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Eight County Freight Plan

Blackhawk Hills Regional Council – 2017 Fall Summit

CPCS Team
October 27, 2017
Timber Lake Playhouse

Project Sponsors



Presentation Map



The Eight County Freight Plan

- **Work Plan**
- **Schedule and Status**

Key Outcomes and Information to be Delivered

Next Steps and Using the Results

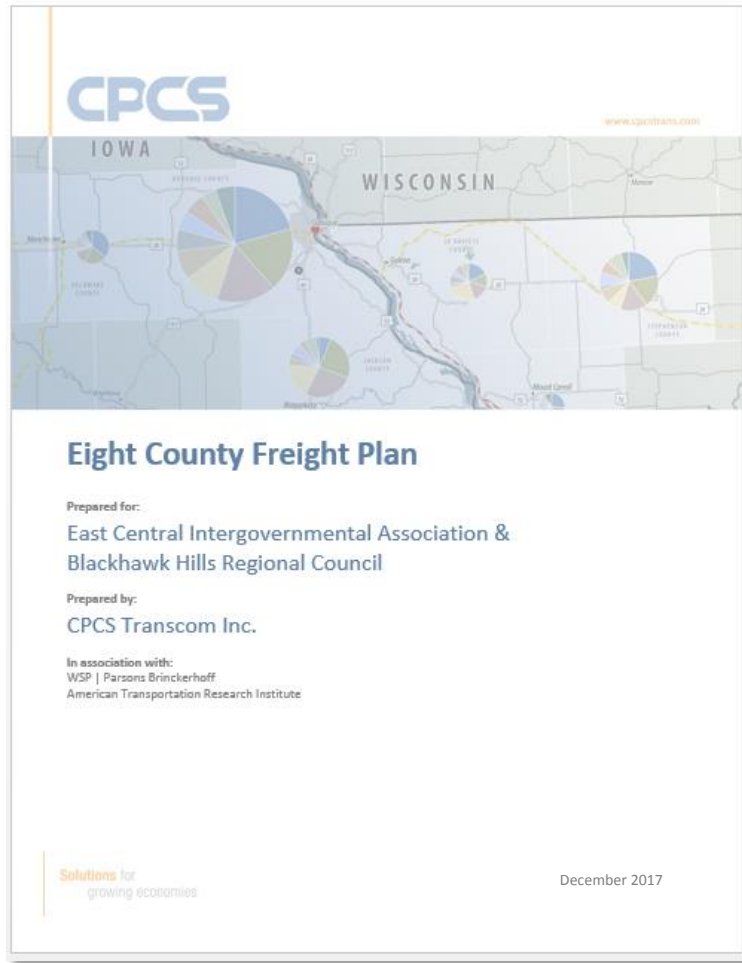
Project Motivations

- Inconsistent data across freight modes
- Understand link between freight transportation system and local economy
- Be aware freight system needs and opportunities
- Incorporate freight in local transportation planning decisions

Project Objective

To develop a better understanding of the multimodal freight system in the tristate region and to use this information to better inform policy and programming decisions in the region.

Eight County Freight Plan



Key Tasks

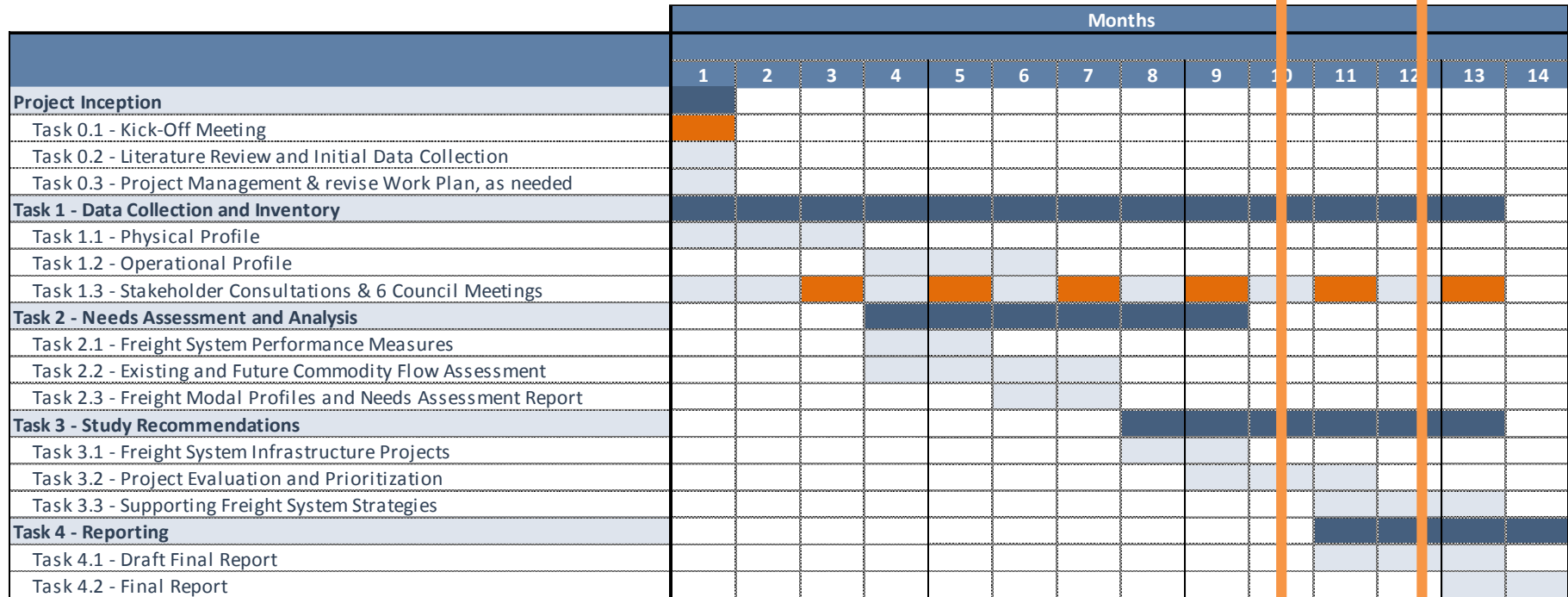
- Physical System Inventory
- Commodity Flow Profile
- Freight System Needs Assessment
- Freight System Recommendations & Benefits Evaluation
- Stakeholder Outreach

Not just any regional freight plan...

- It's all about the economy!
- Superior data
- Transparent process
- Tools you can use
- Realistic, clear, & actionable plan

Work Plan Schedule

We are
here



Legend



Major Task Duration



Work Activity



Meeting

Presentation Map

The Eight County Freight Plan



Key Outcomes and Information to be Delivered

- Primary questions to be answered
- Datasets and tools to be developed

Next Steps and Using the Results

Questions the Eight County Freight Plan Can Answer

1. What are the Region's freight system assets?
2. What goods use the Regional freight system and how?
3. What transportation connections are most critical for the Region's economy?
4. What is the cost of using the Regional freight system?
5. What recommendations will enhance the Region's economic competitiveness?

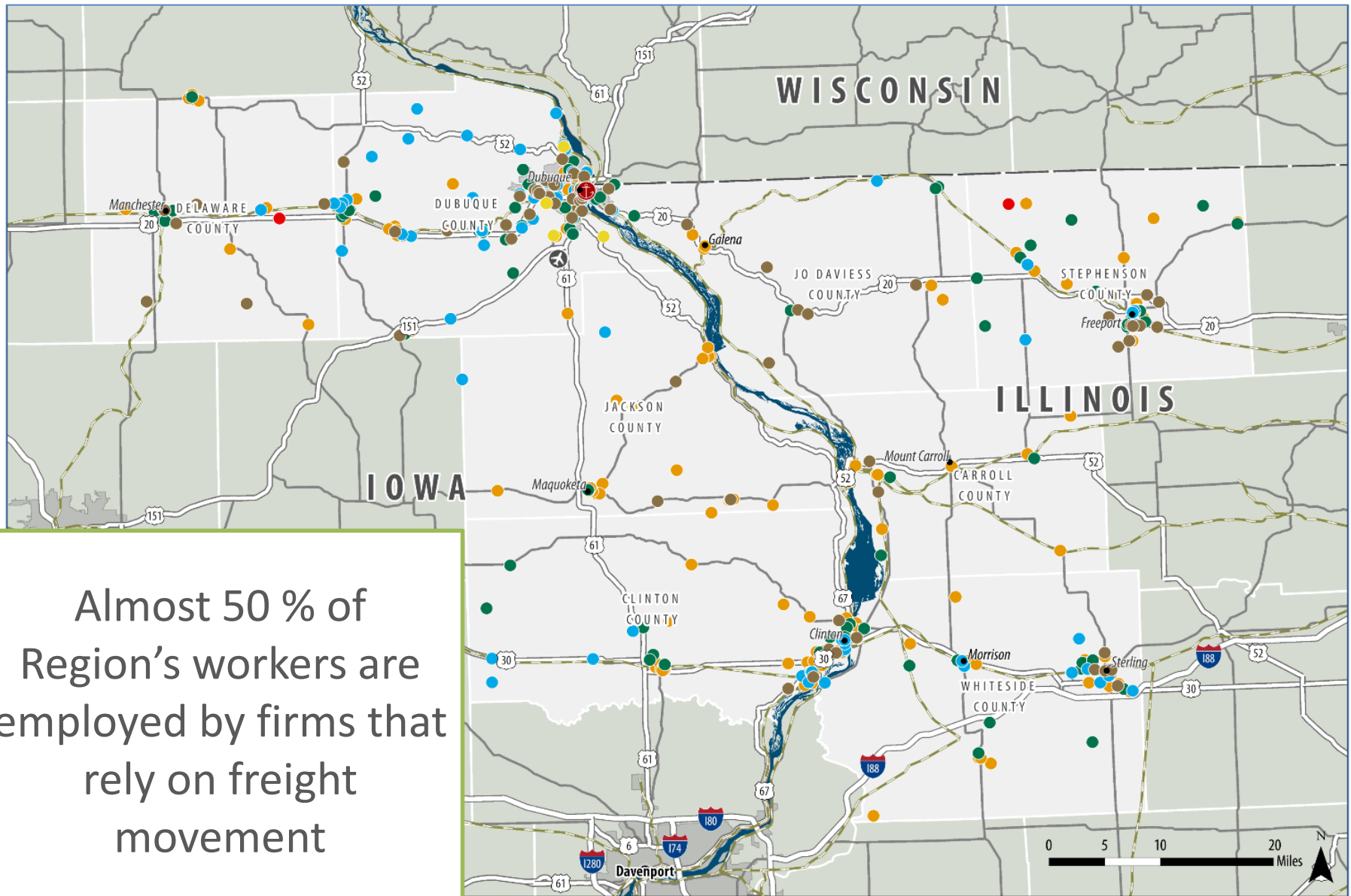
Key Question 1

What are the Region's freight system assets?

Why is this question important?

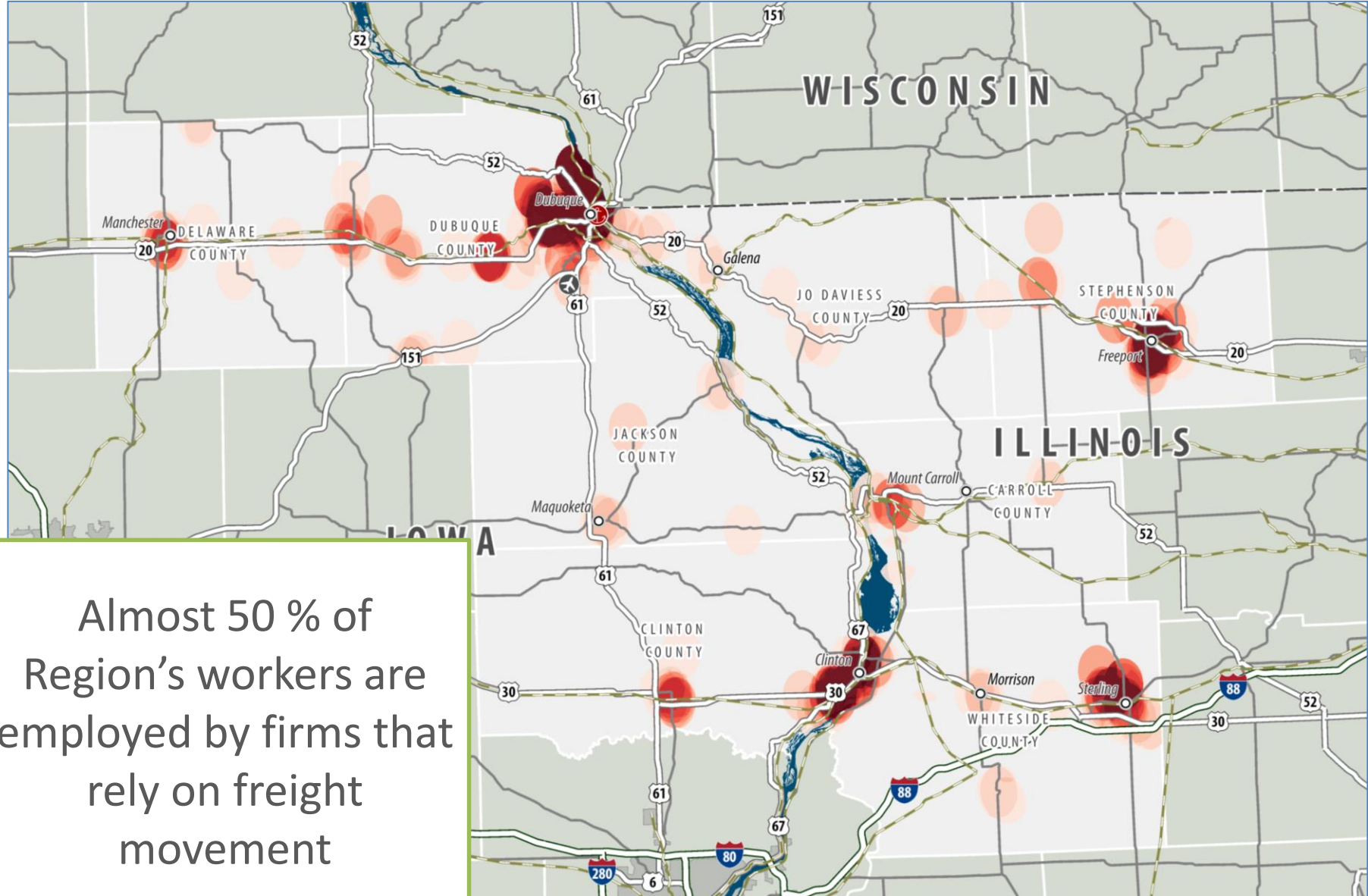
- This is the backbone of your Regional economy.
 - Key industries
 - Key facilities
 - Physical system

A Freight-Dependent Economy



Source: CPCS Analysis of ReferenceUSA, 2016

Freight-Related Employment Concentration



Freight-Related Employment

NAICS	Firms with 20-49 Employees	Firms with 50-99 Employees	Firms with 100+ Employees
(11) Agriculture, Forestry, Fishing, and Hunting	3	2	1
(21) Mining, Quarrying, Oil and Gas Extraction	5	2	2
(22) Utilities	5	0	5
(23) Construction	87	12	24
(31-33) Manufacturing	144	49	92
(42) Wholesale Trade	69	24	117
(44-45) Retail Trade	191	44	52
(48-49) Transportation and Warehousing	81	16	10

Source: CPCS Analysis of ReferenceUSA, 2016

What the Region does Better (Location Quotient)

Industry	Carroll	Clinton	Delaware	Dubuque	Jackson	Jo Daviess	Stephenson	Whiteside
(11) Agriculture	ND	ND	1.58	ND	1.97	ND	2.66	ND
(21) Mining, Quarrying, Oil and Gas Extraction	ND	ND	NC	ND	NC	ND	NC	ND
(22) Utilities	ND	1.11	ND	0.66	ND	ND	ND	0.33
(23) Construction	0.9	0.9	1.25	0.86	0.97	1.3	1.36	0.6
(31-33) Manufacturing	2.13	2.28	3.18	1.68	1.65	1.6	2.3	2.02
(42) Wholesale trade	2.15	0.5	1.9	1.16	1.33	ND	0.67	0.96
(44-45) Retail trade	1.24	0.98	0.95	0.98	1.35	1.14	0.89	1.16
(48-49) Transportation, Warehousing	ND	ND	ND	2.07	1.17	ND	1.06	ND

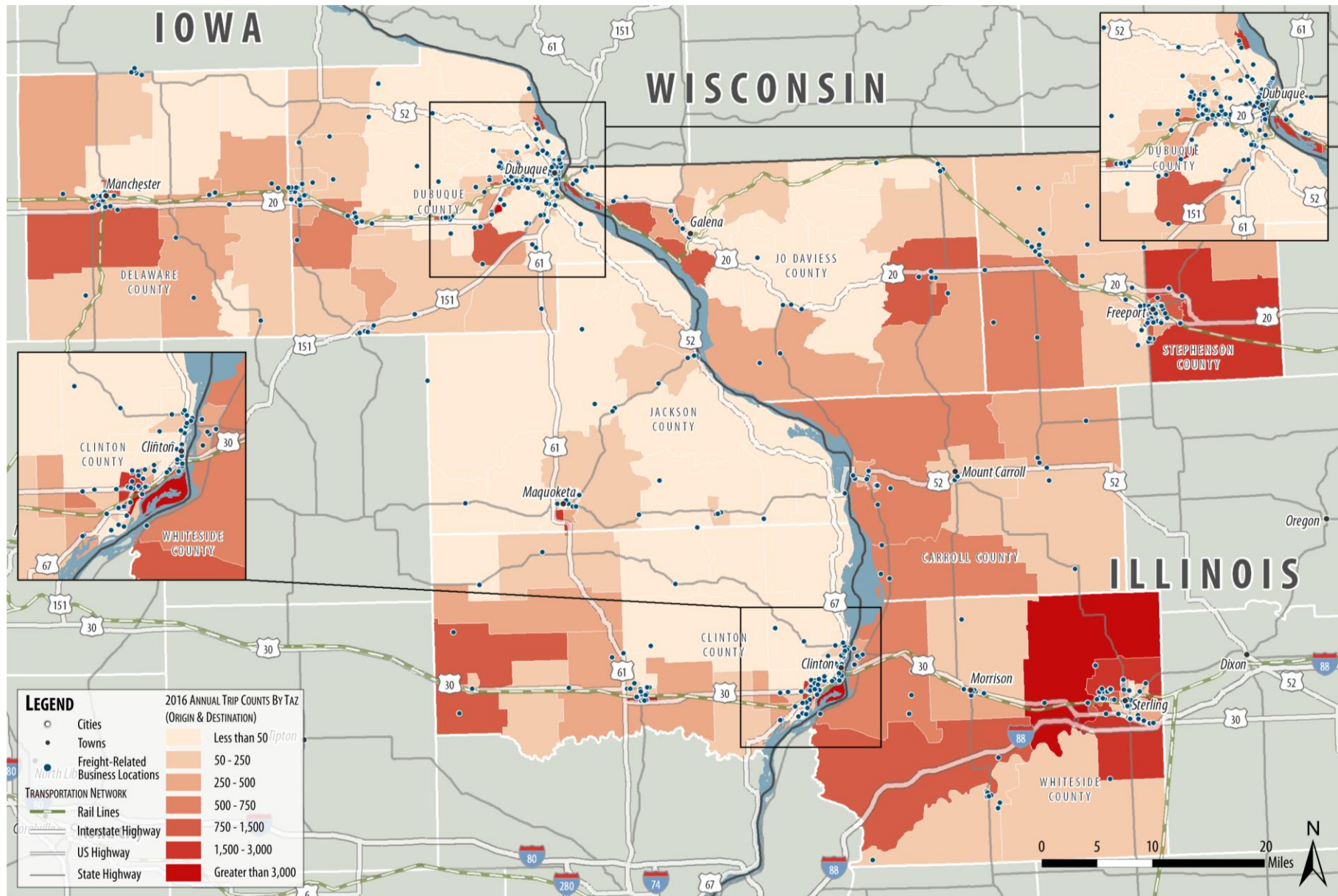
Source: CPCS Analysis of Bureau of Labor Statistics, 2015

ND indicates that a quotient is not disclosable, and NC indicates quotients that could not be calculated.

Multimodal Freight Transportation System



Trip Ends by Analysis Zone



Trip Ends by Analysis Zone (indexed by sq. miles/zone)



Source: ATRI FPM Program, American Transportation Research Institute, 2017

Key Question 2

What goods use the Regional freight system and how?

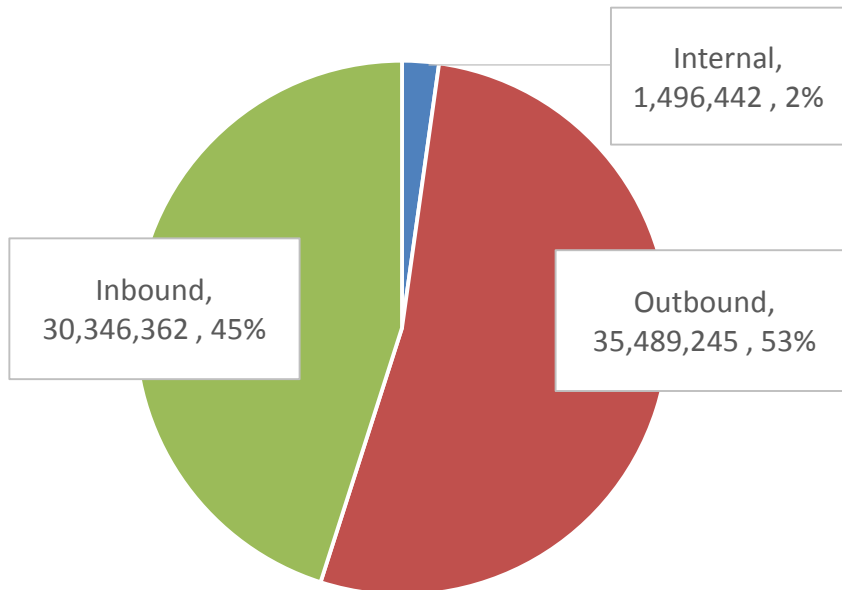
Why is this question important?

- This provides greater insight on your Regional economy.
 - The size of your economy.
 - The industrial niches that are most important to the Region.
 - The role the transportation system serves in the economy.

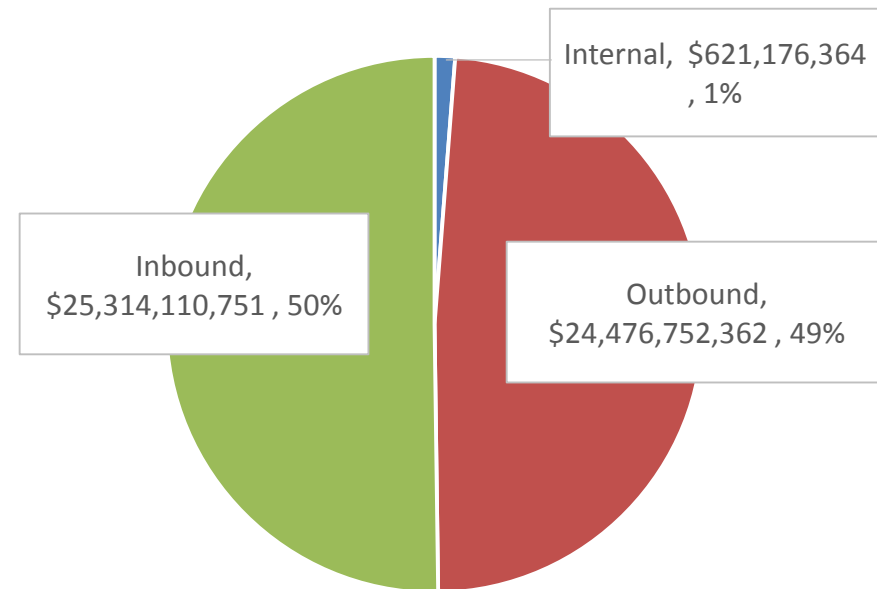
Eight County Tons and Value by Direction of Trade

The Region has fairly “balanced” flows with little internal trade

Tons by Direction (2014)
Total = 67.3 Million tons



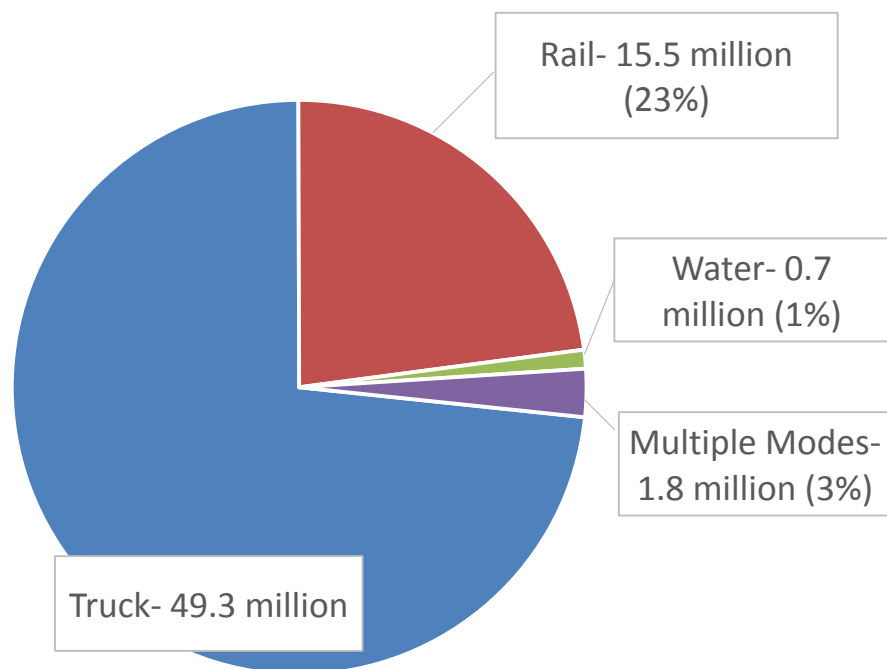
Value by Direction (2014)
Total = \$50.4 Billion



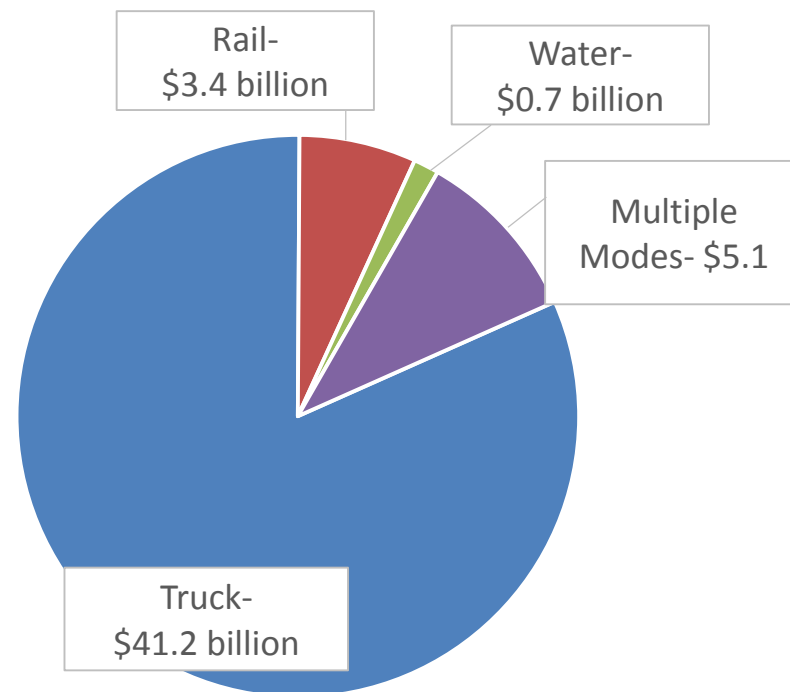
Eight County Tons and Value by Mode

Trucks represent 73% of tonnage and 82% of value, indicating trucks are used to carry higher-value, lower weight manufactured goods

Tons by Mode (2014)
Total = 67.3 Million tons



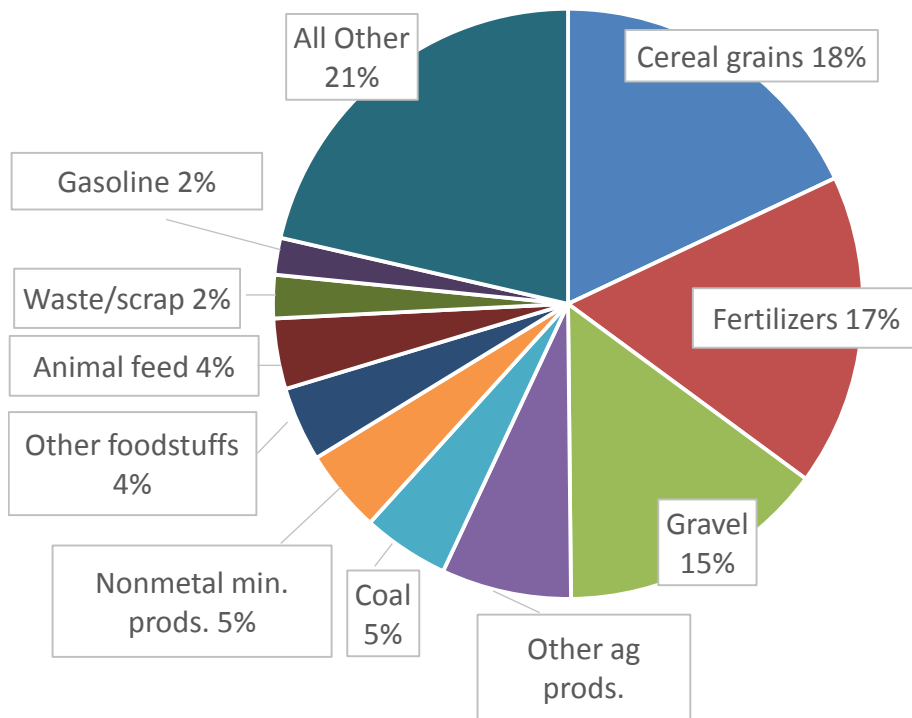
Value by Mode (2014)
Total = \$50.4 Billion



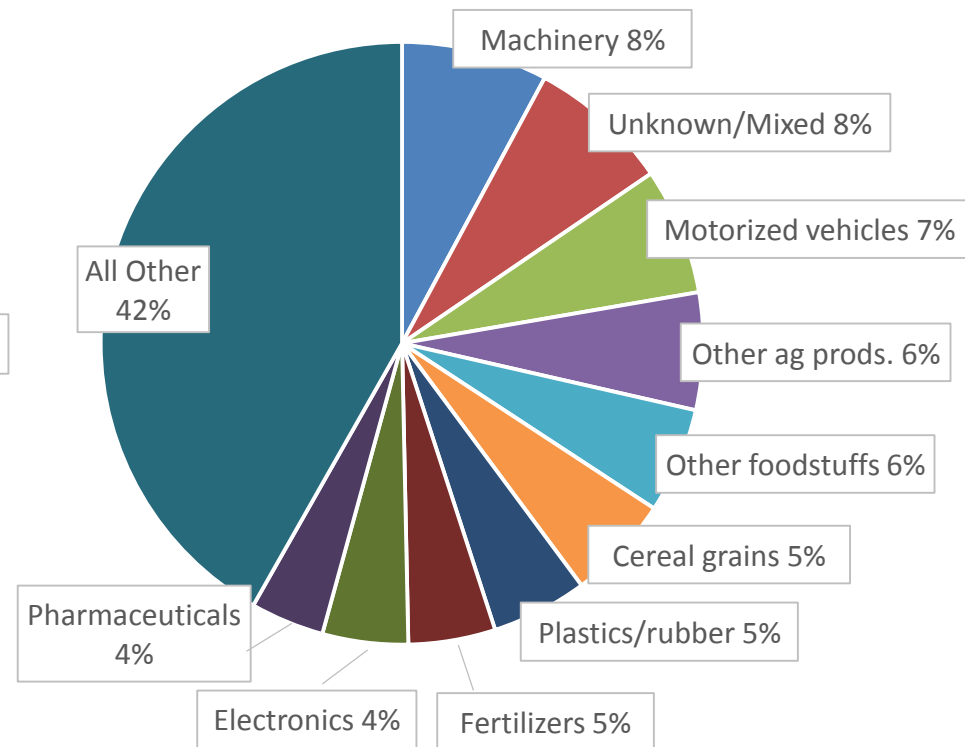
Eight County Tons and Value by Commodity

Top tonnage and value commodities are linked to the Region's key industries – manufacturing and agriculture

Tons by Commodity (2014)
Total = 67.3 Million tons



Value by Commodity (2014)
Total = \$50.4 Billion

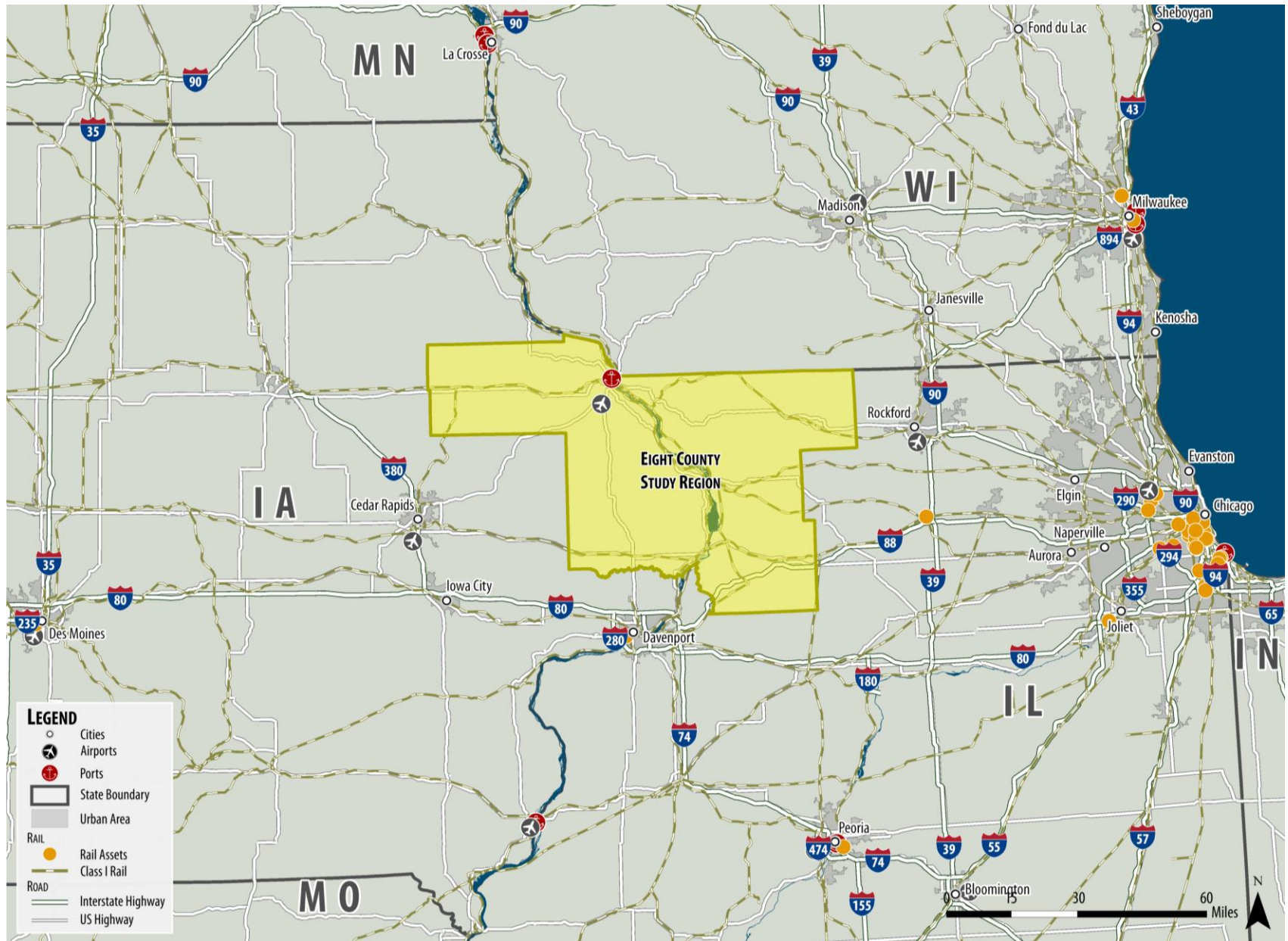


What transportation connections are most critical for the Region's economy?

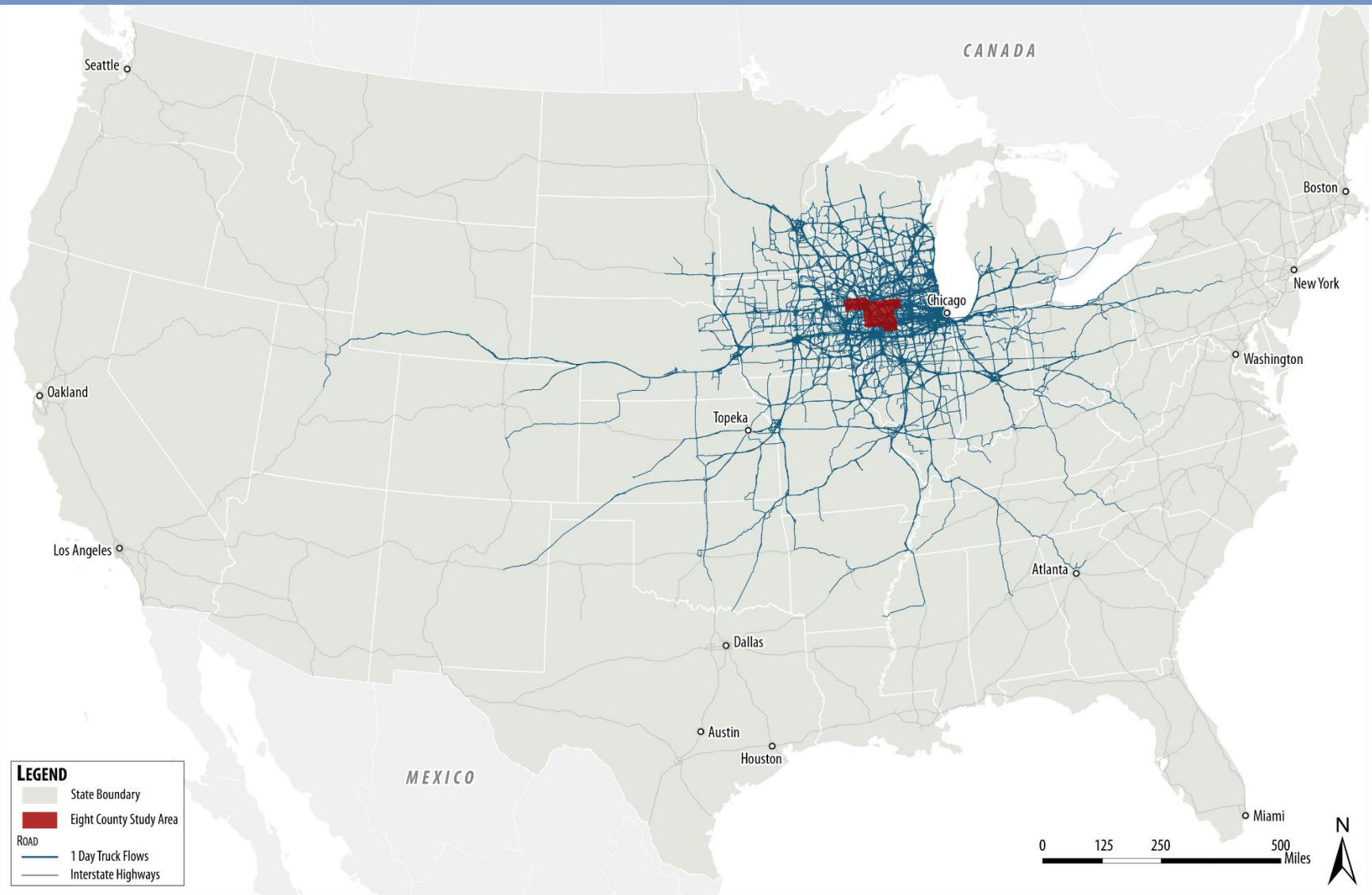
Why is this question important?

- This articulates the connections critical to your Regional economy.
 - Other regions
 - Trade lanes
 - Modes used

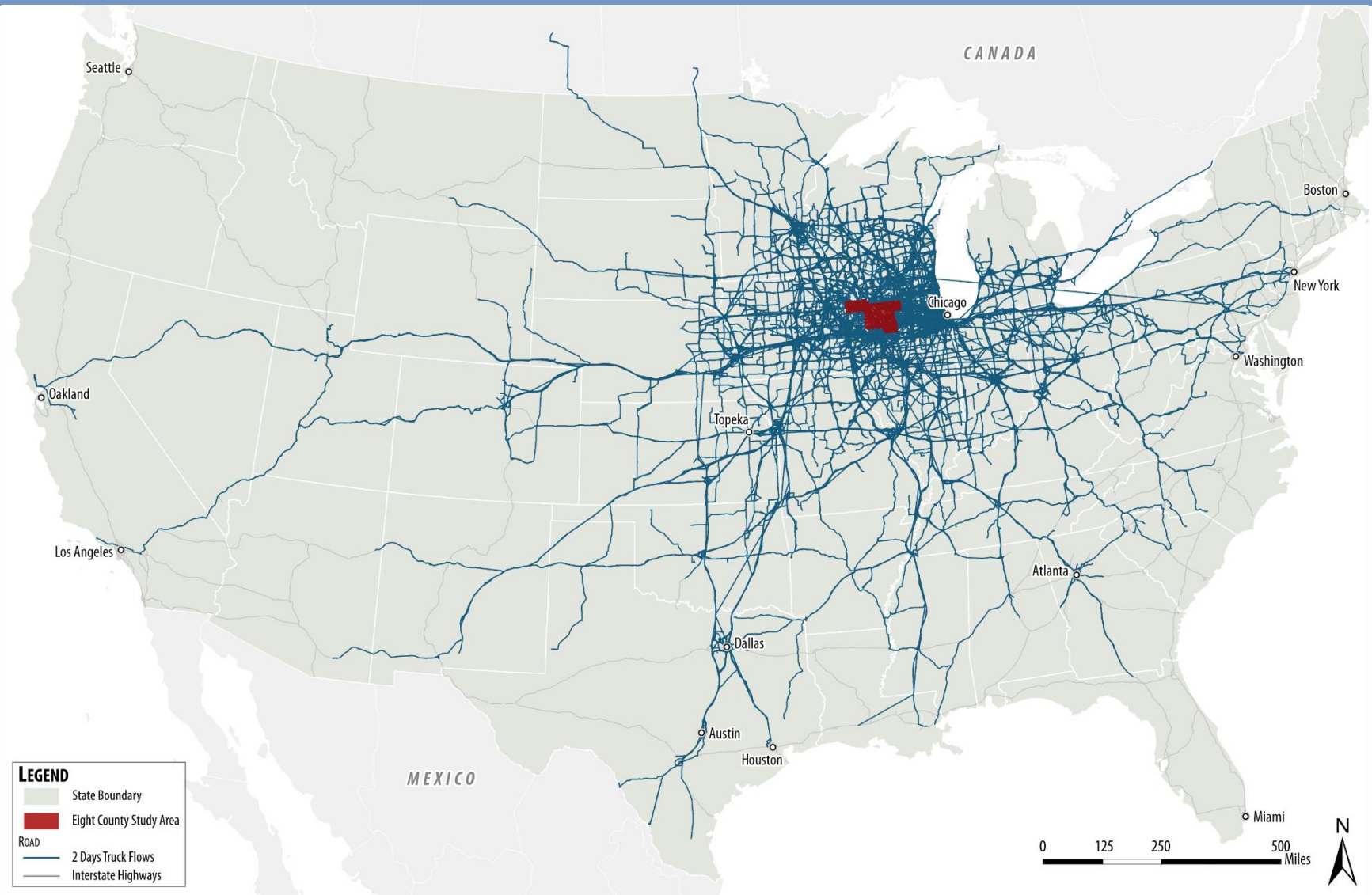
Eight County Proximity



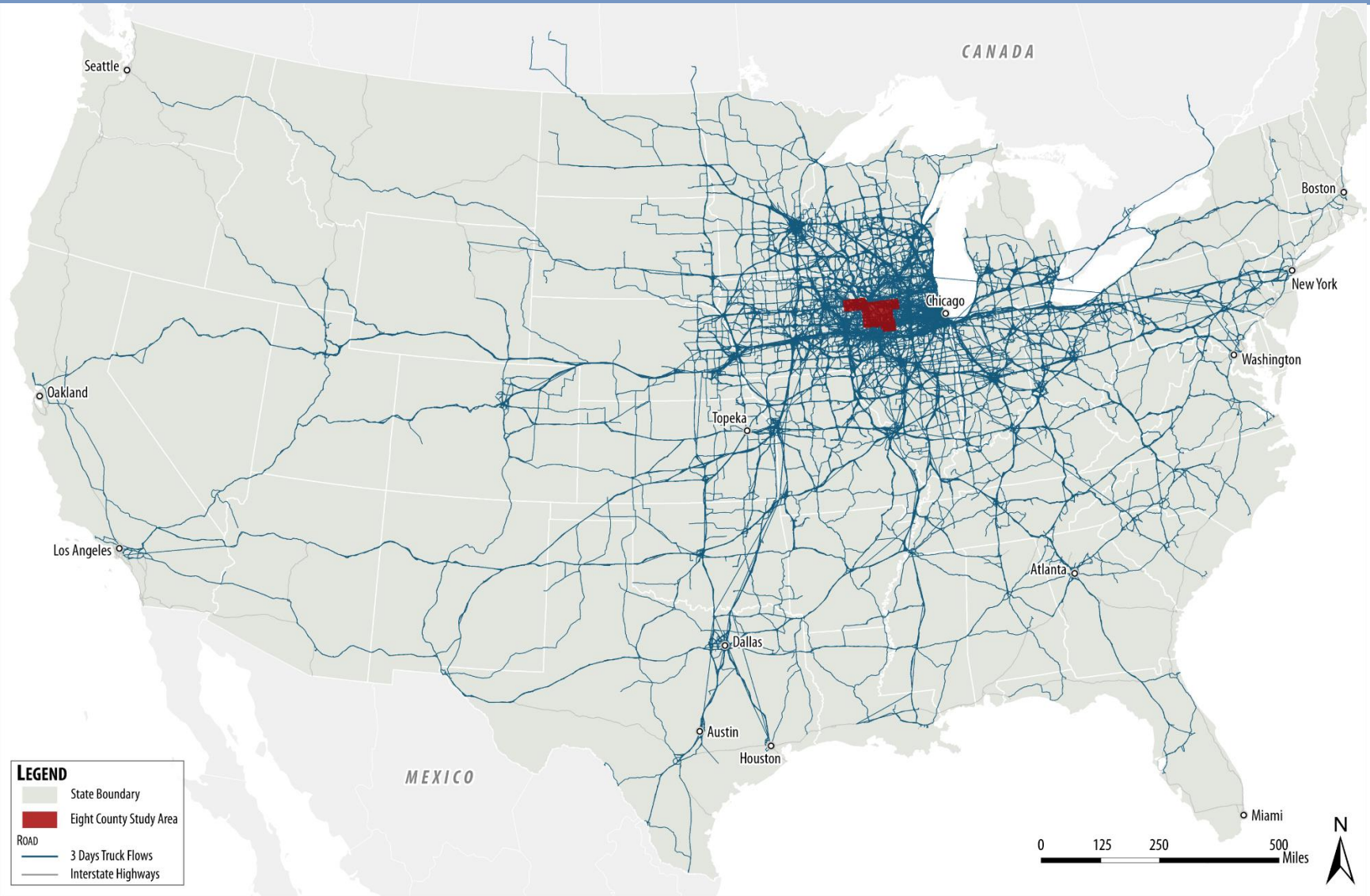
Within a 1-day truck drive from the Region...



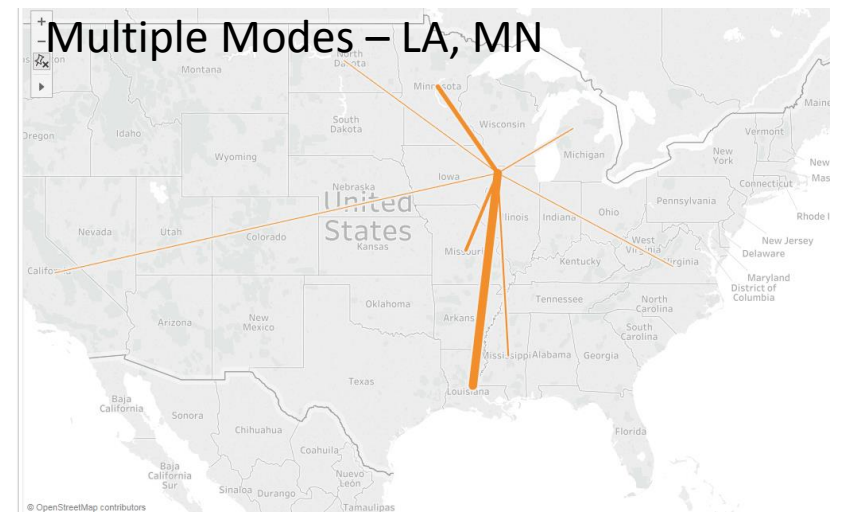
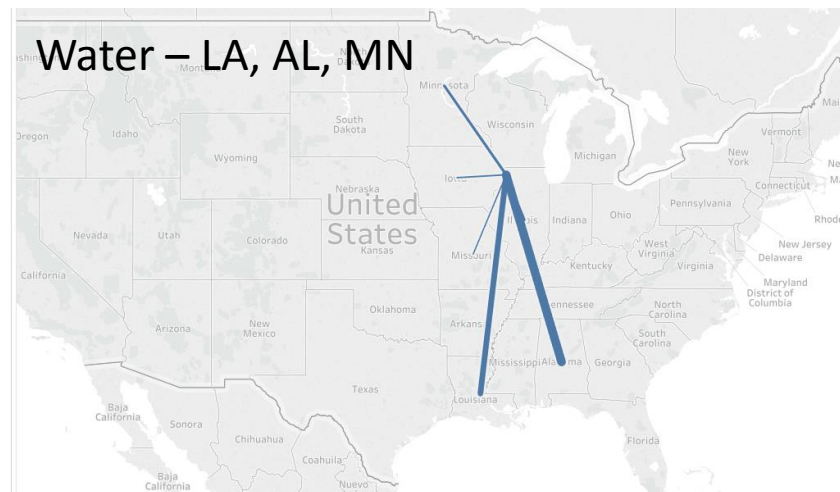
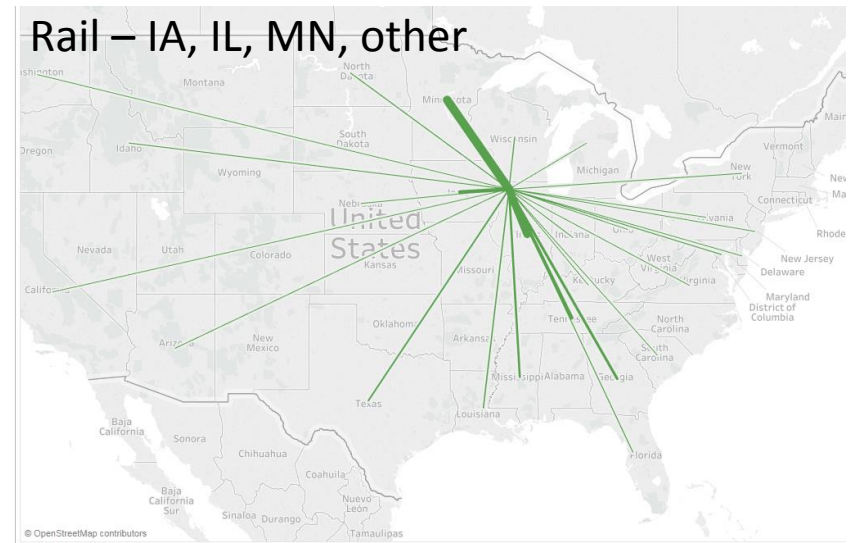
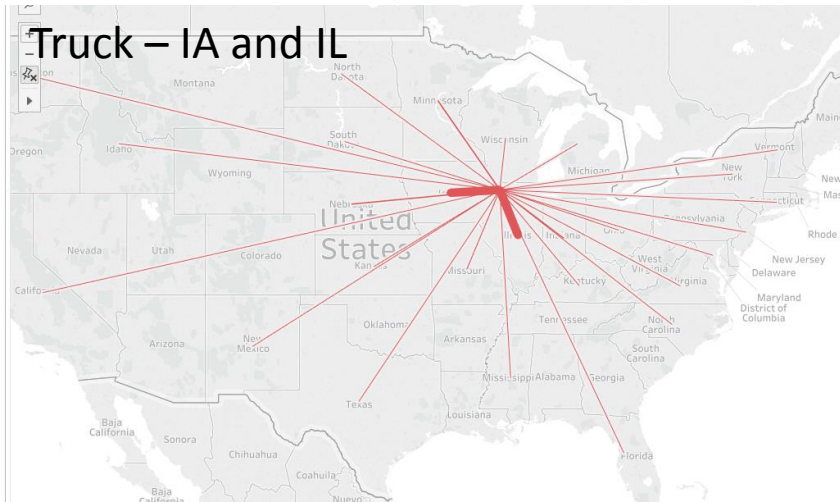
Within a 2-day truck drive from the Region...



Within a 3-day truck drive from the Region...



Example of Cereal Grains Tonnage Flows by Mode



What is the cost of using the Regional freight system?

Why is this question important?

- This informs the competitiveness of the services provided in the Region.

Transportation Cost Results

The Eight County Region “freight bill” can be estimated at roughly \$2 billion per year

	Rate per Ton-Mile	Ton-Miles, 2014	Estimated Transportation Cost
Truck	\$ 0.108	13,056,538,943	\$ 1,410,106,206
Rail	\$ 0.083	6,159,485,019	\$ 511,237,257
Multiple	\$ 0.097	1,012,159,822	\$ 98,179,503
Water	\$ 0.050	385,064,490	\$ 19,253,224
Total			\$ 2,038,776,190

Eight County Modal Usage

High reliance on rail, low reliance on water

	Eight County Region 2014 Tonnage Share	US Total Tonnage Share (excluding Air, Pipeline, Other)	Eight County “Modal Quotient”
Truck	73.3%	79.6%	0.92
Rail	23.0%	12.4%	1.85
Multiple	2.7%	3.1%	0.88
Water	1.1%	5.0%	0.21

Key Question 5

What recommendations will enhance the Region's economic competitiveness?

Why is this question important?

- A freight plan goal is to increase freight system speed, reliability, and modal availability, and to decrease cost.

Stakeholder Insights

- Information Gathering
 - EDC stakeholder meetings
 - Consultant team one-on-ones
 - Survey Monkey online questionnaire
 - Steering Committee feedback

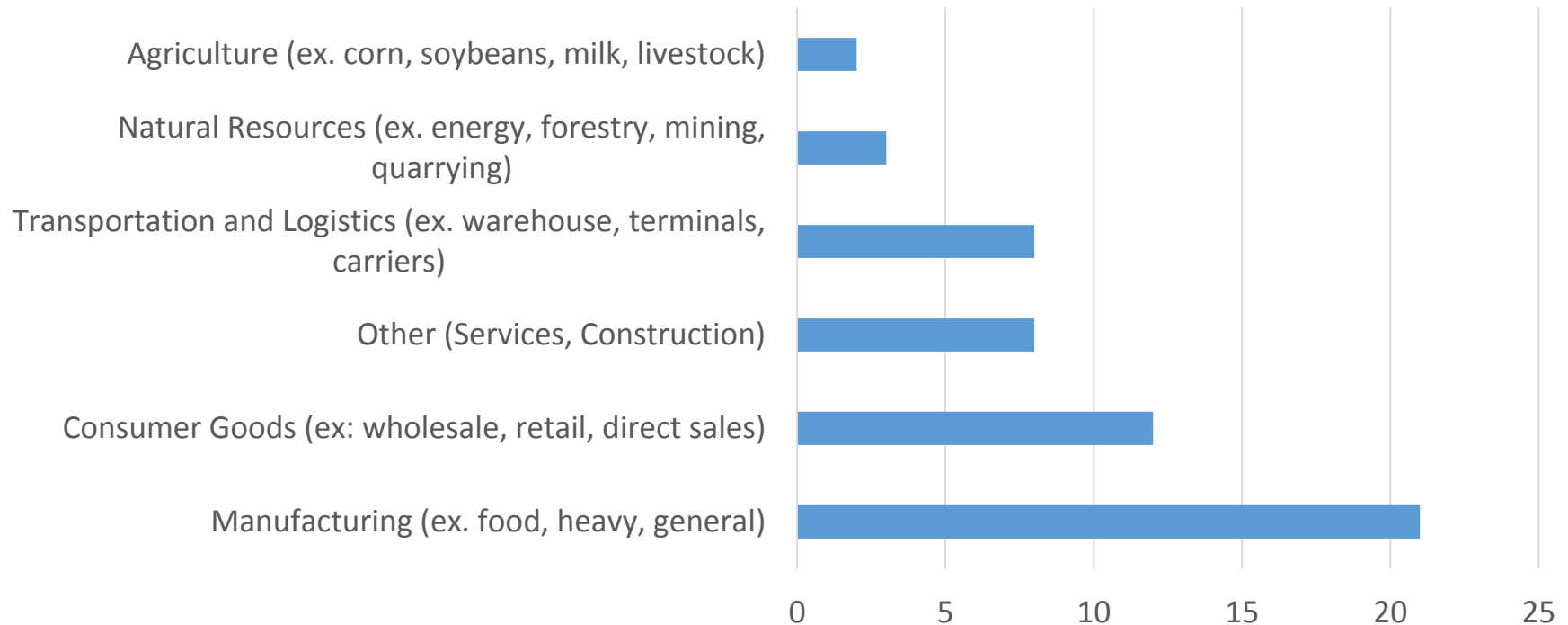
Stakeholder insights (qualitative data) will be compared against the performance assessment (quantitative data)

Industry Survey – Response Update

54 company responses

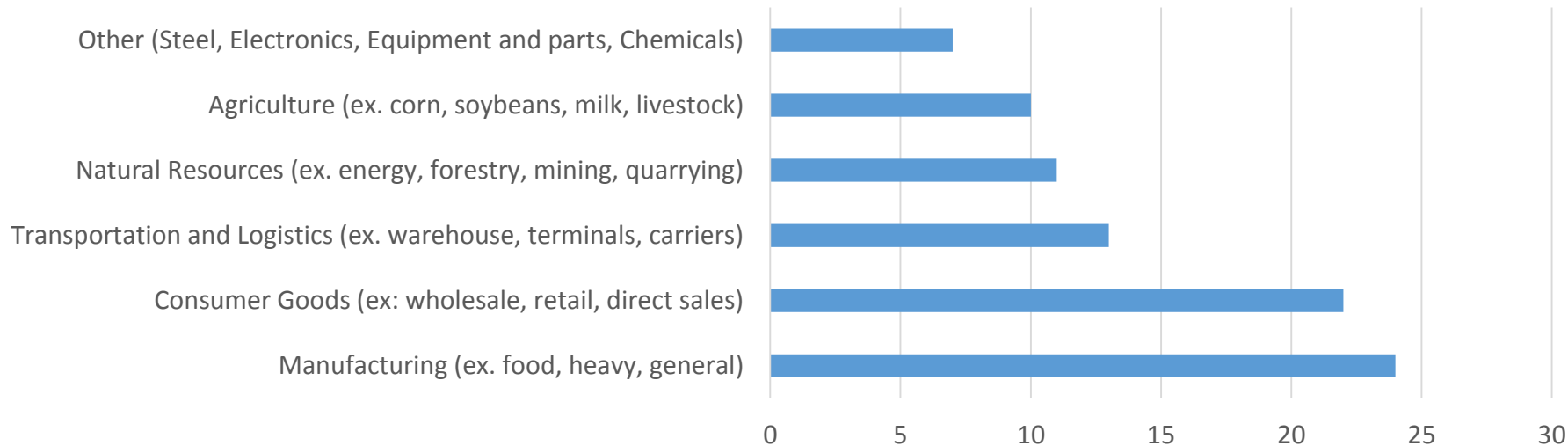


Industries Represented



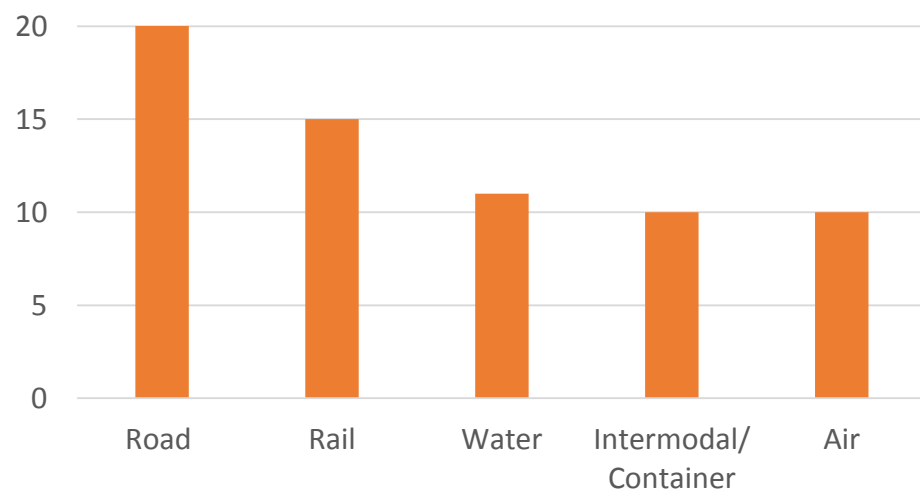
Industry Survey – Profile of Inbound Flows

Types of Inputs Used

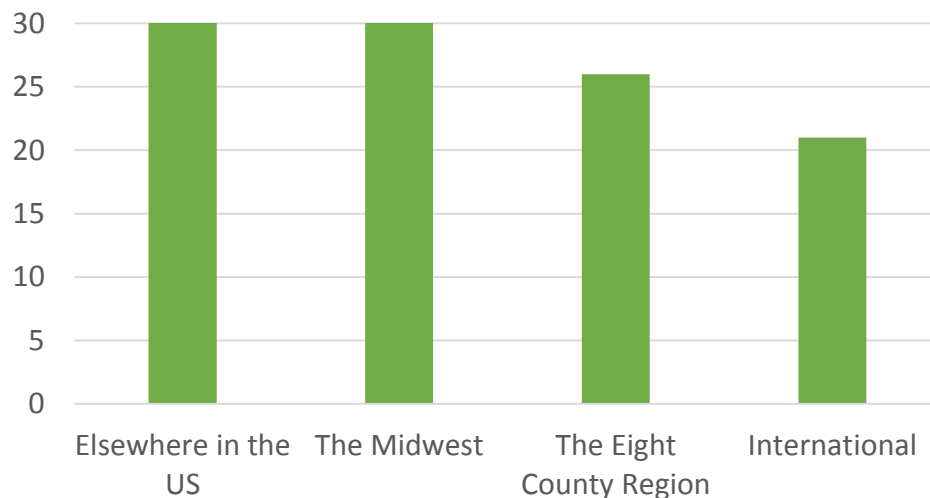


Inbound Modes of Transportation Used

All industries use road; 28 use road exclusively

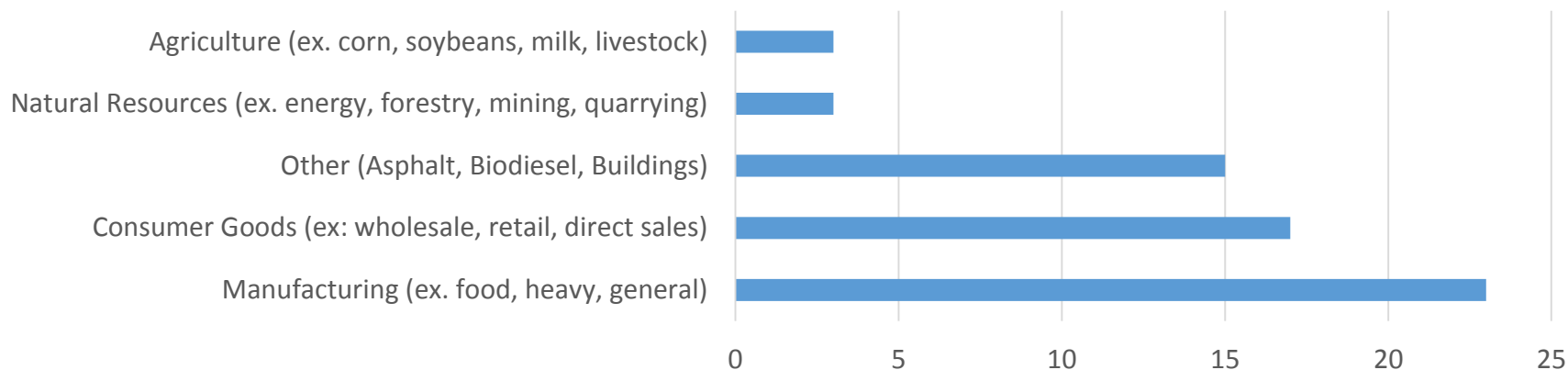


Origins of Inbound Commodities

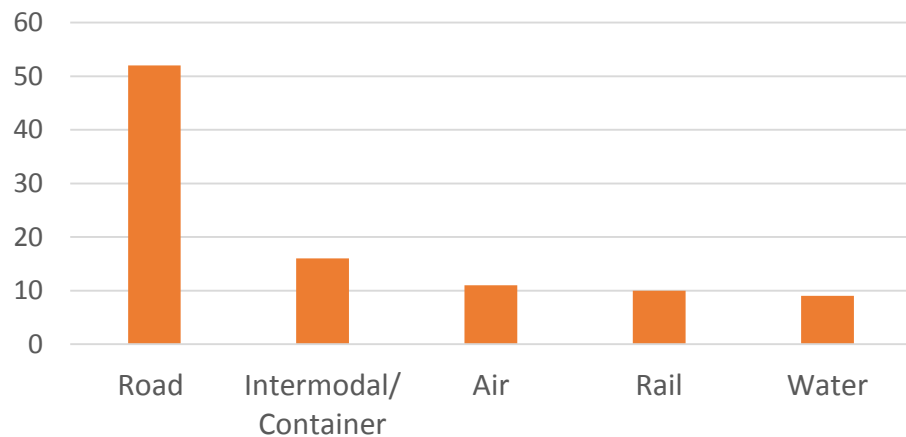


Industry Survey – Profile of Outbound Flows

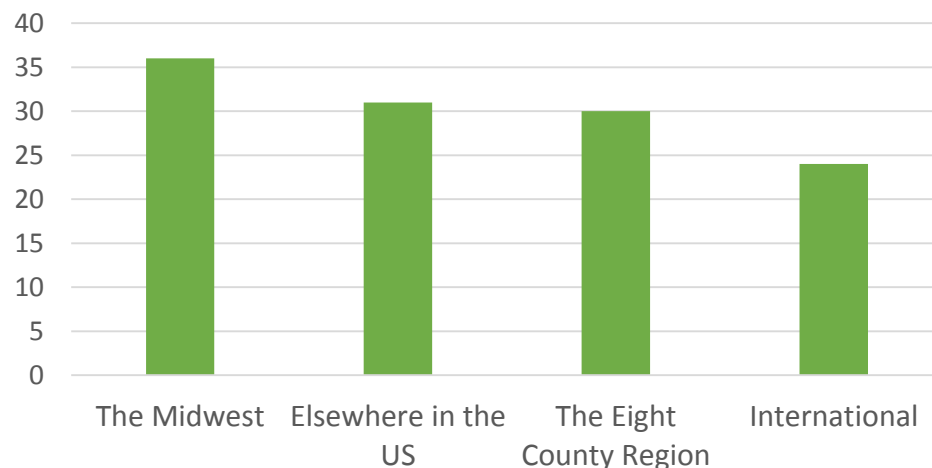
Types of Goods Produced
*(Goods Producing Companies Only;
Four companies produce more than one type of Good)*



Outbound Modes of Transportation Used
*(For 52 Goods-Producing Industries, all of whom
use road)*

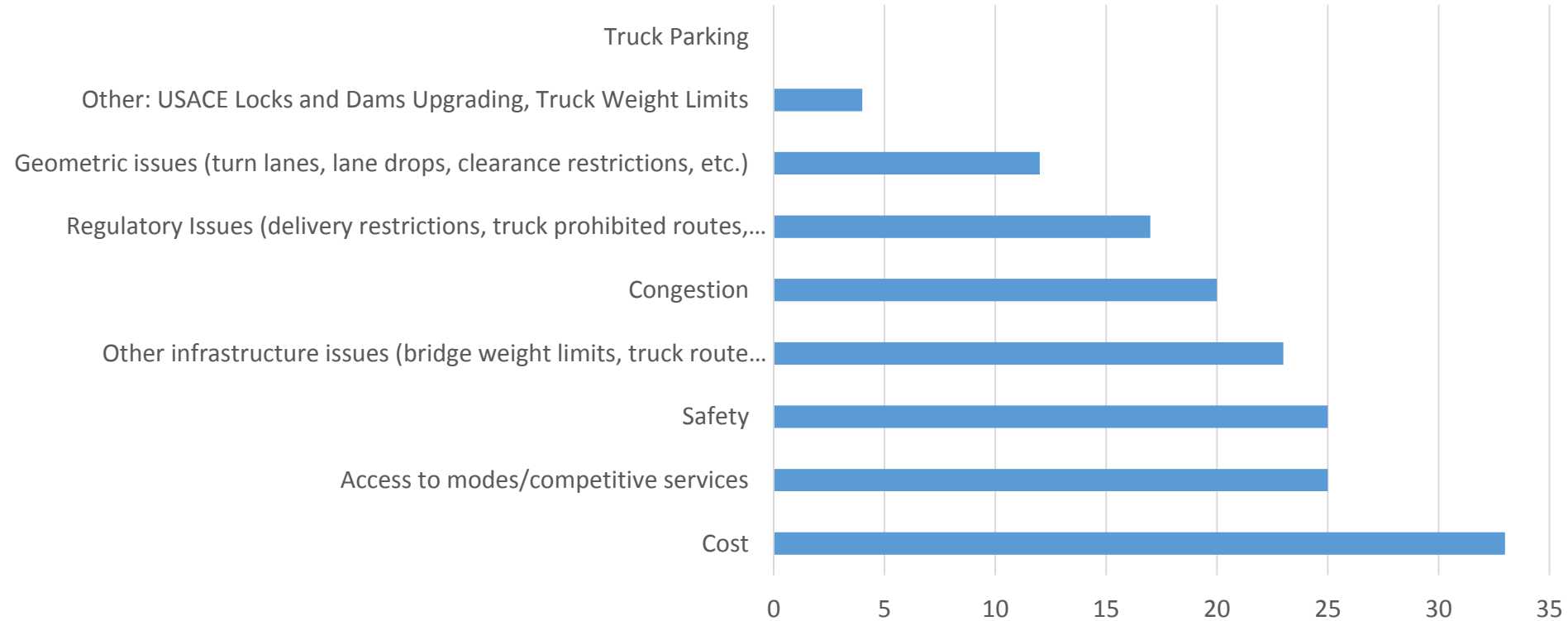


Destination of Outbound Commodities
(For 52 Goods-producing companies only)



Industry Survey – Transportation System Performance

"Top 3" Transportation Issues in Eight County Region



Transportation Needs and Opportunities

Projects	Programs
<ul style="list-style-type: none">• New/expanded roadways• Pavement improvements• Bridge improvements• Other spot highway improvements to address congestion and safety• New/improved intermodal and/or port facilities• Transload/consolidation facilities• Lock and dam improvements	<ul style="list-style-type: none">• Programs focused on highway and railway safety• Programs focused on enhancing skills of local workforce• Programs focused on technology applications to the (freight) transportation system• Freight planning program to monitor needs, issues and progress
Policies	Partnerships
<ul style="list-style-type: none">• Truck regulation harmonization between Iowa and Illinois• Illinois seasonal exemption for agricultural loads (up to 90,000lbs).• Truck route guidance	<ul style="list-style-type: none">• State, county and local public agency partnerships• Federal transportation agencies, including USDOT and the USACE• Regional and local economic development agencies• Class I and short line railroads• Airports• Water ports• Other local private industry/businesses,

Presentation Map

The Eight County Freight Plan

Key Outcomes and Information to be Delivered



Next Steps and Using the Results

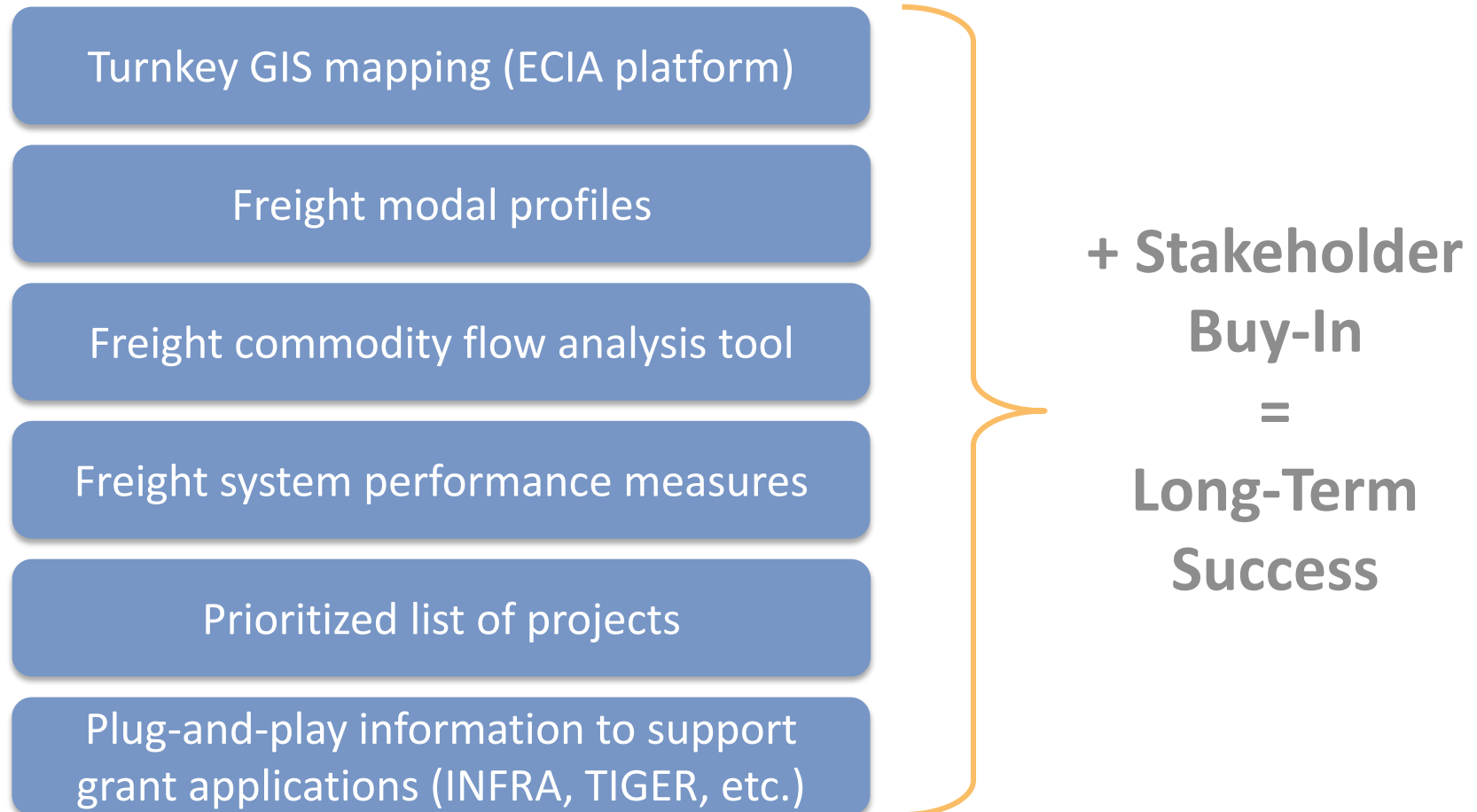
- Transportation, economic development, and supply chains
- Integrating user perspectives

Next Steps

- Formalize list of project recommendations
- Conduct benefit-cost analysis on select project types
- Coordinate with public and private sector stakeholders to vet and validate full slate of strategic recommendations
- Develop final Eight County Freight Plan and tools

Eight County Freight Plan Legacy

Outcomes and tools to advance Regional freight planning



Thank you!



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growing economies