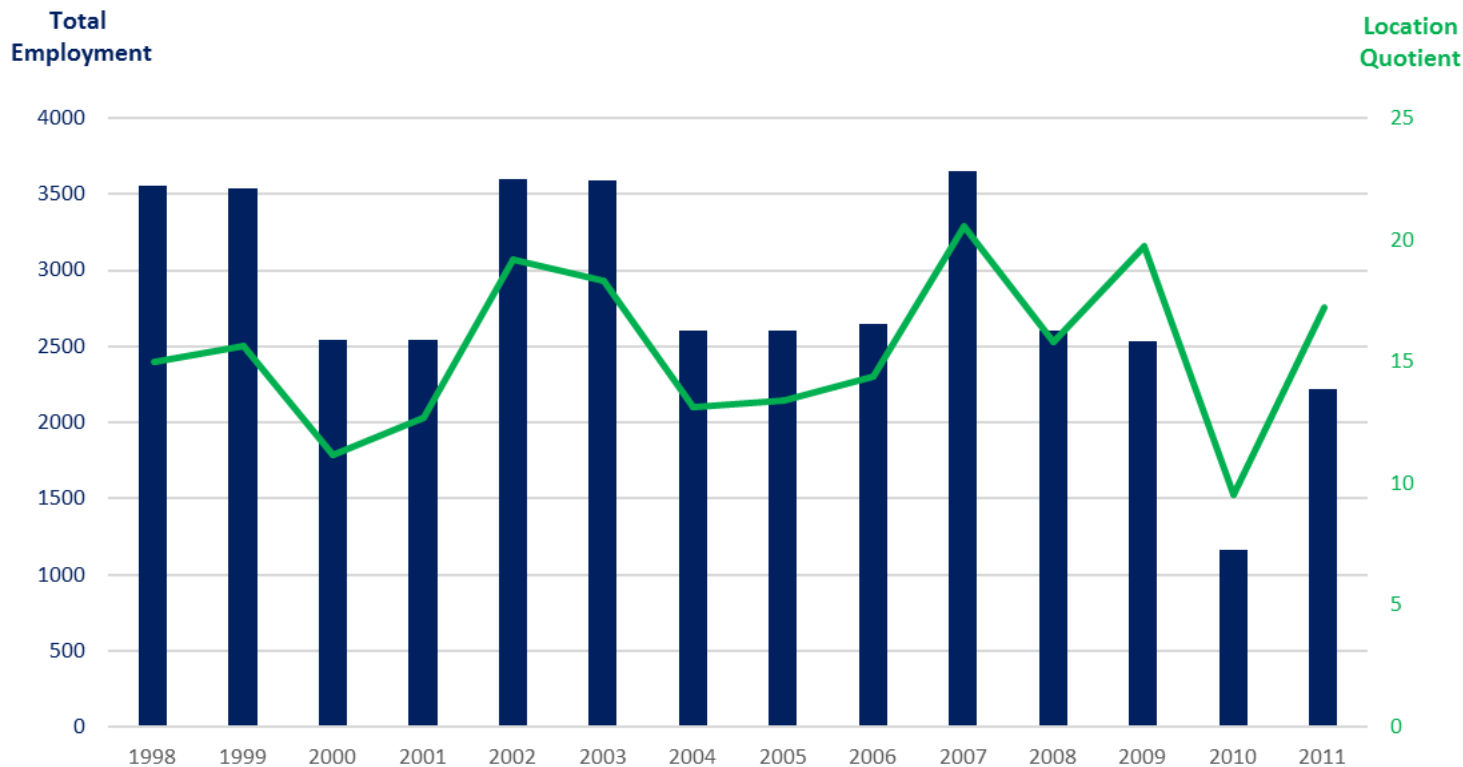
Wage data for the Automotive cluster in Northwest Minnesota is unavailable

Share of Regional Employment

12.47%

Nearly one in eight jobs in Northwest Minnesota are within the Automotive cluster.

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School. In instances of suppression problems, data reflect the midpoints of ranges given.



Recreational Vehicles

- Hard to find skilled employees
- 3-D printers have changed product delivery
- Revamping their distribution strategy
- Highway 59 and Highway 2
- Transportation is over 10% of total budget



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Recreational Vehicles



- Diversified holdings
- Worker shortage
- Transportation is their largest budgetary item
- Weather related hardships
- Driver regulations make transportation very difficult



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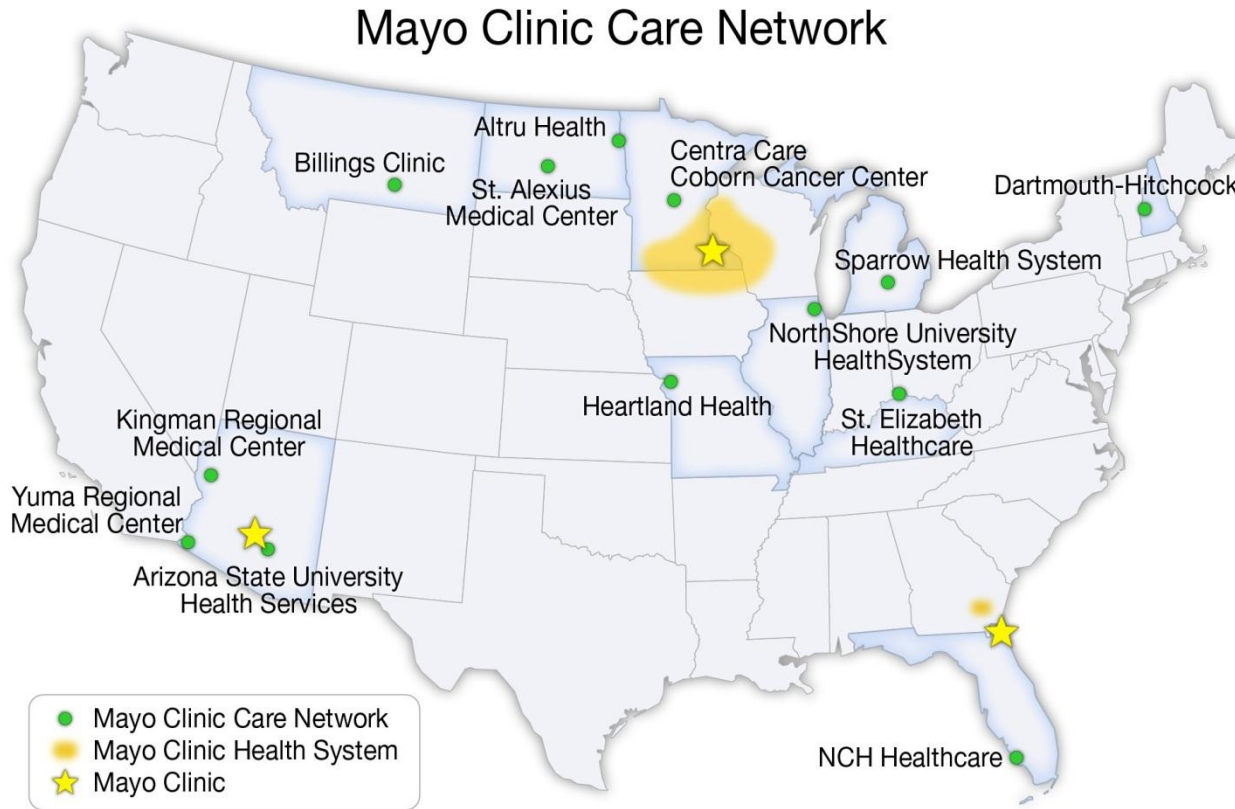
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Mayo Clinic Medical Services Network



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Mayo Clinic Services

- Medical Care
 - Tertiary Care Center
 - Highly specialized services (oncology, neurosurgery, cardiac surgery)
- Research
 - Clinical research, experimental medicine, lab testing
- Education
 - Many doctors on staff at Mayo are also instructors



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Mayo Competitiveness

- Global patient base
 - 500 K unique visitors , 1.5 M visits
 - 50 states, 150 countries
 - Roughly 50% from 150-200 mile radius
- Unique challenges
 - Major competitors: Cleveland Clinic (OH), Johns Hopkins (Baltimore), MD Anderson Cancer Center (Houston)
 - All major competitors are located in large metros
 - Better air services, local transport, local amenities, etc.
 - DMC initiative
 - Mayo is more dependent than others on regional passenger, freight links



Mayo Medical Laboratories

Founded in 1971, Mayo Medical Laboratories is the reference laboratory for Mayo Clinic.



4.5 Million

Patients touched around the world each year by our testing



6,629

Clients around the world that send testing to Mayo Clinic



30,000

Specimens that arrive at Mayo Clinic every day, on average

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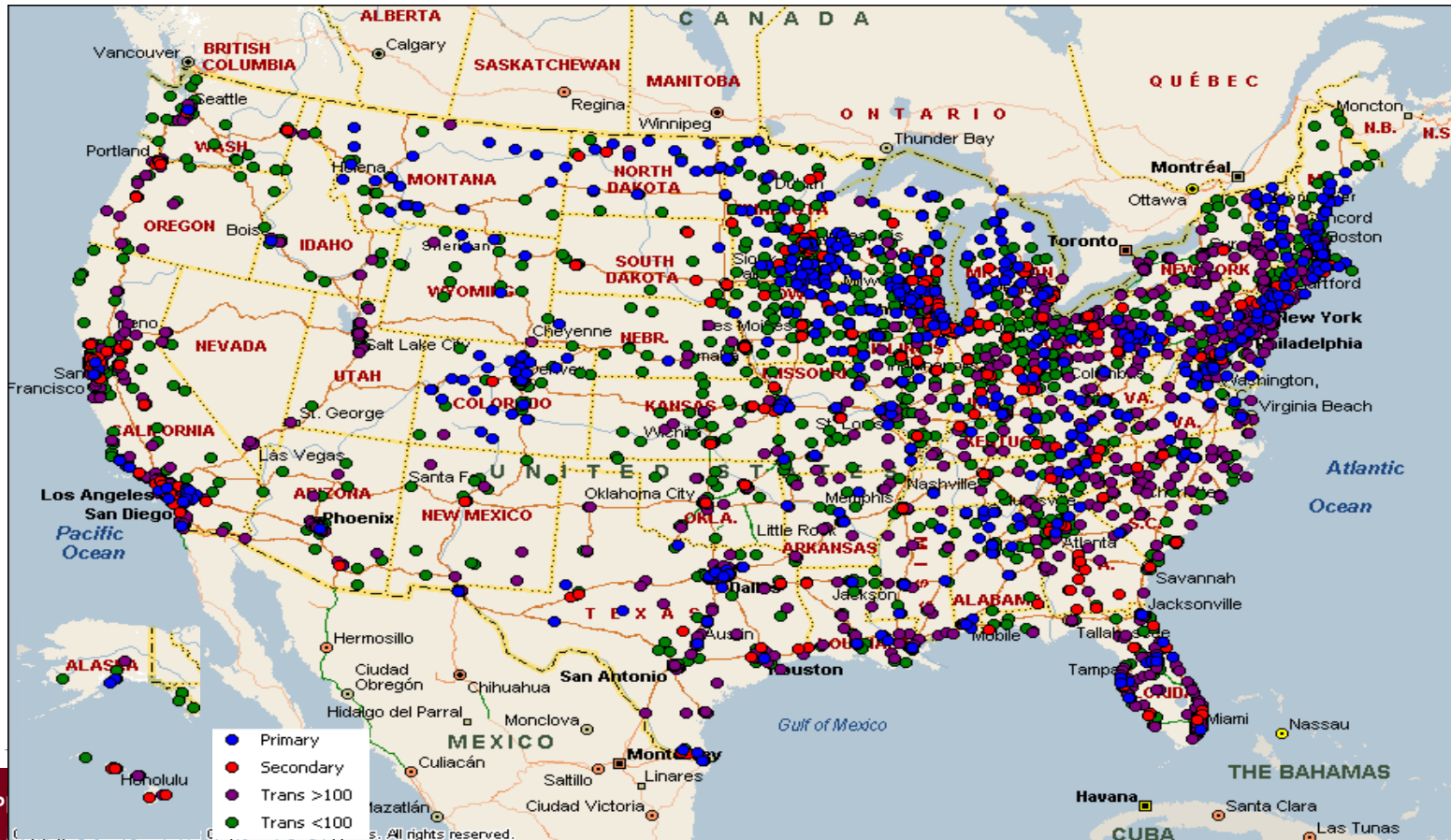
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Mayo Medical Laboratories Client Base

MML has approximately 5,000 clients around the U.S. resulting in over 12 million tests annually.



MML International Origins YTD 2014



Australia, Bahrain, Brazil, Canada, Chile, China, Colombia, Cyprus, Denmark, Dominica, Ecuador, Germany, Greece, Guatemala, Honduras, Hong Kong, Iceland, India, Iraq, Japan, Jordan, South Korea, Lebanon, Mexico, Pakistan, Peru, Puerto Rico, Qatar, Saudi Arabia, Spain, Turkey, the United Arab Emirates, Uruguay, Venezuela, Viet Nam

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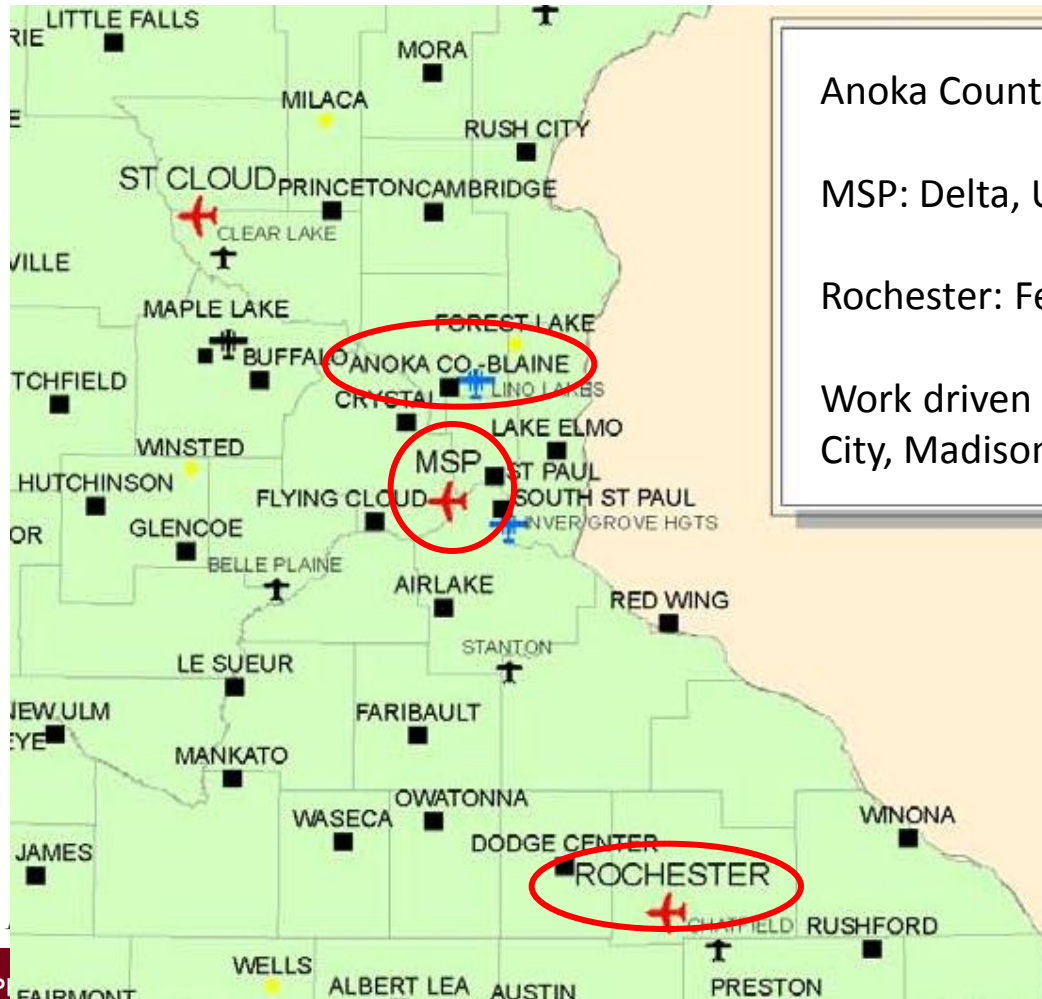


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Airports Utilized by MML



Anoka County Blaine: ICS

MSP: Delta, United, American

Rochester: FedEx, ICS

Work driven in from MSP, Kansas City, Madison



State and



Industry Cluster	Transportation Issues	Primary Freight Modes Used	Important Service Characteristics	Number of MN Regions in Which Cluster is Specialized
Construction Materials (Granite)	Varying state regulations; customs delays; fuel costs	Truck (flatbed), Rail, Water	Reliability, Safety	1
Forest Products	Rail capacity and equipment; need for intermodal facilities	Truck, Rail	Cost, Transit Time, Reliability	10
Glass	Specialized carrier availability; labor access; weather delays	Truck, Water, Air	Cost, Reliability, Transit Time	1
Health Services	Regional air access; reliability of shipments; improved air navigation	Air, Truck	Reliability, Safety	13
Heavy Machinery	Road conditions; truck availability; weather-related delays	Truck, Water, Rail	Cost, Reliability	19
Hospitality and Tourism	Regional air access; highway access from points west	Truck	Reliability, Transit Time	6
Medical Devices	Airport access; congestion delays; shipment reliability	Air, Truck	Safety, Reliability, Cost	5
Printing and Publishing	Weather-related delays; customs delays	Truck (LTL and small parcel), Water	Cost, Reliability, Transit Time	10
Processed Food	Carrier availability; shipment reliability; regulatory consistency	Truck (truckload), Rail, Water	Safety, Transit Time	21
Recreational Vehicles	Weather-related delays; infrastructure condition; carrier availability	Truck, Water, Rail	Cost, Reliability, Safety	1
Robotics	Speed of shipments	Truck (LTL and small parcel), Air, Water	Cost, Transit Time	1
Transportation and Logistics	Congestion delays; infrastructure condition; carrier availability	Truck, Air, Rail, Water	Safety, Reliability	4

IMPLICATIONS FOR TRANSPORTATION POLICY, PLANNING AND IMPLEMENTATION

- Statewide Freight Planning
- Regional Transportation Strategies
 - District 8 and District 4 Manufacturing Outreach
- Transportation Investments to Promote Economic Competitiveness
 - Transportation Economic Development (TED) program
 - Corridors of Commerce program
 - TIGER
 - Trunk Highway Funds
 - Freight Funding
- Intermodal Connections and Investments
- Public-private partnerships and collaboration

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