CENTREPORT CANADA

Canada's Centre for Global Trade
WINNIPEG, MANITOBA

Sustainable Transportation

Diane Gray, President and CEO
CentrePort Canada Inc.
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✓ Growing regional and global trade

NAFTA

- In 2012, merchandise trade between NAFTA partners exceeded $1.1 trillion (more than 3x 1994 figures).

- Canada and Mexico account for one-third of U.S. merchandise exports. Canada is the largest export market for 38 U.S. States.

- Trade in the region is facilitated by critical shared gateways, like the Mid-Continent Trade and Transportation Corridor and the Can-Amex Corridor, as well as through integrated supply chains.

- As one in five jobs in Canada are linked to international trade, agreements like NAFTA provide our regions with significant competitive advantages.

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Regional and Global Trade Continues to Grow

Exports by principal countries (millions U.S. $)			
	2002	2012	% Increase
Canada to:			
United States	220,072.4	337,829.6	53.5%
Mexico	1,542.3	5,392.9	249.7%
China	2,633.8	19,364.0	635.2%
Total World Exports	252,584.3	453,380.9	79.5%
United States to:			
Canada	160,794.8	291,674.9	81.4%
Mexico	97,530.5	216,330.8	121.8%
China	22,052.4	110,590.1	401.5%
Total World Exports	693,222.3	1,545,565.2	123.0%
Mexico to:			
Canada	3,010.1	10,929.1	263.1%
United States	137,963.1	288,148.1	108.9%
China	653.7	5,720.8	775.1%
Total World Exports	160,750.5	370,826.8	130.7%

Source: United Nations International Merchandise Trade Statistics

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Growth in Trade has Created Congestion

- Freight movements in the U.S. across all modes could increase 62% between 2011 and 2040 *(U.S. Federal Highway Administration, via Association of American Railroads, April 2013)*.
- Rail congestion bottlenecks currently cost the U.S. economy $200 billion per year *(ASCE, 2013)*.
- Cost of congestion (travel delay, fuel, and truck congestion costs) in the 15 largest U.S. cities studied: $1.5 billion in San Diego to $11.8 billion in New York-Newark (*Urban Mobility Report 2012 - Texas Transportation Institute).*
- Total cost of congestion in 9 Canadian urban areas (wasted time, fuel, and GHG emissions): $2.3 billion to $3.7 billion (*Transport Canada - March 2006*).

Cost of Congestion

Urban Mobility Report 2010: total congestion invoice - extra time and fuel in 439 U.S. urban areas (2009 dollars) - $115 billion

Congestion and Truck Delays, 2011 (Urban Mobility Report 2012 - Texas Transportation Institute)				
	Truck Congestion Cost ($ million)	Total Congestion Cost ($ million)	Excess Fuel Consumed (1,000 gallons)	Travel Delay (1,000 hrs)
New York-Newark	$2,541	$11,837	255,798	544,063
Los Angeles-Long Beach-Santa Ana	$2,290	$10,785	219,710	501,881
Chicago	$1,716	$6,214	127,016	271,718
Seattle	$546	$2,241	47,156	100,802
Minneapolis-St. Paul	$232	$1,260	22,100	60,788

✓ There is a Need to Create Sustainable Transportation Systems

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Sustainable Transportation

- The Centre for Sustainable Transportation defines a sustainable transportation system as one that:
  - "Allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations;
  - Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy;
  - Limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise."

GHG Emissions

- Globally, the second largest GHG contributor is the transport sector (15%). 73% of transport-related GHG emissions are from road transport (passenger and freight). Without changes, transport-related GHGs will double by 2050.

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Achieving Sustainable Transportation

- Avoid-Shift-Improve strategies (OECD):
  - **Avoid**: reduce travel distances/ the need to travel by improving the overall transportation system (coordinate land use and transportation planning – currently sustainable infrastructure planning is often ad hoc).
  - **Shift**: encourage shifts to less energy intensive transportation modes.
  - **Improve**: vehicle and fuel technologies/ efficiencies.
- Avoid-Shift-Improve strategies should be country-specific, addressing relevant infrastructure needs, trends, energy mixes, etc.

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Sustainable Transportation Initiatives
An Example of Avoid

Reshoring

- 37% of U.S. manufacturing executives with sales of $1 billion are planning/ actively considering repatriating jobs to the U.S. *(Boston Consulting Group).*

- Reasons for repatriating:
  - Reduce transportation costs
  - Supply chain disruption risks
  - Well-established transportation network

North American Initiatives
An Example of Shift

Natural Gas

- Converting 1 heavy duty truck to natural gas = GHG reduction equivalent to 30 cars.

- Most natural gas fuel stations are compressed natural gas (CNG) that can be installed wherever there is an underground natural gas pipe (gas often compressed on site).

- 19,000 natural gas refueling stations in 80 countries.
  - 587 CNG fueling stations in 48 U.S. states, 80 in 5 Canadian Provinces (BC, AB, SK, ON, QC).
  - 32 LNG stations in the U.S., 2 in Canada (more under development, including a partnership between Bison Transport and Shell Canada which will open LNG stations in Calgary, Red Deer and Edmonton).

North American Initiatives
An Example of Improve

Transporte Limpio (Mexico)

- Based on the SmartWay program, Transporte Limpio works with long-haul shipping companies to reduce emissions and fuel consumption.
- The environmental performance of participating companies is assessed over three years. After three years, an action plan is developed to further reduce emissions and fuel consumption.
- In 2010, the program reduced carbon dioxide emissions by an estimated 300,000 tonnes.

Transporte Limpio

Other Sustainable Transportation Trends

Modal Shifts

- Over the last 25 years, intermodal has been the fastest growing rail traffic mode in the U.S. *(Association of American Railroads, April 2013).*
- Annually, ~ 25 million containers/ trailers are moved using intermodal.
- Rail is 4x more fuel efficient than trucking.
- Many trucking companies are increasing their use of rail intermodal for environmental, economic (lower fuel costs), and other reasons.
- Truck-rail intermodal often makes sense because rail works well for large long haul shipments, while trucks can provide first and last mile and other short-haul service. Rail cannot provide access to ~ 80% of U.S. communities.
  - Therefore the entire supply chain must become more efficient (i.e. can't just move all freight to rail).

Other Sustainable Transportation Trends

Shortening the "Last Mile"

- Area Development magazine defines the last mile as "the process of delivering small-quantity orders to end-users is the last mile…. [the] last mile actually encompasses the final delivery of any kind of product to a home, job site, or office."

- As e-commerce continues to grow, making the last mile more efficient will become increasingly important.

- Ways to reduce the last mile/ increase the efficiency of the last mile:
  - Smaller distribution centres / distribution centres in urban centres
  - Load consolidation
  - Off-peak delivery options
    - The PierPASS OffPeak program at Port Los Angeles-Long Beach encourages off-peak delivery times. Traffic mitigation fees are also used during peak hours.

There is a Need to Invest in Infrastructure

- Adequately investing in infrastructure now, could:
  - Improve productively and encourage growth of high paying jobs.
    - By 2040, maintained/ new service and manufacturing jobs would pay on average 28% more in the U.S.
  - Economic gains – higher productivity levels and lower costs.
    - Enhance reliability (i.e. just-in-time deliveries).
  - Save future generations from shouldering the burden.
    - Lower maintenance costs by alleviating pressures on road infrastructure.
    - Decrease environmental and safety costs.
  - Keep key transportation corridors and ports competitive by halting growing congestion trends.

Cumulative Costs of Deficient/ Deteriorating Surface Infrastructure (*American Society of Civil Engineers*)	
2010	$130,000,000,000
2020	$912,000,000,000
2040	$2,972,000,000,000

✓ How Canada is Changing its Approach to Sustainable Transportation and Infrastructure Planning


Okay. I'm inland!
So where's the port?
?!
PHELPS

What is an Inland Port?

"A physical site located away from traditional coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain."

Center for Transportation Research, The University of Texas at Austin

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CentrePort: Canada's Centre for Global Trade

CentrePort Canada offers 20,000 acres of high-quality industrial land, adjacent to a major urban centre and the Canada-US border, with on-site access to **tri-modal** transportation options.

CentrePort Canada Inc. is a business, logistics and development **facilitator**.

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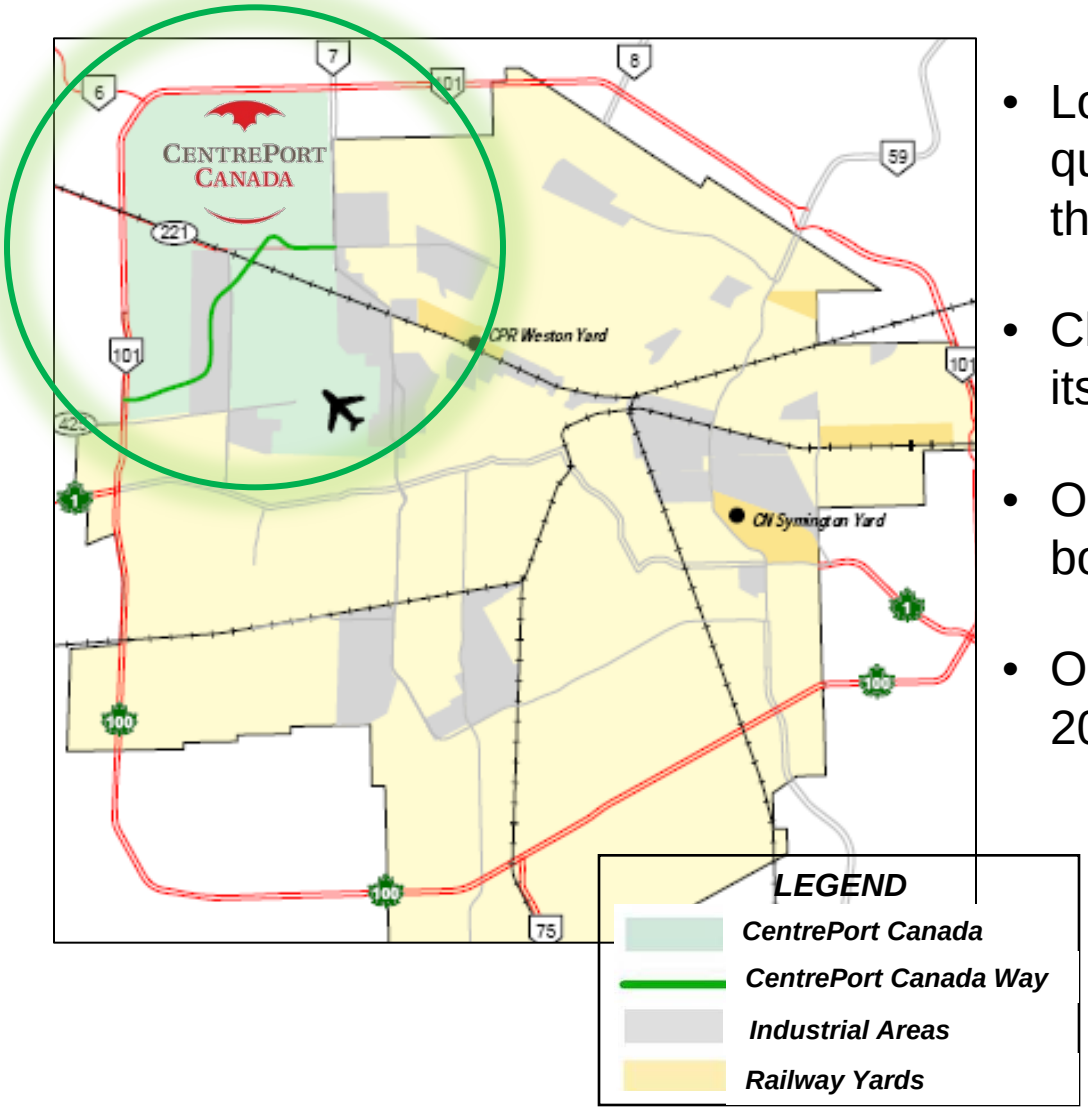
At the Hub of Key Trade Gateways

CentrePort Canada is connected to important global markets:

- **Asia Pacific Gateway**
  - Trans Canada Corridor
  - Northwest Corridor
- **Quebec-Ontario Gateway**
  - Trans Canada Corridor
  - Windsor/Detroit
- **NAFTA Gateway**
  - Mid-Continent Corridor
  - Eastern USA Seaboard
  - Mexico
- **Atlantic Gateway**
  - Halifax Port
- **Arctic Gateway**
  - Air Polar Routes
  - Marine Polar Routes4

CentrePort Canada's Location



- Located in the northwest quadrant of Winnipeg and in the R.M. of Rosser.
- Close to Lake Winnipeg and its environs.
- One-hour from Canada-U.S. border.
- Operational since November 2009.

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Tri-modal inland port

Rail

- 3 Class 1 railways: CN, CP and BNSF.

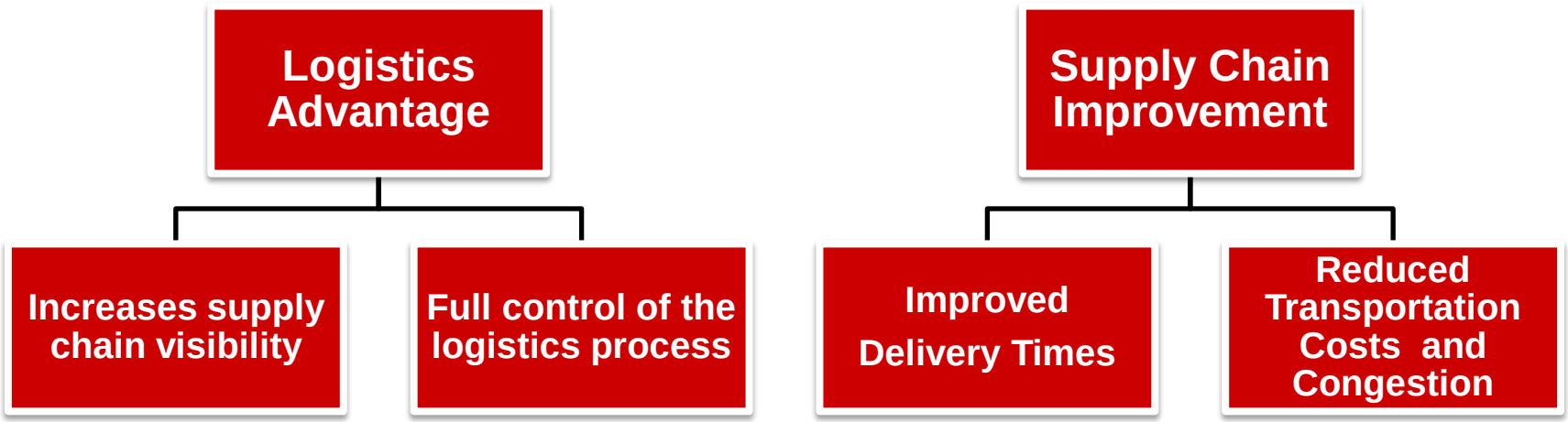
Road

- Over 450 trucking companies operating in Manitoba.

Air

- James A. Richardson International Airport is #1 in Canada for dedicated freighter aircraft movements and operates 24 / 7.

Advantages of Using an Inland Port



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One-Stop Shop for Business Decisions

- **FTZ Programs:** Single access to federal programs. Supports the import, storing and re-exporting of goods without paying duties and taxes until point of sale. Provides companies with cash-flow management support.

- **Special Planning Area / Master Development Plan:** Transparent development requirements and charges, zoning, and decision-making processes. Industry leading timelines for development approvals

- **Tax Increment Financing (TIF)**: Helps finance infrastructure needs with the recovery of financing captured through the property and education taxes realized through additional development.

In Summary:

1. Support Avoid, Shift and Improve Strategies to encourage users of transportation and carriers themselves to adopt sustainable practices.

2. Build infrastructure that is integrated into land use and other planning to ensure networks are developed that eliminate congestion and encourage conversion to lower GHG emitting modes.

3. Use distribution models for goods, like inland ports, that eliminate single shipments and create more cost-effective and time efficient models for supply chain management.

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Contact: Diane Gray

Diane.Gray@CentrePortCanada.ca

204-784-1300

www.centreportcanada.ca