Ministry of Transportation

Initiatives Supporting Ontario's Goods Movement

Presentation to Smart Freight Symposium

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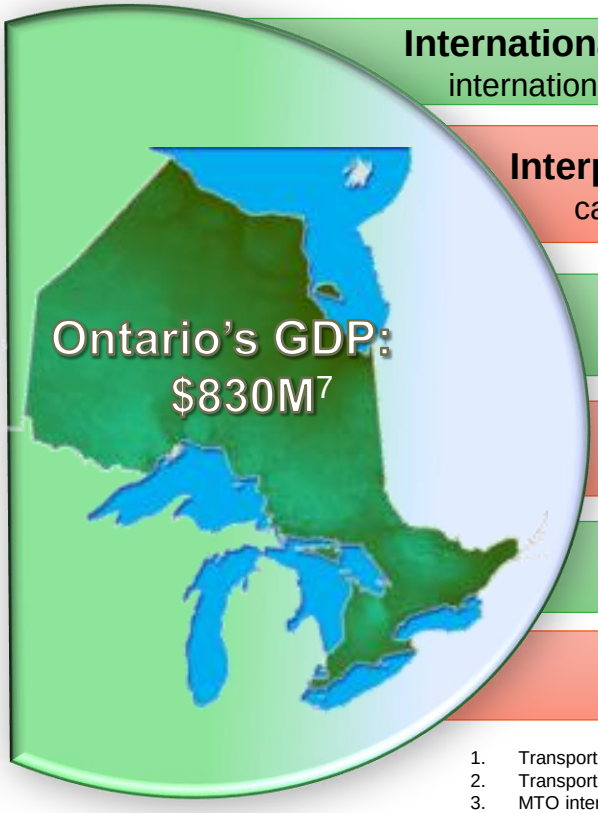
Ontario

Outline

- Goods Movement's Support for Ontario's Economy
- MTO's Role in Goods Movement (examples of initiatives)
- Infrastructure Initiatives
- Optimizing Networks (Off-Peak Deliveries)
- Preparing for the Future
- Regional Transportation Planning
- GGH Transportation Plan

Goods Movement's Support for Ontario's Economy

- Ontario's multimodal goods movement sector is foundational to Ontario's economy, supporting commercial interests, attracting investment and delivering goods.
- Nearly 40% of the economy consists of industries considered to be goods movement intensive: manufacturing, wholesale and retail, construction, agriculture, forestry, mining, etc.



International Trade: In 2016, Ontario's transportation system carried 56% of Canada's international trade, and 66% of Canada-US trade[1]

Interprovincial trade: In 2011 (last available data), Ontario's transportation system carried about 70% of Canadian interprovincial trade[2]

Revenue Generator: The goods movement industry directly supports 4% of Ontario's GDP through the "transportation and warehousing" sector (2016)[3]

Employment: About 6.5% of Ontario's total employment is in transportation & related industries [4]

Foreign Direct Investment: The "Invest in Ontario" website cites the transportation system in the top 5 reasons to Invest in Ontario[5]

Cost and Accessibility of Goods: The cost of transportation can account for up to 10% of the price of a good[6]

1. Transport Canada Annual Report Addendum (2016)
2. Transport Canada Annual Report Addendum (2012)
3. MTO internal report (2017)
4. MTO internal (2017) Report
5. www.InvestinOntario.com (2016)
6. The Geography of Transport Systems
7. Ministry of Finance Fact Sheet April 2018

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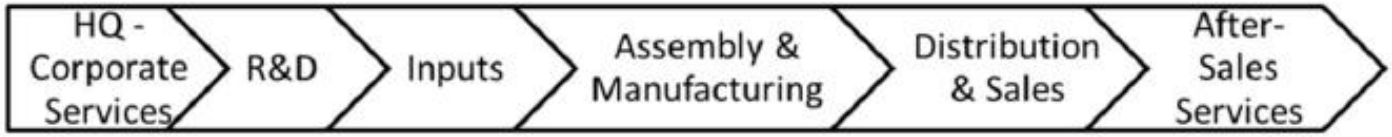
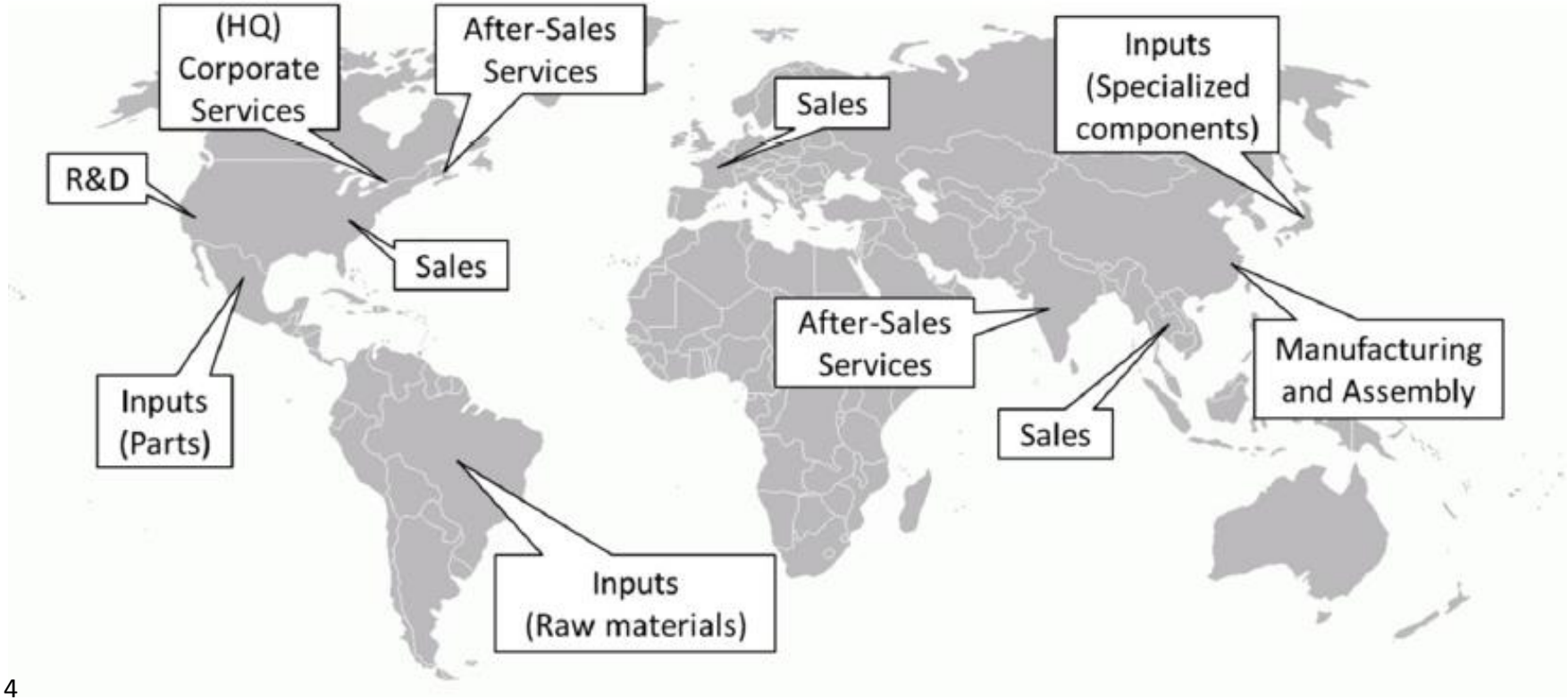
Business is Global and Partnerships are Critical

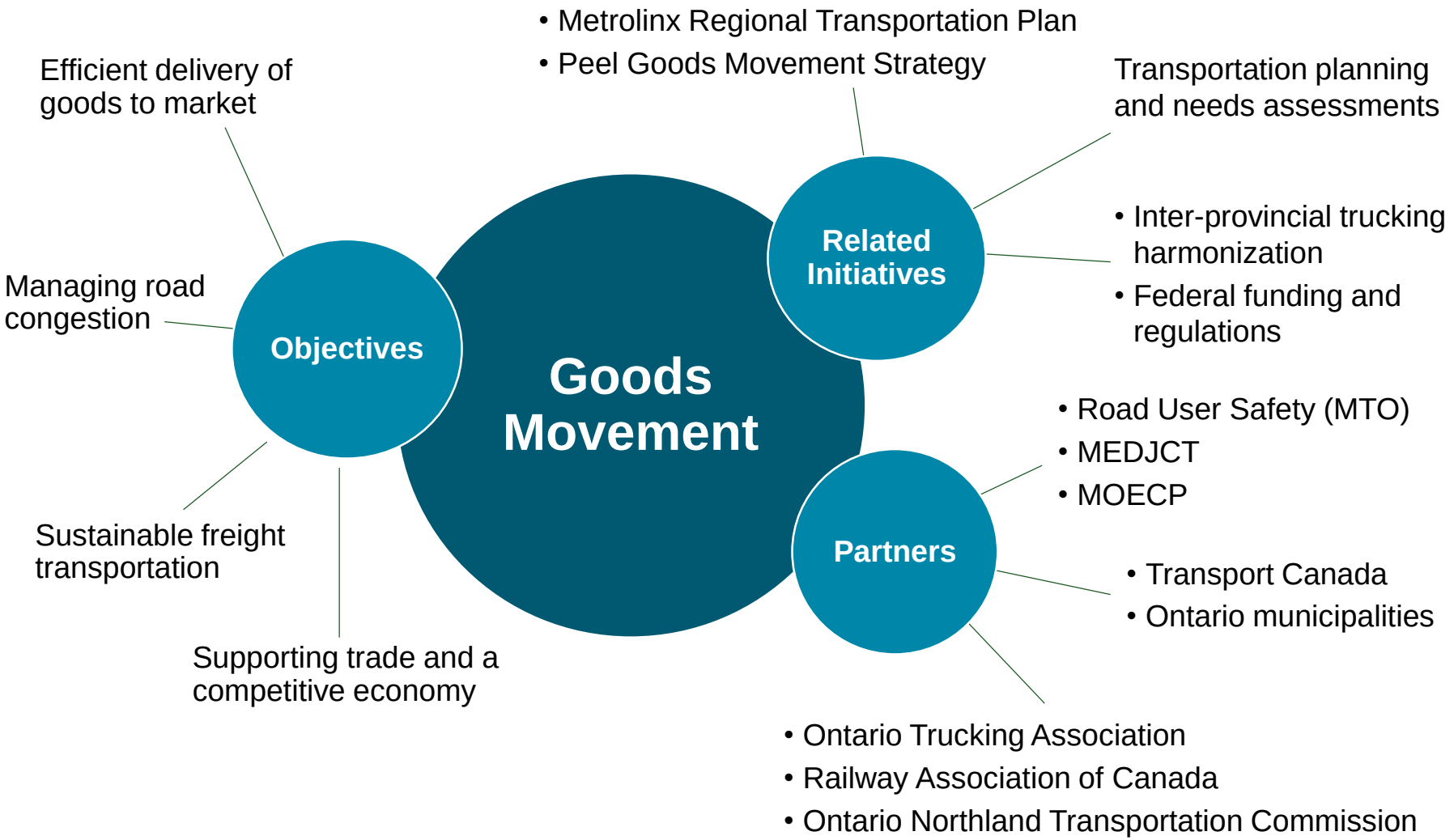
A global value chain exists when the individual activities within the production process are separated ....



... and distributed across the world



MTO's Role in Goods Movement



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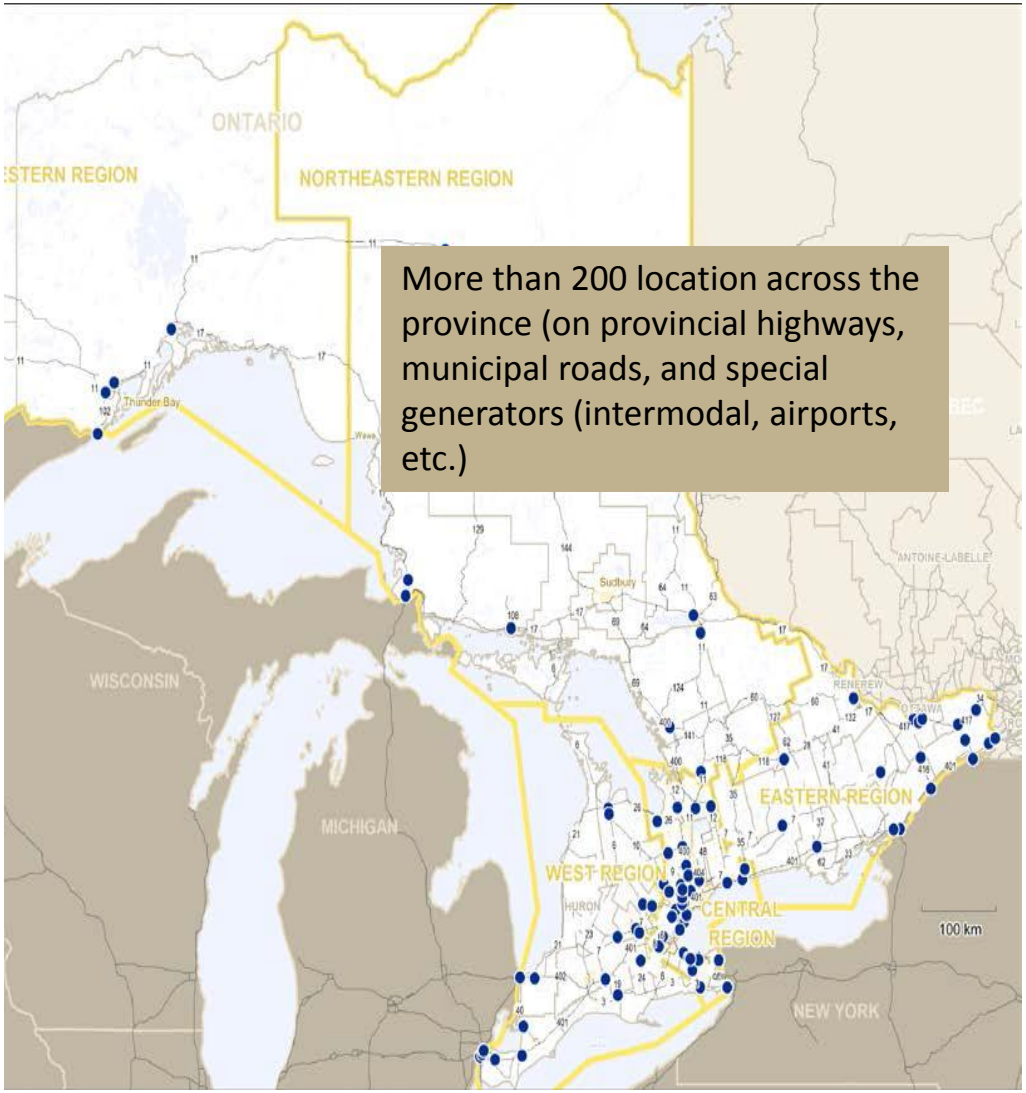
Commercial Vehicle Survey (CVS)

- Four year program, started in fall 2018 – more than 9,000 surveys completed so far.
  - Tracking to complete 22,000 surveys by end of 2020 and 45,000 by end of 2022
- Increased focus on truck activity related to multi-modal hubs – rail intermodal, Pearson and Hamilton airports, Hamilton marine terminal
  - Helps to identify multi modal shifts in goods transportation to evaluate the potential impacts of eCommerce and other evolving trends
- For 2018-2023 CVS MTO has partnered with Regional Municipalities of York, Peel, and City of Hamilton to collect data on major truck routes in those regions.
- Partnerships allow the municipalities to collect comprehensive truck travel data on their roads while allowing MTO to fill the gaps in truck travel knowledge on major municipal corridors that feed trucks to provincial highways.
- Plans to conduct surveys at Pearson and Hamilton airports, CN/CP intermodal and the Hamilton port to further knowledge of intermodal aspects of goods moved by truck, and impacts of emerging trends such as ecommerce on goods movement.



More than 200 location across the province (on provincial highways, municipal roads, and special generators (intermodal, airports, etc.)

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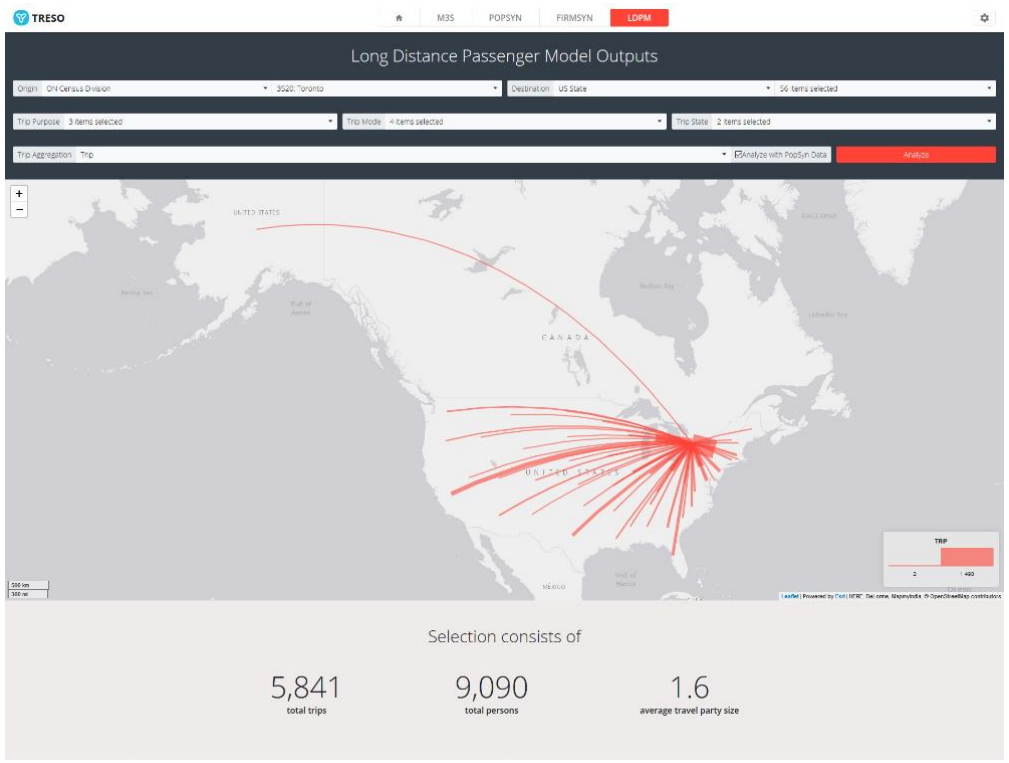
Provincial Passenger/ Freight Model

- Multi-modal province-wide model for passenger and freight
- Developed through strong partnership with Transport Canada and freight railways on the data front
- Models urban, inter-urban and long distance passenger travel and freight movements
- Provides detailed breakdown of freight movement by commodity types and mode (Marine, Rail, and Trucks)
- Capable of producing annual forecasts to 2051 in terms of network flows
- Covers Canada and US activities related to Ontario
- Tool for scenario analysis, e.g., investigate future alternatives, such as new infrastructure or advent of automated vehicles



Dashboard to visualize various model results and forecasts

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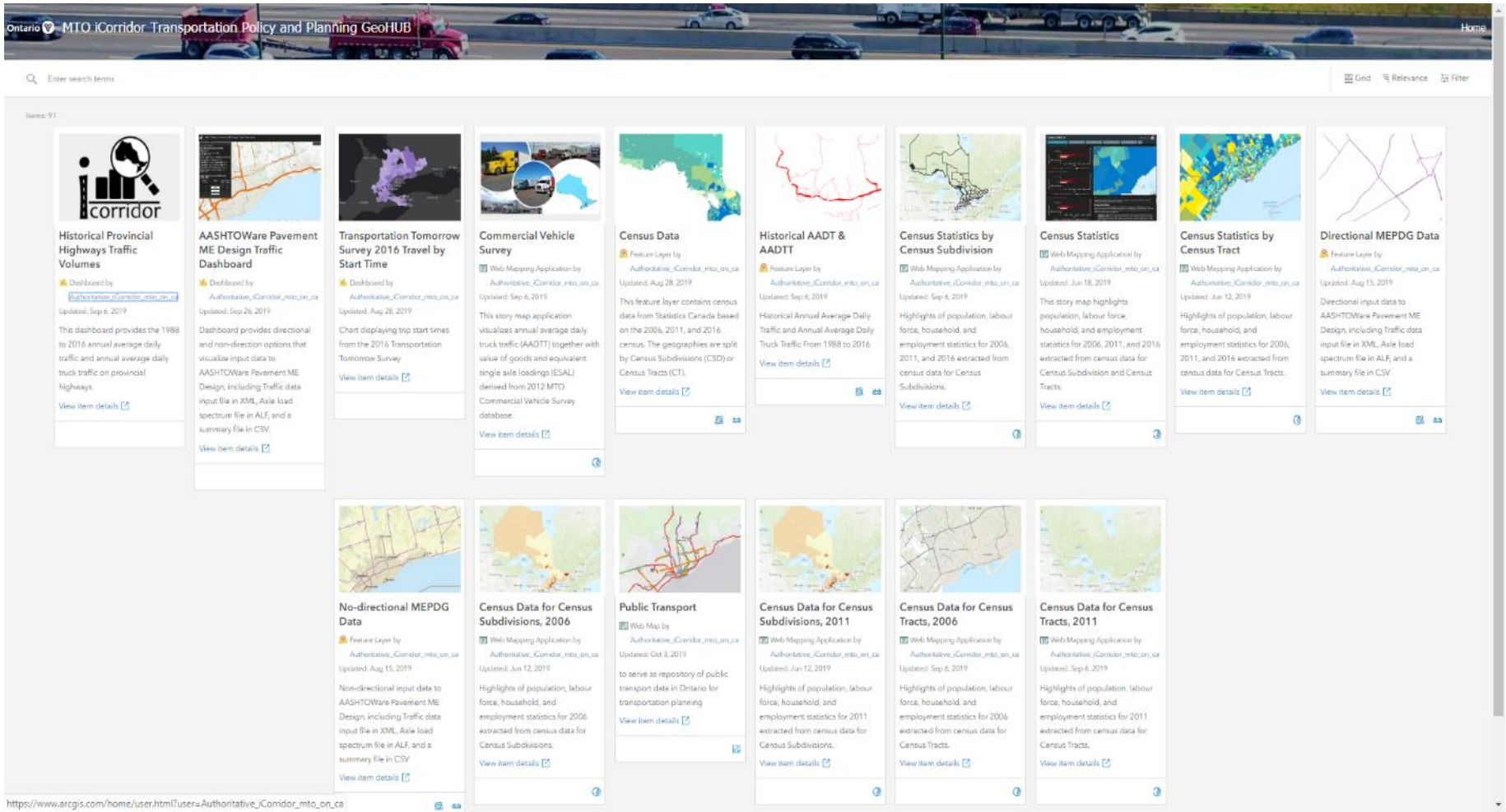
Sharing Information:
iCorridor – www.mto.gov.on.ca/icorridor/



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Infrastructure Initiatives

Province is investing in infrastructure improvements to support transportation's role in increasing Ontario's economic competitiveness.

Recent examples include:

- Widening 18km of Highway 401 in Mississauga and Milton, to relieve congestion, allow for more efficient transportation and flow of goods, and support population and employment growth in the region.
- Resuming the Environmental Assessment for the GTA West Corridor to improve Ontario's highway network, reduce travel times, and relieve traffic congestion across the GTA to move people and goods faster.

2018 Fall Economic Statement (FES)

- *"As urban areas across Central Ontario and particularly the Greater Golden Horseshoe become more integrated and connected, a regional transit system is an increasingly important element to promoting mobility and economic competitiveness"*
- *"The Ministry of Transportation will continue work on a broader transportation plan for the Greater Golden Horseshoe that will guide Metrolinx's transit implementation work, and ensure that highway and transit investments are coordinated to keep people and businesses in the region moving"*

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Optimizing Networks (Off-Peak Deliveries)

- There have been two recent OPD initiatives in an effort to help address daytime congestion and realize cost benefits for businesses:
  - During the Toronto 2015 Pan Am / Parapan Am Games, MTO worked with 40 municipalities to pilot off-peak deliveries, and
  - The Region of Peel recently completed an OPD pilot with a number of retailers with promising results.
- MTO continues to work with interested organizations, businesses and municipalities to explore other potential off-peak delivery opportunities.

Preparing for the Future

Connected and Automated Vehicles (CV/AV)

- MTO examining how CV/AV technology can help meet broader transportation goals in a number of key areas such as infrastructure, operations, and policy and regulatory frameworks. For example:
  - On January 1, 2019 a pilot program was launched to allow the testing of cooperative truck platooning with a driver present in each vehicle, under specific conditions, along specified routes.

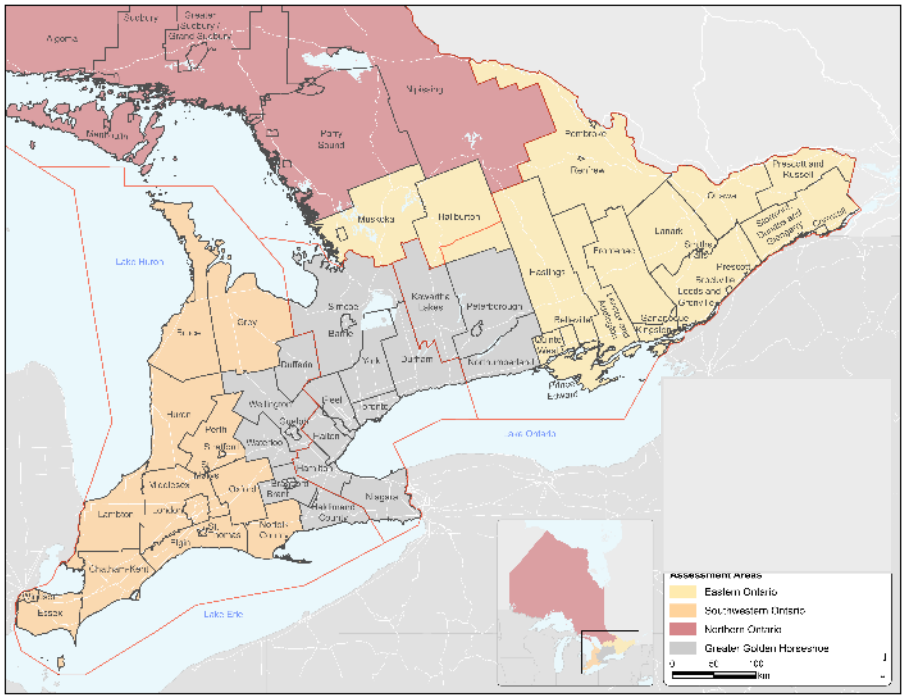
Low Carbon/Alternative Fuel vehicles and Infrastructure

- Ontario exploring ways to reduce our emissions through low-carbon modes of travel and a broader range of clean fuels, including removing barriers that block private investors from deploying low-carbon refueling infrastructure that will help increase the uptake of low-carbon vehicles.

Regional Transportation Planning

MTO has been directed by Government to conduct two regional plans:

- A multimodal transportation plan for the Greater Golden Horseshoe
- Southwestern Ontario Transportation Plan



These studies will help the Province to:

- Prioritize future improvements to transportation infrastructure and policies.
- Provide clarity on provincial priorities and provide guidance/platforms for partnership with key partners

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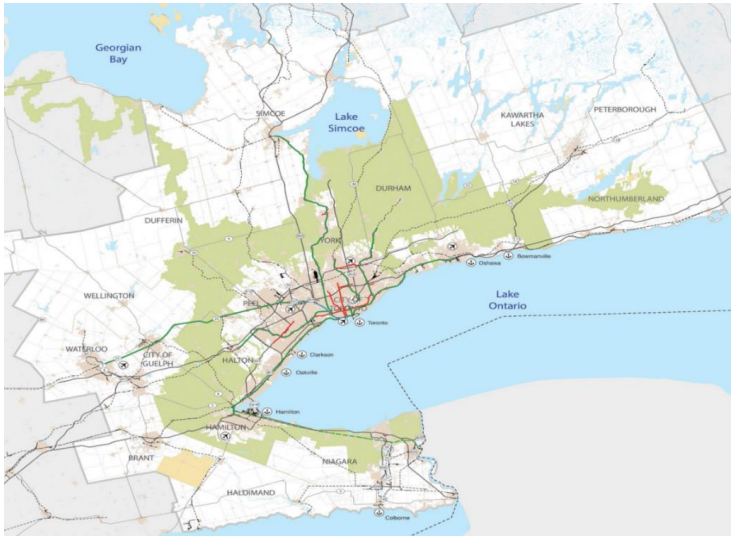
GGH Transportation Plan

The GGH Transportation Plan is a long-term, multimodal transportation plan for the GGH to 2051

The Plan will include network strategies for all modes and supporting policies to maximize the value of investments and is intended to:

- Identify a regional significant transportation network to 2051 (including transit) and a GGH-wide strategic goods movement network;
- Provide evidence-based input to capital planning: establish needs, and provide direction on priorities and phasing for provincial highways and transit;
- Be based on assessments of future changes (e.g. Automation, Automated and Connected Vehicles);
- Provide direction for policies and supportive investments to optimize the system (e.g. information technology/smart infrastructure);
- Integrate and coordinate with other plans (e.g. federal, private) , and build partnerships;
- Protect future corridors; and
- Proactively manage disruption and change, and establish a framework for transportation resiliency.



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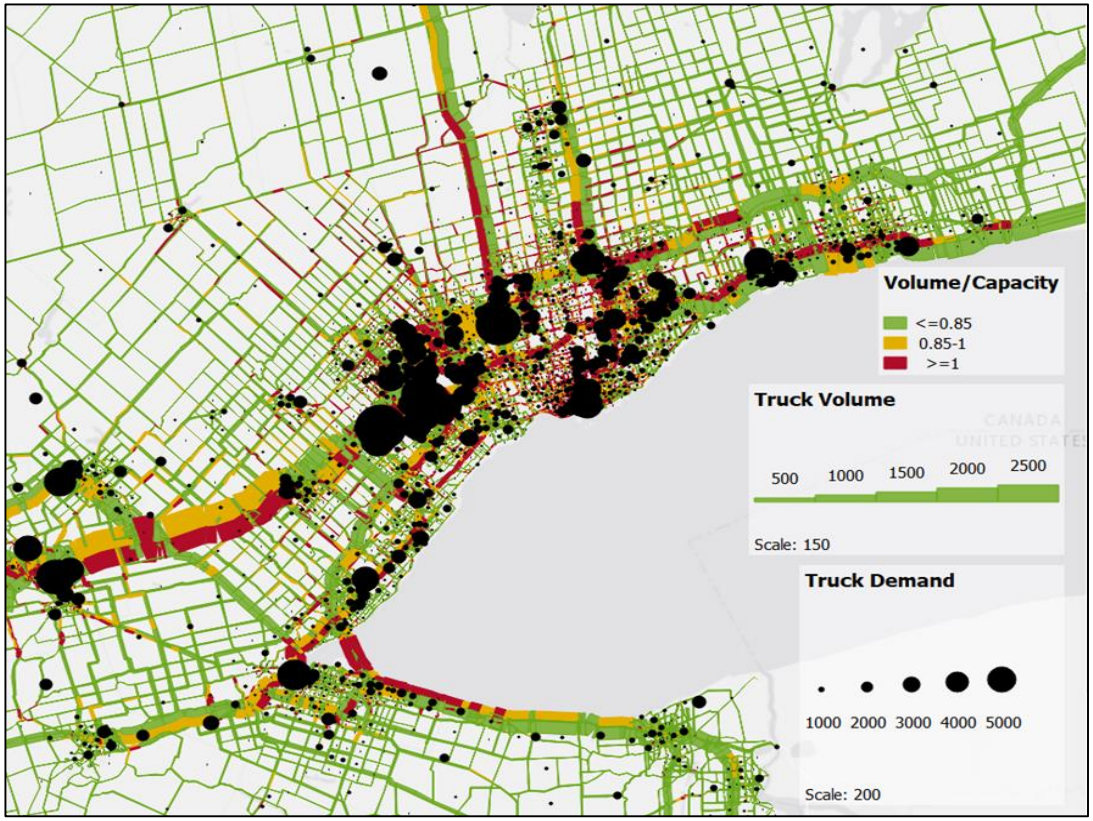
2041 Goods Movement

In 2041, trucks using the provincial network and accessing **intermodal hubs** experience substantial delays due to congestion in the AM peak period.



Forecasted truck demand and congestion, 2041 AM peak hour

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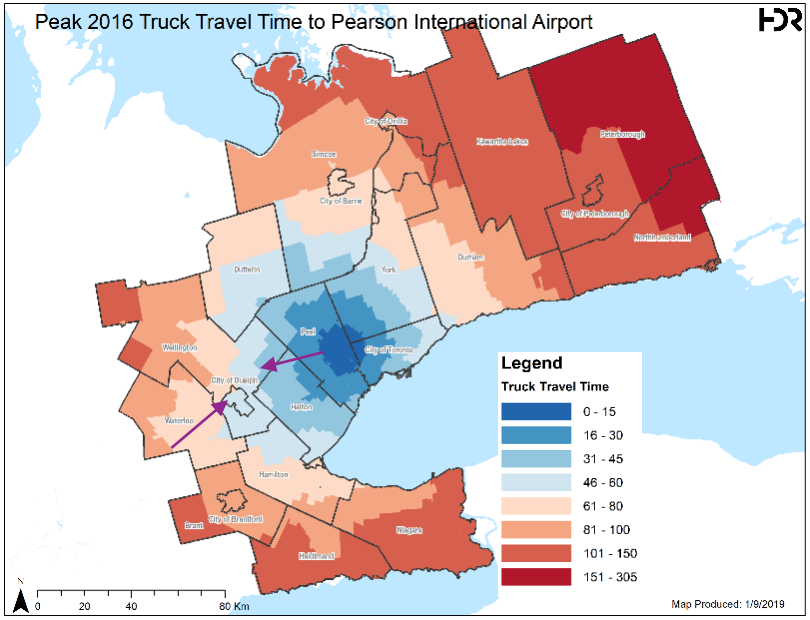
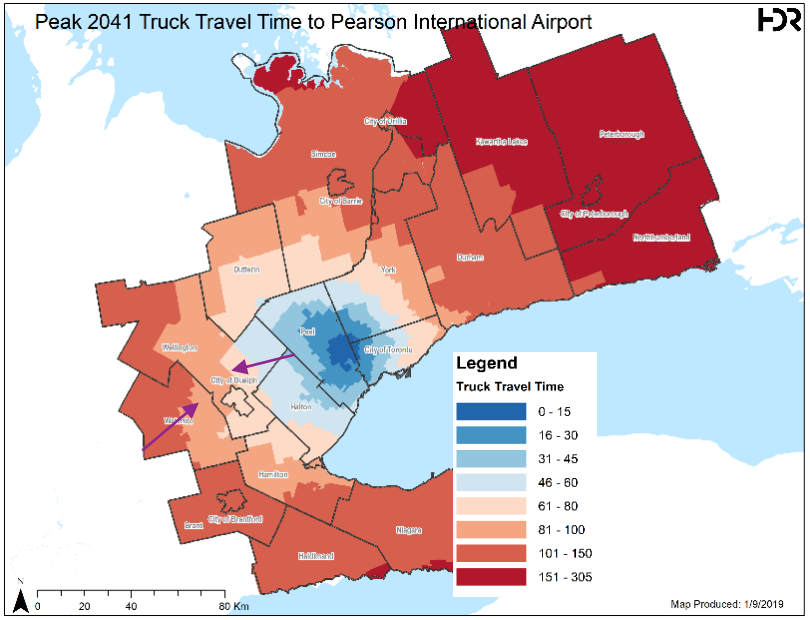
2041 Goods Movement





Pearson airport and the adjacent employment area are affected by **growing congestion** on the surrounding road network.

- **Maps show forecasted AM peak hour changes (between 2016 and 2041) in truck travel time (minutes) to Pearson International Airport from elsewhere in the GGH by point of origin**

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Improve the Distribution Network and Flow of Goods

Movement of goods is essential to the GGH's economy and prosperity.

Strategic Opportunity

- **Minimize conflicts between commuting and goods** by implementing a strategic goods movement network
- **Protect and better serve the region's gateways** for goods movement (ports, airports, inter-modal terminals, border crossings).
- Embrace **emerging trends and technologies through pro-active planning** (e.g. low-carbon vehicles, distribution centres to accommodate drones).
- Support **a more connected goods movement network** for the region by implementing seamless multi-modal access and connections.

Port of Hamilton – serves the steel and agri-food industries in the GGH.

Brampton Intermodal Terminal – the region's intermodal terminals are critical in the distribution of goods arriving by rail.

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Proposed Strategic Goods Movement Network (SGMN)

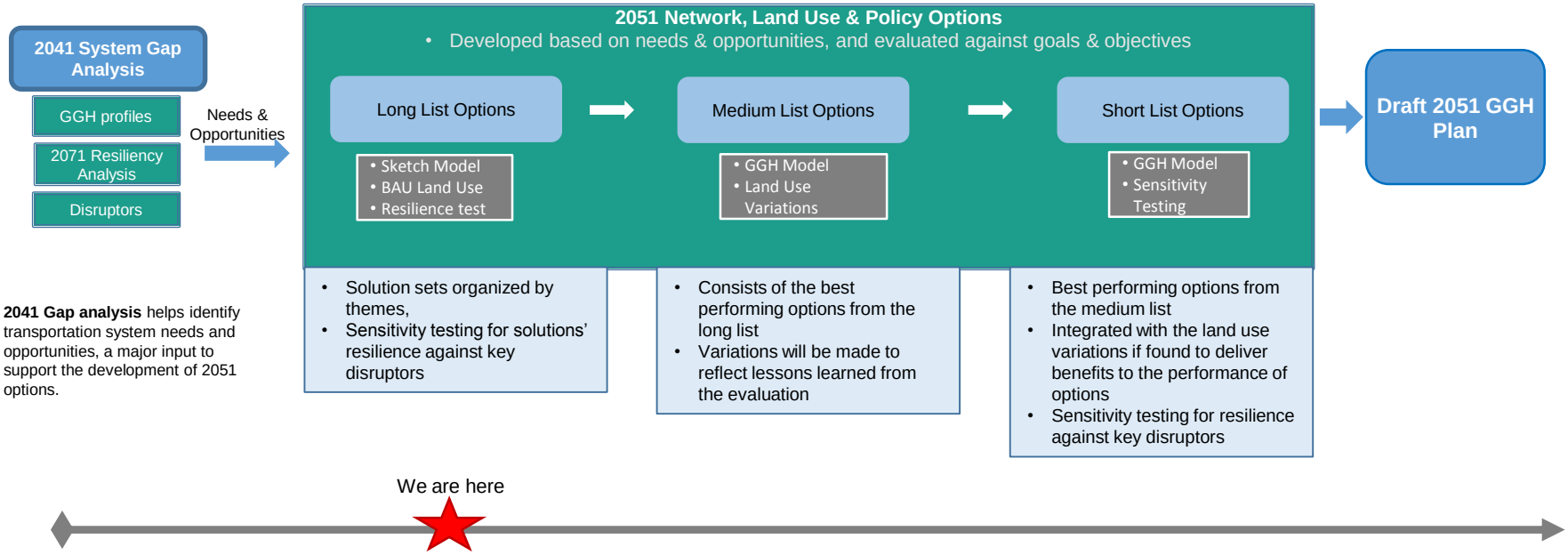
The proposed SGMN will be a GGH-wide road and rail network that will help inform planning and investment priorities in order to promote seamless and smooth flowing goods movement within and through the region

The goals of the SGMN will be to:

- Avoid conflicts with rapid transit plans, sensitive areas, etc. while ensuring freight connectivity
- Connect all freight hubs (air, marine, rail) and key freight generators
- Account for forecasted truck trips and consider future employment / industrial lands

The starting point for the proposed SGMN will be the Metrolinx 2016 GTHA-wide SGMN which will be extended to cover the GGH region and projected to 2051 demand

Developing the 2051 GGH Plan



2041 Gap analysis helps identify transportation system needs and opportunities, a major input to support the development of 2051 options.

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Thank You!

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APPENDIX

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Potential Strategic Opportunities

A. Connected and Complete Employment Centres

- **Improve multi-modal connectivity** (through transit, last-mile connections, etc.) of a few strategic employment areas.
- More connected and complete employment areas will be accessible to a larger proportion of the labour force, increasing their competitiveness and helping to alleviate pressure on the highway network.

B. Improve the Distribution Network and Flow of Goods

- **Minimize conflicts** between commuting and goods by implementing a **strategic goods movement network.**
- Protect and better serve the region's gateways for goods movement (ports, airports, inter-modal terminals, border crossings).
- Embrace emerging trends and technologies through **pro-active planning** (e.g. low-carbon vehicles).
- Support a more connected goods movement network for the region by implementing seamless multi-modal access and connections.

C. Plan for a Competitive and Coordinated Network of Airports

- Coordinate and connect the GGH's airports for each airport's distinct role in the region's prosperity to **offer travellers more choice** and shorten air passengers' ground journeys.
- Greater multi-modal access to key airports will create more connected hubs that support access, reduce airport-related congestion and contribute to the **competitiveness of the region's businesses.**

D. Create Complete Communities

- Create more **complete communities** where residents can live, work and meet their daily needs. This will result in reducing the need for longer-distance travel and take stress of the network.
- Communities with a higher level of self-containment generally have shorter average trip distances and greater potential to shift mode share.

E. Optimize Existing Infrastructure

- Maximise throughput across the region's transportation network through **demand management strategies**.
- Better use the railway network and waterways.

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Potential Strategic Opportunities

F. Consider Alternative Regional Connectivity

- Create **competitive transit options** within and between inner-ring municipalities without going through Downtown Toronto to improve congestion and better serve these trips.
- Create **a second regional transit hub** to reduce the need to go through Toronto.

G. Enhance Connections and Improve Mobility in Rural Areas

- Create secondary **transportation hubs** to serve outer ring communities such as Barrie, Peterborough, and Guelph to serve their surrounding rural areas
- Harness rapidly advancing technologies and **new mobility** models to provide more accessible and efficient transit options

H. Integrate Transportation and Land Use

- Improve **transit accessibility** to jobs and services, particularly for lower-income and rural areas of the GGH
- **Align transit** to provide access to affordable housing and new housing areas

I. Use Transportation to Contribute to Healthier Communities

- Transportation has a key role in improving health. Contribute to healthier communities with opportunities for active transportation, more mobility options for all ages, investments in public transit, and reduced GHGs

J. Leverage Rapidly Advancing Technologies

- **Leverage advancing technologies** to address the needs in the GGH transportation network and help achieve the strategic opportunities
  - AVs and CVs
  - Mobility as a Service
  - Goods movement optimization

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