



Illinois 2022  
State Freight Plan

# State and District Freight Plans

*presented to*

*Illinois State Freight Advisory Council*

*presented by*

*IDOT Office of Planning and Programming*

*Cambridge Systematics Consultant Team*

June 30, 2022



Illinois Department  
of Transportation

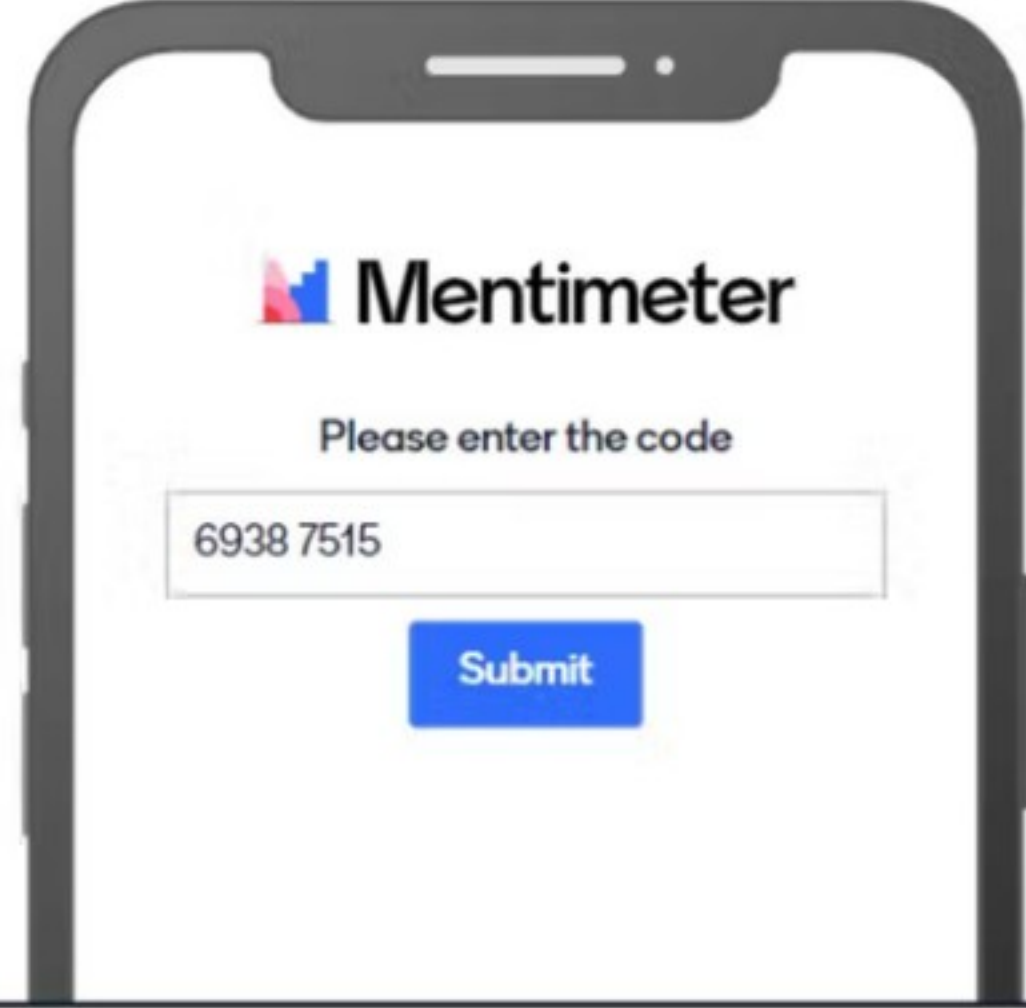


# Agenda

- » Introduction
- » Updates on 2022 State Freight Plan
  - New Infrastructure Investment and Jobs Act (IIJA) requirements
  - Outreach
  - Key Findings & Needs Assessment
- » SWOT Findings and Discussion
- » Next Steps

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# 2022 State Freight Plan Update

# New Requirements for State Freight Plans – IIJA/BIL

- » Assessment of truck parking facilities
- » Description of supply chain cargo flows
- » Inventory of commercial ports
- » Discussion of the impacts of e-commerce on freight infrastructure
- » Considerations of military freight
- » Expansion of Critical Corridors mileage (CUFC and CRFC)
- » Strategies and goals to decrease:
  - Severity of impacts of extreme weather/natural disasters on freight mobility
  - Impacts of freight movement on local air pollution
  - Impacts of freight movement on flooding and stormwater runoff
  - Impacts of freight movement on wildlife habitat loss

# Outreach Process

## » Round One: Vision and Goals

- 1:1 interviews with District staff and local industry leaders
- November 2021 ISFAC meeting






## » Round Two: Defining the Priority Freight Network and SWOT development

- February 2022 ISFAC meeting
- 9 District Freight Forums
- 130 industry representatives provided input into SWOT process





### Participating Stakeholders

- **Public sector organizations:** District staff, local public agencies, municipalities, counties, MPOs, port authorities
- **Freight operators:** trucking companies, rail and air freight carriers, barge operators, logistics operators, commodity shippers (coal, oil, agricultural)
- **Industry stakeholders:** industrial developers and managers, investors, large employers, Illinois Farm Bureau, Midwest Truckers Association

# Outreach Takeaways

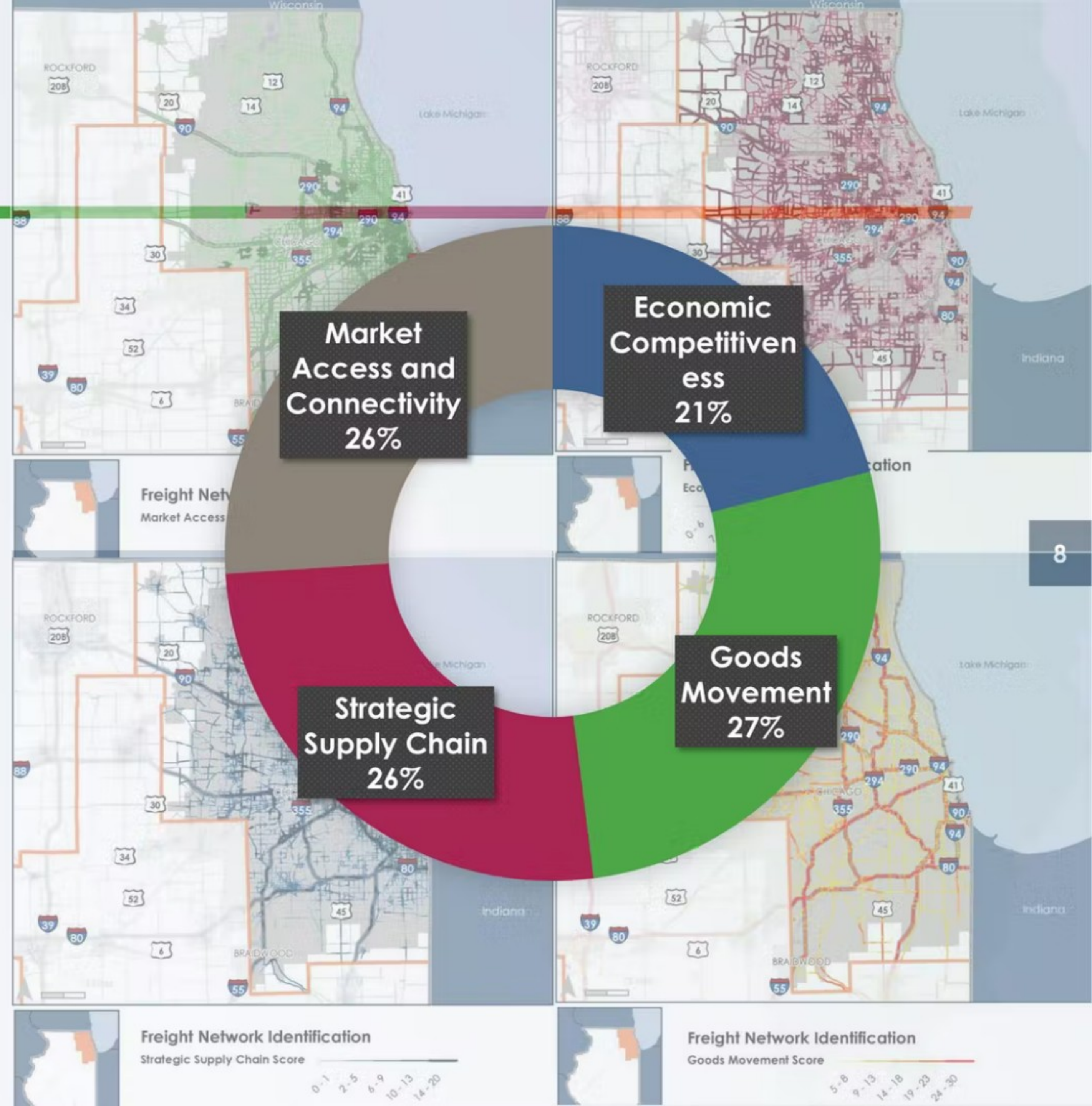
-  Each IDOT District has unique freight assets and needs
-  Freight developments impact the entire transportation system without prior coordination
-  Truck congestion and truck impacts are expanding into rural and previously unaffected areas
-  Workforce issues are impacting infrastructure project delivery and supply chain fluidity
-  Truck parking areas are needed for staging and driver rest/compliance with federal requirements

# Outreach Takeaways

-  More multimodal and multi-jurisdiction coordination and communication is needed to address freight issues
-  Freight data availability needs to be expanded with guidance on how to incorporate information into programming and project development
-  Illinois needs to do more to leverage its multimodal assets
-  Community and livability impacts of freight should be incorporated into freight planning and execution

# Priority Freight Network

- » Last time, **ISFAC** provided input to score the criteria for the priority freight network
- » Since then, we developed **draft network** and **vetted** with **stakeholders** throughout the state





# Priority Freight Network

- » Draft network is 7,706 miles
  - Started with statewide network, added local roads deemed critical to stakeholders
  - 652 comments received from stakeholders
- » The Priority Freight Network will be used to help identify the most critical corridors, needs, and projects for inclusion in the Freight Plan



## IDOT Draft Priority Freight Network

- Draft Freight Highway Network
- Proposed
- IDOT System
- Illinois Urban Areas

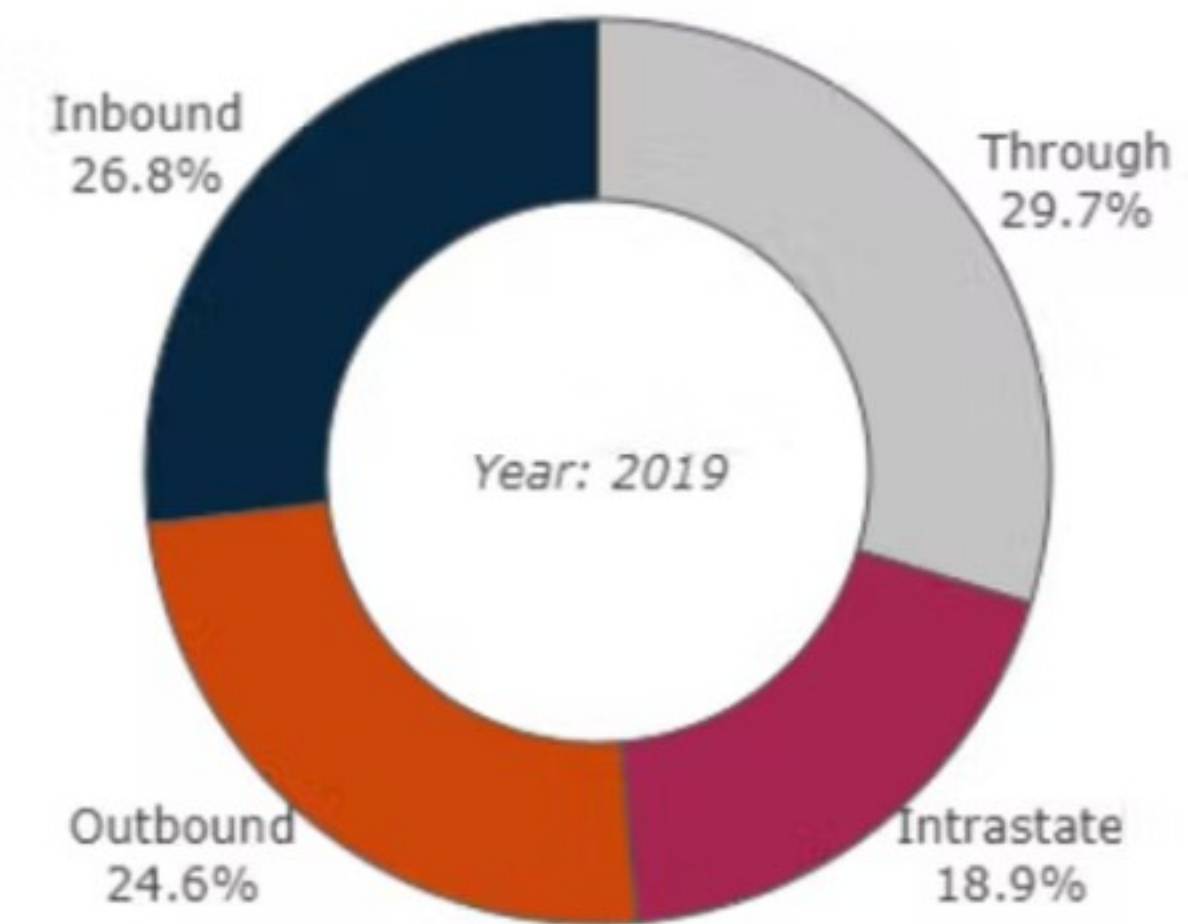


# Freight Plan Data Analyses

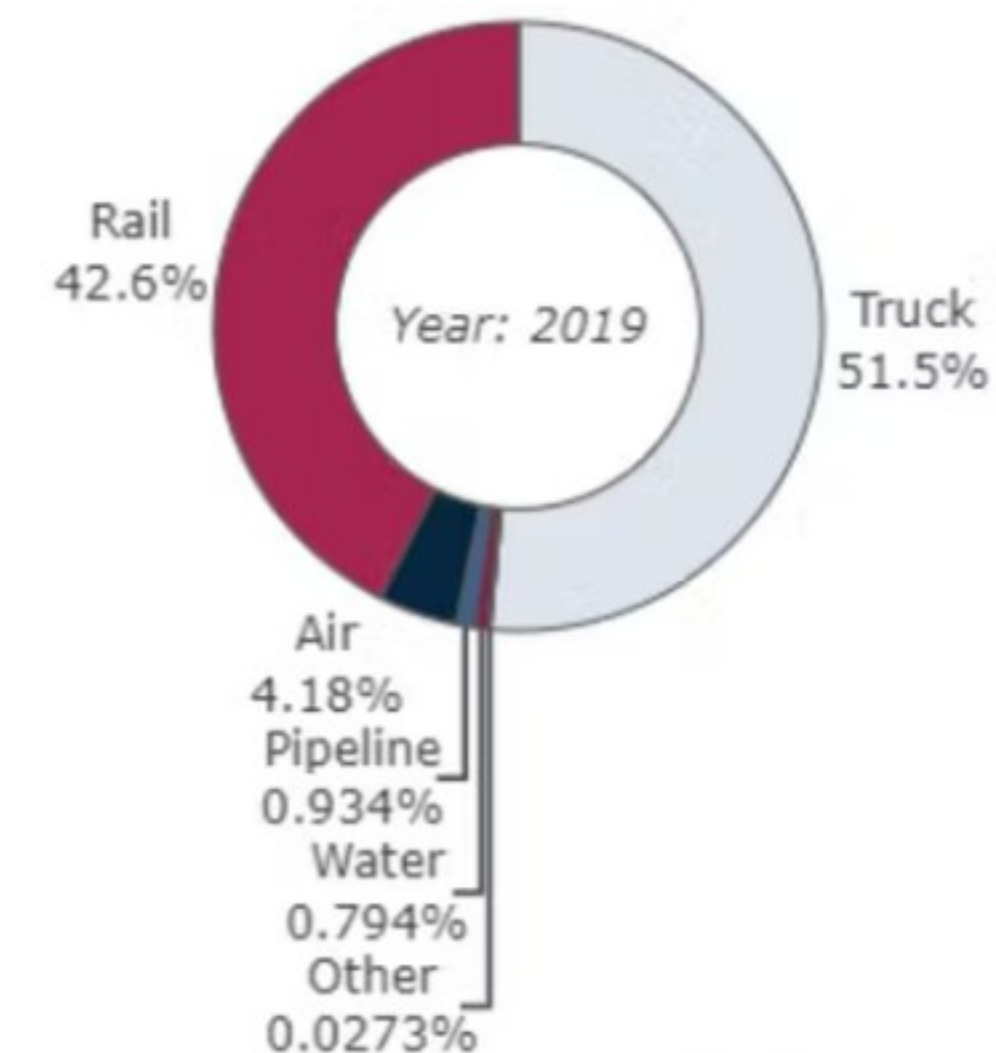
- ✓ Highway Modal Profile
- ⌚ Rail Modal Profile
- ✓ Aviation Modal Profile
- ⌚ Waterways Modal Profile
- ✓ Pipeline/HazMat Modal Profile
- ✓ ITS/Technology Modal Profile
- ⌚ Freight Generators Analysis
- ⌚ Commodity Flow Analysis
- 🕒 Equity and Environmental Justice Analysis
- 🕒 Needs Assessment

# Goods Movement Overview

- » In 2019, **1.65 billion tons** of goods worth **\$2.60 trillion** were transported in Illinois
- » By 2050, that is projected to become **3.08 billion tons** (87% growth) worth **\$5.62 trillion** (115% growth)
- » The freight system is dominated (>**90%**) by **truck & rail** movements
- » **Air** plays a critical role for transporting high value goods (4%)
- » **Pipeline & marine** cargo account for a larger share of the total tonnage (9%) than of the total value (<2%)



**Flow by Direction – Based on Value**



**Mode Split – Based on Value**

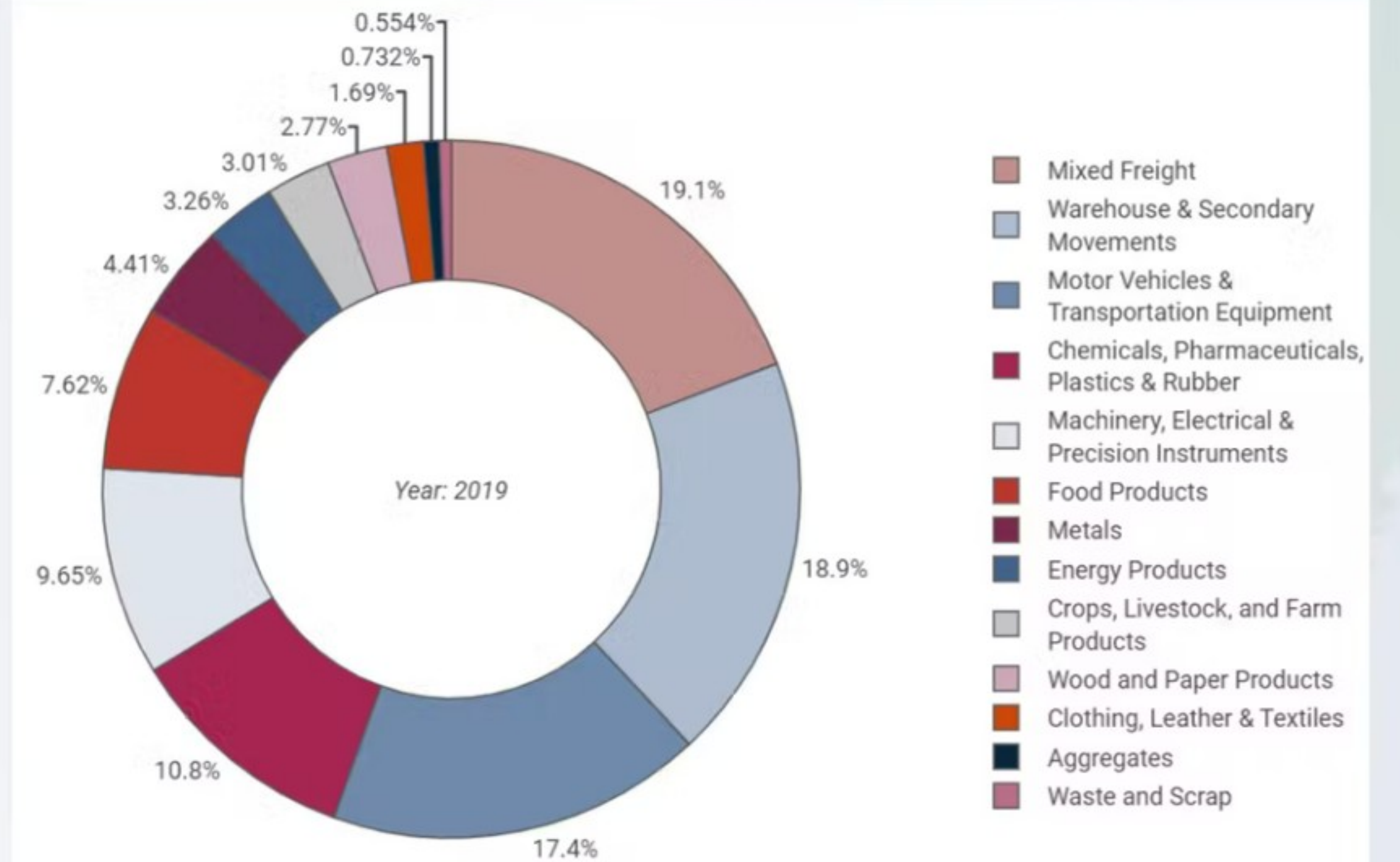
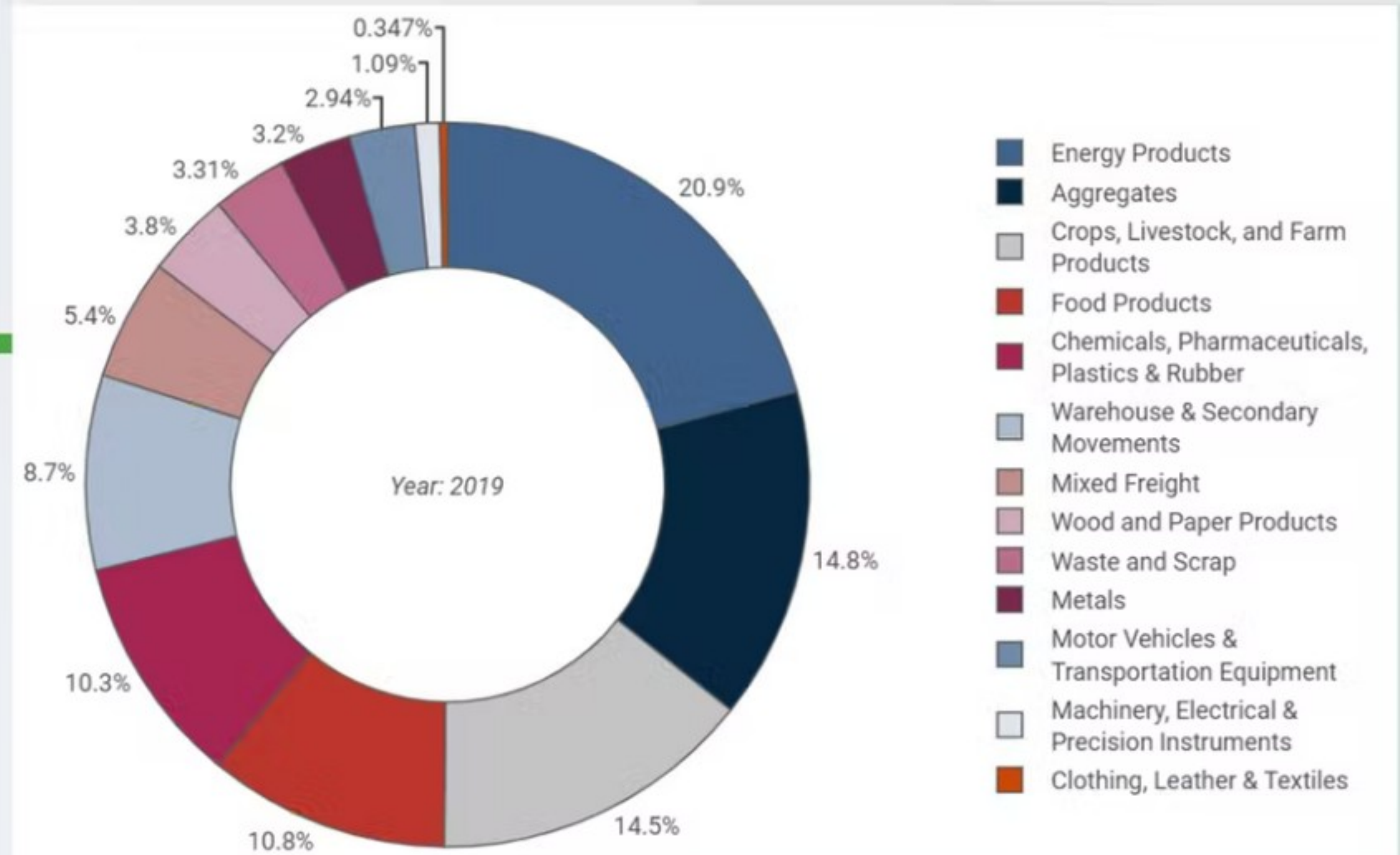
# Top Commodities

## Top Commodity Groups by Tons in 2019

- Energy Products (344 M Tons)
- Aggregates (245 M Tons)
- Crops, Livestock, and Farm Products (239 M Tons)
- Food Products (177 M Tons)
- Chemicals, Pharmaceuticals, Plastics, and Rubber (170 M Tons)

## Top Commodity Groups by Value in 2019

- Mixed Freight (\$498 B)
- Warehouse & Secondary Movements (\$492 B)
- Motor Vehicles and Transportation Equipment (\$454 B)
- Chemicals, Pharmaceuticals, Plastics, and Rubber (\$281 B)
- Machinery, Electrical, and Precision Equipment (\$251 B)



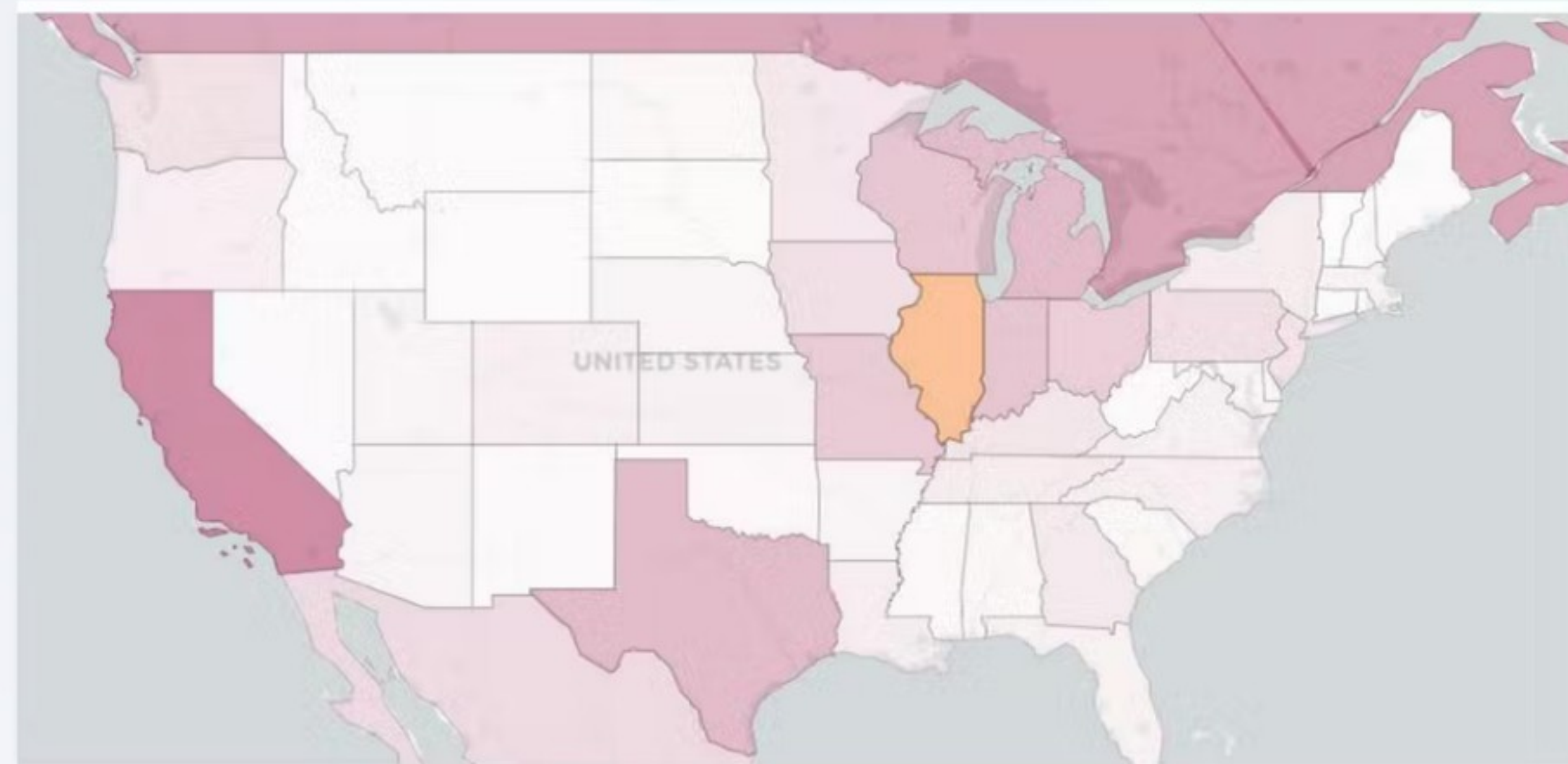
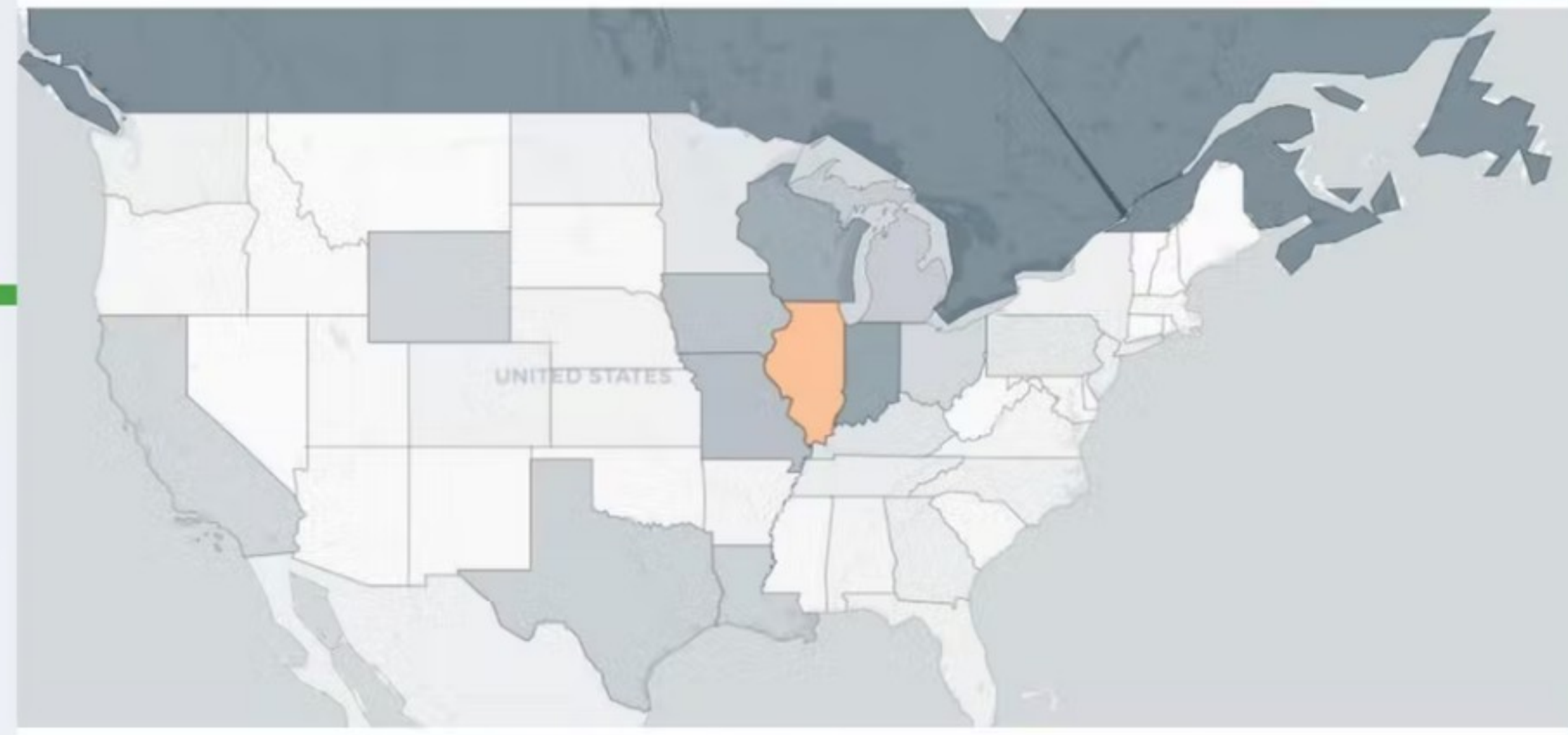
# Top Trading Partners

## Top Trading Partners by Tons in 2019

- Canada (210 M Tons)
- Indiana (168 M Tons)
- Wisconsin (153 M Tons)
- Missouri (115 M Tons)
- Iowa (107 M Tons)

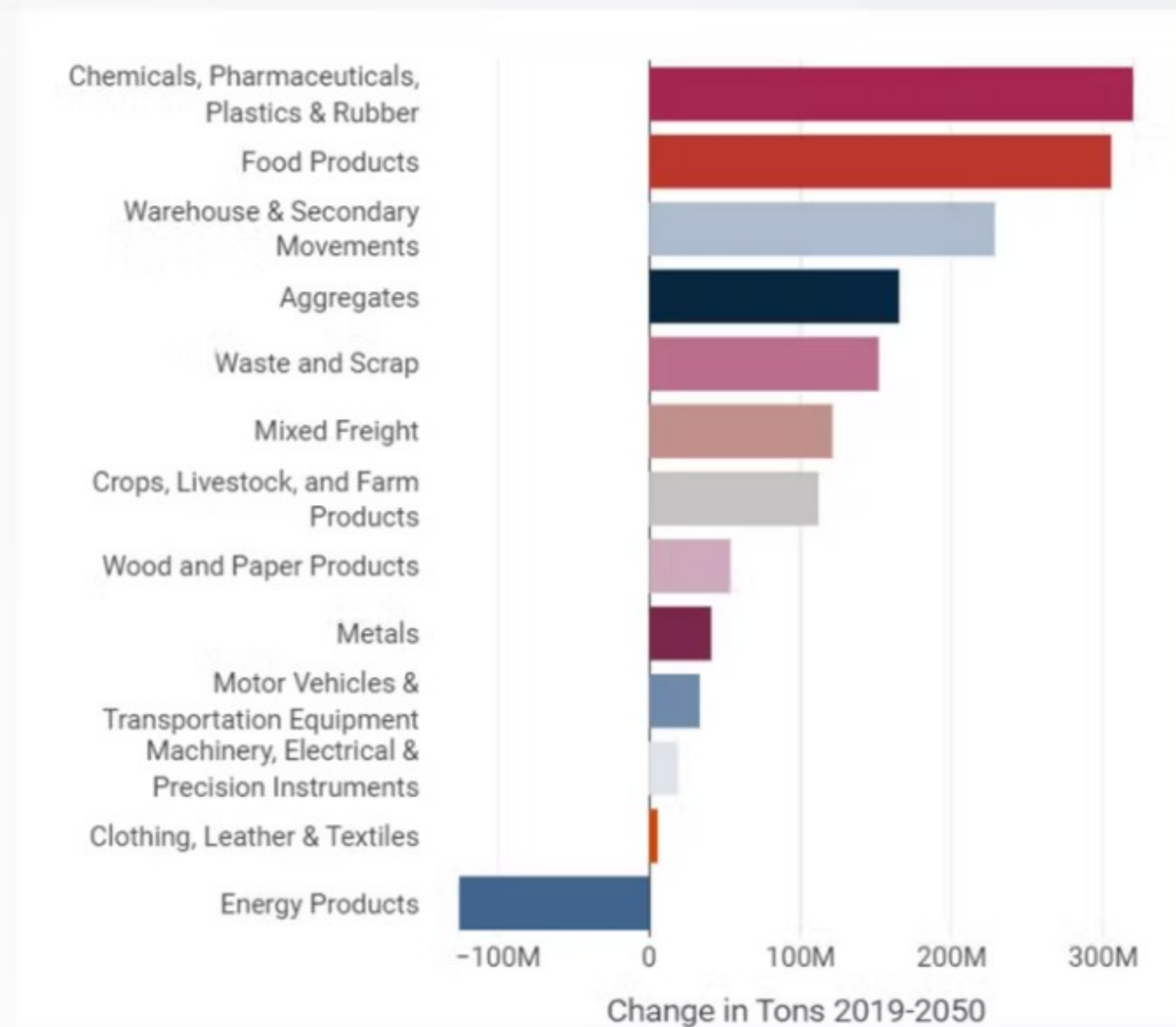
## Top Trading Partners by Value in 2019

- California (\$333 B)
- Canada (\$264 B)
- Texas (\$195 B)
- Michigan (\$192 B)
- Wisconsin (\$164 B)

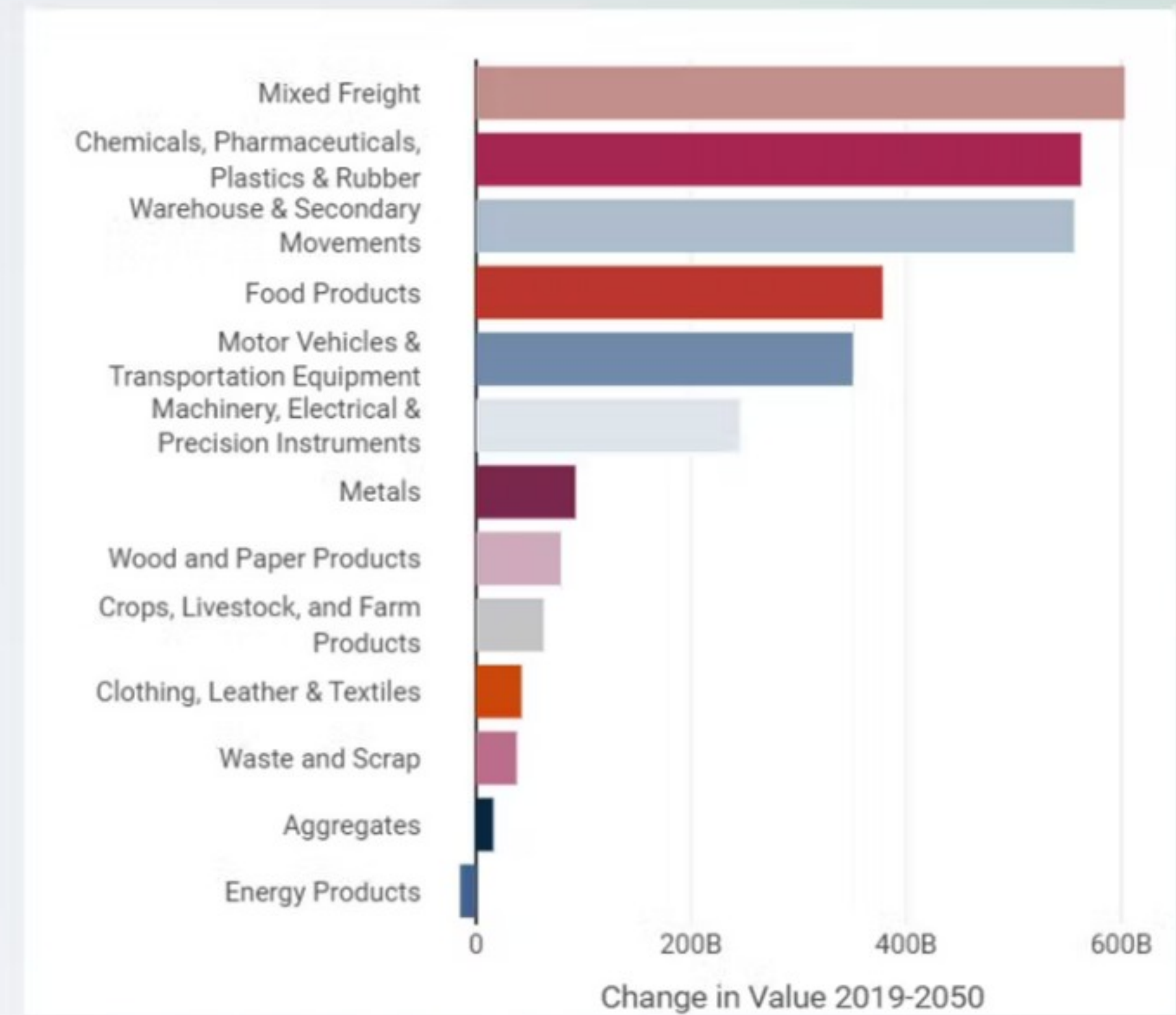


# Future Commodity Trends

» By 2050, Truck projected to increase tonnage more share by 6%

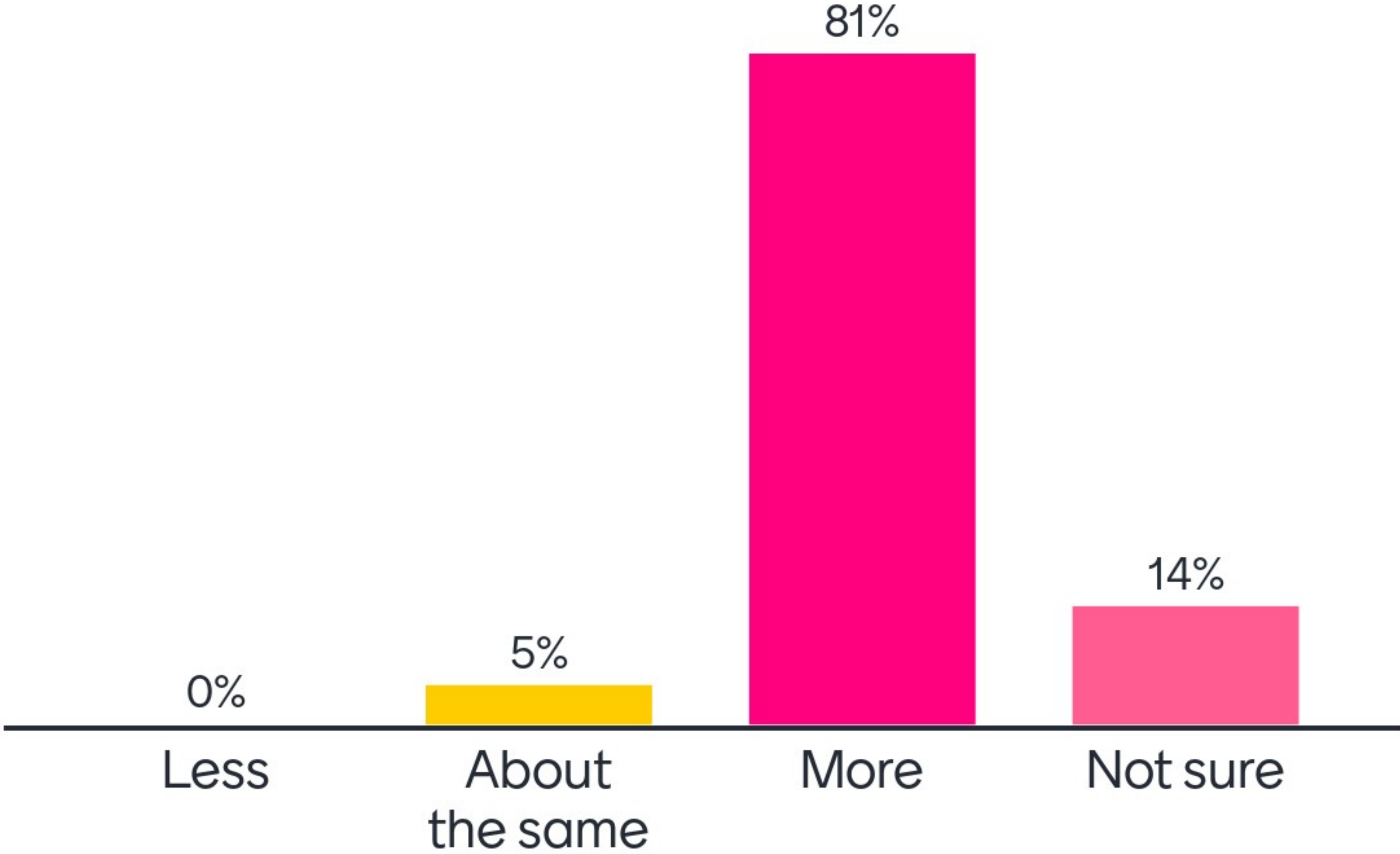


**Change in Commodity Groups by Tons (2019-2050)**

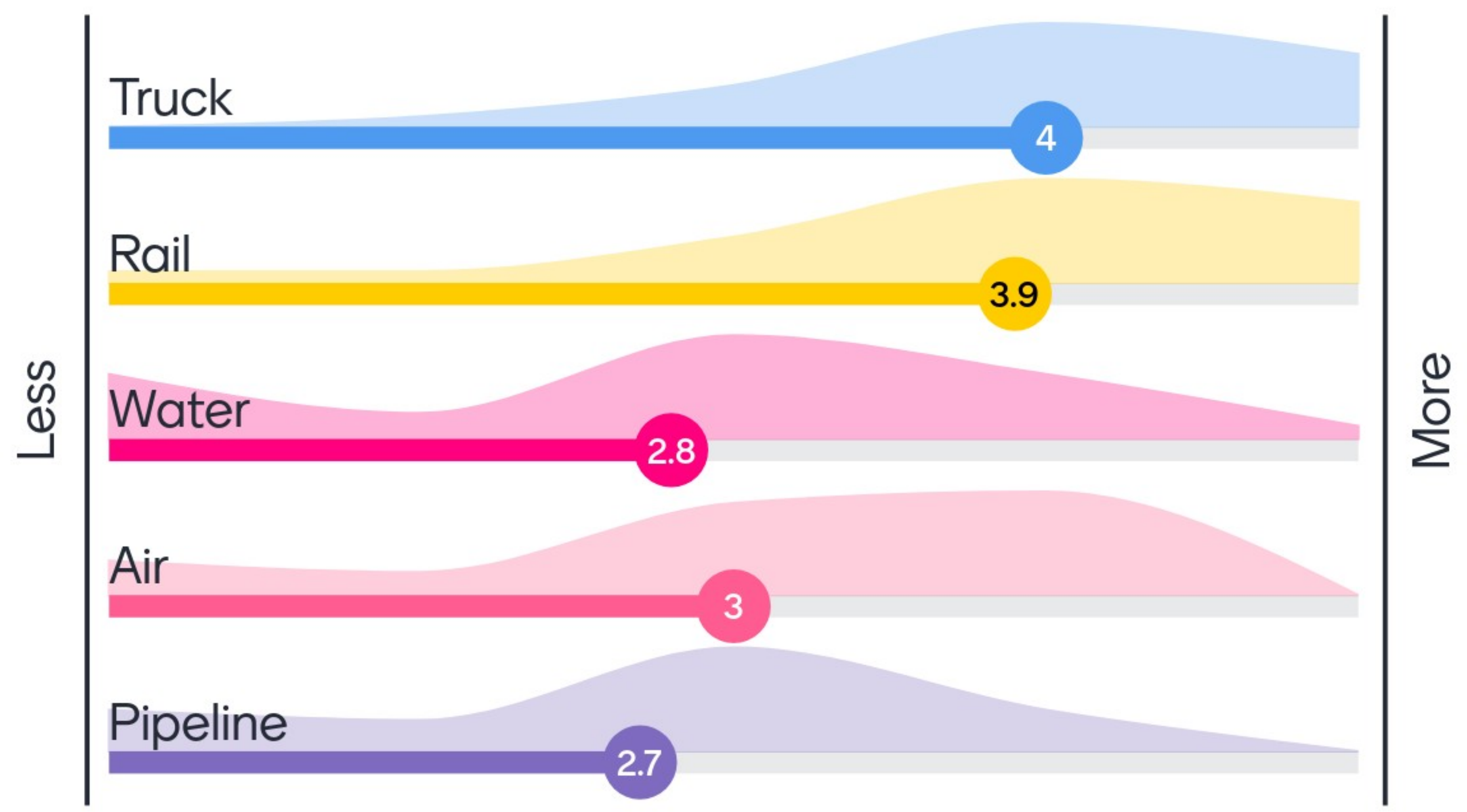


**Change in Commodity Groups by Value (2019-2050)**

# How do you expect the volume of goods moved by your industry/region to change in the next 10 years?



# How do you see the transportation modes used by your industry/region changing?





# What factor will have the greatest impact on freight in your industry/region in the next 10 years?

Labor

New businesses and tech

Automation

Automation

changing technology- especially autonomous vehicles

Cost and availability of fuel

Consumer expectation

Climate change

Labor

# What factor will have the greatest impact on freight in your industry/region in the next 10 years?

Improvements to the Mississippi River lock and dam system

workforce development

Crew size reductions and Train length

Fuel costs. Workforce needs.

Energy

climate change

TDL/Supply chain tied to Last Mile

Labor

Infrastructure improvements

# What factor will have the greatest impact on freight in your industry/region in the next 10 years?

community support

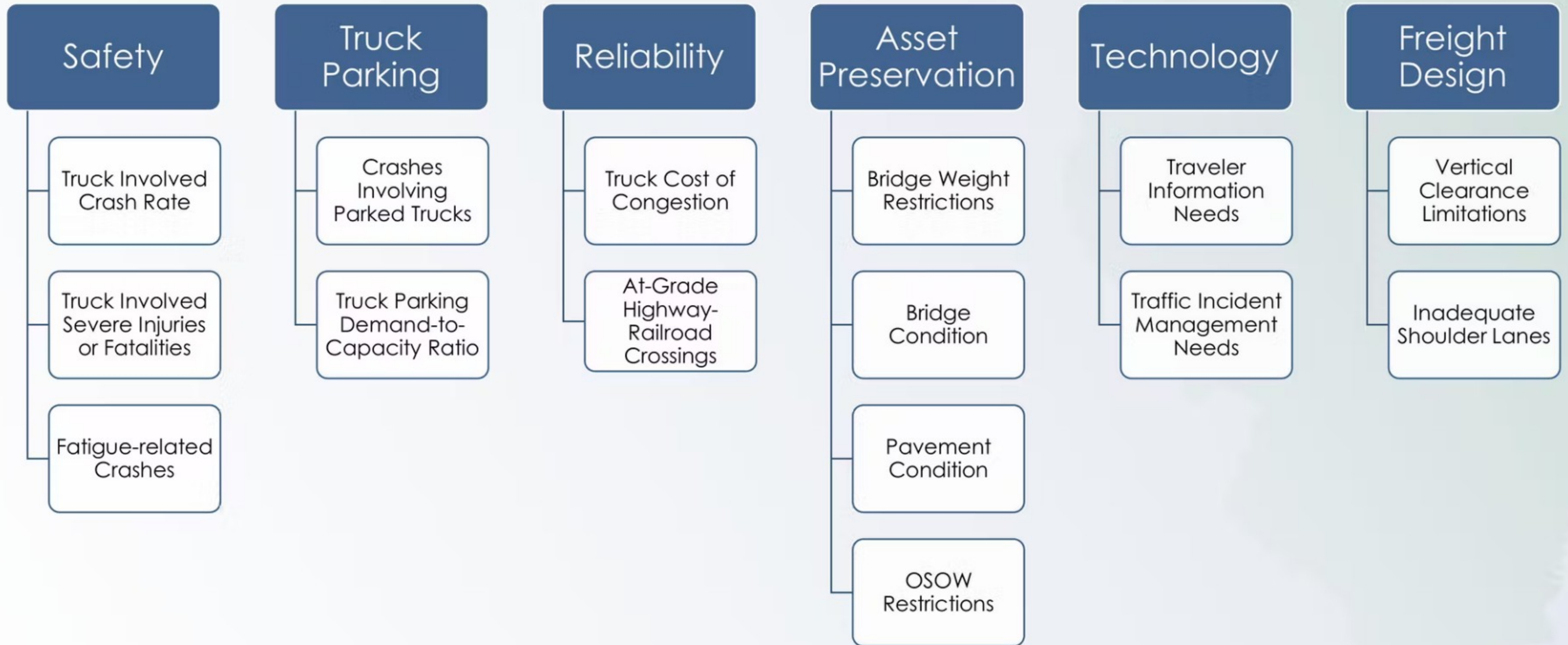
Autonomous vehicles, costs of operation, regulatory meddling

More interest in intermodal ports and containers.

Move from Diesel Fuel to Electric

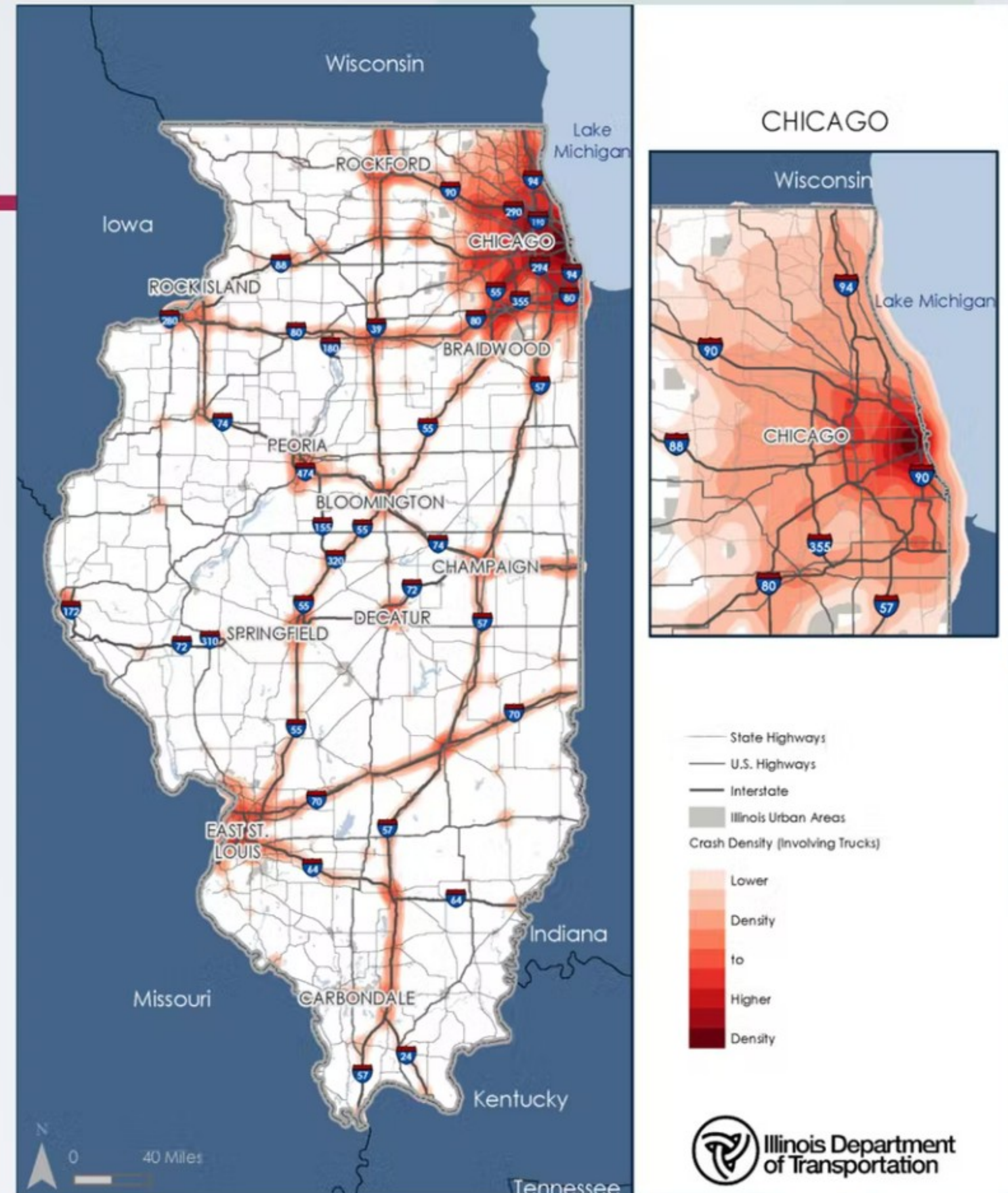
container on barge

# Proposed Highway Needs Assessment Metrics



# Highway Safety

- » Between 2015-2019, Illinois had **67,000** truck-involved crashes
  - **493** involved a fatality
  - **7,813** involved a serious/major injury
- » The overall crash rate increased about 4% during this time
  - However, fatal and serious injury crashes decreased (about 4% and 13%)

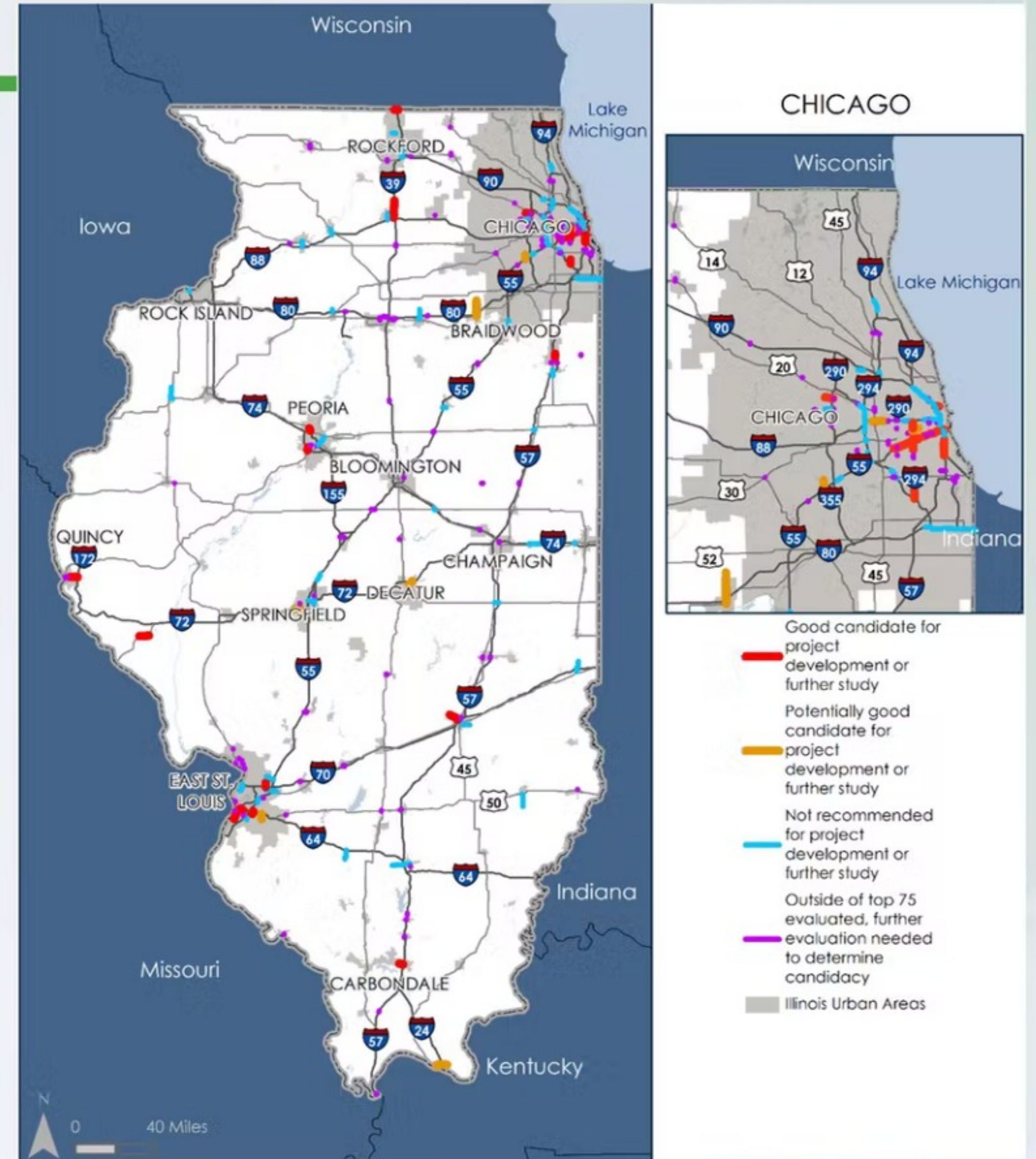


Source: IDOT Crash Data (2015 - 2019)

# Truck Cost of Congestion

Bottleneck Name	Congestion Cost (\$ per day)
<b>Urban Chicago Area</b>	
Dan Ryan/Kennedy Expwy - Pershing Rd to Edens Expwy	1,158,063
I-80/294 from Hazel Crest Split to Indiana Line	615,875
I-294 from I-290 to York Rd	239,533
Stevenson Expwy - Harlem Av to Cicero Av	206,662
Stevenson Expwy - Cermak to Kedzie	181,982
<b>Urban Other Area</b>	
IL-162/Edwardsville Rd, Madison County	139,972
Wabash Ave/Veterans Pkwy, Springfield	60,151
IL-157/Bluff Rd in Madison County	39,801
I-74 west of Danville	38,027
State St in Rockford	31,799
<b>Rural</b>	
IL-15, Mount Vernon	191,406
I-55 Exits 241-240	90,385
IL-47 in Morris	77,203
I-74 at US-136, McLean County	60,142
IL-23 in Ottawa	54,652

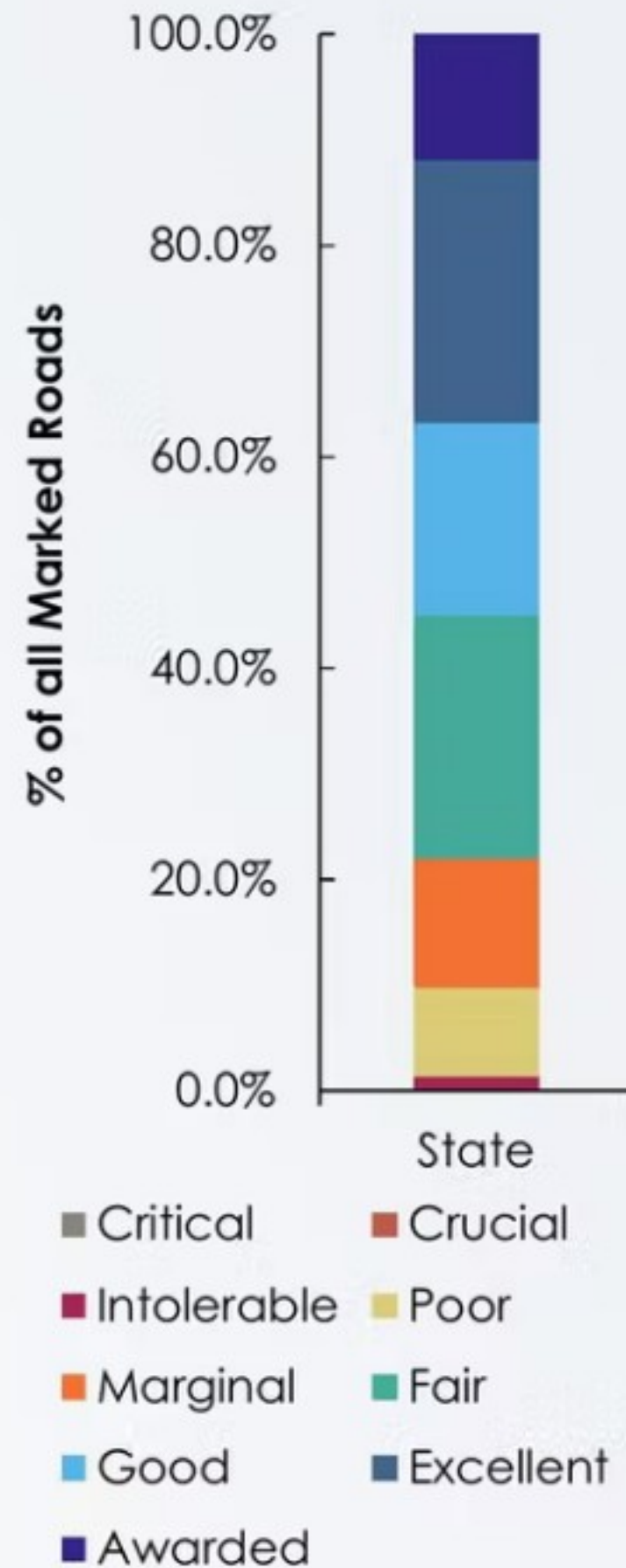
## Illinois Truck Bottlenecks (2019)



# Pavement Condition

» Much of the pavement on roadways important to freight is in acceptable condition

- **97%** of Interstates
- **91%** of Freeways and Other Principal Arterials
- **85%** of Minor Arterials or Major Collectors



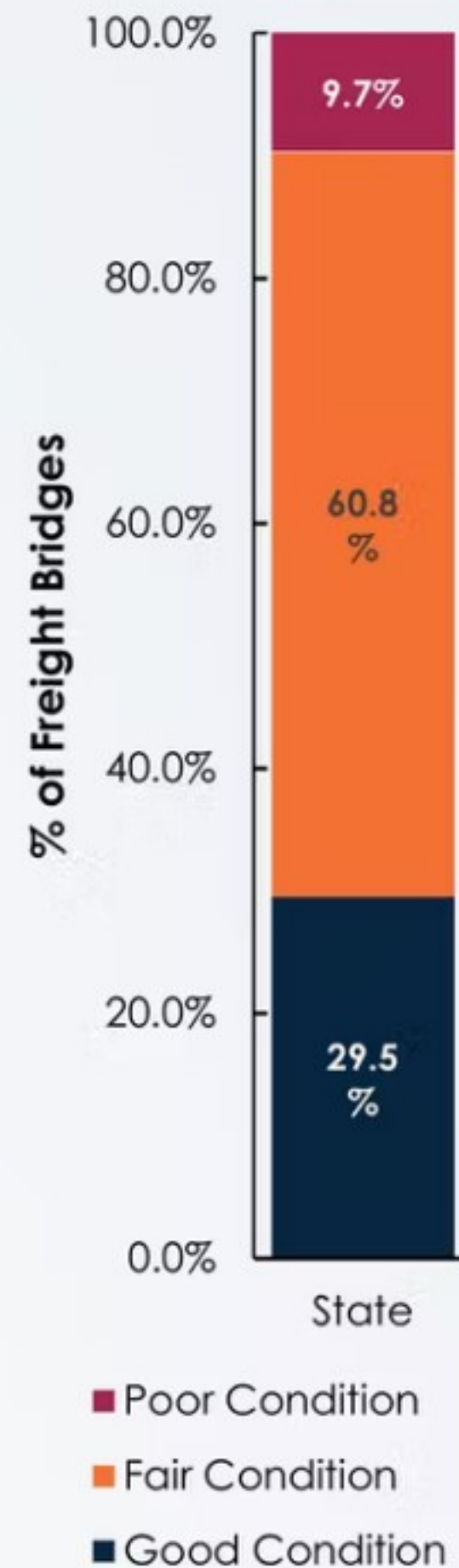
## Statewide Condition Rating Survey (CRS)

- Critical/Intolerable (CRS 1-2)
- Marginal (CRS 5)
- Fair (CRS 6)
- Good/Excellent/Awarded (CRS 7-9)
- Interstate
- Illinois Urban Areas



# Bridge Condition and Limitations

- » 90% of bridges on freight roadways are in acceptable condition
- » Interstate bridges in poor condition are found:
  - I-80 near Joliet
  - I-74 between Rock Island and Peoria



## Freight Network Bridges in Poor Condition

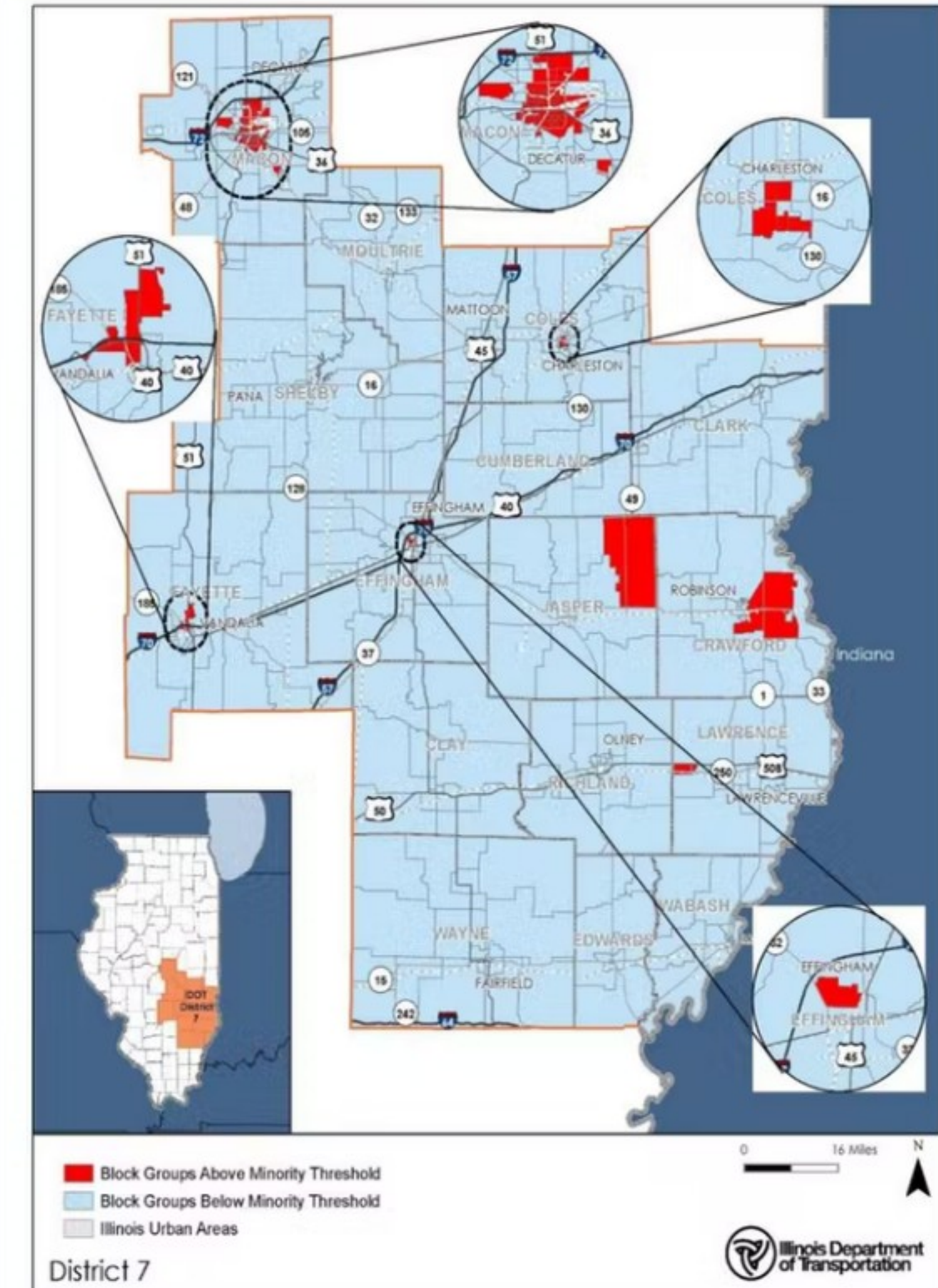


<sup>1</sup>Includes bridges on the National Highway Freight Network and/or State Designated Truck Routes



# Other Needs Metrics Under Consideration

- » Potential types of needs
  - Vertical Clearance Limitations
  - Inadequate Shoulder Lanes
  - Traveler Information/Traffic Incident Management on congested segments
  - Oversize/Overweight (OSOW) limitations
- » Considerations
  - Urban vs. Rural
  - Environmental Issues
  - Equity
  - Identified Truck Bottleneck



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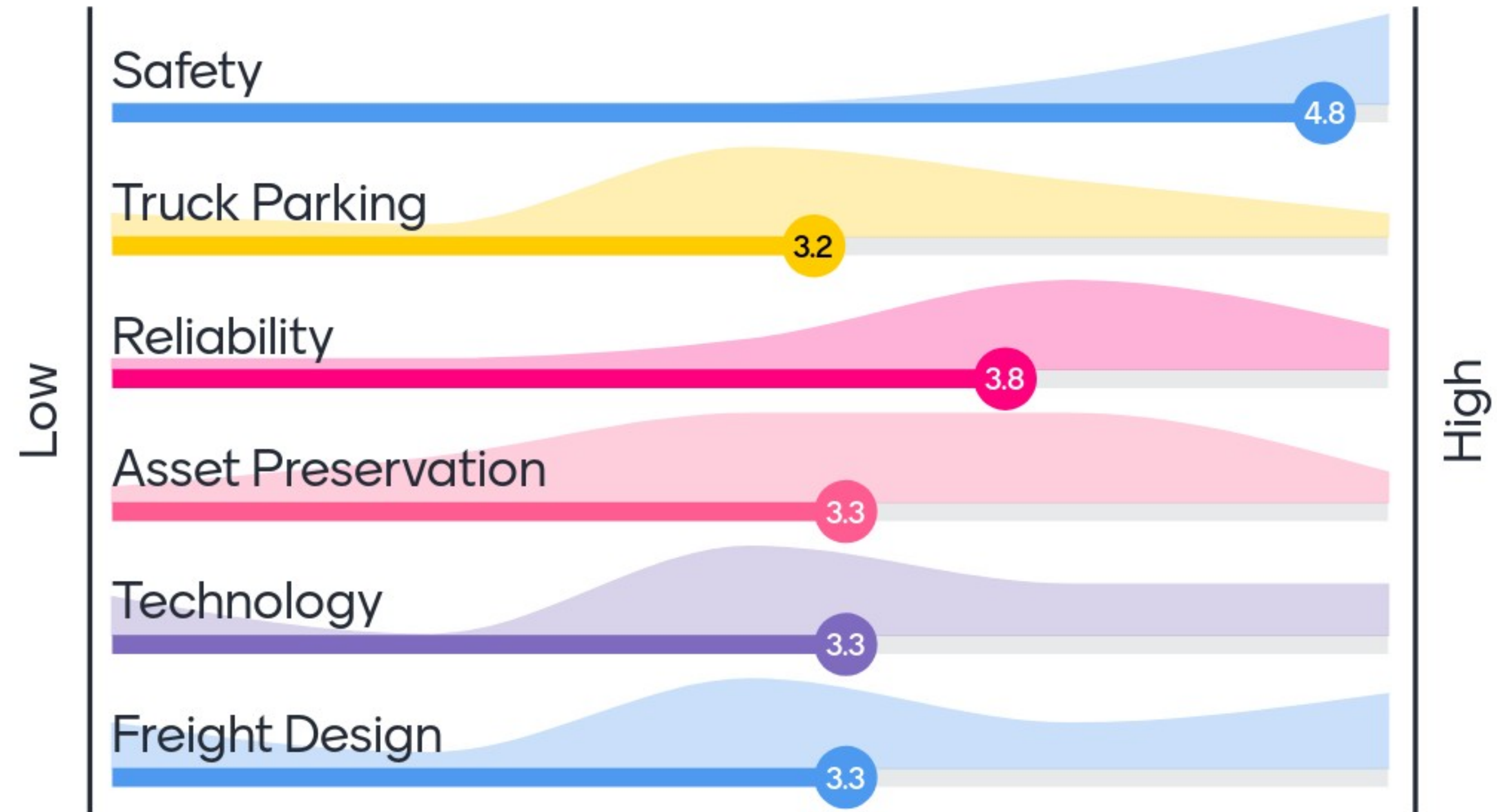
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# How important are each of these criteria for inclusion in the freight plan?



# Are there other highway freight needs that we should be measuring?

We should measure Highway capacity; lane miles

Addressing highway pinch points which exacerbates congestion and reliable travel times.

Equity/environment justice specific to freight movements

greenhouse gas reductions (climate change)



# SWOT Findings and Discussion

# SWOT Analysis

Positive

Negative

Internal to IDOT



## Strengths

Competitive advantages that should be marketed and built upon for future growth



## Weaknesses

Areas that need to be improved upon  
These are the operational goals that should be pursued in the near-term

External to IDOT



## Opportunities

Positive social, political, environmental and economic factors that affect IL freight transportation system  
Opportunities can be leveraged for future growth



## Threats

Negative social, political, environmental and economic factors  
Threats can negatively impact future growth and constrain opportunities and should be monitored

# Process



- » Over **20 freight-related reports** were reviewed
- » Over **130 industry representatives** provided input to the SWOT analysis process
- » **1 Statewide and 9 District-level SWOT analyses** were developed
- » Over **100 elements** were identified in the statewide SWOT analysis

## STRENGTHS

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ng efforts recognize  
ht network

ments and bridges me  
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electronic permitting  
ng, routing and staff commu

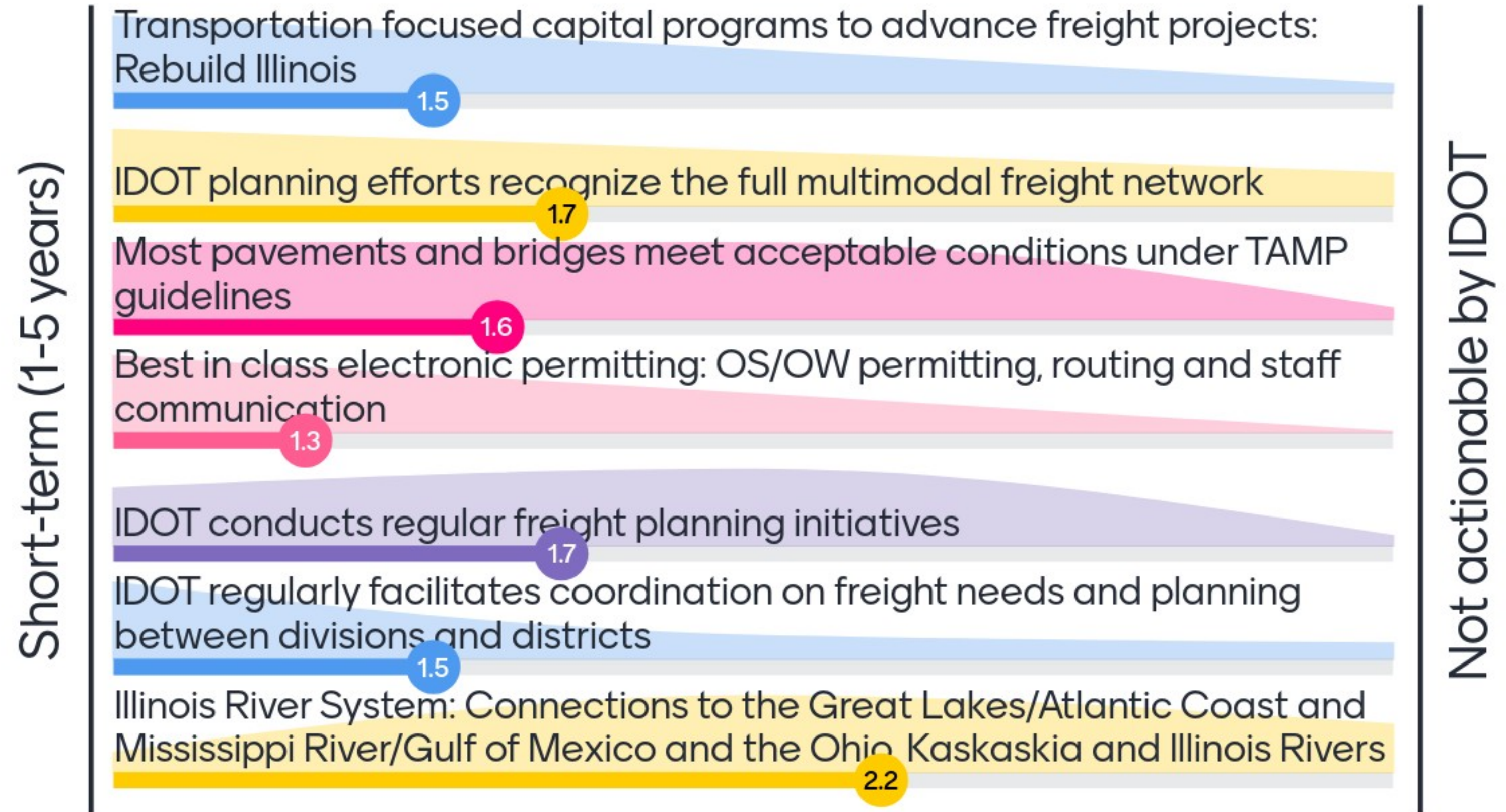
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the Great Lakes/Atlantic Co  
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# Should these *Strengths* be a focus for IDOT?



## WEAKNESSES

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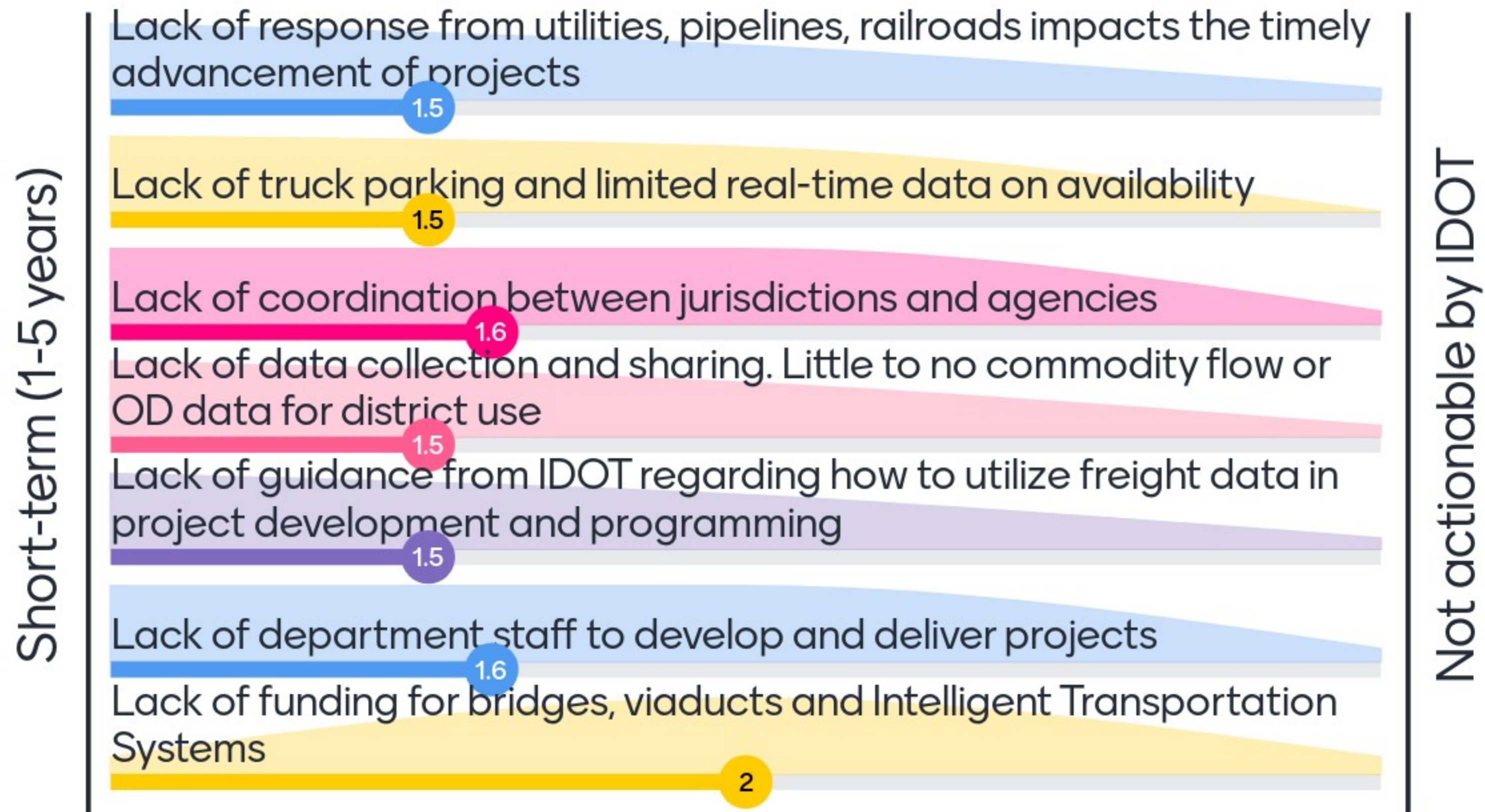
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# Should these *Weaknesses* be a focus for IDOT?





## OPPORTUNITIES

Use of Illinois' four ma

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tion, EV manufacturing and s

all 7 Class I railroads

short line railroads offer online  
railroads

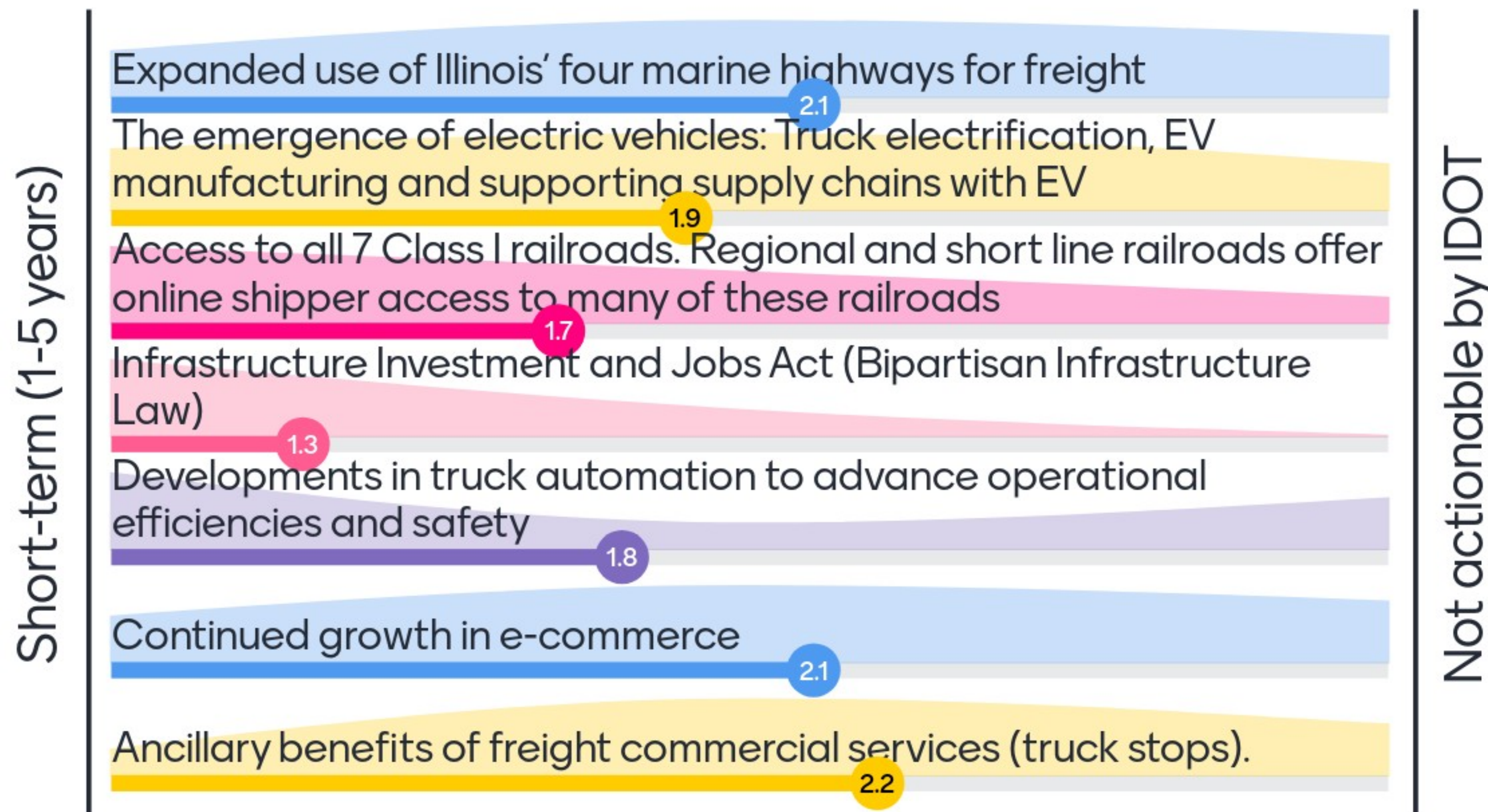
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nts in truck automation  
efficiencies and safety  
y and in-cab cameras

growth in e-commerce

enefits of freight comr

# Should these *Opportunities* be a focus for IDOT?



## THREATS

in disruptions  
pandemic, climate change, disasters

flooding events  
structure and will require more

truck driver workforce  
workforce, poor working conditions

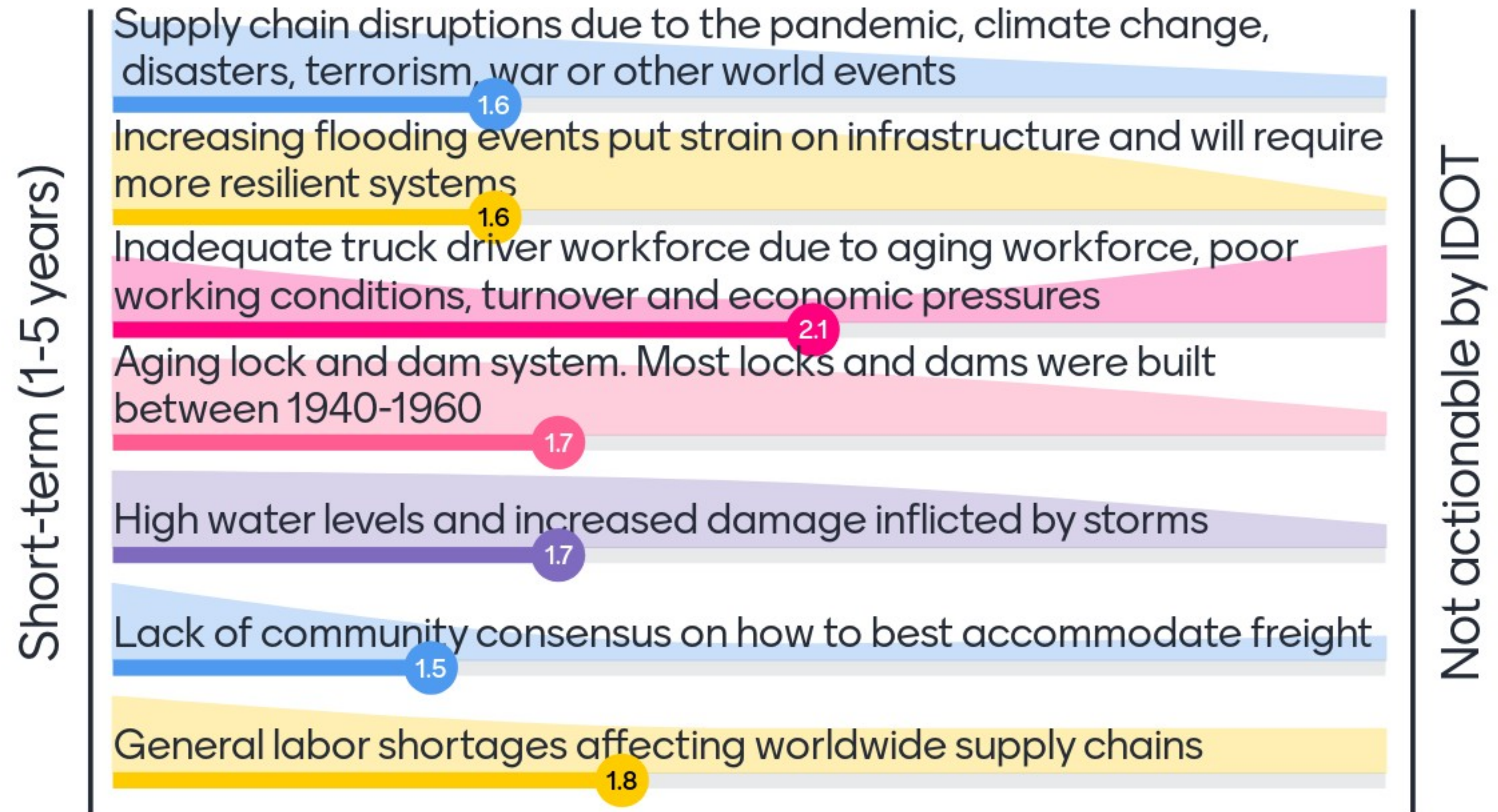
and dam system  
dams were built between 19

levels and increased  
storms

community consensus on  
date freight

labor shortages affecting  
ns

# Should these *Threats* be a focus for IDOT?





# Next Steps

# Freight Plan Next Steps

- » Finish modal profiles and technical analysis (July)
- » Continue developing online tools to support needs assessment and project selection (July/August)
- » Kick off second round of stakeholder outreach (July – September)
- » Identify Projects, Policies and Strategies for inclusion in the freight plan (September/October)



# Thank You! Questions?

Check out the IL Freight Plan website: <https://www.ilfreightplan.org/>