



Illinois 2022
State Freight Plan

State and District Freight Plans

presented to

Illinois State Freight Advisory Council

presented by

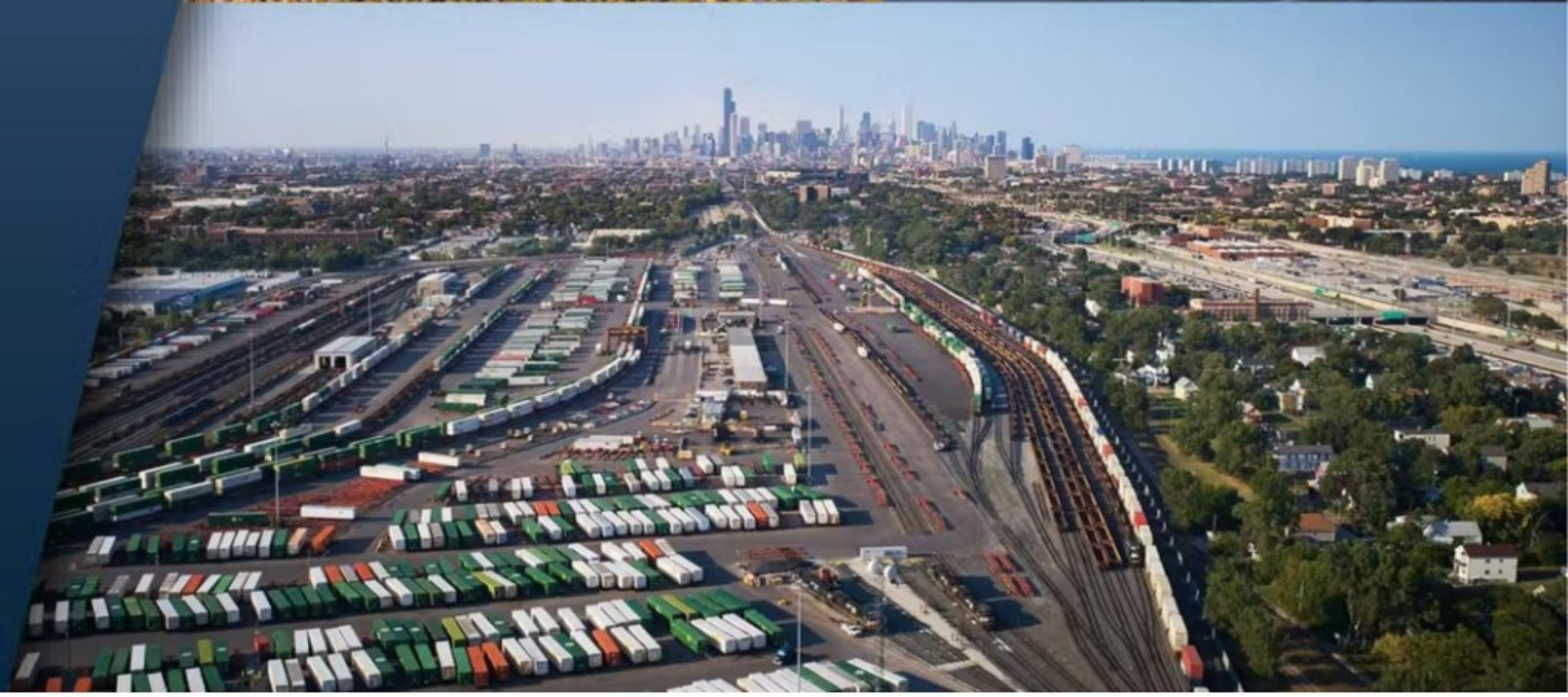
IDOT Office of Planning and Programming

Cambridge Systematics Consultant Team

February 10, 2022



Illinois Department
of Transportation




State and District Freight Plans ISFAC Meeting

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Agenda

- » Update on Freight Plan technical activities
- » Provide background on Priority Freight Network methodology
 - Poll on weighting of metrics to determine Priority Freight Network
- » Validate and review SWOT
 - Poll for additional strengths, weaknesses, opportunities and threats
 - Poll to select top 5 strengths, weaknesses, opportunities and threats
- » Next steps

State and District Freight Plans Status Update

TASK	2021		2022				2023
	SUMMER	FALL	WINTER	SPRING	SUMMER	FALL	WINTER
1. PROJECT MANAGEMENT	[Blue bar spanning all quarters]						
2. STAKEHOLDER ENGAGEMENT	[Maroon bar]						
2A. IDOT, ISFAC AND DISTRICT MEETINGS		[Pink bar]	[Pink bar]	[Pink bar]	[Pink bar]	[Pink bar]	[Pink bar]
2B. EXTERNAL STAKEHOLDER ENGAGEMENT		[Light pink bar]	[Light pink bar]	[Light pink bar]	[Light pink bar]	[Light pink bar]	
3. REVIEW AND COORDINATION WITH EXISTING PLANS AND DATA ACQUISITION		[Green bar]					
4. STATE OF THE SYSTEM		[Yellow bar]	[Yellow bar]	[Yellow bar]			
5. STRATEGIC DIRECTION AND NEEDS AND ISSUES			[Orange bar]	[Orange bar]	[Orange bar]		
6. STRATEGIES PROJECTS AND IMPLEMENTATION				[Grey bar]	[Grey bar]	[Grey bar]	
7. FINAL PLAN AND REPORT						[Red bar]	[Red bar]



Priority Freight Network Identification Methodology

Defining the Priority Freight Network

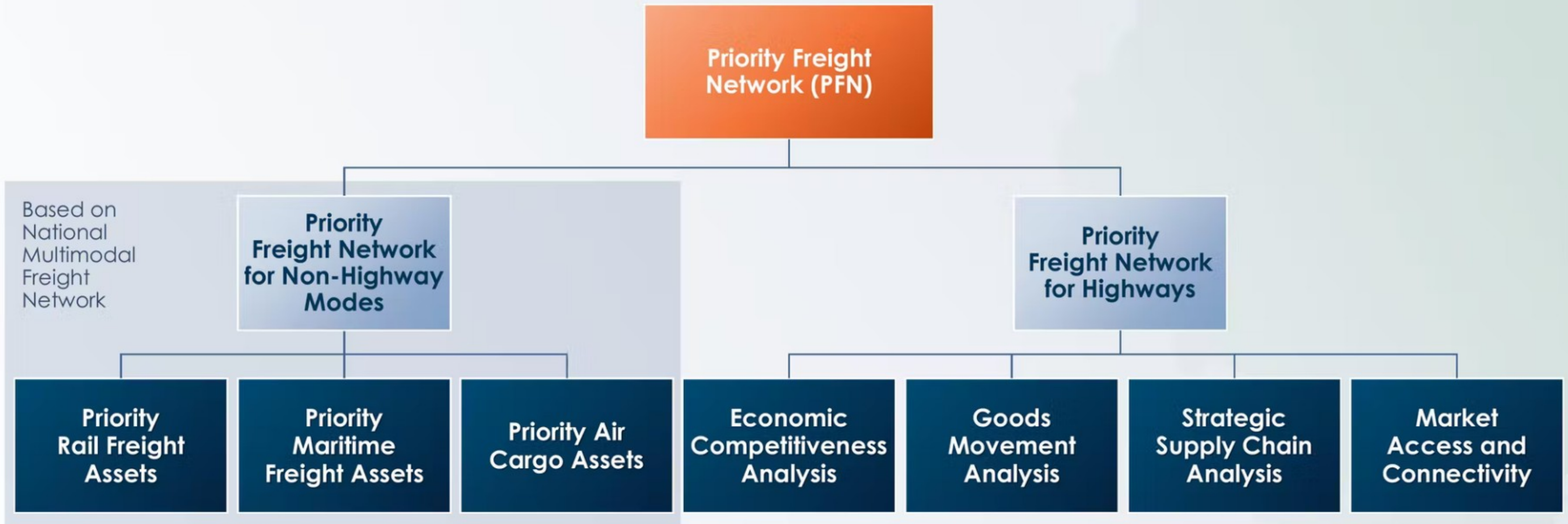
STEP 1 Define the metrics and identification methodology

STEP 2 Present the identification methodology to IDOT and the Freight Advisory Council

STEP 3 Adjust the factor weighting, key metrics, or methodology based on feedback

STEP 4 Review results and produce draft PFN

Defining the Priority Freight Network



Priority Freight Network for Highways



Economic Competitiveness Factors

Examines demographic preparedness, freight intensity and supporting industries.

- *Population Growth*
- *Workforce Size*
- *Educational Attainment*
- *Freight Employment Intensity*
- *Key Military Facilities*
- *Key Transportation Distribution, Logistics Facilities*
- *Pipeline Facilities*

Priority Freight Network for Highways



Economic Competitiveness Factors

Examines demographic preparedness, freight intensity and supporting industries.



Goods Movement Factors

Metrics covering tonnage, value, and volume of goods moving across the state.

- *Average Annual Heavy Commercial Volumes*
- *Truck Vehicle Miles Traveled (VMT)*
- *Truck VMT by Lane Mile*
- *Percent Truck*
- *Total Tonnage*
- *Total Value*

Priority Freight Network for Highways



Economic Competitiveness Factors

Examines demographic preparedness, freight intensity and supporting industries.



Goods Movement Factors

Metrics covering tonnage, value, and volume of goods moving across the state.



Strategic Supply Chain Factors

Provides understanding of how businesses move goods between suppliers, producers, distributors, and final consumers.

- Support of Freight-Generating Strategic Industries
- Freight-Generating Strategic Industries businesses
- Employment Size Freight-Generating Strategic Industries businesses

- Support for Commodities Associated with Targeted Industries (Tonnage)
- Support for Commodities Associated with Targeted Industries (Value)

Freight-Generating Strategic Industries

» Strategic Industries:

- Sourced from Illinois Department of Commerce and Economic Opportunity's target industries
- Focused on freight-generating industries



Priority Freight Network for Highways



Economic Competitiveness Factors

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Provides understanding of how businesses move goods between suppliers, producers, distributors, and final consumers.



Market Access & Connectivity Factors

Evaluates intermodal connectivity, connectivity (connections to rail, pipeline, airport, etc.) to trading partners and international gateways.

- *Intermodal Connectivity*
- *High-Diversity Market Gateway Access: TTT from marine port terminals*
- *Market Gateway Access: TTT from inland and multimodal port terminals (truck, rail, airport) and key state markets*

Priority Freight Network for Highways



Economic Competitiveness Factors

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Goods Movement Factors

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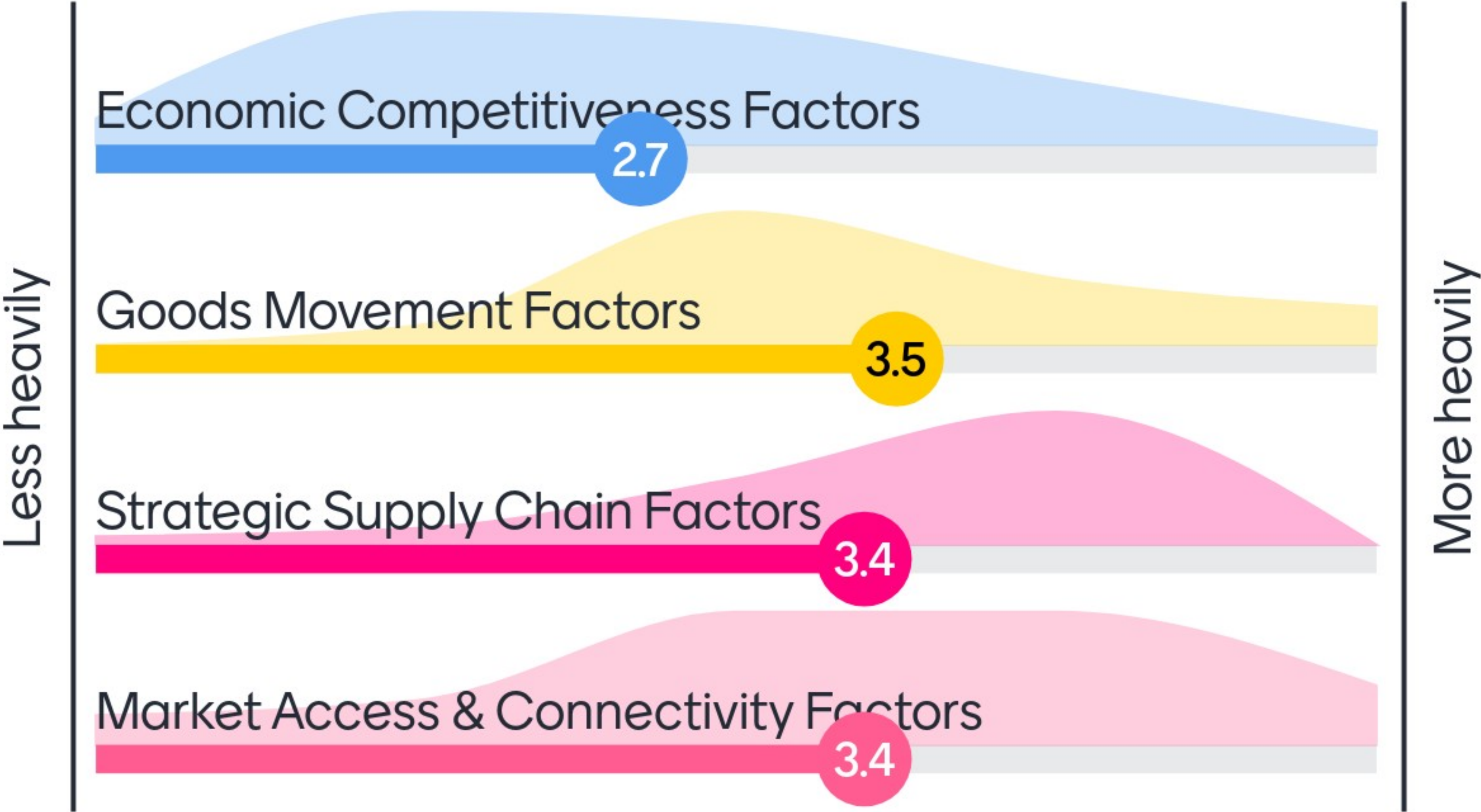
Market Access & Connectivity Factors

Evaluates intermodal connectivity, connectivity (connections to rail, pipeline, airport, etc.) to trading partners and international gateways.

Weighting of the Criteria

- » Currently the four factor categories are equally weighted – 25% each
- » Need your input – should some analyses/metrics be weighted more heavily?

Should the following metrics for the Priority Freight Network identification be weighted...



The background features a light blue map of the United States, centered on the continent. A dark blue horizontal band runs across the middle of the image, containing the text. Two thin green lines are positioned above and below the dark blue band.

Review SWOT Analysis Worksheet

SWOT Analysis



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.



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.

Review Strengths

Coordination

1. Coordination on freight needs and freight planning between divisions at District Office level

Funding

2. Financial partner for rail freight projects
3. ICC grade crossing protection program
4. Provides competitive funding opportunities for freight projects
5. Rebuild Illinois capital funding

Review Strengths

Planning

6. Supports local and regional freight studies
7. Prioritizes freight bottlenecks in plans
8. Getting local input into planning
9. Regular freight planning
10. Freight issues/needs accounted for in project staging, TMPs, and work zones
11. Involving all stakeholders willing to participate/seeking input from ISFAC
12. Recognizes the multi-modal system
13. Corridor planning, including freight
14. Recent studies on truck bottlenecks and truck parking
15. Illinois MTS Plan provides map for waterway program enhancement

Review Strengths

System

16. Electronic permitting/Discussions with OS/OW carriers noted that communications from the permit officer were some of the best in the nation.
17. 90% of major highways and bridges meet asset condition goals
18. Location and airport facilities support role as regional air cargo hub
19. Quick and easy entry into rail-to-river access points is a competitive advantage for smaller railroads as it can help them appeal to additional customers.
20. Traffic Management Centers in key metropolitan areas and statewide support incident management on key freight routes to resolve disruptions and delays.

What are other additional strengths?

Multi-modal coordination

77

12

River was listed, but Illinois likely is the #1 in the nation in terms of navigable river miles

1

18

58

10

What are the top 5 strengths for IL to market? Pick and list the numbers only

- Coordination**
 - 1. Coordination on freight needs and freight planning between divisions at District Office level
- Funding**
 - 2. Financial partner for rail freight projects
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 - 18. Location and airport facilities support role as regional air cargo hub
 - 19. Quick and easy entry into rail-to-river access points is a competitive advantage for smaller railroads as it can help them appeal to additional customers.
 - 20. Traffic Management Centers in key metropolitan areas and statewide support incident management on key freight routes to resolve disruptions and delays.
 - 21. Other



Review Weaknesses

Coordination

1. Lack of coordination between jurisdictions and agencies
2. Lack of coordination across modes
3. Need to approve project procurements and complete engineering reviews more timely
4. Need to coordinate permitting for jurisdictions
5. Lack of response from utilities, pipelines, RRs
6. RR agreements on public infrastructure projects and the ICC process, including requirements to pay for RRs for plan reviews

Review Weaknesses

Data

7. Little or no commodity flow data provided to the District or local agencies
8. Lack of guidance from Statewide offices on how to use freight data in project/program planning
9. Need better freight OD data
10. Most truck crashes lack data about contributing factors

Funding

11. Limited allocation of funds
12. No coordination to identify opportunities to leverage federal funds
13. Need more funding for bridges and viaducts
14. Need for additional funding for ITS

Review Weaknesses

Planning

- 15. Need to integrate maritime and air cargo into planning
- 16. Geometric design standards need to take into account freight traffic
- 17. Need for programs to mitigate negative effects of freight on communities
- 18. Need for last mile consideration

Review Weaknesses

Policy

19. OS/OW carriers note that Illinois requires State Patrol escorts for many over-dimension loads. Adjacent states only require civilian escorts. The Illinois SP escort requirement has become more difficult due to staffing/resource limitations of the SP, especially during COVID. This has resulted in longer wait times for some loads at the state line
20. OS/OW carriers noted that blades are unable to travel on Saturdays while the remaining components are allowed to travel causing scheduling issues at the project sites
21. Illinois regulations hurt business
22. Doubling of motor fuel tax without seeing improvement in the state system (interview)
23. Half of worker compensation cases in Illinois are fraudulent (interview)
24. DBE program requirements raise costs but lower service (interview)

Review Weaknesses

Safety

25. Truck crashes have been rising compared with 2015

System

26. Lack of truck parking and limited real-time information on availability

27. Damage to ROW and safety risks of trucks parking on shoulders

28. Functionally obsolete bridges

29. Need to include load clearances for ICC crossings in the automated permit system

30. Need to address rail congestion hot spots

31. Need for EV infrastructure for freight delivery vehicles

Review Weaknesses

System (continued)

- 32. Significant roadway congestion in urban areas, especially in Chicago where major intermodal infrastructure is located
- 33. Limited space for additional air cargo support facilities at airports
- 34. Adequate maintenance of local roads can be a weakness for truck operations as poorly maintained roads around barge facilities can damage trucks and cargo or require trucks to take longer routes
- 35. OS/OW carriers noted low overhead clearances on older structures
- 36. Closing of Interstate routes during construction instead of using cross-overs to keep corridors open

Workforce/Staff

- 37. Lack of staff to develop and deliver projects

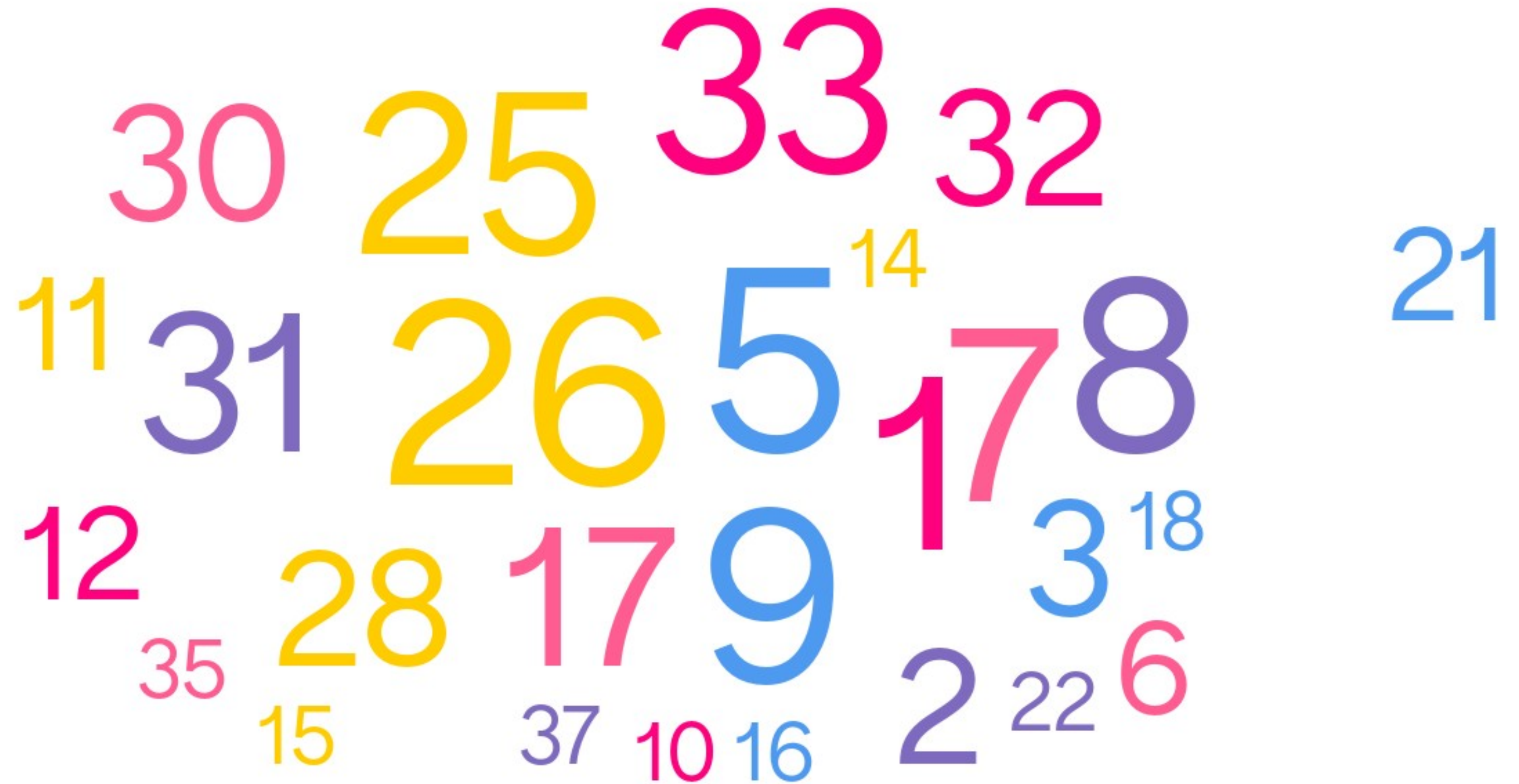
What are other additional weaknesses?

adding funding for TSP that could
move roadway traffic more efficiently

What are the top 5 weaknesses for IL to address?

Pick and list the numbers only

- | | |
|--|---|
| <p>Coordination</p> <ol style="list-style-type: none"> 1. Lack of coordination between jurisdictions and agencies 2. Lack of coordination across modes 3. Need to approve project procurements and complete engineering reviews more timely 4. Need to coordinate permitting for jurisdictions 5. Lack of response from utilities, pipelines, RRs 6. RR agreements on public infrastructure projects and the ICC process, including requirements to pay for RRs for plan reviews <p>Data</p> <ol style="list-style-type: none"> 7. Little or no commodity flow data provided to the District or local agencies 8. Lack of guidance from Statewide offices on how to use freight data in project/program planning 9. Need better freight OD data 10. Most truck crashes lack data about contributing factors <p>Funding</p> <ol style="list-style-type: none"> 11. Limited allocation of funds 12. No coordination to identify opportunities to leverage federal funds 13. Need more funding for bridges and viaducts 14. Need for additional funding for ITS <p>Planning</p> <ol style="list-style-type: none"> 15. Need to integrate maritime and air cargo into planning 16. Geometric design standards need to take into account freight traffic 17. Need for programs to mitigate negative effects of freight on communities 18. Need for last mile consideration <p>Policy</p> <ol style="list-style-type: none"> 19. OS/OW carriers note that Illinois requires State Patrol escorts for many over-dimension loads. Adjacent states only require civilian escorts. The Illinois SP escort requirement has become more difficult due to staffing/resource limitations of the SP, especially during COVID. This has resulted in longer wait times for some loads at the state line | <ol style="list-style-type: none"> 20. OS/OW carriers noted that blades are unable to travel on Saturdays while the remaining components are allowed to travel causing scheduling issues at the project sites 21. Illinois regulations hurt business 22. Doubling of motor fuel tax without seeing improvement in the state system (interview) 23. Half of worker compensation cases in Illinois are fraudulent (interview) 24. DBE program requirements raise costs but lower service(interview) <p>Safety</p> <ol style="list-style-type: none"> 25. Truck crashes have been rising compared with 2015 <p>System</p> <ol style="list-style-type: none"> 26. Lack of truck parking and limited real-time information on availability 27. Damage to ROW and safety risks of trucks parking on shoulders 28. Functionally obsolete bridges 29. Need to include load clearances for ICC crossings in the automated permit system 30. Need to address rail congestion hot spots 31. Need for EV infrastructure for freight delivery vehicles 32. Significant roadway congestion in urban areas, especially in Chicago where major intermodal infrastructure is located 32. Limited space for additional air cargo support facilities at airports 33. Adequate maintenance of local roads can be a weakness for truck operations as poorly maintained roads around barge facilities can damage trucks and cargo or require trucks to take longer routes 34. OS/OW carriers noted low overhead clearances on older structures 35. Closing of Interstate routes during construction instead of using cross-overs to keep corridors open <p>Workforce/Staff</p> <ol style="list-style-type: none"> 37. Lack of staff to develop and deliver projects 38. Other |
|--|---|



Review Opportunities

Economic

1. Continued growth of ecommerce and air cargo

Funding

2. Infrastructure Investment and Jobs Act

Review Opportunities

System

3. Roadway improvements performed under Access Permits as part of freight facility developments (truck stops, intermodal and distribution centers, etc.)
4. Commercial services like truck stops that offer ancillary benefits like truck parking
5. Access to all 7 Class I railroads, with regional and short line railroads that offer online shipper access to many of these railroads
6. Support not only logistics industry, but also efforts to take advantage of this through value added services
7. Illinois has four marine highways, Mississippi and Ohio Rivers, Illinois waterway system and Lake Michigan
8. Consider designating some corridors that move a lot of over-dimension cargos as “super-haul corridors” where future improvements would consider designs to accommodate over-dimension load

Review Opportunities

Technology

9. Truck electrification
10. Further developments in truck automation (self-driving, truck platooning)
11. Utilizing lane technology and in-cab cameras can improve safety and provide evidence in case of crashes

What are other additional opportunities?

Identification of rail-served and/or mega-site locations in the state

Improved freight mobility with advancement of CREATE projects to unlock freight bottlenecks

What are the top 5 opportunities for IL to leverage? Pick and list the numbers only

- Economic**
 - 1. Continued growth of ecommerce and air cargo
- Funding**
 - 2. Infrastructure Investment and Jobs Act
- System**
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 - 12. Other

12 - rail served sites
createprogram

Review Threats

Economic

1. Supply chain disruptions
2. Economic downturns/uncertainty
3. Trade wars/tariffs
4. Growing number/density of distribution centers
5. Utility cost inflation/uncertainty

Environmental

6. Flooding/resiliency
7. Threat of Invasive Asian carp – mitigation efforts risk to disrupt the freight movement
8. High water levels are a threat to Great Lakes terminal operators due to increased damage inflicted by storms

Review Threats

Political/Social

9. Lack of community consensus on how to best accommodate freight
10. Complexity of federal grant requirements
11. Increasingly, if distribution of freight benefits and freight impacts is seen to be inequitable, it can impact development of capacity and services

System

12. Seasonal congestion at grain processing facilities
13. Increased rail freight traffic leading to additional grade crossing blockages
14. Aging lock and dam system, most locks and dams were built between 1940-1960

Review Threats

Technology

- 15. Truck electrification. One carrier noted the loss in 4-5 tons per payload due to weight of e-truck is an issue along with the lack of range
- 16. Natural gas trucks lack of engine longevity

Workforce/Staff

- 17. Warehousing and distribution labor shortages to support air cargo
- 18. Truck driver shortage

What are other additional threats?

Extreme Weather - Variability related to drought and low river levels

What are the top 5 threats for IL to monitor? Pick and list the numbers only

<p>Economic</p> <ol style="list-style-type: none"> 1. Supply chain disruptions 2. Economic downturns/uncertainty 3. Trade wars/tariffs 4. Growing number/density of distribution centers 5. Utility cost inflation/uncertainty <p>Environmental</p> <ol style="list-style-type: none"> 6. Flooding/resiliency 7. Threat of Invasive Asian carp – mitigation efforts risk to disrupt the freight movement 8. High water levels are a threat to Great Lakes terminal operators due to increased damage inflicted by storms <p>Political/Social</p> <ol style="list-style-type: none"> 9. Lack of community consensus on how to best accommodate freight 10. Complexity of federal grant requirements 11. Increasingly, if distribution of freight benefits and freight impacts is seen to be inequitable, it can impact development of capacity and services 	<p>System</p> <ol style="list-style-type: none"> 12. Seasonal congestion at grain processing facilities 13. Increased rail freight traffic leading to additional grade crossing blockages 14. Aging lock and dam system, most locks and dams were built between 1940-1960 <p>Technology</p> <ol style="list-style-type: none"> 15. Truck electrification. One carrier noted the loss in 4-5 tons per payload due to weight of e-truck is an issue along with the lack of range 16. Natural gas trucks lack of engine longevity <p>Workforce/Staff</p> <ol style="list-style-type: none"> 17. Warehousing and distribution labor shortages to support air cargo 18. Truck driver shortage 19. Other
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unregulated train length



Next Steps

- » Continue to develop technical material (Winter and Spring)
 - Modal Profiles, Priority Freight Network Identification, Commodity Flow Forecasting and Needs Assessment
- » District Freight Forums (Later Winter / Early Spring)
 - Identify additional needs, system gaps and conduct district level SWOT analysis
- » Stakeholder Survey (Spring)
 - Current state of freight infrastructure and operations, identifying challenges and trends, carbon reduction strategies and understanding impacts of pandemic



Thank you