



CROSS-BORDER  
INSTITUTE

# ASSESSING ECONOMIC IMPACTS AND REALIZING ECONOMIC OPPORTUNITIES

- *Objective:* Generate practical information on the enhanced transportation services that Gordie Howe International Bridge will provide, and what governments, business and individuals can do now to reap the greatest possible economic benefits from them.
- *Impacts vs opportunities*
  - Impacts occur automatically when the Bridge opens
  - Opportunities require additional actions by public and private actors
- *What this study does not do*
  - "bottom line" dollar value of benefits
  - financial assessment of project
  - construction phase economic benefits

***Economic benefits generally translate into increased commercial traffic***

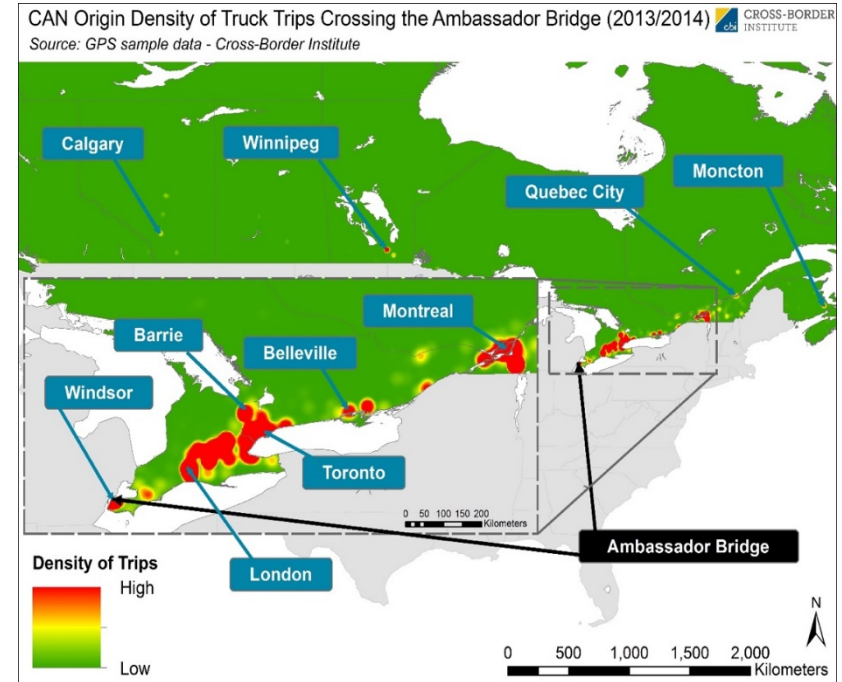
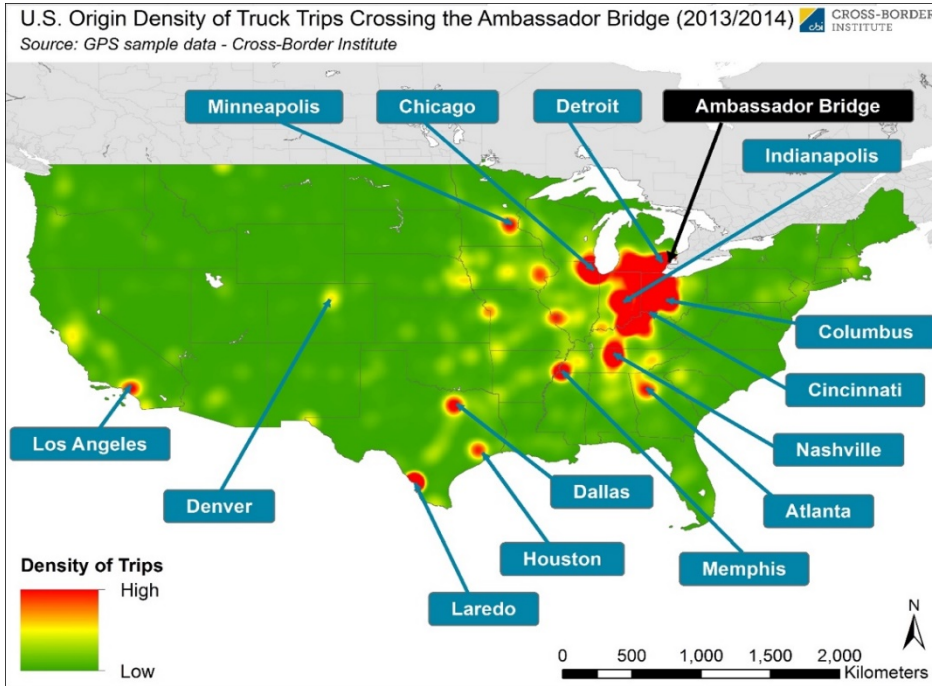


# NOT AN ORDINARY BRIDGE

- Special character of border bridges
- Nexus of US and Canadian highway networks
- Cross-Border Supply Chains (main automotive connection)
- Economic significance of Detroit River crossing
  - 19% of Canada-US trade
  - Ambassador + Blue Water Bridges 3<sup>rd</sup> largest US port
  - Ambassador Bridge freight volume greater than Vancouver containers

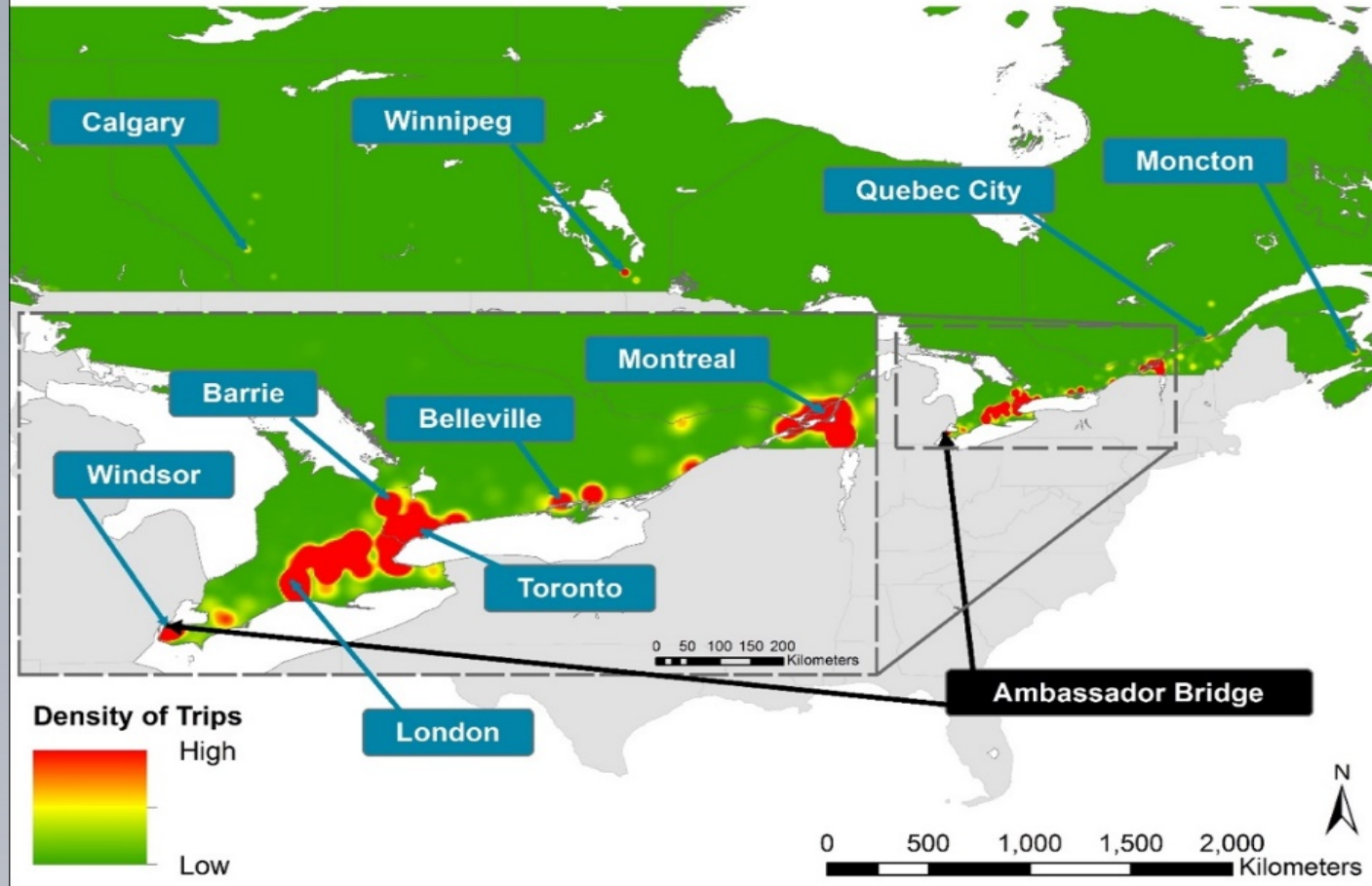


# AMBASSADOR BRIDGE O-D PATTERNS (FROM GPS DATA)

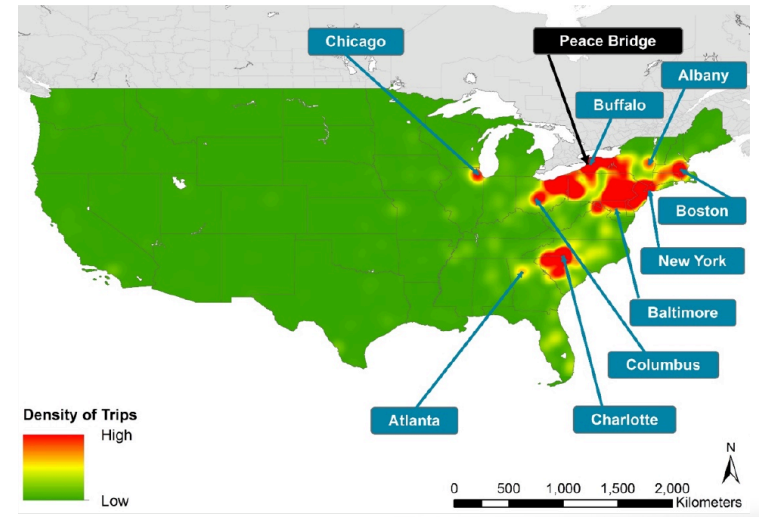
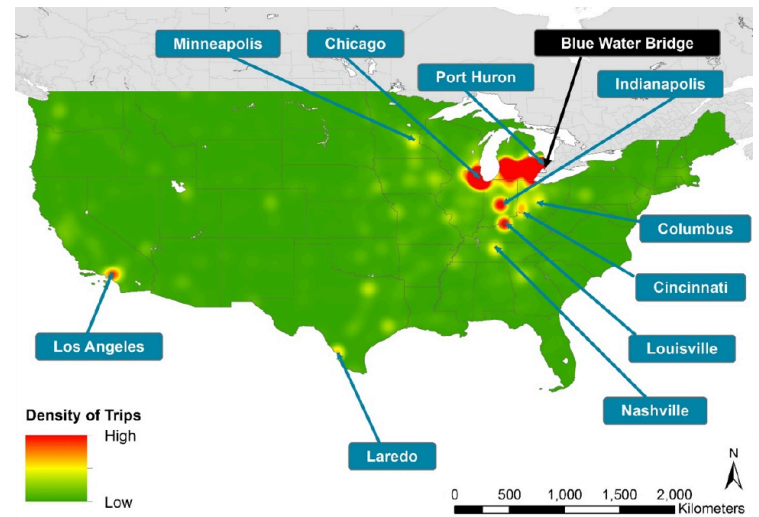
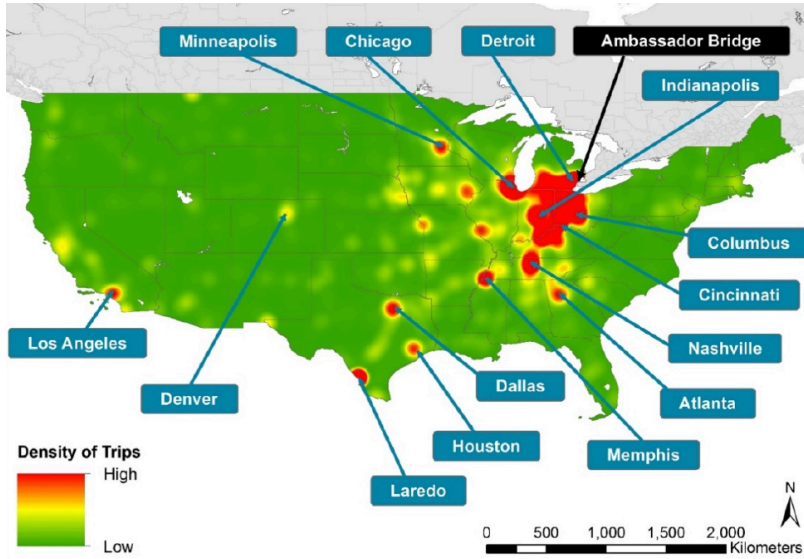


# CAN Origin Density of Truck Trips Crossing the Ambassador Bridge (2013/2014)

Source: GPS sample data - Cross-Border Institute



# UNIQUE GEOGRAPHY FOR EACH CROSSING



# CROSS-BORDER SUPPLY CHAINS

Three necessities

- Business case
- Binational cooperation
- Binational infrastructure (fast, *consistent*, resilient)

Benefits from cross-border integration of production systems

- Operate at the scale of the North American market
- Opportunities for SMEs

# KEY SECTORS FOR CROSS-BORDER INTEGRATION

## Automotive

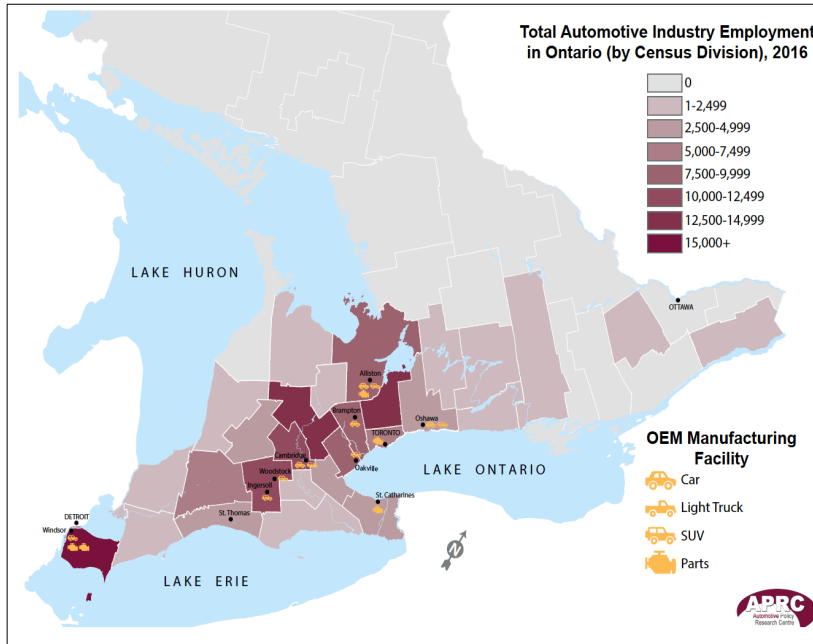
- Long history, very large share of trade at Detroit River crossing
- Highly intolerant of delay
- Sensitive to lack of redundancy
- Facing headwinds of competition and political uncertainty

## Agrifood

- Large flows but limited integration

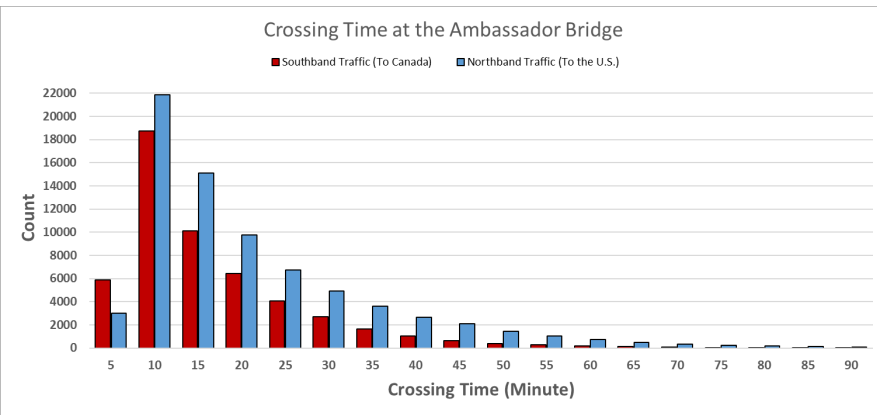
## Retail

- Poorly integrated but large potential





# IMPACTS: WHY THE GORDIE HOW INTERNATIONAL BRIDGE WILL BE A BETTER CROSSING



- Highway-to-highway connection in expanded corridors
- Larger inspection plazas
- More lanes
  - Support more volume
  - Reduce impact of incidents (better consistency)
  - Support trusted traveler/trader
- Advanced technology
- Certainty of long service lifetime to support private investment



# TWO TYPES OF ECONOMIC IMPACTS

Why build infrastructure? To create two types of benefits:

*Static benefits:* Provide better transportation services to the existing pattern of cross-border traffic flows:

- Aggregate time savings for border crossers
- Enhanced accessibility to economic markets and resources

*Dynamic benefits:* Superior service gives rise to a changed pattern of traffic flow due to new and expanded economic activity:

- Like eliminating a tariff, reducing border costs leads to growth in income, employment and trade



# IMPACTS: TIME SAVINGS

Our calculations take account of both the reduction in average crossing time and in schedule time buffers to offset variability in crossing time.

Net present value of savings relative to existing infrastructure (varies based on discount rate and time horizon)

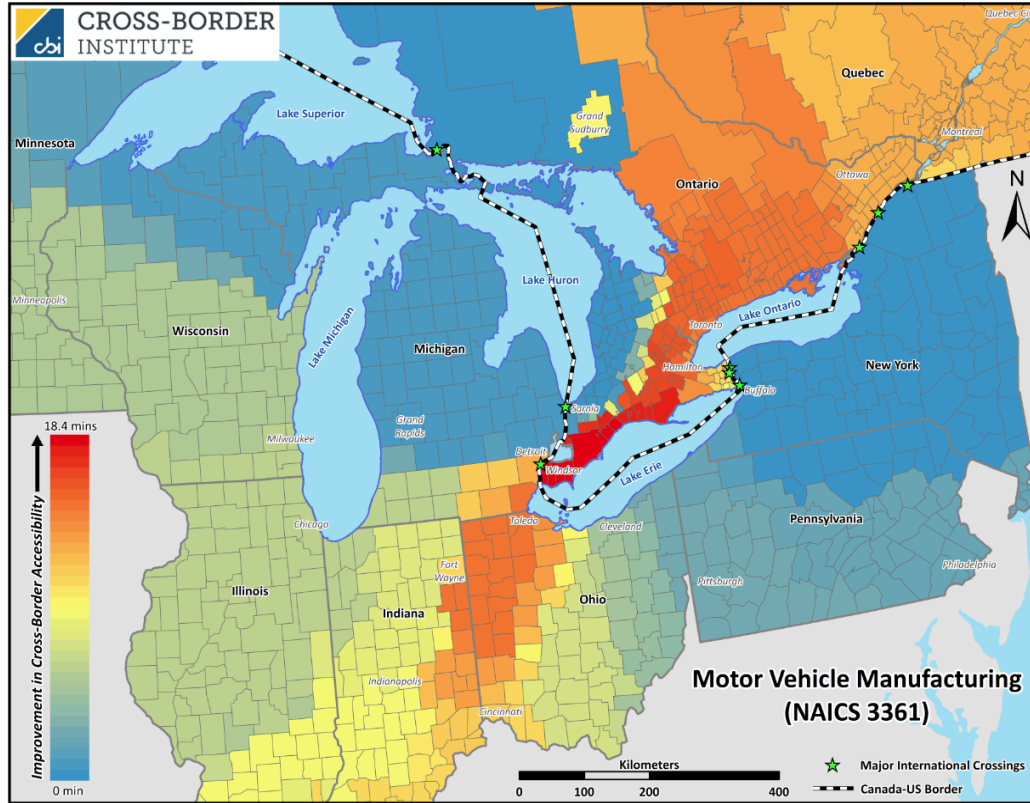
- \$1.1 To \$2.3 billion trucks only,
- \$1.4 to \$3.0 billion for trucks and cars
- Much higher value for ensuring Detroit River option relative to St. Clair River

These measures are conservative because they can't account for:

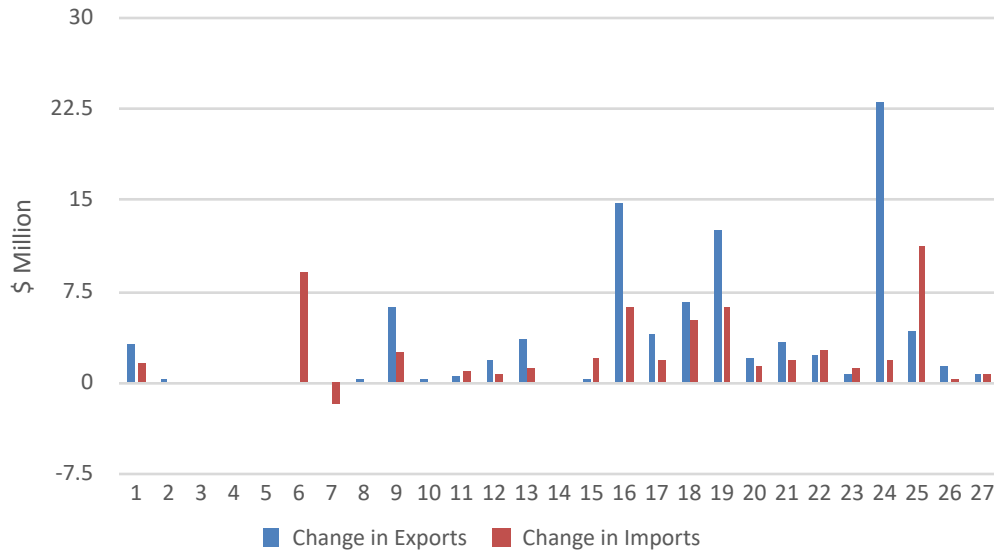
- More daily turns per vehicle,
- Reduced risk of missing time windows,
- Reduced risk of exceeding hours of service
- Avoidance of long detour due to closure (redundancy)



# IMPACTS: AVERAGE ACCESS TIME SAVINGS TO INDUSTRIAL INPUTS – AUTO ASSEMBLY



# IMPACTS: TRADE EXPANSION DUE TO IMPROVED CROSSING TIMES (CGE MODEL RESULTS)



No.	Name
1	Grains and other crop products [M111B]
2	Live animals [M112A]
3	Other farm products [M11D0]
4	Forestry products and services [M11E0]
5	Fish and seafood, live, fresh, chilled or frozen [M1140]
6	Mineral fuels [M21B0]
7	Metal ores and concentrates [M2122]
8	Non-metallic minerals [M2123]
9	Food and non-alcoholic beverages [M31C0]
10	Alcoholic beverages and tobacco products [M312A]
11	Textile products, clothing, and products of leather and similar materials [M31D0]
12	Wood products [M3210]
13	Wood pulp, paper and paper products and paper stock [M3220]
14	Printed products and services [M3230]
15	Refined petroleum products (except petrochemicals) [M3240]
16	Chemical products [M3250]
17	Plastic and rubber products [M3260]
18	Non-metallic mineral products [M3270]
19	Primary metallic products [M3310]
20	Fabricated metallic products [M3320]
21	Industrial machinery [M3330]
22	Computer and electronic products [M334C]
23	Electrical equipment, appliances and components [M3350]
24	Transportation equipment [M336A]
25	Motor vehicle parts [M3363]
26	Furniture and related products [M3370]
27	Other manufactured products and custom work [M3B00]

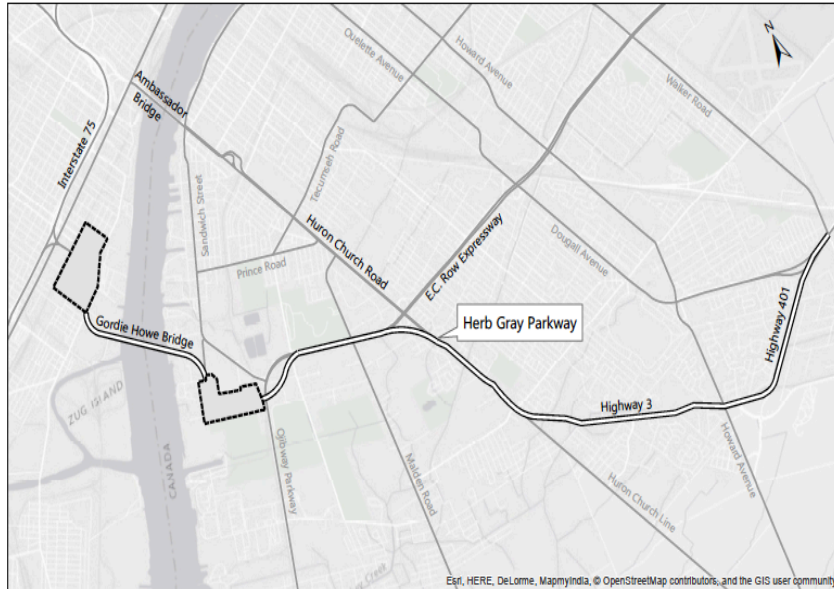
# OPPORTUNITIES: POTENTIAL FOR TRANSPORTATION, DISTRIBUTION AND LOGISTICS DEVELOPMENT

## Why TDL?

- TDL sector is best placed to take advantage of the huge flow of freight through the corridor served by the new Bridge;
- it is a land-intensive activity and developable land is more readily available in the study regions than in other metro areas;
- it has the potential to provide employment opportunities to people with limited transferable skills;
- growth in TDL services will enhance the competitiveness of other industries in the region;
- the central location of the Detroit River crossing creates the potential to provide **hub services** for the broader Great Lakes and St Lawrence (GLSL) economic region.



# HOW DOES THE GORDIE HOWE INTERNATIONAL BRIDGE CHANGE TDL POTENTIAL?



- Improved accessibility to origins and destinations of freight
- Increased flow through the corridor
- Reduced risk due to redundancy
- Opening opportunities for land development (especially on Canadian side)

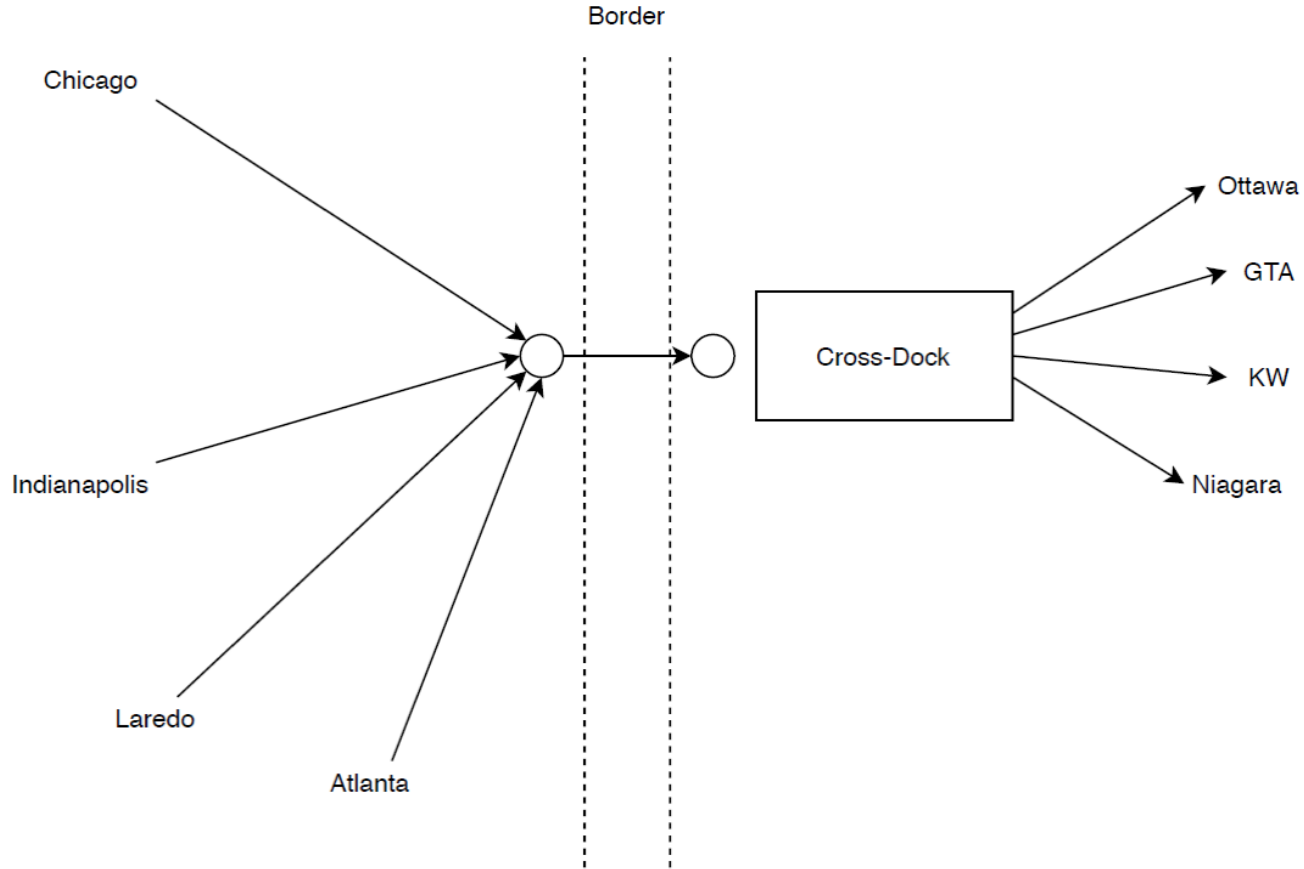
# TDL CLUSTER: RECOMMENDED AREAS OF FOCUS

- Canada-US Cross-docking
- E-commerce
  - Deconsolidation of Canadian orders
  - Cross-border fulfillment
  - Cross-border reverse logistics centre.
- Global trade (goods in transit)
  - One-stop processing centre.
  - Dray from container facilities in US (*New Traffic*)
- Climate controlled facilities with on-site inspection
- Truck stop
- Addressing the driver shortage





# CROSS-DOCKING AT THE BORDER



# ADVANCED IT FOR TDL CLUSTER AS A COMMON RESOURCE

- Direct data link between an importer's IT system and CBSA
- Duty minimization (“re-engineering tariffs”)
- Advanced traceability (distributed ledger)
- Cross-docking and similar load matching using AI
- Delay prediction using AI
- Payments and trade finance
- Collection and commercialization of data

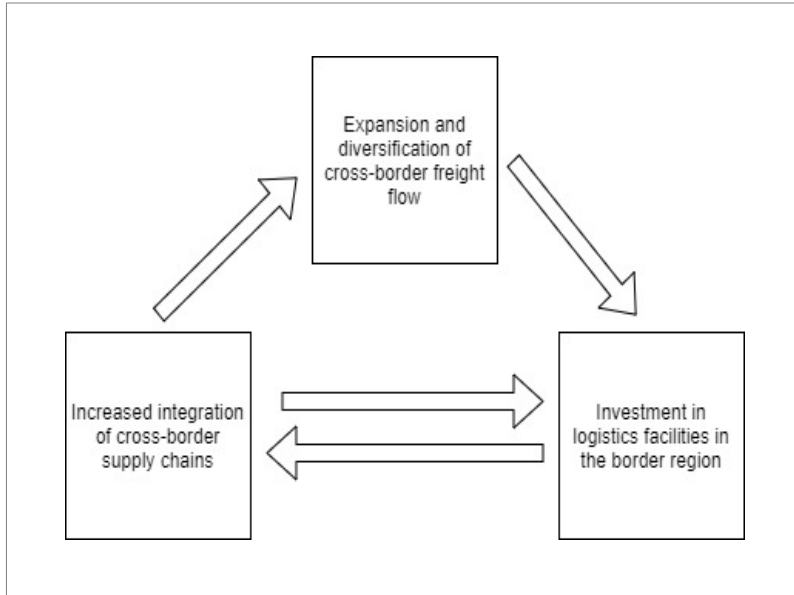


# ENVIRONMENTAL INNOVATION

- Smoother driving cycle to reduce emissions per km
- Logistics services to reduce number of empty backhauls and partially filled trucks
  - Load boards, digital brokerage
  - Cross-dock functions
- Service to support alternate fuel, electric, autonomous and connected vehicles
  - Fueling and charging
  - POE design
  - Logistic facilities (platooning)
- Design to promote natural run-off from logistics facilities
  - Permeable pavements
  - Vegetative filters, grass swales, etc.



# OPPORTUNITIES: LOGISTICS CLUSTER ACTION PLAN



- Simultaneous causation calls for coordinating institution
- Development models
  - Public
  - Private
  - Public / private
  - Whose lead?
- Binational Coordination

# GENERAL RECOMMENDATIONS ON TDL CLUSTER

- Develop business case for cluster based on flow-through traffic rather than just local demand
- Private-Public model but no development “on spec” – private investment required for all facilities (analytical template developed in project)
- Since no single entity is likely to have sufficient stake on its own, a coordinating institution is needed
- Development must be justified on commercial, social and environmental benefits
- Common IT assets for service providers in the cluster
- First step: *ad hoc* committee to develop action plan



# GENERAL CONCLUSIONS

The Gordie Howe International Bridge projects represents one of the most important initiatives for trade facilitation in the world today. It will

- save billions of dollars for the trade movements that currently pass through the Windsor-Detroit corridor;
- improve cross-border accessibility throughout the Great Lakes and St. Lawrence region;
- facilitating growth in mutually beneficial cross-border trade; and
- provide the level of certainty necessary to induce investments in productive assets in both Canada and the United States.

It will also create a zone of high cross-border accessibility and freight flow, providing the opportunity to build a cluster of transportation, distribution and logistics activities that can expand the economic base and employment level in Southeastern Michigan and Southwestern Ontario.