

Administrative Issues

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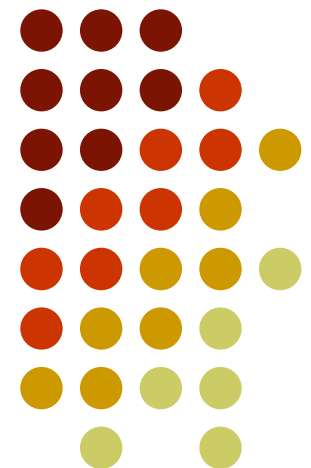
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Driving Question



How does administration of highways contribute to the performance of highway freight transport?

Highway Freight Administration



- Trucking Regulations across the Region
 - Size
 - Weight
 - Axle configuration
 - Number of trailers
- Impacts of Regulatory Inconsistencies
- CVISN Services
 - Electronic screening
 - Safety information exchange
 - Electronic credentialing

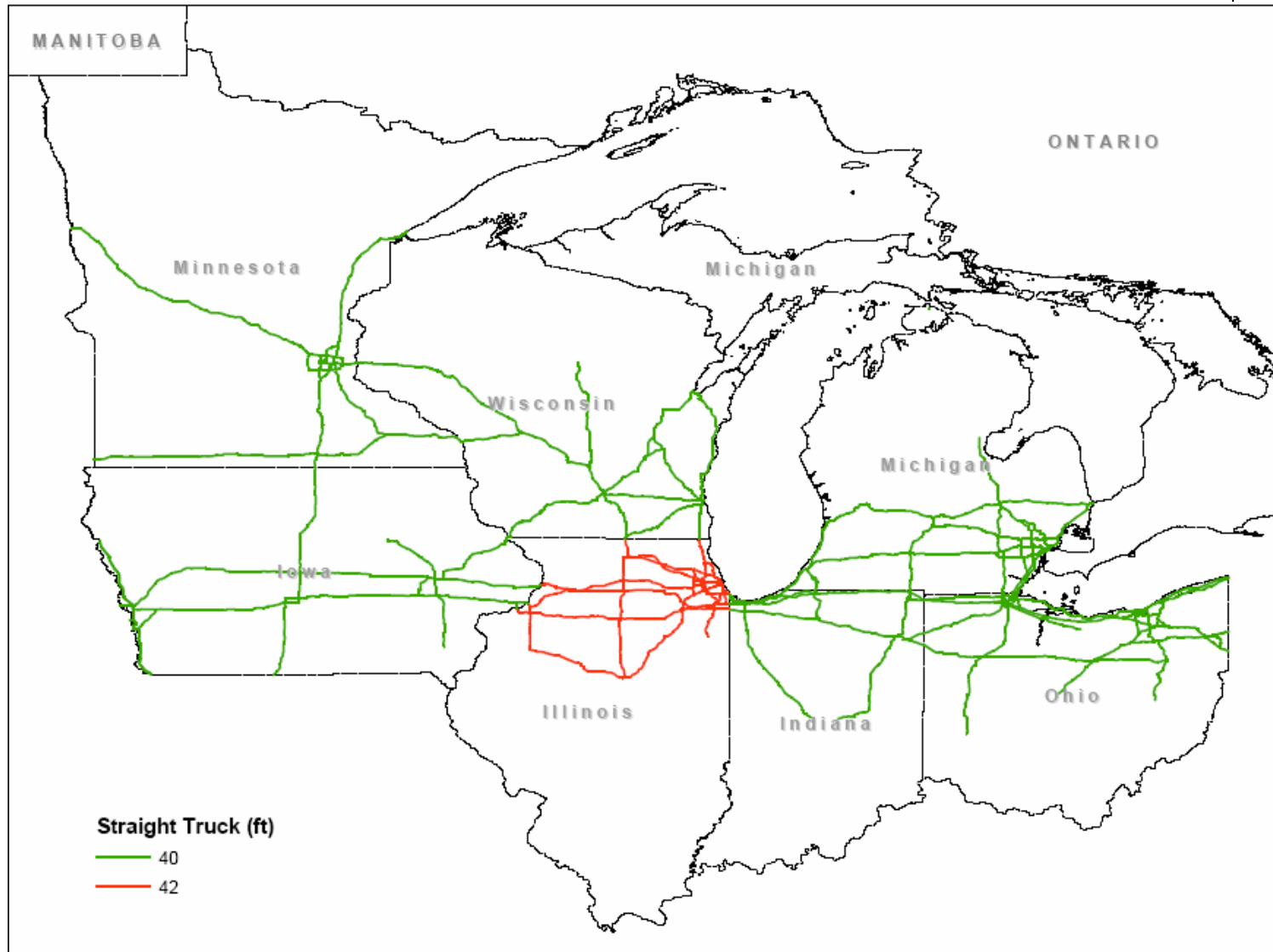
‘Weight Packages’ in the Upper Midwest Region (gross vehicle, single axle, tandem axle, and use of the bridge formula)



- Six different weight combinations both on and off the National Network
- Four states apply the federal limits statewide
- Two provinces allow GVW and tandem axle weight limits higher than U.S. limits
- Two states limit GVW and single axle weight below the federal standard off the NN
- One state limits the tandem axle weight below the federal standard off the NN
- One province allows the single axle weight limit higher than U.S. limits

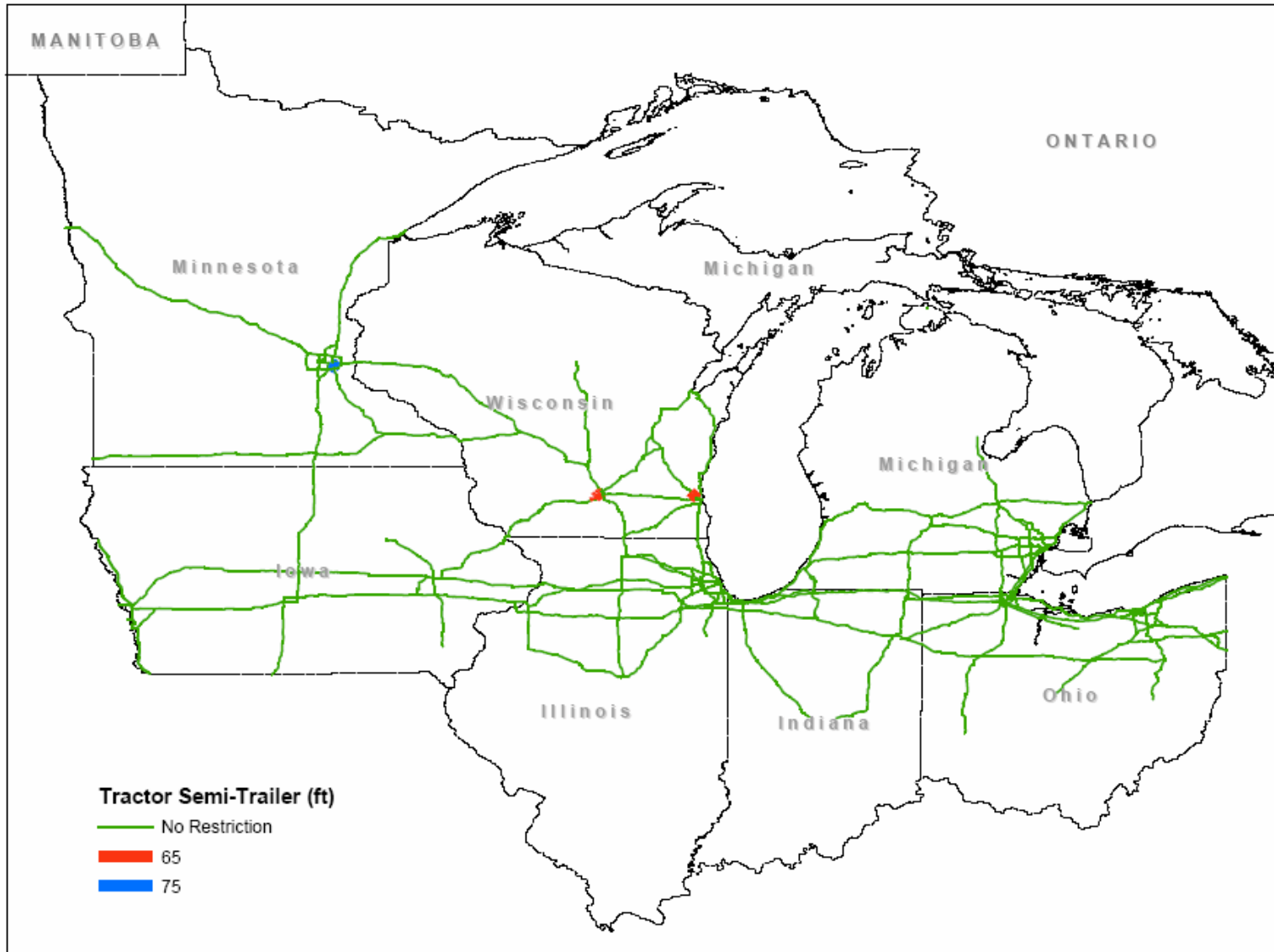
Regional Perspective

Maximum Straight Truck Length



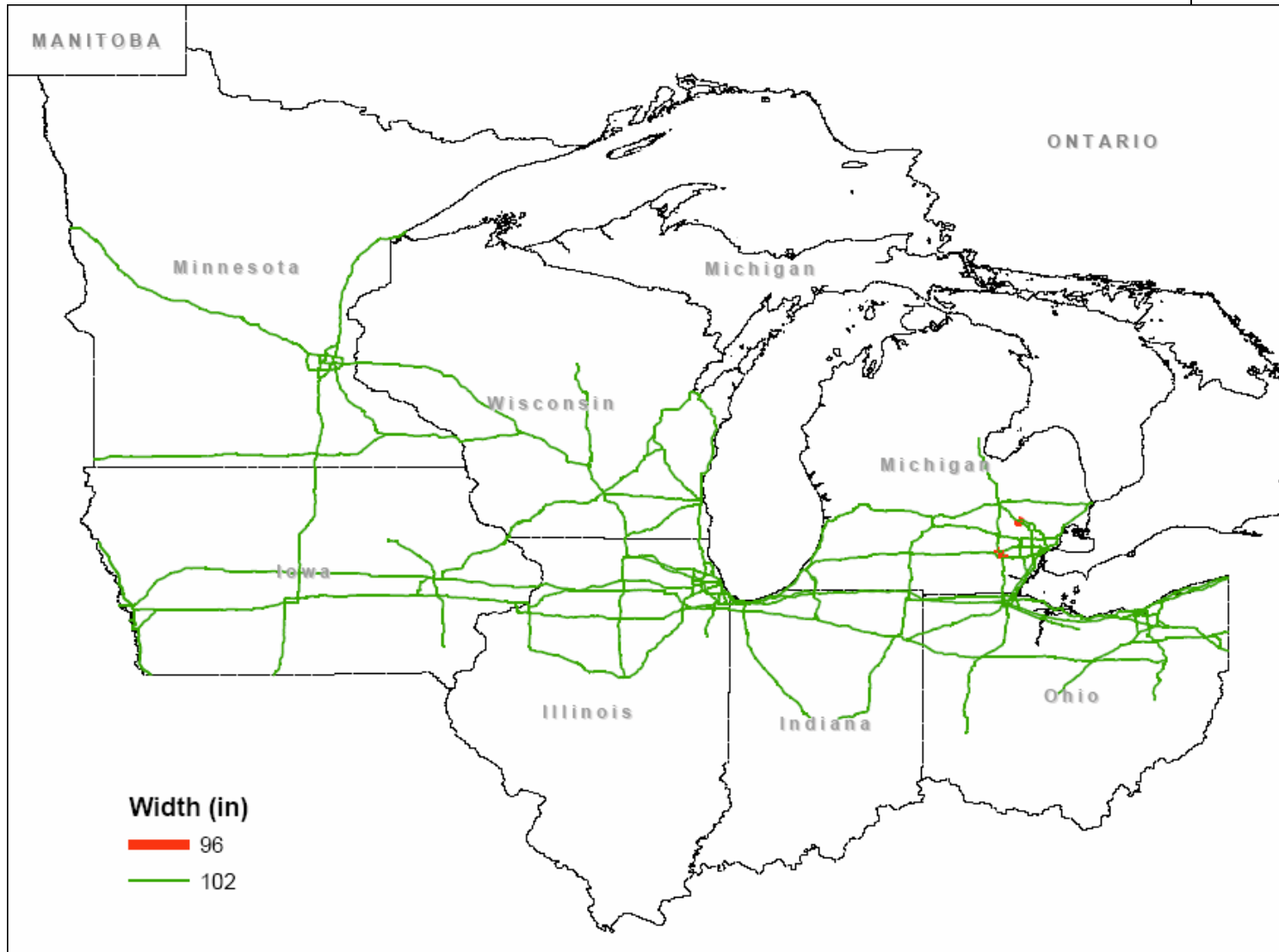
Regional Perspective

Maximum Tractor Semi-Trailer Length



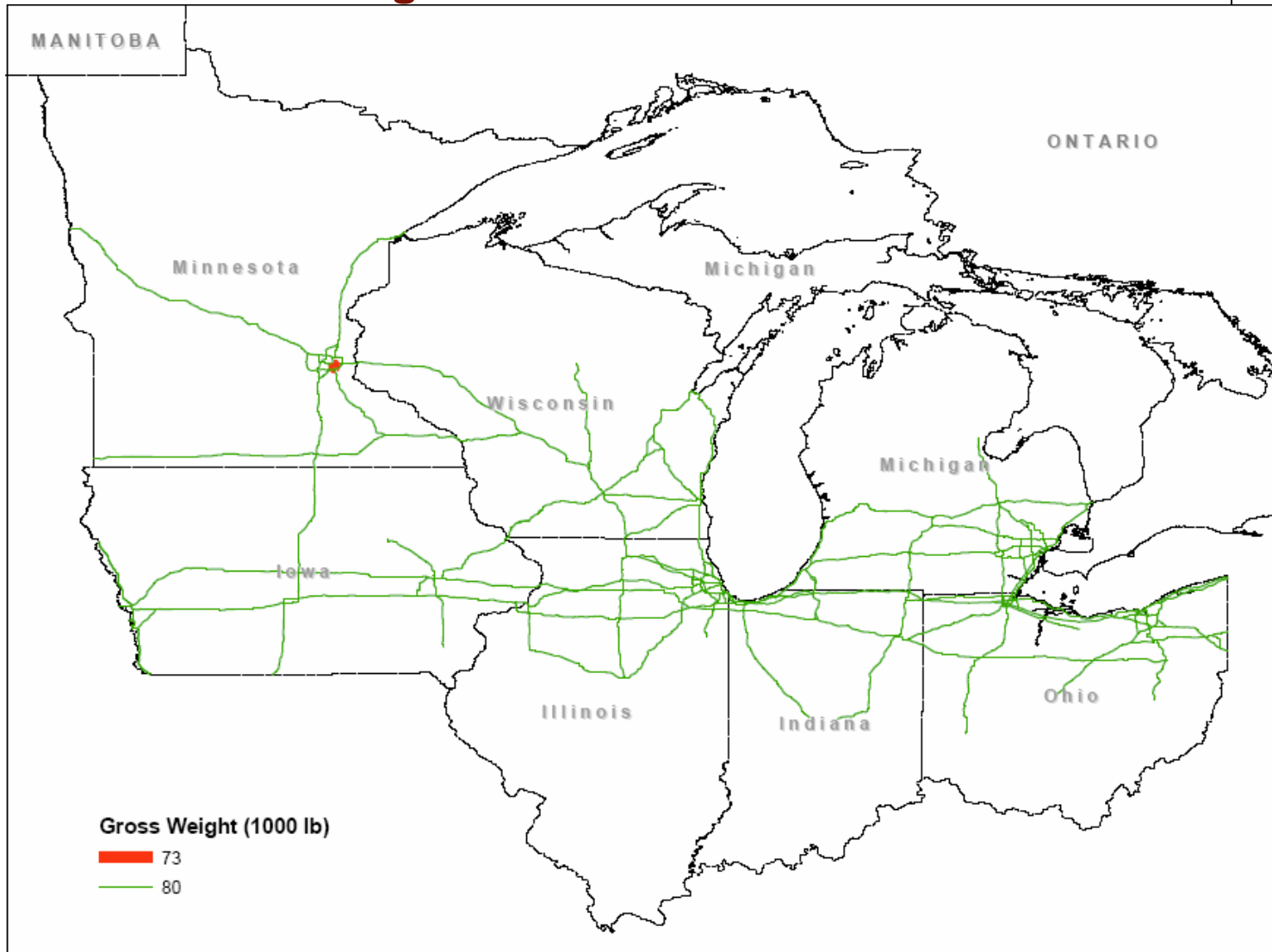
Regional Perspective

Maximum Width



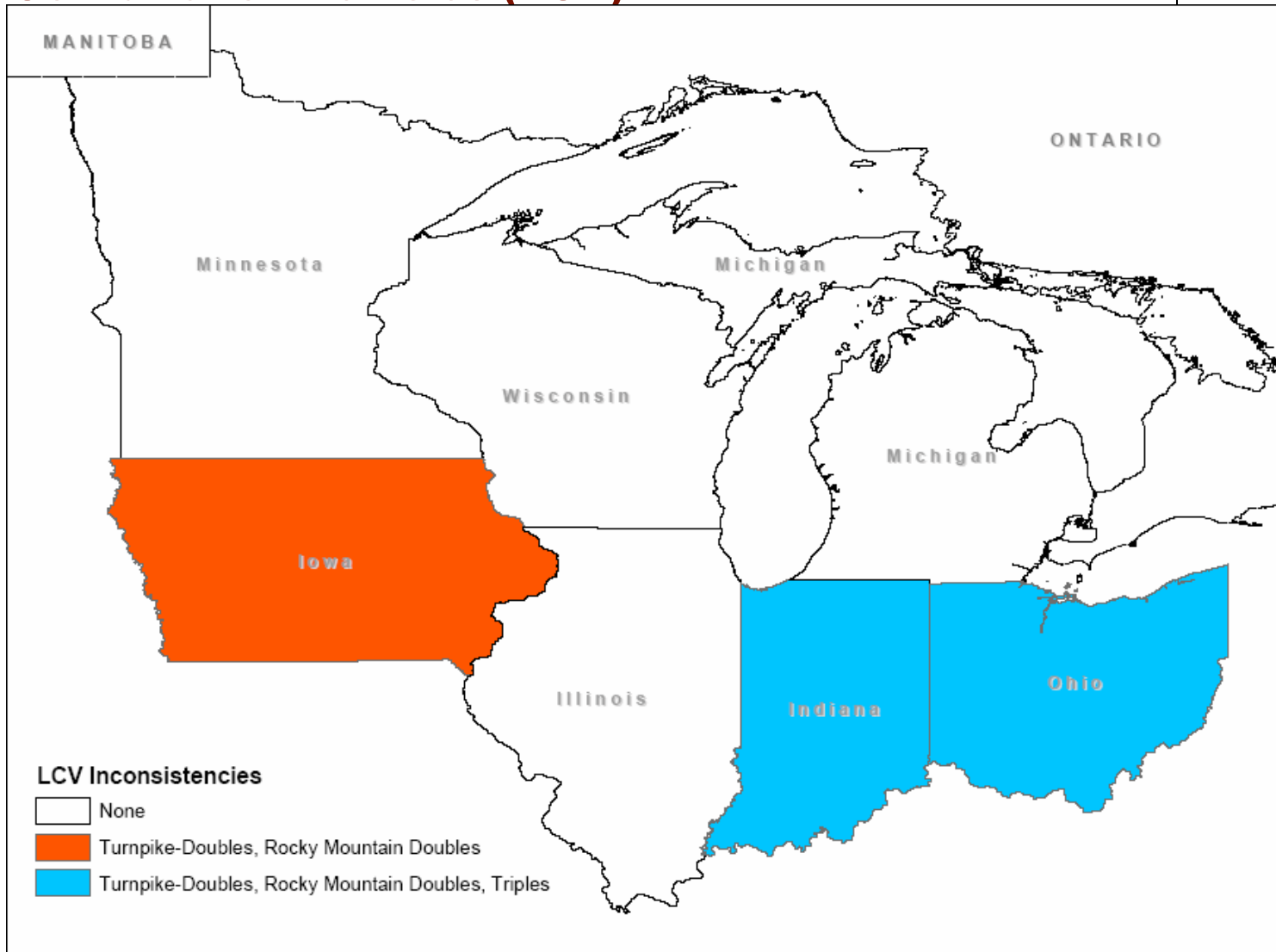
Regional Perspective

Maximum Gross Weight



Regional Perspective

Long Combination Vehicles (LCV)



Impacts of Regulatory Inconsistencies

Source: 8 Related Studies plus Interviews



2003

- *Effect of Truck Weight on Bridge Network Costs* NCHRP Report 495

2002

- *Regulations of Weights, Lengths, and Widths of Commercial Motor Vehicles*, TRB Special Report 267
- *Federal Truck Size and Weight Policy: Looking Beyond the Comprehensive Truck Size and Weight Study*, Workshop Proceedings U.S. DOT

2001

- *Effects of Truck Size and Weights on Highway Infrastructure and Operations: A Synthesis Report*, Center for Transportation Research, UT at Austin

2000

- *Comprehensive Truck Size and Weight Study*, U.S. DOT

1994

- *Longer Combination Trucks, Potential Infrastructure Impacts, Productivity Benefits, and Safety Concerns*, GAO
- *The Productivity Effects of Truck Size and Weight Policies*, Oak Ridge National Laboratory

1993

- *Synthesis of the Impacts of Truck Size and Weight on the Transportation System and the Economy*, AASHTO Joint Committee on Domestic Freight Policy

Scope of Impacts

- Highway Infrastructure
- Safety
- Traffic Operations
- Environment
- Economic Productivity and Modal Competitiveness
- Finance and Energy
- Compliance and Enforcement
- Intergovernmental Issues

Highway Infrastructure

- Scope
 - Pavement
 - Bridge
 - Roadway Geometry
- Impacts
 - Pavement load equivalency factors
 - Bridge overstress/fatigue
 - Functional improvements
 - Maintenance, rehab, and replacement frequency

Safety

- Scope
 - Accident cause and severity
 - Vehicle and driver performance
 - Public perception
- Impacts
 - Accident type, rate, severity
 - Property damage
 - Exposure of risks

Traffic Operations

- Scope
 - Congestion
 - Platooning
- Impacts
 - Passenger car equivalents
 - LOS
 - Average speed

Environment

- Scope
 - Air
 - Water
 - Noise/vibration
- Impacts
 - Pollutant emissions
 - Air quality
 - Fuel consumption
 - Exposure to risks
 - Noise/vibration

Economic Productivity and Modal Competitiveness



- Scope
 - Production and distribution patterns
 - International trade
 - Market areas
 - Resource markets
 - Modal competitiveness (mode agnostic)
 - Commodity exemptions
- Impacts
 - Truck VMT
 - Operating costs/Unit payload
 - Logistics costs
 - Production costs
 - Possible rail to truck freight diversion

Finance and Energy

- Scope
 - Fuel consumption
 - Alternative fuel use
 - Revenue sources
- Impacts
 - Operating costs
 - Fuel economy
 - Change in fuel based tax money

Compliance and Enforcement



- Scope
 - Permitting
 - Enforcement
- Impacts
 - Inspections
 - Permit issuance

Intergovernmental Issues

- Scope
 - Grandfathered rights
 - Size and weight packages
- Impacts
 - Efficiencies:
 - Enforcement
 - Permitting
 - Level playing field between states and industries
 - ‘Ratcheting’ weight limits upward
 - Match vehicle weights and dimensions with the infrastructure capacity and mechanisms for cost recovery

Regional Perspective CVISN Technology Deployment



- Identify locations for CVISN technology deployment based on regional analysis
- GIS and Benefit-Cost Analyses
 - Maximize Regional Benefits
 - Reduce congestion and travel time
 - Improve safety and reduce crashes
 - Reduce operating costs
 - CVISN systems and equipment costs
 - Importance of routes (for origins-destinations)

CVISN Hardware/Software Deployment

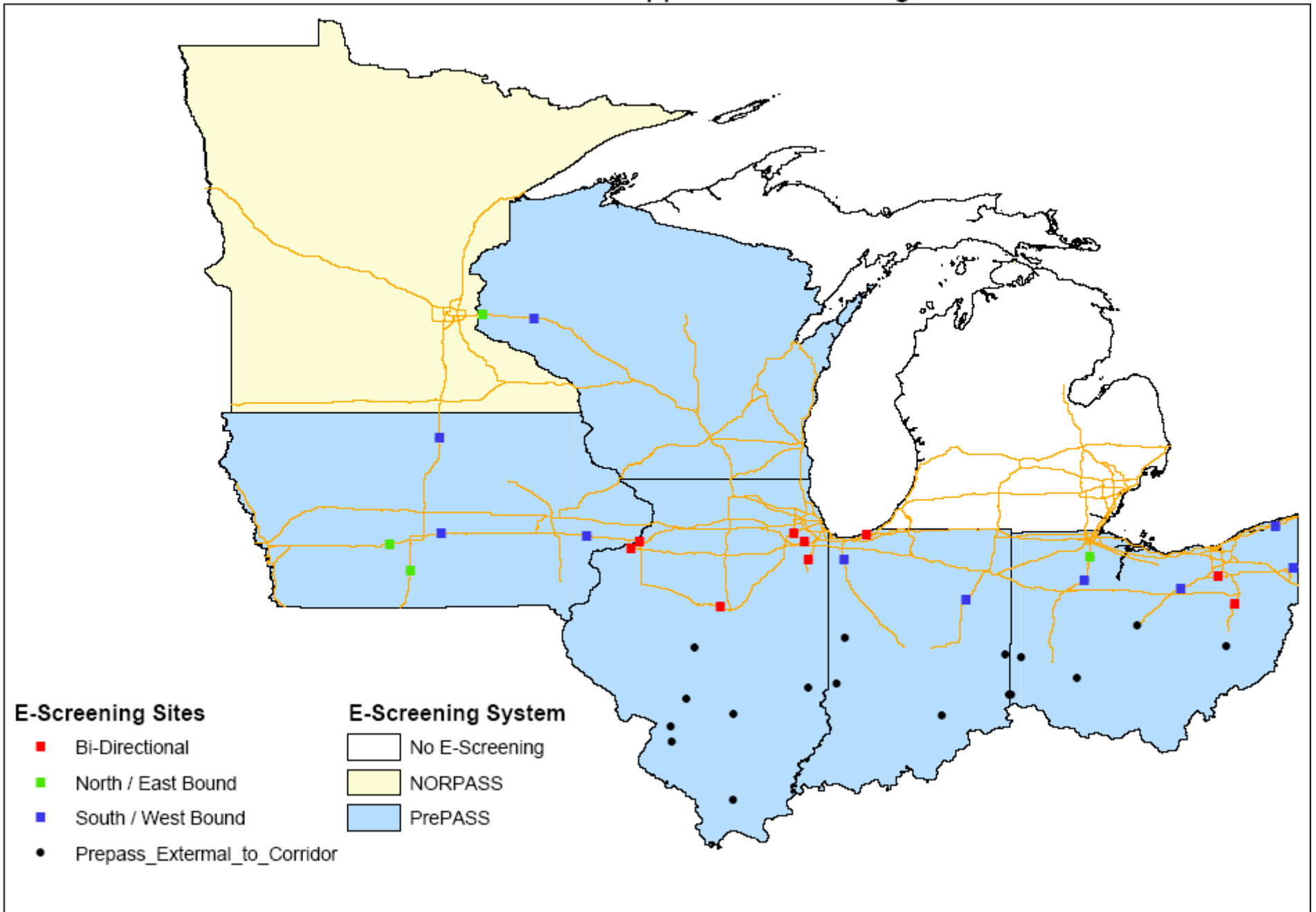
State	CVISN Deployment	PRISM	Safety Info Exchange			Electronic Credentialing				Electronic Screening	
			ASPEN	SAFER	CVIEW	End-to-End IRP	IRP Clearinghouse	End to End IFTA	IFTA Clearinghouse	Fixed/Mobile Sites	SAFER/CVIEW Snapshots
MN	Level 1 FY '02	Yes	I	A	I	P	I	I		Norpass	
MI	Level 1 FY '03		I	E	I				I		
IA	Step 3	Yes	Q	E						Prepass	
IN	Step 3	Yes	I	A					I	Prepass	
OH	Step 3		I	E			I		I	Prepass	
WI	Step 3		I	E	P				I	Prepass	
IL	Step 2		I	E						Prepass	

Legend

T	=	Demonstrated Technically	I	=	Implemented
P	=	Partially Implemented	Q	=	Equivalent System
E	=	Enrolled User	A	=	Active User

<http://www.dot.state.mn.us/guidestar/pdf/cvisn02/cvisnvol1.pdf>

Electronic Clearance Sites in the Upper Midwest Freight Corridor



CVISN Impacts

Safety	<ul style="list-style-type: none"> ● Fewer crashes involving trucks ● Increased personal safety of the motoring public
Efficiency	<ul style="list-style-type: none"> ● Increased throughput at inspection sites ● Increased throughput of credentialing process
Productivity	<ul style="list-style-type: none"> ● Reduced time, cost, and uncertainty in credentialing ● Reduced cost of inspections ● Reduced Transit Time due to shorter stops at inspection site and due to fewer crashes ● Reduced accident costs ● Decreased tax and fee evasion ● More equitable treatment in paying taxes and fees ● Reduced accident cleanup costs

CVISN Impacts (cont.)

<p>Mobility</p>	<ul style="list-style-type: none"> ● Reduced cost of goods movement to shippers/receivers and the public ● Decreased goods movement transit time and increased reliability of delivery schedules to/from shippers/receivers ● Increased cargo safety and security ● Reduced highway delays to public from fewer accidents
<p>Energy/ Environment</p>	<ul style="list-style-type: none"> ● Reduced energy consumption of trucks ● Reduced environmental impacts of trucks.

Expected Products

- Administrative and Legislative Issues Matrixes
 - Impacts of Size and Weight Regulatory Inconsistencies
- GIS map illustrating Size and Weight regulations
- Regional CVISN Planning Tools