



MOVEMENT OF GOODS SERIES



TORONTO
REGION
BOARD OF TRADE



TORONTO REGION BOARD OF TRADE

Movement of Goods Initiative Update

November 27, 2018

Toronto Region Board of Trade – Transportation Summit 4.0



4th Transportation Summit: UPLOADING OPPORTUNITIES



KEYNOTE SPEAKER

LINCOLN LEONG
CEO
MTR Corporation Ltd.



Leading global cities have world-class transportation systems that unlock their potential. Ours has failed to keep up. The result is congestion that keeps people and goods on roads too long, slowing prosperity and costing the region billions.

Inspired by these cities, and the Board's *Superlinx* proposal, our annual day of discussion and advocacy will bring together international and local experts to help share the Ontario Government's transit uploading agenda.

Rail

- Route length: 256.6 km*
- Stations: 94
- Weekday patronage: 5.8M
- On-time passenger journeys: 99.9%
- One more rail system under construction

*Includes HSR (HK section)

港鐵路綫圖 MTR system map

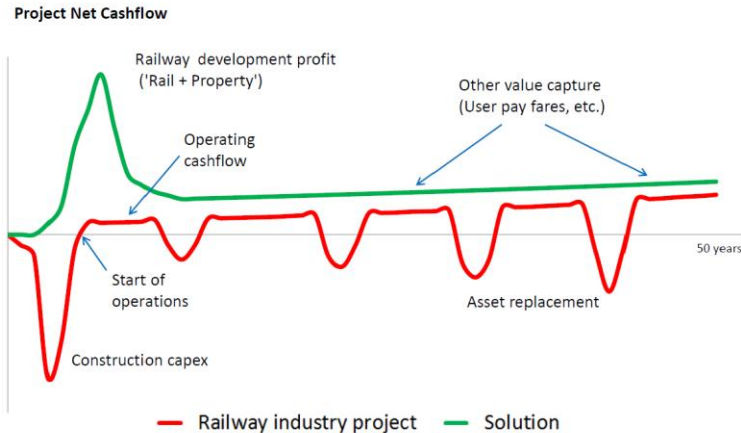
Community

- Property developments: 45 stations
- Total GFA: 13 million sq. m.
- Housing units: ~100,000
- Commercial space: >2 million sq. m.

Profits generated from property sales can be used to finance railway projects

Page 3

Railway Funding – Applying MTR's Solution



Toronto Region Board of Trade – Transportation Summit 4.0

THE REGION WEIGHS IN ON UPLOADING TRANSIT



SUPERLINX

The idea of putting a regional transit agency in charge of overseeing, planning, building and operating local and regional transit services.

RESPONSES BY REGION

	WATERLOO	HAMILTON	HALTON	PEEL	TORONTO	YORK	DURHAM
Satisfaction with the local transit system	63%	67%	66%	71%	59%	55%	67%
Believe commute has worsened in the past 12 months	31%	32%	36%	26%	28%	40%	41%
Agree regional transportation systems require a significant overhaul	81%	83%	88%	76%	91%	87%	82%
Support the Superlinx proposal	67%	65%	88%	87%	74%	89%	78%

WHO TOOK THE SURVEY



INCOME BY HOUSEHOLD

- 18% Under \$40K
- 16% \$40K - \$60K
- 16% \$60K - \$80K
- 17% \$80K - \$100K
- 22% \$100K - \$150K
- 10% More than \$150K



EMPLOYMENT BREAKDOWN

- 49% Full-time
- 13% Part-time
- 20% Retired
- 9% Student
- 4% Work from home Full-time
- 4% Unemployed



HOW MANY HAVE A CAR:

- 43% 1 car
- 35% 2 cars
- 10% 3+ vehicles
- 13% No car

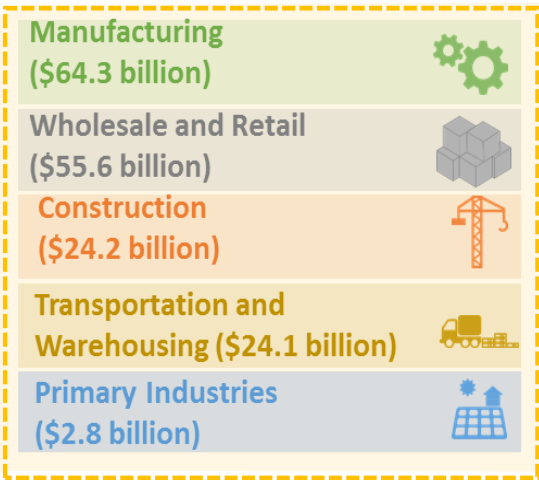


Toronto Region Board of Trade acts as a catalyst for, and with, the region's business community. One of the fastest growing metros in North America, Toronto is a vibrant, global city, consistently ranking among the world's top cities for quality of life. However, once deemed an enviable strength, the region's transit system has become a significant weakness. Congestion is getting worse as more residents commute regionally across multiple lines. We require a regional transit agency with the authority to integrate the one million residents who have moved into the region over the past 10 years, and the millions more arriving in the coming decade. Learn more about the Board's transit policies at bot.com and join the conversation by following us on Twitter (@TorontoRBOT) and LinkedIn.

Movement of Goods

- The Board is leading 1st of its kind study to fill information gap on the challenges facing the Toronto-Waterloo Corridor's (the Region) businesses relying on goods movement.
- This work complements people movement.
- The Region is Canada's largest multimodal goods transportation hub: 1M tonnes/\$3B moves through the Region daily. GDP Impact 34% of Region/ 8% of Canada = \$171B. Jobs: 1.4M

Toronto Waterloo Innovation Corridor Goods Movement: \$171 billion



Toronto Region Board of Trade – Movement of Goods Series

The challenge of getting around the congested transportation network of the Toronto-Waterloo Corridor is well known to both businesses, residents and visitors

The Movement of Goods series reports take a multimodal perspective, describing how air, marine, pipeline, rail and trucking interact in moving goods across the Corridor:



Three Bold Solutions for the Toronto – Waterloo Corridor

The fifth report in the Movement of Goods series addresses the most pressing challenges in the Corridor

Challenges Recap

The second Movement of Goods report identified these challenges preventing the Corridor's efficient movement of goods:



Road Congestion



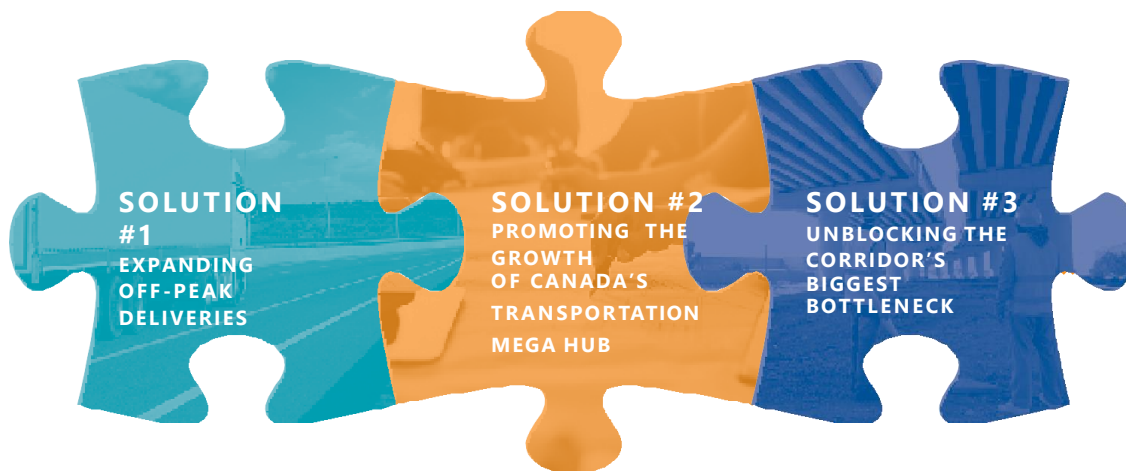
Land Use Conflicts



Last-Mile
Connectivity



Need for Strategic
Vision



Infrastructure Options to Improve the Movement of Goods in Canada's Innovation Corridor

RESEARCH SUPPORT



SPONSORED BY
AIR CANADA 



6th Report Profiles Infrastructure Options to Improve the Movement of Goods in Canada's Innovation Corridor

Objectives:

- ✓ *A list that represents the top priorities of stakeholders across the modes to speak with "one voice"*
- ✓ *Infrastructure projects that will "move the needle" on goods movement*
- ✓ *Use the list to leverage funding and other support*

The Corridor is Canada's pre-eminent transportation hub. A coordinated approach is needed to ensure its continued growth.

List of Criteria

Projects to be included are ones that are:

- **In the Corridor**
- **Large, big-impact projects**
 - Infrastructure, not operations or policy
 - High-impact projects (not regular highway widening)
 - Significant freight angle
- **Public, or private with meaningful public role**
- **Not yet underway**
- **Actionable right away or in short term**

LEGEND

Multimodal Priority Projects

- A Milton Logistics Hub
- B Union Station West
- C Super Express
- D GTA West Corridor

Regional Transit Projects

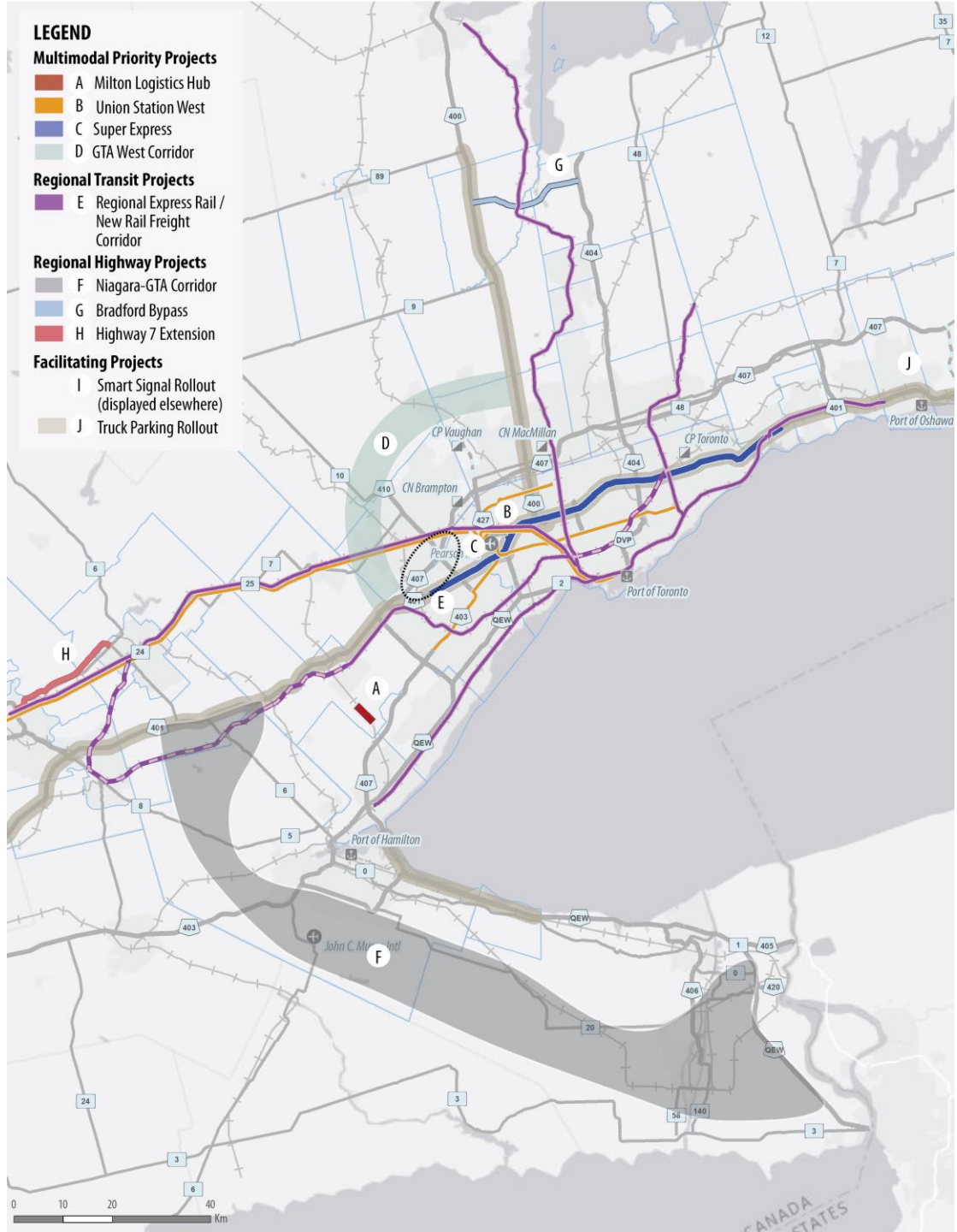
- E Regional Express Rail / New Rail Freight Corridor

Regional Highway Projects

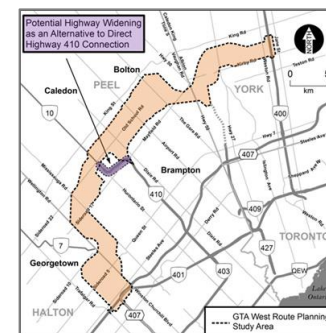
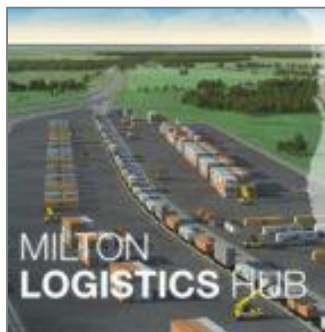
- F Niagara-GTA Corridor
- G Bradford Bypass
- H Highway 7 Extension

Facilitating Projects

- I Smart Signal Rollout (displayed elsewhere)
- J Truck Parking Rollout

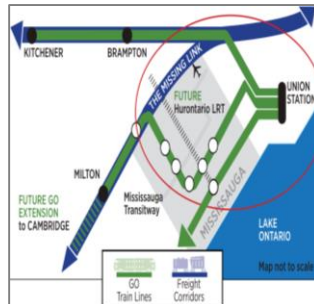


Priority Multi-Modal Projects



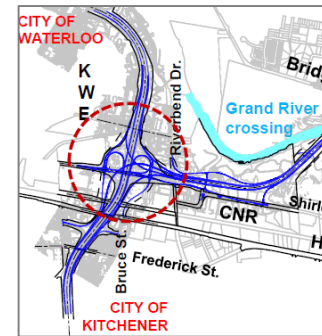
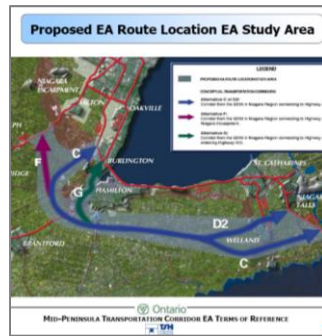
Project	Location	Mode	Cost	Benefit
Milton Log. Hub	Halton	Intermodal (Rail)	\$250 m.	Address shortage of intermodal capacity Approve project that is privately funded
Union Station West	Near Pearson	Transit, Air	\$11-12 b.	Relieve congestion at largest freight hub Shift auto commuters to transit
Super Express	Peel / Toronto	Highway (8 km+)	\$2 b.	Address most severe freight bottleneck Complete express lane network
GTA West Corridor	York to Halton	Highway (50 km)	\$5 b.	Expand EW capacity at critical juncture Serve large goods movement hubs

Regional Transit Projects



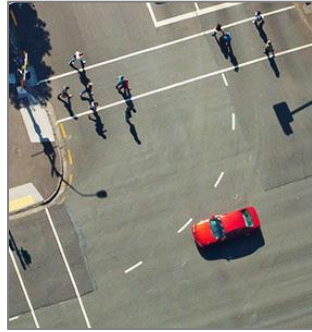
Project	Location	Mode	Cost	Benefit
Regional Express Rail / New Rail Freight Corridor	Region-wide	Transit	<p>\$13.5 b for RER;</p> <p>New Rail Freight Corridor: \$2B to complete the link; and \$3B to expand the wide corridor</p>	<p>Enable high frequency use of GO lines</p> <p>Shift auto commuters to transit</p>

Regional Highway Projects



Project	Location	Mode	Cost	Benefit
Niagara-GTA Corridor	Niagara/ Hamilton +	Highway (up to 100 km)	\$10 b.	Relieve congestion on QEW Provide alternate route to border
Bradford Bypass	York/ Simcoe	Highway (16 km)	\$1-2 b.	Provide redundancy and connectivity Divert trucks from arterial roads
Highway 7 Extension	Waterloo/ Wellington	Highway (19 km)	\$1-2 b.	Connect two growing hubs/cities Provide alternative to congested 401

Facilitating Projects = Low Hanging Fruit



Project	Location	Mode	Cost	Benefit
Smart Signals Rollout	Region-wide	Arterial Roads	\$500 m-\$1 b.	Improve flow on arterial road network Make signals adaptive in real-time
Truck Parking	Region-wide	Truck Support	<\$50M	Provide sufficient parking to meet rest requirements; Enable staging for city deliveries

Top 4 Projects Selected at Transportation Summit 4.0

MILTON LOGISTICS HUB

COST \$\$\$\$
TIME TO IMPLEMENT [Icon: 3 sand timers]
IMPACT ON REDUCING CONGESTION HIGH



CN is proposing to build and operate an intermodal hub on CN-owned land in Halton Region that will add 450,000 container units of annual capacity to supplement its existing intermodal terminal in Brampton. This project is driven by the growing demand for containerized goods in the Corridor and across Canada. With the federal government investing heavily in coastal ports, there is an equally important need to increase inland capacity.

COST
 \$250 million – entirely private funds.
TIMELINE
 Short-term project. Currently in approvals stage.
IMPACT

Without this additional infrastructure, the Corridor risks becoming the bottleneck of key Canadian trade corridors. Moving goods by rail rather than highways is also environmentally friendly and reduces traffic congestion. Freight rail is on average four times as fuel efficient as trucking, and CN's intermodal network removes approximately 2 million long-haul trucks off Canadian highways annually.

MORE INFO: www.cn.ca/en/about-cni/milton-logistics-hub

UNION STATION WEST

COST \$\$\$\$
TIME TO IMPLEMENT [Icon: 3 sand timers]
IMPACT ON REDUCING CONGESTION TRANSFORMATIONAL



Toronto Pearson's operator, the Greater Toronto Airports Authority (GTAA), has proposed a multi-modal transit and mobility hub at the airport to serve as a second major ground mobility hub in the Corridor next to Union Station. The airport area, with its central location, existing employment base and global air connectivity, is well-situated as a second hub to expand the capacity, reach and frequency of the regional transit network. Pearson already provides direct access to 70% of the world's economies through daily direct flights.

COST
 ~\$11-12 billion – including extensions of possible transit lines.
TIMELINE
 Long-term project. Currently in an early design stage.
IMPACT

This area is the central freight cluster and most congested part of the Corridor. A multi-modal transit and mobility hub will benefit the movement of goods by shifting single-occupancy automobile commuters off congested highways onto transit and by supporting Pearson's growth as a global hub, benefiting shippers across the Corridor through more direct flights to cities around the world.

MORE INFO: www.torontopearson.com/regionalgrowth

NEW RAIL FREIGHT CORRIDOR & EXPANSION OF RER

COST \$\$\$\$
TIME TO IMPLEMENT [Icon: 3 sand timers]
IMPACT ON REDUCING CONGESTION TRANSFORMATIONAL



Under Metrolinx's Regional Express Rail (RER) plan, the GO train network will be transformed with train electrification and 15-min two-way, all-day service, although not on the Milton, Kitchener (past Bramalea station) and Richmond Hill corridors. The proposed new 15-km freight rail link in Halton Region would enable CN and/or CP freight trains to re-route away from in-demand passenger lines and thereby provide improved opportunities to implement RER on the Milton and Kitchener corridors, while supporting or improving freight capacity.

COST
 ~\$2 billion for completing the 'missing link' between the Milton and Kitchener lines, and an additional \$3 billion for expanding the CP mainline for a potential new alignment.
TIMELINE
 Long-term project. Currently conceptual.
IMPACT

New and expanded highways alone are not enough to meet the demands of a rapidly growing region. Continuing to segregate freight and passenger trains will help increase the capacity to absorb growing demand for both passengers and freight.

MORE INFO: "The Missing Link - Final Report," Town of Milton, September 14, 2015.

SMART SIGNALS ROLLOUT

COST \$\$\$\$
TIME TO IMPLEMENT [Icon: 3 sand timers]
IMPACT ON REDUCING CONGESTION HIGH



A large-scale rollout of smart traffic lights across the arterial and collector road network throughout municipalities in the Corridor. Modern smart signals use video technology and machine learning to communicate with each other and optimize traffic flow in real-time. Video technology can also produce much richer traffic insights to support long-term planning. The City of Toronto has launched a smart signal pilot at 10 intersections on Yonge St in Midtown and 12 intersections on Sheppard Ave in Scarborough, testing two different technologies.

COST
 ~\$500 million for the Corridor's 7,000 traffic signals.
TIMELINE
 Medium-term project. Currently at pilot stage with the City of Toronto.
IMPACT

Pilot projects of modern adaptive traffic signals elsewhere (e.g. Pittsburgh) have found reductions in travel time by 25%, braking by 30% and waiting time by more than 40%. Assuming at least 25% time savings, cars and trucks would save 15 minutes for every hour in traffic.

Next Steps

- **Consult with Transportation Summit Attendees on Top 3 Projects**
- **Announce Chair and Vice-Chair of Movement of Goods Council at the Transportation Summit**
- **Release MOG #6 Report in Mid-January advancing Top 3 Projects for the Corridor**
- **Begin E-Commerce Study**