



Freight Market Development in the Great Lakes: Why? How?

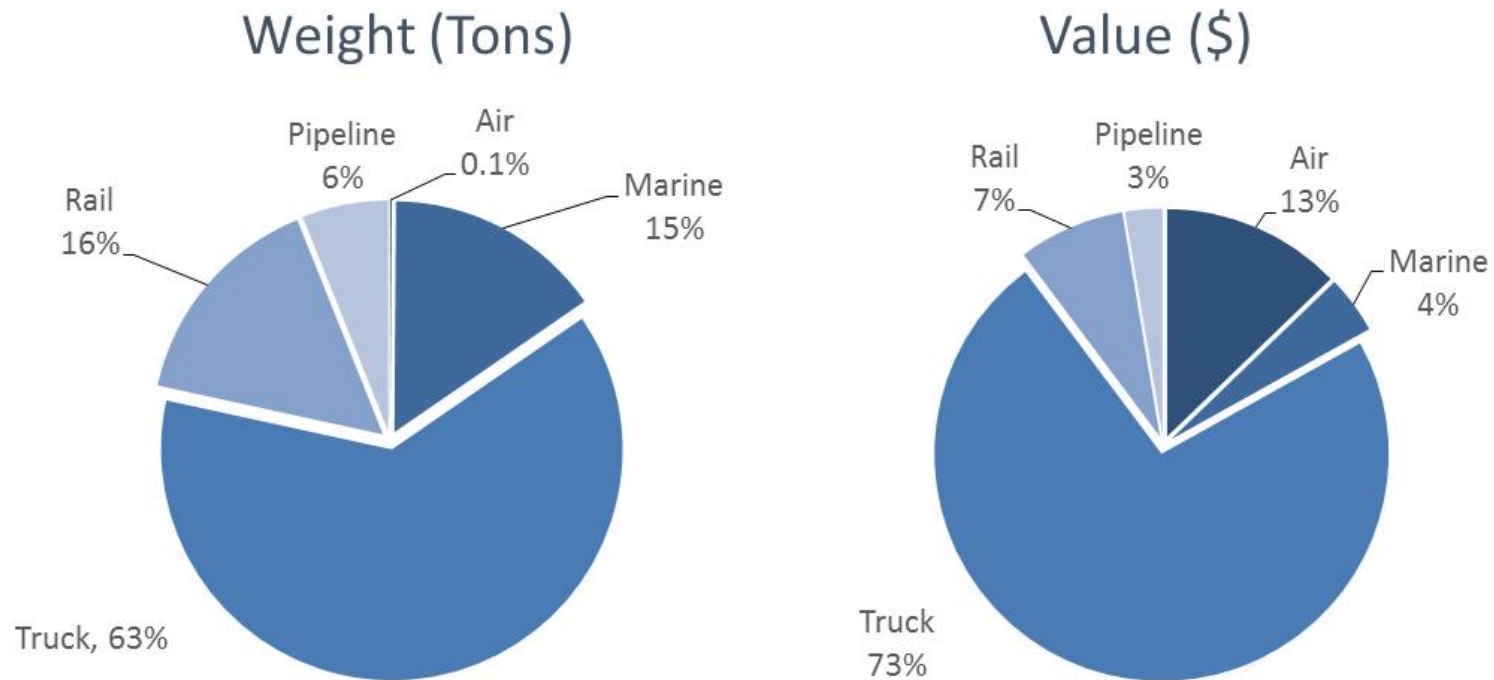
Marine Highways and Marine Freight Development in the MAFC

Solutions for
growing economies

Marc-André Roy
April 22, 2pm
Chicago, IL

Market Share

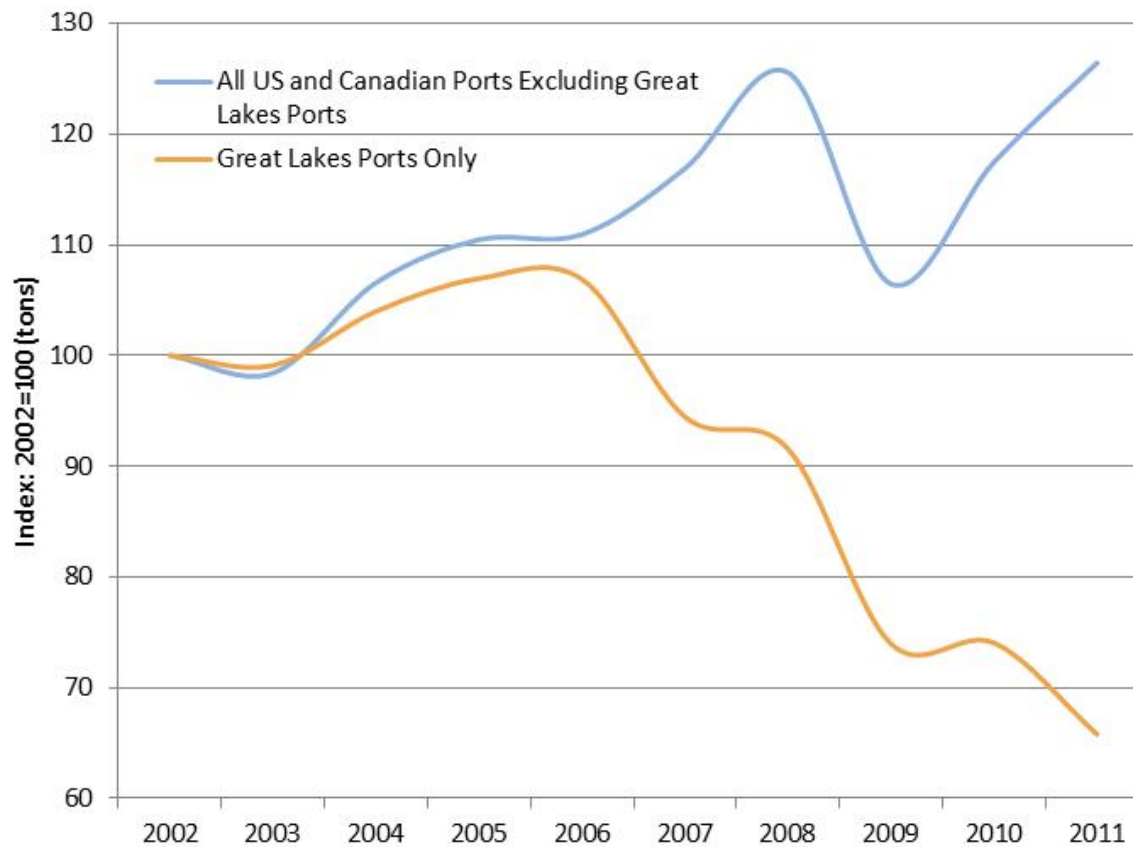
Of the total freight traffic moving to, from and within the Great Lakes states and provinces, the marine mode carries approximately 15% by volume (tonnage) and 5% by value (\$)



Source: CPCS analysis of data from Freight Analysis Framework (2007), other sources

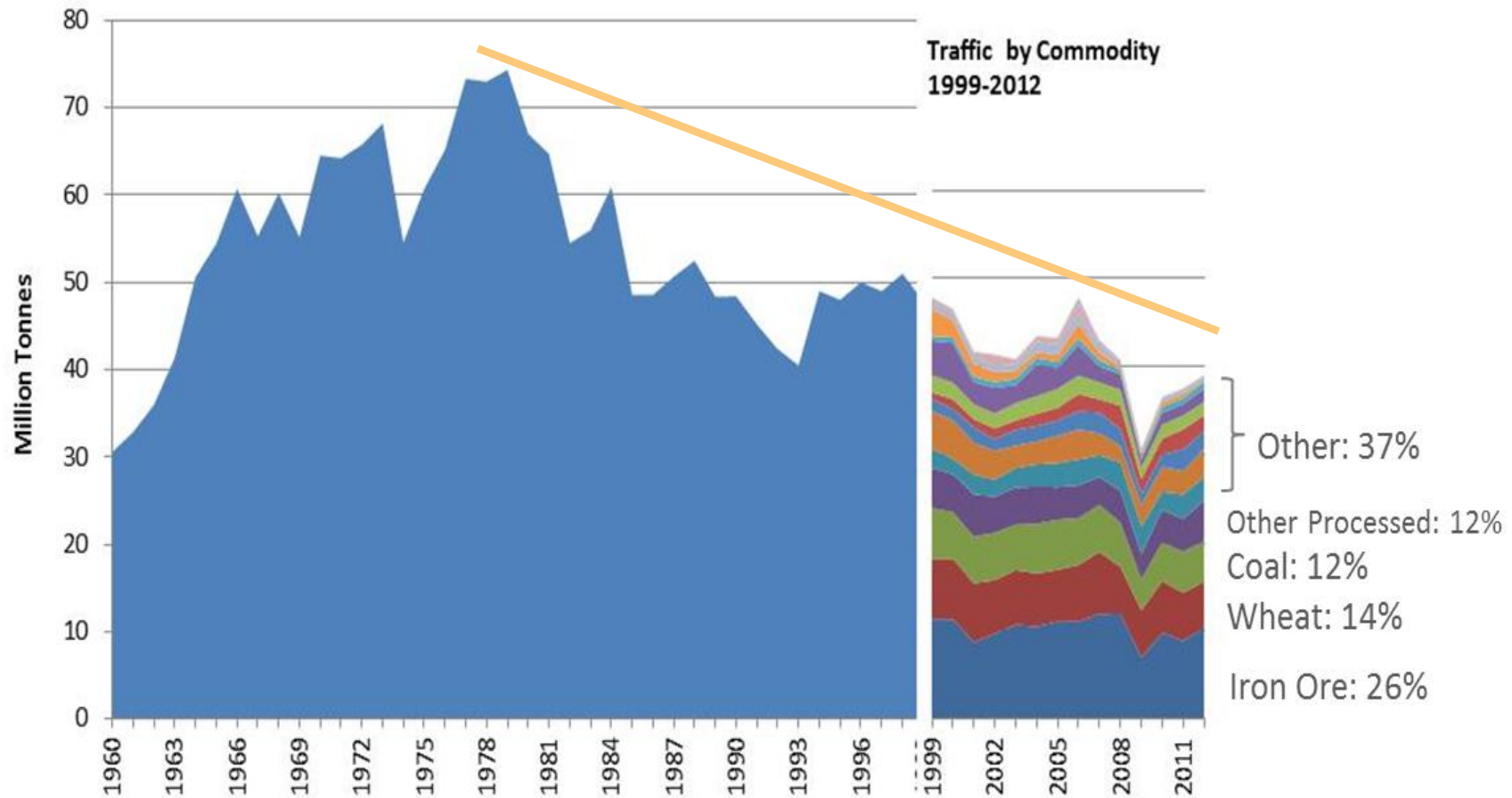
The Bad News: Market Share is Declining

Traffic through Great Lakes ports not keeping pace with traffic through non-Great Lakes ports in the US and Canada.



Longer Term Trend also One of Decline

St. Lawrence Seaway Traffic
1960-2012



Market Influenced by Many Things:

- Geography, including the geographic location of cargo with respect to end markets
- Macro-economic factors, including global economic cycles
- Sector-specific trends and shipper supply-chain requirements
- The structural and institutional context within which the Great Lakes region competes
- The **competitiveness** of the marine transportation system, relative to competing modes & routings

These factors are difficult to control and influence

Future market development is all about competitiveness

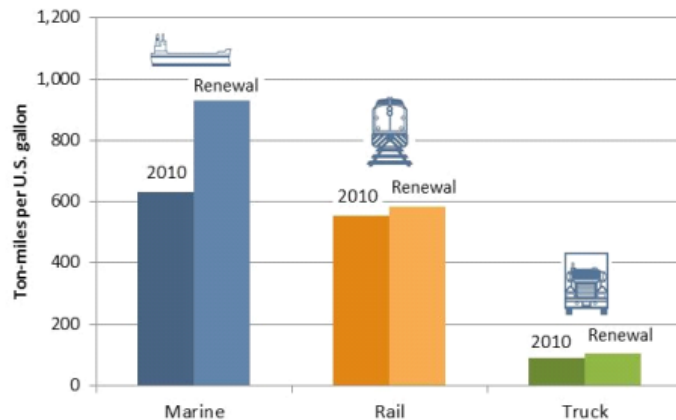
Session Overview

- **Why** seek market development?
- **How** to enable market development?

Arguments For Marine Market Development Well Known

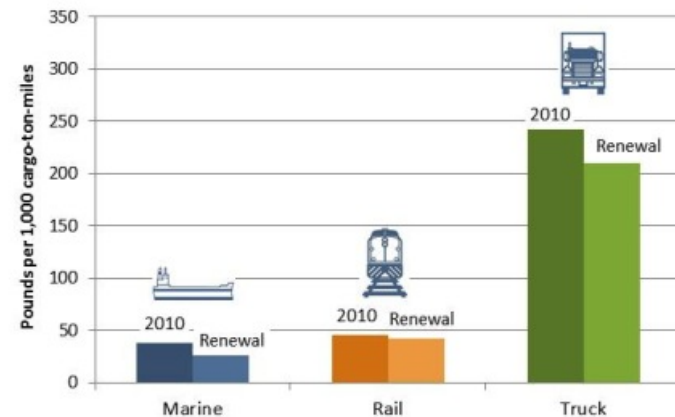
- **Cost:** Most economic mode on a per ton basis
- **Capacity:** Opportunity to alleviate congested land transportation system / reduce wear tear on roads
- **Safety:** Lower rate of accidents relative to other modes
- **Environment:** More energy efficient that rail and truck

Modal Energy Comparison



Source : RTG analyses of confidential marine carrier data, reformatted by CPCS

Modal GHG Comparisons



Source : RTG analyses of confidential marine carrier data, reformatted by CPCS

Its about more than this...

**It's about regional economic competitiveness,
economic growth, jobs.**

Transportation is a DERIVED demand.

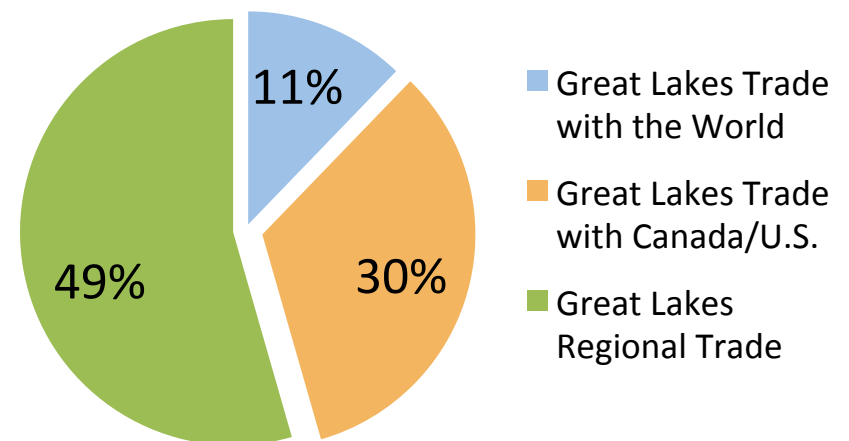
When transportation options are efficient and competitive, shippers benefit from lower transport costs, faster and better service, and increased reliability, which in turn contribute to their competitiveness and growth and those of the broader region.

It's About the Economy

- **\$5.3 trillion:** Estimated GDP of Great Lakes States and Provinces in 2012 (more than GDP of UK and France combined)
- **7.8 million jobs :** Estimated employment in Great Lakes States and Provinces for primary users of freight transportation (i.e. goods-producing industries) in 2012

\$3.0 Trillions: Value of **Goods** Shipped from / to the Great Lakes region
(i.e. “stuff” that moves represents significant share of of regional economy)

Where are Goods Moving?



Major Commodities Moving Through Region

The major commodities moving to, from or within the Great Lakes St. Lawrence River (GLSLR) Region (all modes) include:

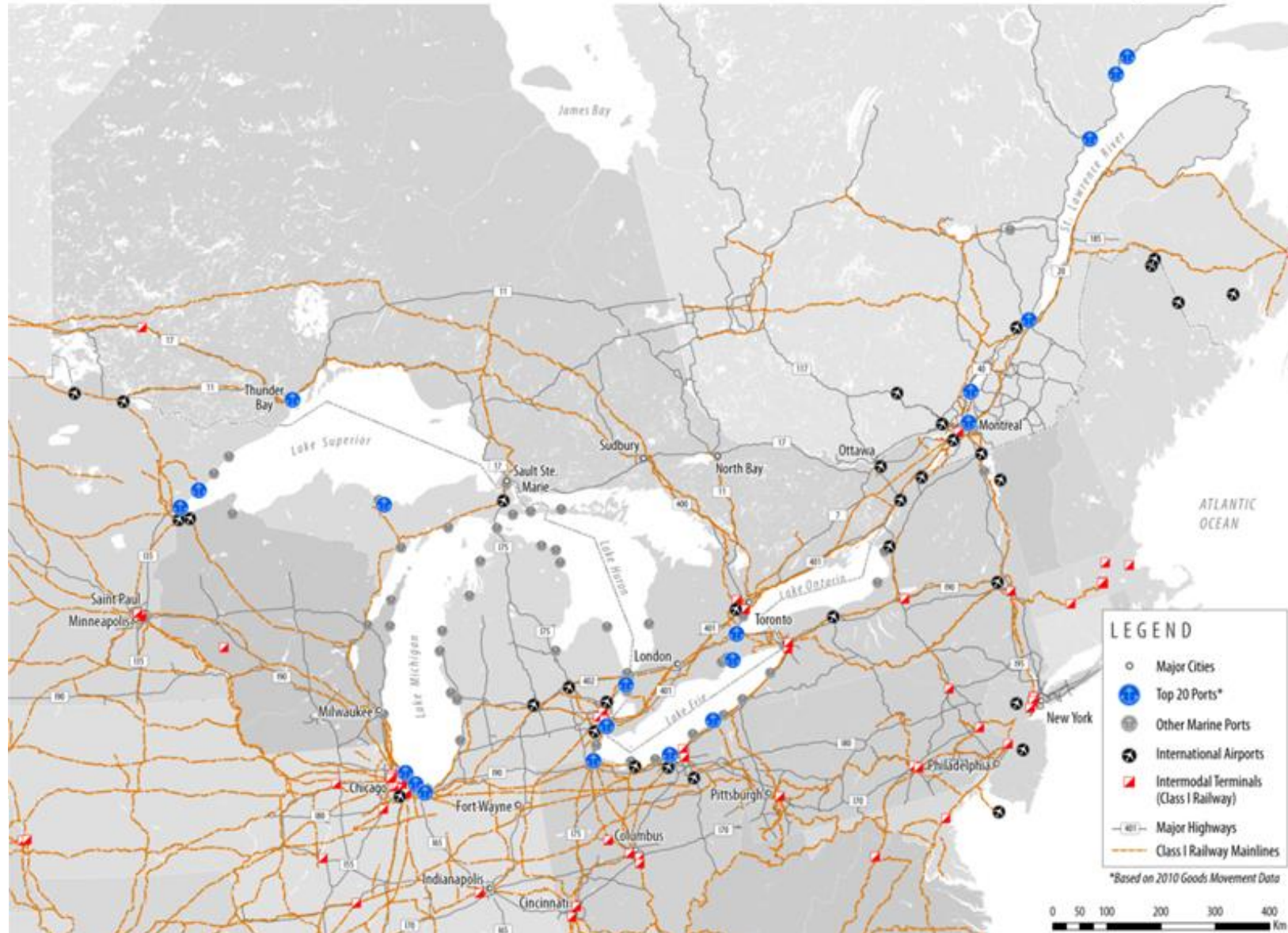
- **Coal** (largely for regional power production),
- **Iron ore** (for regional steel production and export),
- **Limestone and cement** (for regional construction)
- **Grain & agricultural products** (local consumption and export),
- **Automotive & machinery** (supporting local manufacturing base),
- **Other manufactured goods** (including containerized imports)

i.e. Bulk commodities and industrial goods, dependant on low cost transport, comprise significant part of regional economy.

It's About Multimodal Transport / Options

CPCS Solutions for growing economies

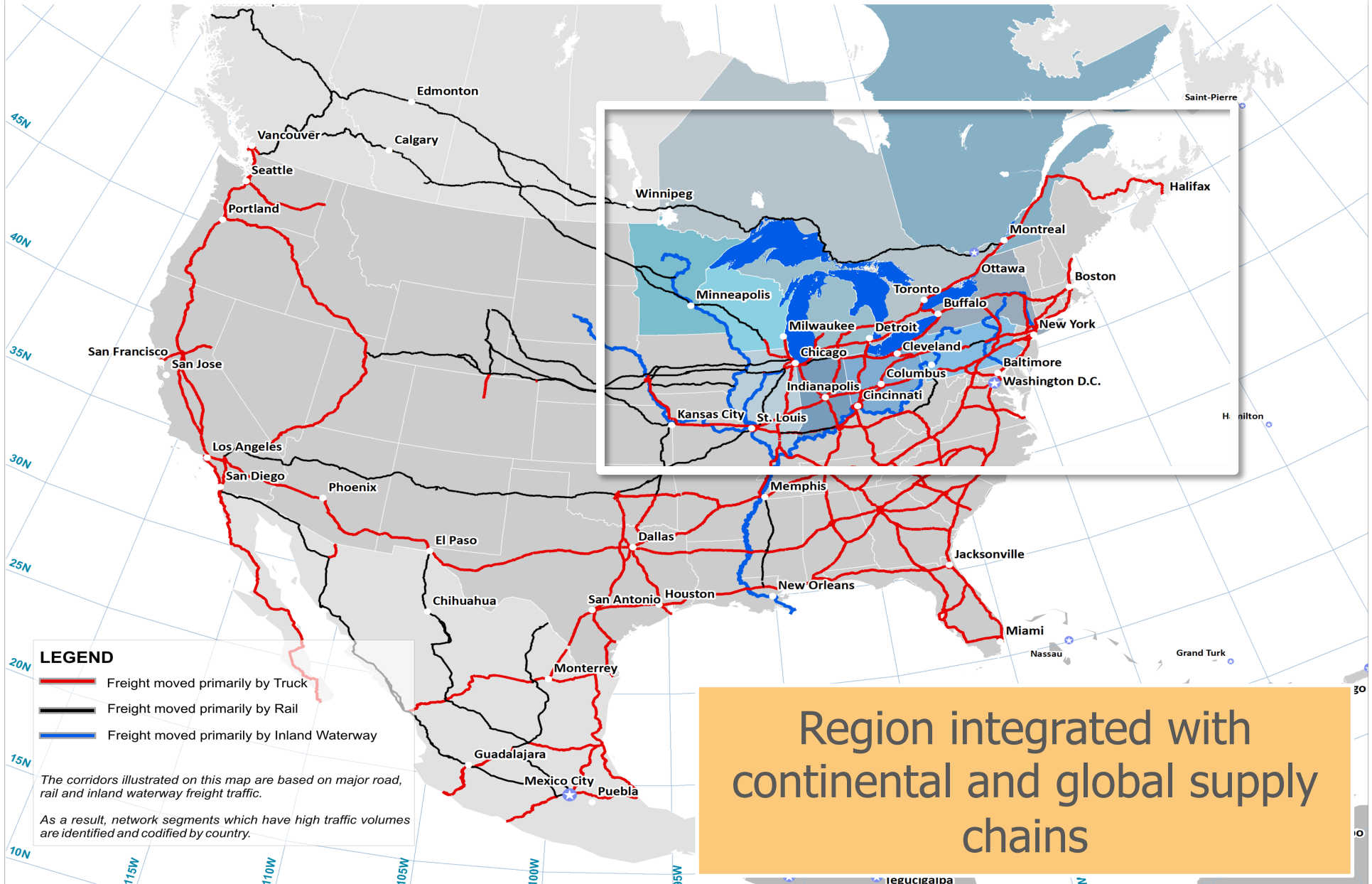
Great Lakes St. Lawrence River System
Multimodal System Infrastructure



It's About Connectivity between Sources of Production and Markets

CPCS Solutions for growing economies

Major North American Freight Corridors of Significance (North American Cities with More Than 500,000 People)



It's About [Regional Economic] Competitiveness

- Jurisdictions with access to competitive transportation infrastructure and services (the more the better) are at a competitive advantage in attracting investment, creating jobs and realizing economic growth.
- All regional stakeholders could benefit from a more competitive marine system – whether or not they transport goods by water.

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Roles in the Market

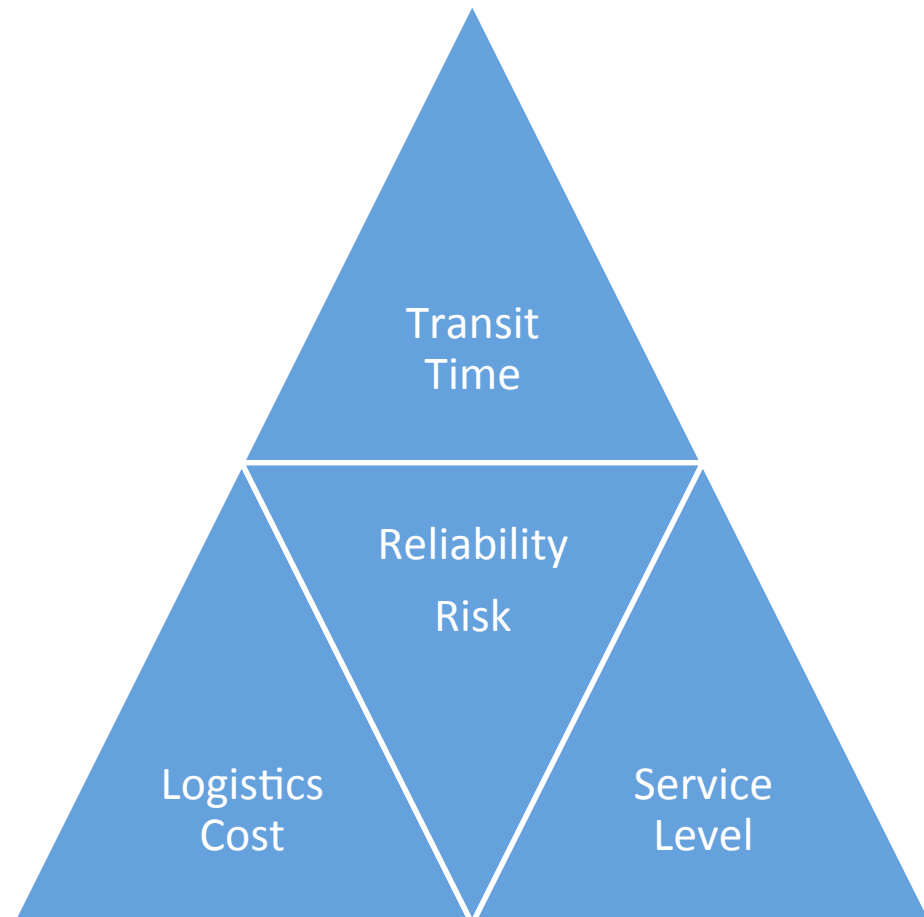
- **Shippers ARE `the market`. They choose !**
- **Carriers offer services**
- **Governments enable**

It is not for governments to prescribe what traffic should shift to marine, or to favor the marine mode over others... but it can enable a more competitive, efficient, safe marine transportation system (the market will do the rest).

Shippers: Mode Choice & Routing Driven by Shipper Requirements

“Performance” vis-à-vis transportation requirements:

Performance is
Supply Chain
Specific



Coal Supply Chains

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2 million tons from western Canada to Thunder Bay, ON

Legend

Major ports involved in coal supply chain (more than 2.5m tons)

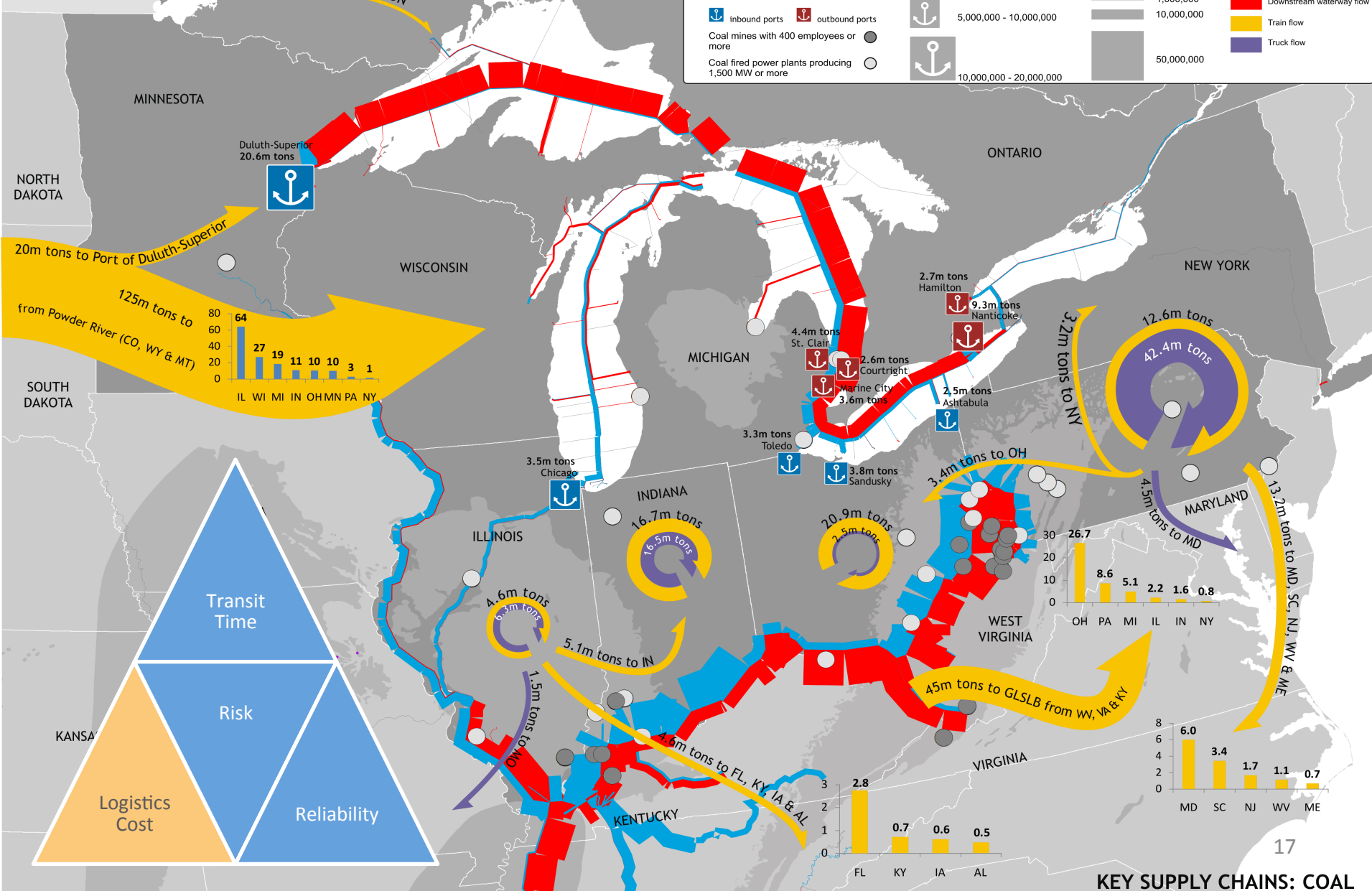
⚓ inbound ports ⚓ outbound ports
● Coal mines with 400 employees or more
○ Coal fired power plants producing 1,500 MW or more

Total Coal Flow Movement (in US Short Tons)

⚓	2,500,000 - 5,000,000		100,000
⚓	5,000,000 - 10,000,000		1,000,000
⚓	10,000,000 - 20,000,000		10,000,000
			50,000,000

Types of Flows

- Upstream waterway flow
- Downstream waterway flow
- Train flow
- Truck flow



Automotive Supply Chains

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KEY SUPPLY CHAINS: AUTOMOTIVE & MACHINERY MANUFACTURING (locations with 40m or more in sales)

Legend

Major ports involved in automotive supply chain

- Inbound ports
- Outbound ports

Automotive & Machinery Manufacturing Types

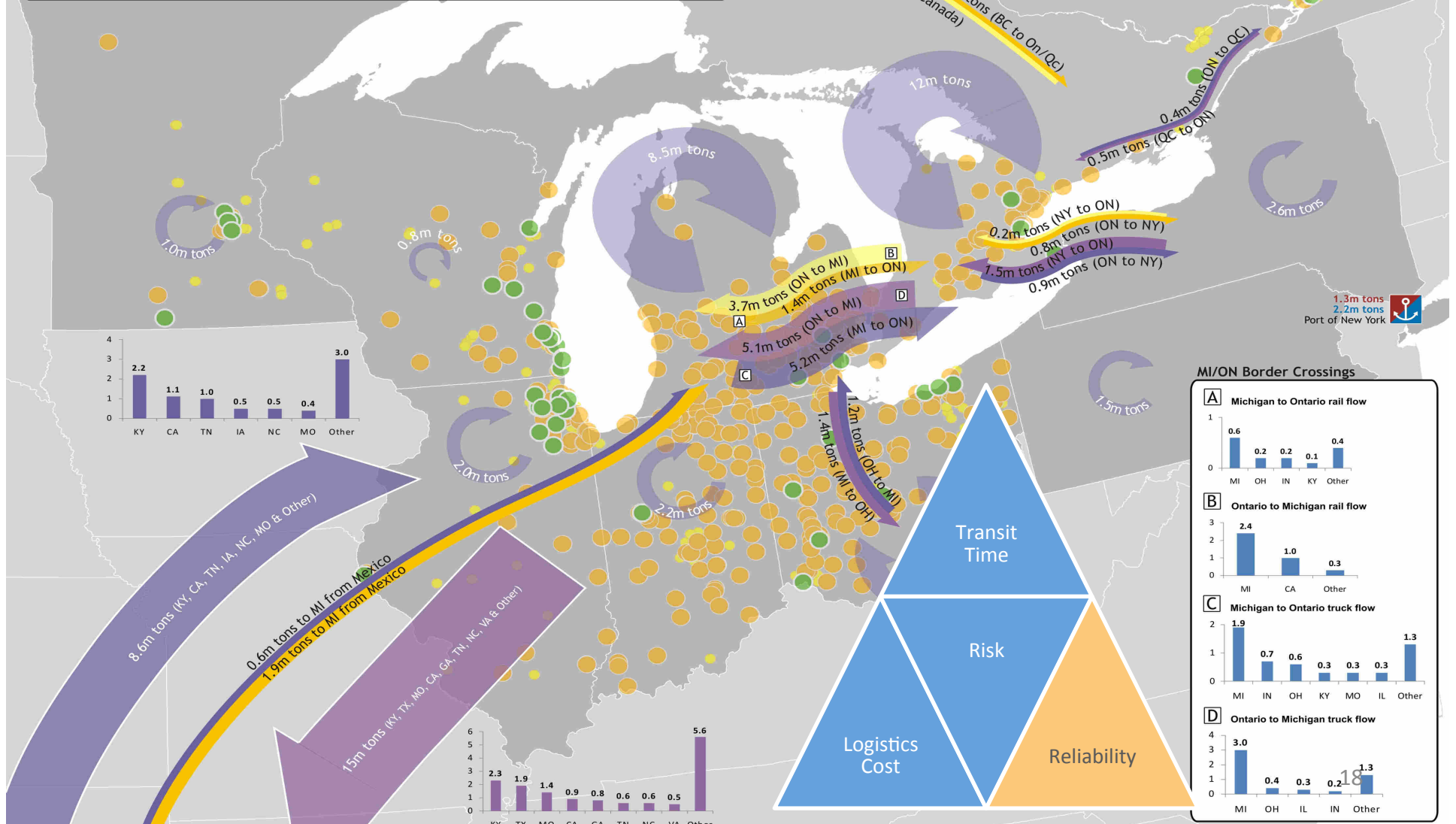
- Car Dealership
- Car Manufacturer
- Machinery Manufacturer

Total automotive & machinery manufacturing flow movement (in US Short Tons)

- 100,000 - 1,000,000
- 1,000,000 and more
- 50,000 or less
- 100,000
- 250,000
- 500,000

Types of Flows

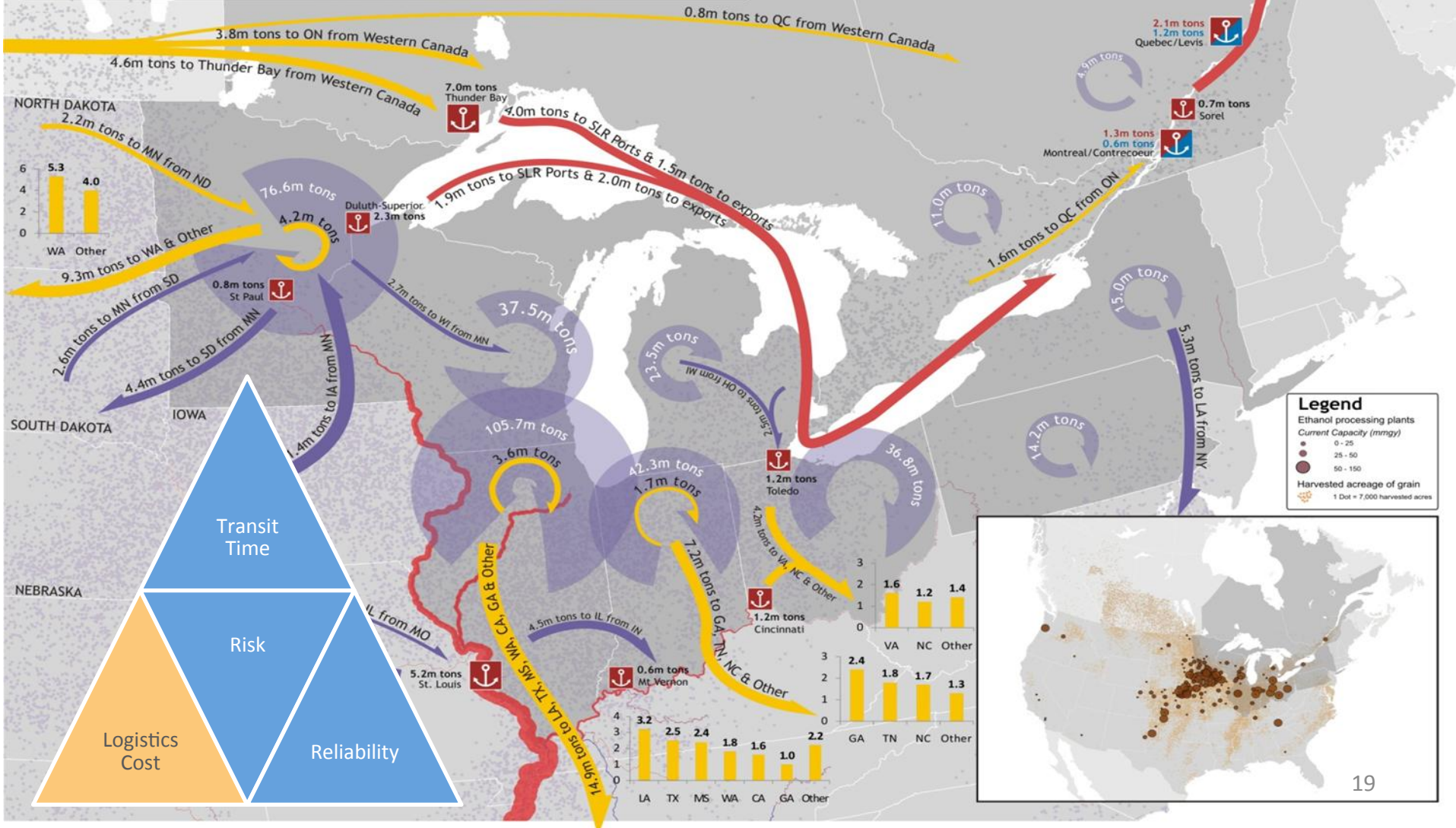
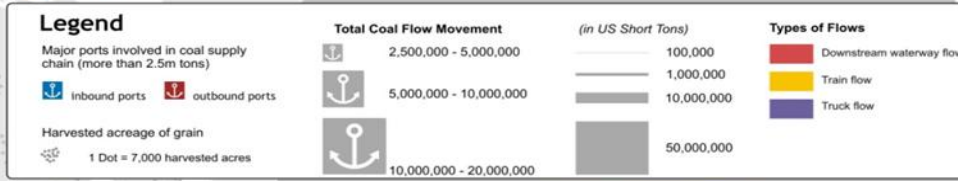
- Train flow
- Truck flow



Grain Supply Chains

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KEY SUPPLY CHAINS: GRAIN



Carriers: Make the Service Available...**When Profitable**

- **Carrier considerations:**
 - Critical mass - adequate volumes/ frequency to warrant service ?
 - (Chicken and egg – service before demand, or demand before service?)
 - Balanced traffic (e.g. payload in both directions?)
 - Overall profitability / risk of new service?
 - Availability of capacity (right place/right time)?

Point: Availability of service not just a function of demand

Government: Role as Market Enabler, but Currently Many Barriers

- **Marine transportation charges (not incurred by other modes)**
 - Harbor Maintenance Tax, Seaway tolls (Can), pilotage, etc.
- **Underinvestment in the system**
 - Navigational channels (dredging)
 - Landside infrastructure, locks
 - Aging US Great Lakes fleet
- **Regulatory barriers and uncertainty**
 - Cabotage regulations
 - Ballast water regulations
 - Air emissions regulations
 - US advance notice of arrival requirements

The Market Development Challenge:

- **Shippers** need to see and understand value of marine
- **Carriers** need appropriate incentives to provide service
- **Governments** need to coordinate actions to address barriers, reflect full potential of marine in multimodal freight plans.

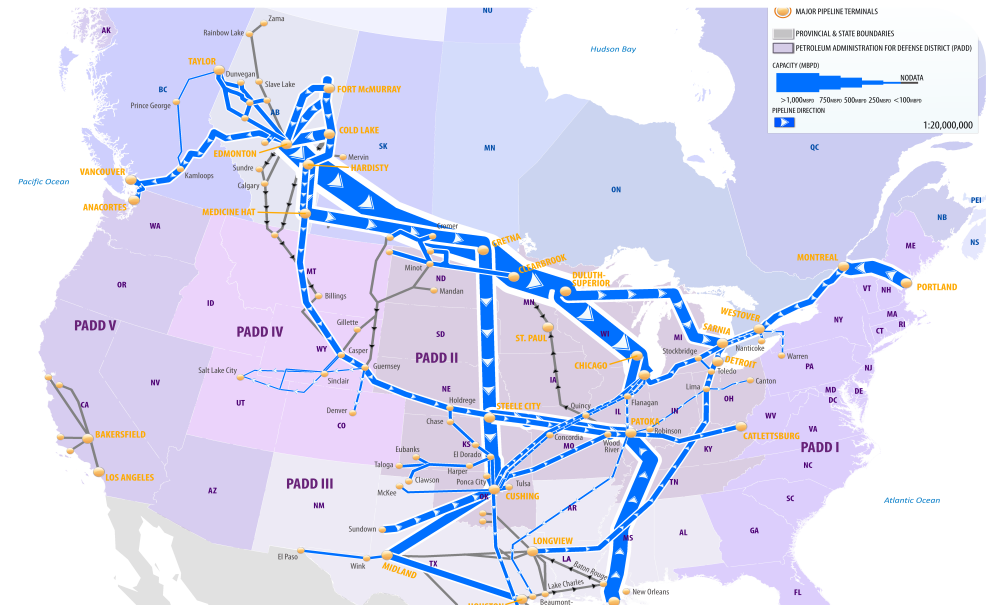
This jives with directions in MAP-21

New Market Opportunities?

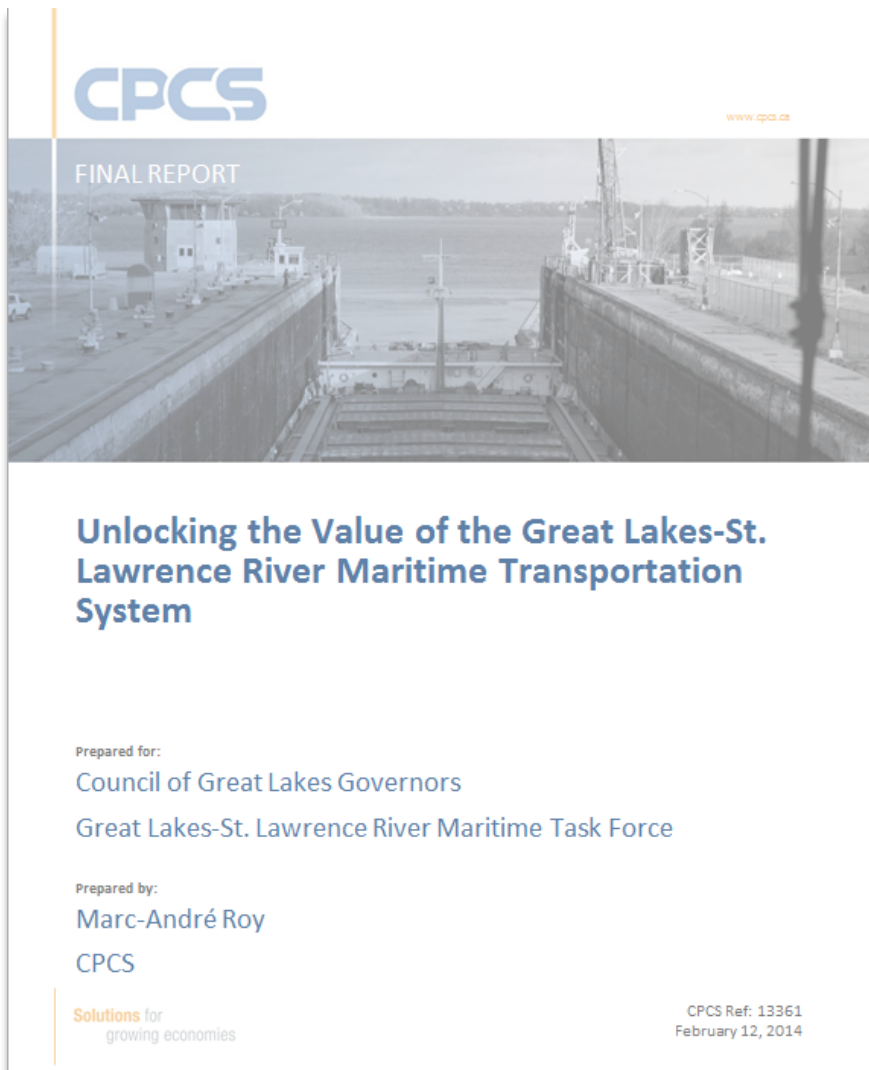
- Petroleum markets?
- Project cargo?
- Containers?

Time will tell...

My opinion: new markets unlikely to develop in any significant way until competitive barriers start to be addressed...or land capacity becomes more constrained than it already is.



Some ongoing initiatives....



- Government
 - Council of Great Lakes Governors Maritime Initiatives
 - Federal initiatives (Strong Ports, Marine Highways)
- Industry
 - Highway H2O
 - Cleveland Express
 - Work of associations

Parting Thought...

Achieving freight market development in the Great Lakes will take coordinated action, investment, sustained energy and time...lots of time.

Questions and Discussions



Marc-André Roy, IMBA, CMILT
Vice President (North America)

T: +1 202 772 3368 | C: +1 613 262 0451 | F: +1 613 237 4494 | www.cpcs.ca



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