

# Interim Report for the Pan-Canadian Competitive Trade Corridor Initiative



PAN-CANADIAN COMPETITIVE TRADE CORRIDOR INITIATIVE | FEBRUARY 2021

*COUNCIL OF MINISTERS RESPONSIBLE FOR TRANSPORTATION AND HIGHWAY SAFETY*

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# Executive Summary





## Executive Summary

As a trading nation, Canada's success is closely linked with the strength and competitiveness of our multimodal transportation system and major trade corridors. Enhancing the reliability and efficiency of our highways, rail networks, ports and airports lowers costs to businesses and consumers and boosts the competitiveness of Canadian goods at home and abroad. The Canadian transportation network is integrated, and there is value in governments working together to achieve common goals.

Canada is a vast country with diverse geography and climates. This means that each region within Canada is unique and thus faces distinct goods movement transportation challenges. For example, one of the main challenges in some, more populated regions, is that parts of the transportation network are commonly being used above design capacity, often leading to a loss of economic output through congestion. However, in the territorial north, for example, there is a need for more transportation infrastructure capacity and some of the main challenges include maintaining transportation networks with limited resources.

The Council of Ministers Responsible for Transportation and Highway Safety (COMT), the principal intergovernmental forum in Canada for discussion and joint action on matters related to, or affecting, transportation within Canada or internationally, launched the Pan-Canadian Competitive Trade Corridor Initiative (PCCTC) to create a framework to support more coordinated improvements to Canada's trade-supporting transportation system.

This interim report aims to examine Canada's trade-supporting transportation system as an interdependent, national system. Federal, provincial and territorial governments have worked together to identify Canada's major multimodal trade corridors and to identify physical impediments and non-infrastructure irritants to trade. This report also gives an overview of work currently underway across Canada aimed at strengthening the system's competitiveness. Going forward, the PCCTC Task Force will work to identify key issues and areas that could be addressed through action by various jurisdictions and develop a framework for increased cross-sector, multijurisdictional, and multimodal coordination and partnerships.

# Interim Report





## Mandate & Purpose

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The Council of Ministers Responsible for Transportation and Highway Safety (COMT) launched the Pan-Canadian Competitive Trade Corridor Initiative (PCCTC) at its February 2020 meeting, with the goal of enhancing Canada's standing as a reliable trading partner by creating a framework to support more coordinated improvements to Canada's trade-supporting transportation systems.

This initiative is a partnership between federal, provincial and territorial governments. It will seek to inform the efforts of all governments as they work towards a series of objectives, key areas of focus and long-term outcomes, outlined below, to foster a strong transportation system that supports Canada's regional, national, and international trade competitiveness.

The work of the PCCTC Task Force will take place over two years (2020-2022).

**Phase 1** involved work to:

- Identify major trade corridors/nodes as well as transportation-related impediments to trade
- Assess activities underway across federal, provincial and territorial jurisdictions aimed at strengthening the system's competitiveness
- Assess known challenges and actions that could be undertaken to address them.

**Phase 2** will encompass further work to identify key issues and areas that could be addressed through action by various jurisdictions and will culminate in the development of a framework for increased cross-sector, multijurisdictional, and multimodal coordination and partnerships.

This initiative could be used to guide freight policy, programs, initiatives and investments, and potentially also to identify freight data and research needs. The following objectives, long-term outcomes and key areas of focus form the basis of the trade-supporting transportation framework, which will be further developed in phase 2.

# Interim Report



The **objectives** of this initiative are to:

1. Implement measures to enhance Canada's standing as a reliable trading partner enabling a competitive trade-supporting transportation system, including a high-performing supply chain and climate-resilient infrastructure
2. Identify and reduce, where possible, physical and regulatory trade-related barriers originating from transportation systems and intermodal connections to foster economic growth.

In concert with various other projects and initiatives that are being undertaken by jurisdictions across Canada, this initiative will aim to support the following **long-term outcomes**:

1. Options for improving international and interprovincial trade corridors are identified and implemented
2. A sustainable, efficient, productive, safe and competitive national trade-supporting transportation system that responds to growth and change
3. Policies affecting the trade-supporting transportation system are aligned and coherent across governments
4. A potential increase in Canada's ranking on trade-related indices.

Achieving this initiative's **goals** will involve:

- Alleviating physical impediments to trade, such as road and highway congestion in and around Canada's largest cities and rail, port and air facilities
- Improving collaboration on gathering and understanding data around current and future volume flows to enable better, more timely planning decisions
- Fostering a competitive regulatory environment that facilitates the safe and efficient movement of goods.

To do this, the PCCTC Task Force recommends **five streams** of work under the following areas of focus:

1. Strengthening coordinated transportation planning to manage future demand
2. Promoting regulatory alignment
3. Fostering innovation and technology adoption
4. Assessing bottlenecks in the system
5. Enabling effective sharing of data (from the federal government to the provinces/territories, from the provinces/territories to the federal government, and between provinces/territories).

The first deliverable of the task force's mandate is this interim report, which leverages existing regional and national efforts to identify major trade corridors and nodes, describes the infrastructure within those corridors and their importance, and identifies major infrastructure impediments and non-infrastructure irritants to trade.

This report is intended to set the stage for focused discussions about how the trade-supporting transportation system can foster more competitive outcomes for Canadians. It is not a policy or position paper and is intended for use by transportation policy professionals, planners, and decision-makers. Each province and territory will determine their own actions and next steps.



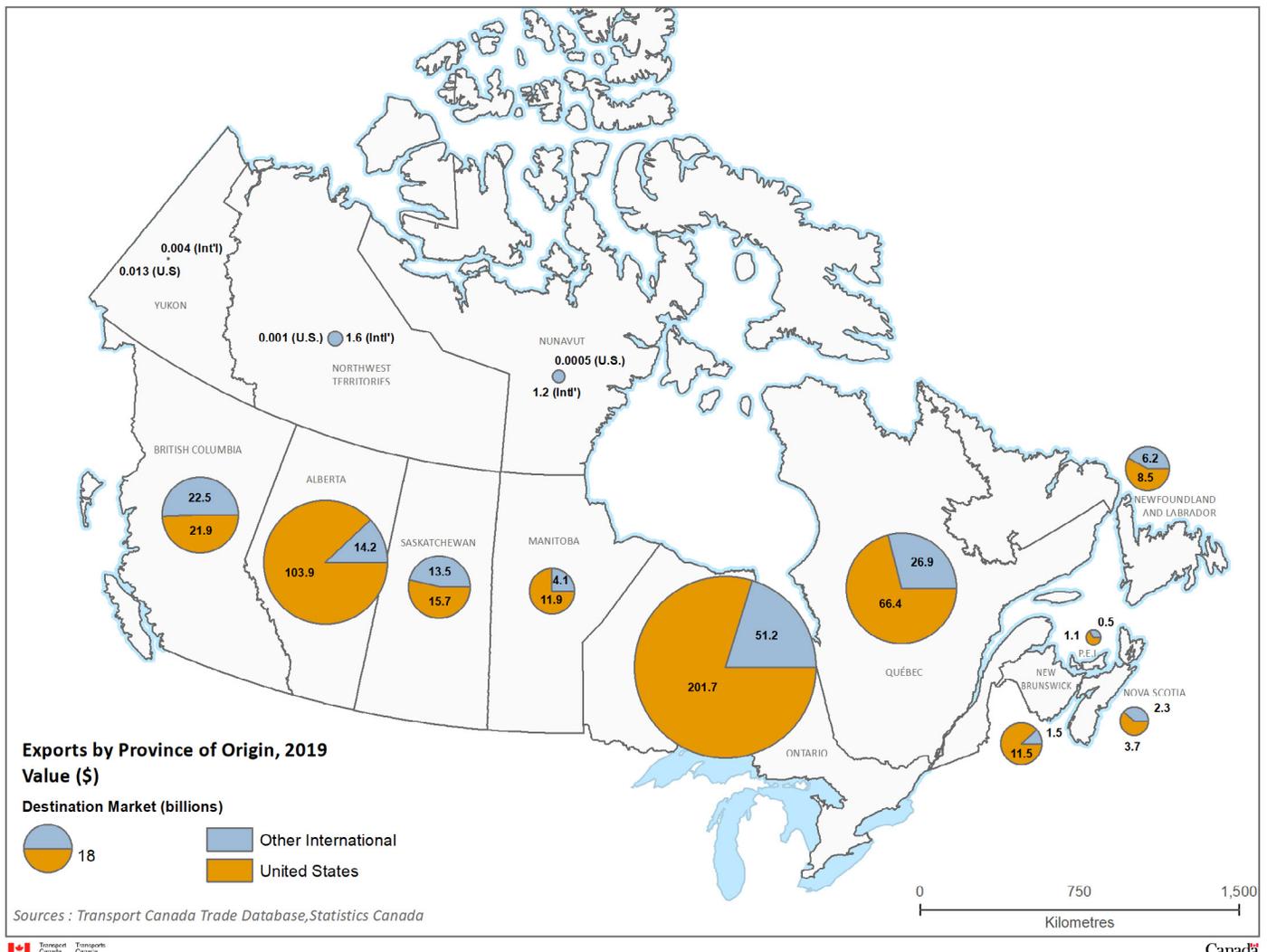
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## Setting the Stage: A Problem Statement

**Canada is a trading nation.** According to the World Bank, trade accounted for 65% of Canada's GDP in 2019. Trade continues to grow in importance, with new, multilateral agreements that have opened up large, important markets in Asia and Europe, and continued and expanded trade with existing partners. As of 2019, Canada had 14 free trade agreements in force with 51 countries with a combined gross domestic product of US\$52 trillion. When the Comprehensive and Progressive Agreement for Trans-Pacific Partnership came into force at the end of 2018, Canada became the only G7 country with free trade links to each of the other partners. The value of Canada's international trade has increased by 65% over the past 10 years, from CAD\$725 billion in 2009 to CAD\$1.2 trillion in 2018.<sup>1</sup>

Each region within Canada plays a crucial role in national trade. For example, Western Canadian exports accounted for 36% of the value of Canada's exports in 2018.<sup>2</sup> Imports to and exports from Ontario accounted for more than half (53%) of the value of Canada's international trade (\$587.6 billion).<sup>3</sup> In 2016, 215 million tonnes of freight worth more than \$626 billion were moved to, from, and within Québec by truck, rail, and air carriers.<sup>4</sup> In Atlantic Canada in 2016, 60 million tonnes of freight worth just under \$4 billion were moved to, from and within the provinces by truck, rail and air carriers.<sup>5</sup> Despite being home to a small fraction of Canada's overall population (0.3%), and facing higher transportation costs and limited access to Canada's national trade corridors, the value of exports from Yukon, Northwest Territories and Nunavut totalled a material \$2.9 billion in 2019, representing a material contribution to overall trade values.<sup>6</sup>

## Exports By Province of Origin



**Image Description:** The map of Canada displays a Pie chart for each province representing the Value (\$) of exports by Province of origin to destination markets. The pie charts have been graduated by size proportional to the export value in billions, and split by color for each destination. The color Orange corresponds to export value destined to the United States and Blue for Other International markets.

Ontario displays the largest value of exports valued at \$252.9B, with \$201.7B destined for the U.S. and \$51.2B destined for other international destinations. Alberta is the 2nd largest exporter by Value at \$118.1B with \$103.9B destined for the U.S. and 14.2B destined for other international destinations.

The remaining provinces and territories export values from high to low include Quebec (\$93.3B), British Columbia (\$44.5B), Saskatchewan (\$29.3B), Manitoba (\$16.0B), Newfoundland and Labrador (\$14.8B), New Brunswick (\$13.1B), Nova Scotia (\$6.1B), Prince Edward Island (\$1.7B), Northwest Territories (\$1.6B), Nunavut (\$1.2B), and Yukon (\$0.017B). Most provinces' export value is by majority destined to the United States aside from British Columbia, Yukon, Northwest Territories and Nunavut which export primarily to other international markets.



Canada's transportation network includes a national highway system with over 38,000 lane-kilometers, over 41,000 route-kilometers of rail track, more than 500 ports, over 8,000 kilometers of seasonal/ice roads and multiple airports across every province and territory. The transportation sector plays a crucial role in supporting Canada's trade and overall competitiveness by:

1. Providing the infrastructure backbone that facilitates the movement of goods and trade
2. Enabling trade flows through a safe and competitive regulatory environment
3. Responding to demand for travel and movement of goods
4. Monitoring travel and performance patterns and emerging needs.

Canada's ability to compete in the global economy is influenced by how well the trade-supporting transportation system is able to move freight and people across vast regions, varying topography, and challenging climates. With a land area of close to 10 million km<sup>2</sup>, the breadth, quality and efficiency of Canada's transportation network is a critical factor in supporting both domestic and international trade.

With such a vast land area, the importance of an efficient trade related transportation network cannot be overstated. Canadian consumers and businesses rely on a safe, efficient, and reliable trade-supporting transportation network to sustain their way of life. It is important to expand and strengthen this network so that it reaches into all of Canada, extending into remote, rural and northern communities to ensure that goods not only reach but also leave these destinations, thereby helping to sustain local economies. The efficient movement of goods is critical for Canada's productivity and competitiveness, and affects the life of every Canadian.



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## A Time to Act

Growing international and inter-provincial trade and the increasingly competitive trade climate present an opportune moment for federal, provincial and territorial governments to collaborate on advancing the performance and competitiveness of Canada's trade-supporting transportation system. Safe, reliable, and efficient transportation boosts exports, enhances commerce, and powers economic growth. Our pan-Canadian multimodal trade-supporting transportation system supports the economy by lowering costs to businesses and consumers and by boosting the competitiveness of Canadian goods abroad.

Continued strategic investment in physical and digital infrastructure is essential to maintaining Canada's competitive position internationally. Global growth and increasing diversification of trade will continue to add pressure to Canada's trade-supporting transportation system. Despite setbacks related to the global pandemic, Canada's trade with the rest of the world is on an upward trend. Maintaining a focus on addressing congestion at ports and border crossings, and

on the infrastructure that connects these trade gateways to the broader transportation system, remains a priority. Supporting the resiliency of our trade-related transportation system will help recovery from unforeseen events that can temporarily reduce system capacity and intermittently disrupt freight flows.

Canada's population and economy are steadily growing, contributing to increased demand for freight. As Canada's economy responds to a post-COVID-19 growth period, demand is expected to increase. Increased congestion results in billions of dollars in lost economic productivity and wasted fuel. As well, traffic flows within urban areas are being impacted by the growth of e-commerce, as companies seek to modify their supply chains to better adapt to evolving consumer expectations for expedient delivery of goods. Population growth in major urban areas will continue to exacerbate existing congestion and will require increased coordination in the planning of infrastructure investments.



Prior to COVID-19, it was estimated that there would be a labour gap of up to 125,000 workers across the sector (particularly in trucking, marine and air sectors) by 2030. While COVID-19 has led to short-term job losses, due to the structural nature of labour shortages, recent projections show there will be a resurgence of systemic labour and skills shortages in the sector, through economic recovery and beyond. Labour shortages are due to factors including a lack of awareness of career opportunities, a lack of underrepresented groups (women, Indigenous Peoples, youth, new Canadians and immigrants) joining the sector, a rapidly aging demographic, and high training costs that are disproportionate to starting salaries with limited options for student financial assistance.

In addition, the construction sector is at or near capacity, with strong private and public sector investments and spending in infrastructure. Issues related to market capacity and the shortage of skilled trades could delay the delivery and/or acceleration of key infrastructure projects. New projects also have the potential to disrupt current projects under development, including trade-enabling infrastructure. All three levels of government and Indigenous communities should work collaboratively with the private sector to address these key market capacity challenges.

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More coordinated planning will need to involve all levels of government, using a pan-Canadian lens, as issues such as bottlenecks and labour shortages in one region can have significant impacts on trade in others. For example, urban road and rail congestion in Toronto, Vancouver, or Montréal can cause delays that increase costs and wait times across Canada, affecting the overall competitiveness of the system. The more efficient the trade-supporting transportation system is, the more Canada will be able to accommodate and embrace future growth and emerging trade opportunities.

**Value in a collective approach.** The Canadian transportation network is integrated, and there is value in working together. By approaching this work with a pan-Canadian lens, we can:

1. Gain better insight into network performance
2. Understand opportunities for jurisdictional alignment
3. Have a consistent base of information for funding decisions
4. Improve harmonization and adoption of new technologies/innovations
5. Develop a shared understanding of the current strengths and weaknesses of the system, and plan for the future of the transportation system
6. Have better overall information-sharing.



**COVID-19 has rendered this work more important than ever.** The COVID-19 pandemic has not only created a number of immediate challenges for Canada but has also highlighted the importance of building and maintaining reliable transportation infrastructure. This pandemic has created an unprecedented global crisis that is having a significant impact on all aspects of the Canadian transportation industry, travellers, and the economy, which has been felt by Canadians and industry across all provinces and territories. New issues created by the pandemic, including an increased demand for more localized goods movement due to online orders and direct shipping, has contributed to increased congestion and in some cases, has exacerbated issues pertaining to last-mile deliveries. It has also highlighted the need for resiliency and security in the transportation system.

**Risks associated with climate change vulnerabilities must also be considered when planning for the future.** Canada is vast and sparsely populated, with extreme weather conditions and a climate that is warming at twice the global rate. The effects of widespread warming are evident in many parts of Canada and are projected to intensify in the future. Anticipated impacts of climate change include more extreme heat, less extreme cold, longer growing seasons, shortened snow and ice cover seasons, earlier spring peak streamflow, thinning glaciers, thawing permafrost, extreme precipitation and flooding events, and rising sea levels. Considering that further warming is unavoidable, these trends will continue to challenge our ability to move goods and people safely, securely and efficiently.<sup>7</sup>

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## Functions of Corridors

The corridors and facilities within this report are all associated with the inter- and intra-provincial/territorial and international movement of goods. Examples include: intermodal facilities, ports, airports, truck terminals, freight rail corridors, and primary transportation corridors used for the movement of goods.

Major trade corridors and facilities include trade-supporting transportation infrastructure that:

1. Experiences high freight traffic volumes
2. Has regional importance (link to rural resource economies, connect to regional hubs and national networks to enable exports)
3. Has national importance (support trade flows from neighbouring provinces/ territories/states)
4. Connects to gateways (marine ports, major airports, etc.).



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## Major Trade Corridors and Facilities

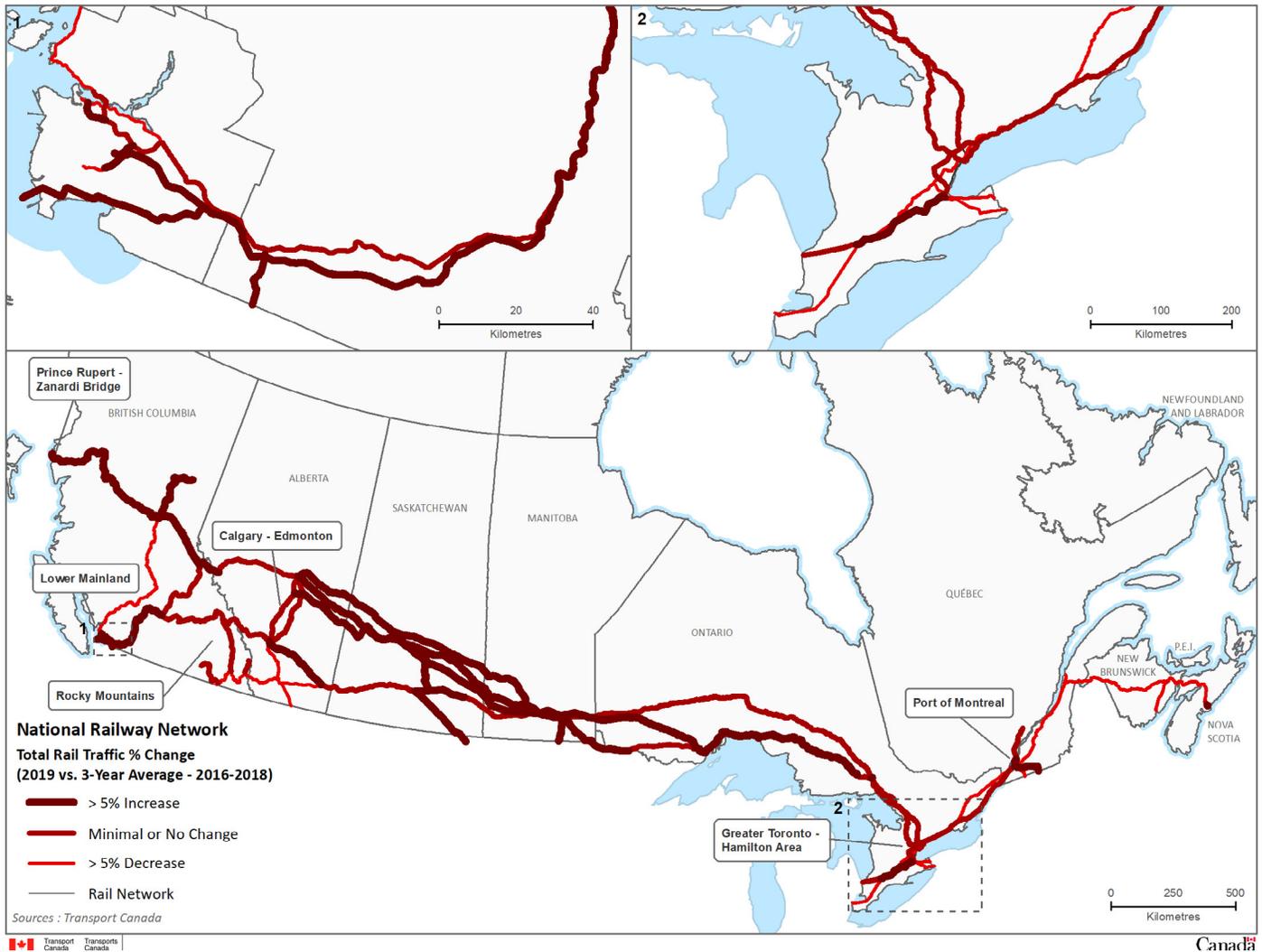
Canada's trade-supporting transportation system is a complex, interdependent, multimodal system of infrastructure and services owned and operated by a mix of public and private-sector entities. The system comprises physical infrastructure or facilities, such as ports, waterways, airports, railroads, roadways, and intermodal facilities, as well as diverse carriers, shippers, and suppliers that use this infrastructure to transport goods.

Significant volumes of east-west freight flow between inland markets and Canadian ports, and north-south, between Canada and the U.S., our largest trading partner.

Canada's major trade-supporting **freight rail corridors** include the Canadian National (CN) and Canadian Pacific (CP) networks and freight/commodities shortline railways. Freight rail infrastructure and services are in almost all cases privately owned and operated, including the large transcontinental CN and CP railways, and a network of shortline railways that connect to CN and CP.

British Columbia is the destination for 36% of rail tonnage, reflecting the importance of west-coast ports for Canadian exports (2018).<sup>8</sup> Approximately 27% of all rail flows in Canada are destined to the U.S. market (2018).<sup>9</sup>

## National Railway Network



**Image Description:** The map shows the change in total rail traffic flow along Canada’s railway network in 2019 compared to the previous 3-year average. Sections of the rail system in which traffic decreased by 5% or more are illustrated by thin red lines, minimal changes to traffic are illustrated by average red lines and sections in which traffic increased by more than 5% are illustrated by thick, dark red lines.

Generally, total rail traffic flows are shown to have remained stable and increased in Canada’s Western corridors, with increases above 5% for corridors leading to the Port of Vancouver and the Port of Prince Rupert. Some corridors also recorded declines above 5%, notably the corridor from Central British Columbia to the Port of Vancouver.

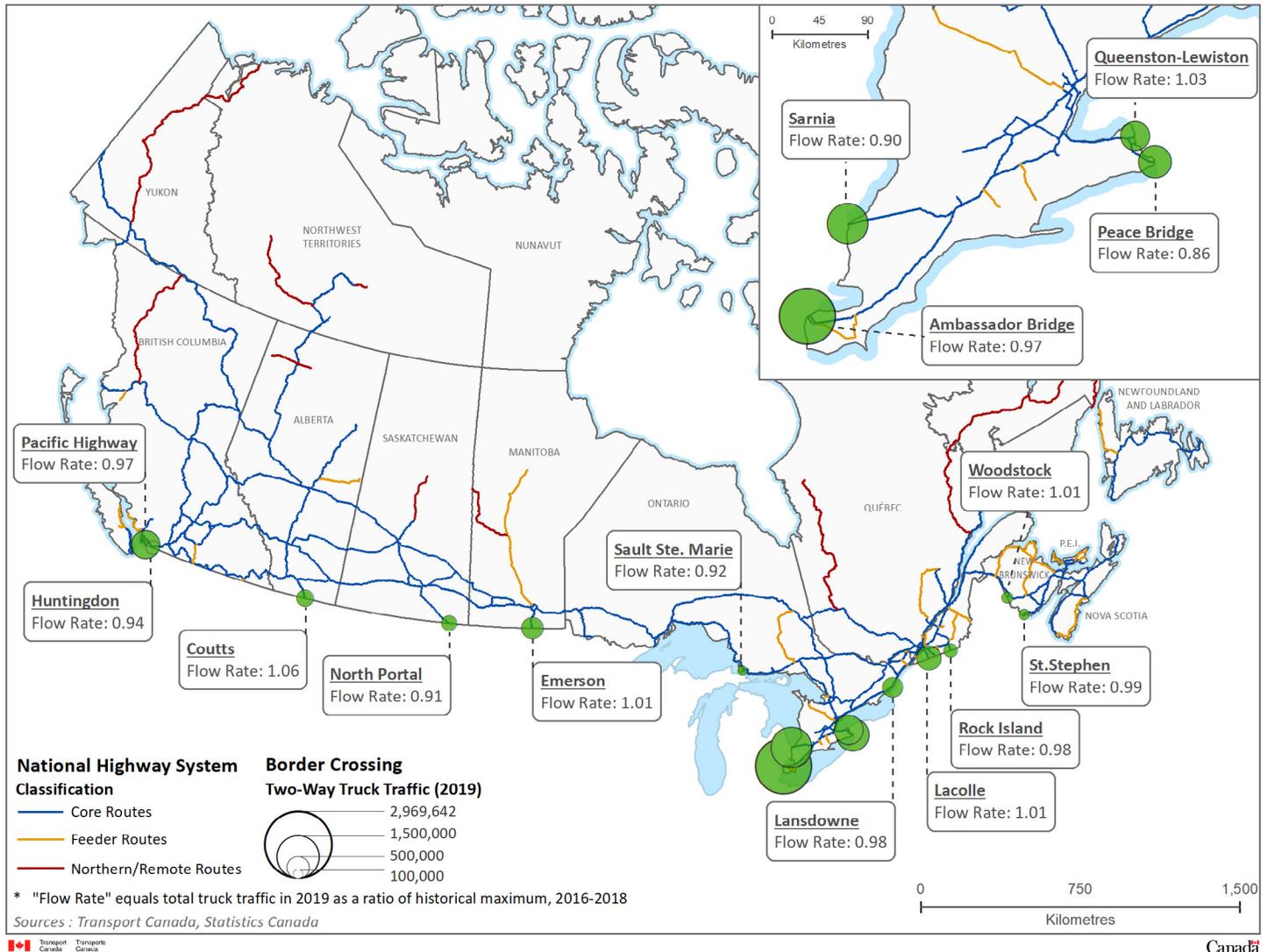
Canada’s Continental and Atlantic corridors are shown to have more varied rail traffic flows compared to the historical 3-year average. 5% increases in rail traffic are predominantly seen on the network between southern Ontario and western provinces. Minimal to no changes in rail traffic, along with decreases in traffic above 5% are concentrated on the network in southern Ontario to the U.S. Border and east to New Brunswick.



## Major Trade Corridors and Facilities Continued

Canada's major trade-supporting **road systems** include the core National Highway System (NHS), as well as feeder and remote/northern system. The overall road system is publicly owned and maintained by a combination of federal, provincial/territorial and municipal governments. The trucking industry is highly competitive and operates in a fragmented market with very low barriers to entry, featuring a diversity of operators in terms of their size, scale and geographic coverage. Trucking activity is highest in Ontario, which accounted for 30% of domestic trucking tonnage and 60% transborder tonnage in 2017.

## National Highway System



**Image Description:** The map shows 15 major border crossings along the Canada – U.S. border. Green circles represent the location of each crossing and are graduated in size to represent the amount of commercial two-way truck traffic handled in 2019. The majority of border crossings handled less than 750,000 trucks, with those exceeding that amount only found in Southern Ontario and at Pacific Highway border crossing in British Columbia.

Flow rate at each border crossing is also provided. This is the total truck traffic in 2019 as a percentage of the historical 3-year average. Only 5 out of the 15 border crossings monitored had a flow rate of 1 or greater, indicating that the total traffic handled was equal to or greater than the historical 3-year average. The largest flow rate seen is 1.06 at Coutts, on Alberta’s southern border, indicating that traffic increased by 6% compared to the historical average.



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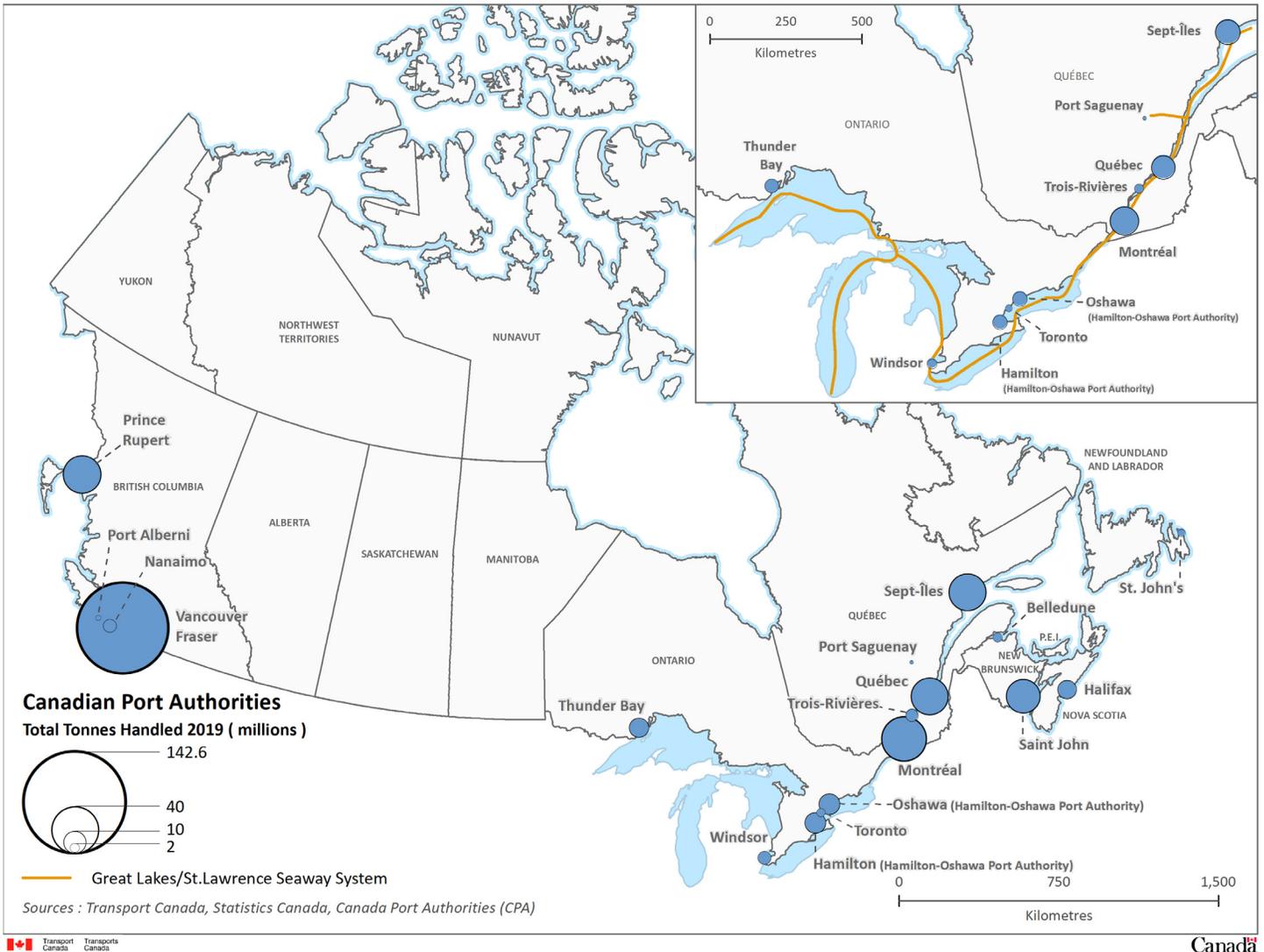
## Major Trade Corridors and Facilities Continued

Canada's major trade-supporting **ports** include the Canada Port Authorities as well as marine resupply. Canada's more than 500 public and private ports are vital links in the supply chain for international and domestic shipments. In 2018, Canada Port Authorities handled more than 342 million tonnes of cargo.

Vancouver is Canada's most significant marine port in terms of cargo volumes handled, dealing with 43% of all freight that moved through Canada Port Authorities in 2018. Montréal, Saint John, Québec, Prince Rupert and Sept-Îles also handle large volumes.

The bi-national Great Lakes and St. Lawrence Seaway system connects the Great Lakes to the St. Lawrence River and international markets. Thunder Bay and Hamilton-Oshawa are the two busiest Canadian ports in the Great Lakes region, and the Port of Montreal in the St. Lawrence region of this system.<sup>10</sup> The St. Lawrence Seaway system also supports the eastern Arctic sealift, which primarily ships dry cargo and bulk fuel to northern communities and resource development sites in Nunavut's three regions - Qikiqtaaluk, Kivalliq and Kitikmeot, as well as Nunavik in Northern Québec and Nunatsiavut in Labrador. After the Great Lakes and St. Lawrence Seaway, the longest inland waterway is the 4,241-kilometer Mackenzie-Great Slave Lake-Slave Peace-Williston Lake-Finley system (NWT), a transportation corridor that resupplies isolated communities via a barge system during the ice-free season.

## Canadian Port Authorities



**Image Description:** This map of Canada shows the geographical locations of the Canadian Port Authorities infrastructure and provides information on the total tonnes handled by each port in 2019. Each port is represented by a blue circle and is graduated in size proportional to the total tonnes handled. The highest total tonnes handled in 2019 was 142.6 million tonnes by Vancouver Fraser Port Authority.

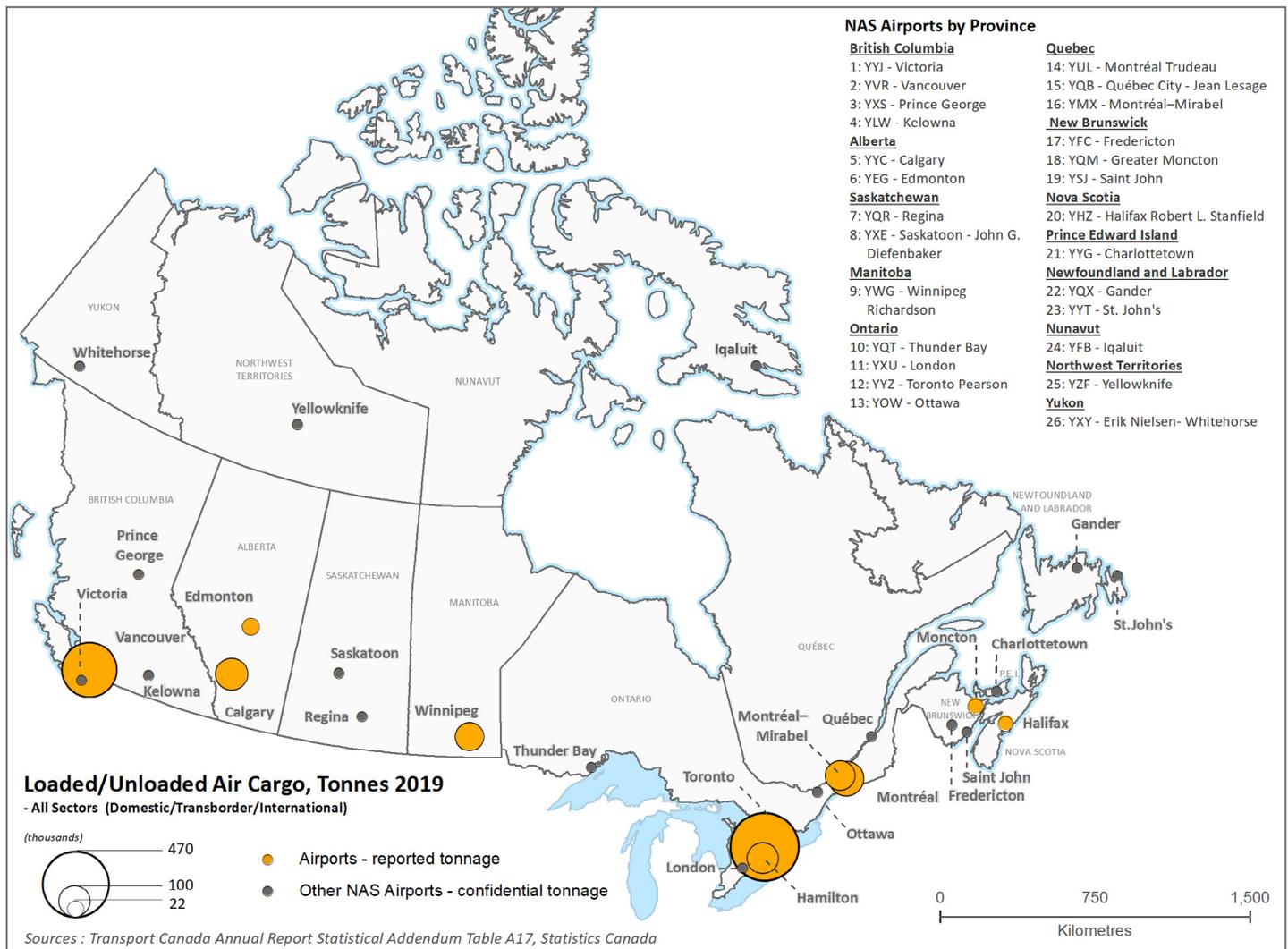
An insert at the top right of the map shows the Great Lakes/St. Lawrence Seaway System (represented by an orange line). This system provides a strategic waterway into the North American heartland and overseas markets.

## Major Trade Corridors and Facilities Continued

Canada's major trade-supporting **airports** include the National Airport System (NAS) as well as high-value cargo airports. Over 90% of air freight is handled at 26 publicly owned airports that make up the NAS. The NAS airports are operated by not-for-profit airport authorities that are mandated to operate as self-sustaining businesses.

Toronto Pearson International and Vancouver International Airports handled more than 50% of all freight moving through NAS airports in 2018.<sup>11</sup>

## Loaded/Unloaded Revenue Air Cargo



**Image Description:** The map of Canada shows the locations of NAS airports, with two additional airports identified in Ontario and Manitoba, as well as the number of loaded/unloaded air cargo for each airport. Each airport is identified by an orange circle that also provides information on the revenue of air cargo in 2019; the larger the circle, the higher the air cargo revenue.



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## Physical Impediments to Trade

Physical impediments to trade are found at locations in the transportation system where available infrastructure cannot meet traffic demand for extended periods due to capacity or operational or regulatory constraints. Infrastructure issues, such as inadequate bridges and tunnels, can also create obstacles by forcing carriers to take less efficient routes, carry smaller loads, or travel at different times.

From a goods movement perspective, shortfalls or bottlenecks in transportation infrastructure impede Canada's competitiveness by creating delays, uncertainty and risk, which in turn result in higher costs for businesses and consumers. Delays caused in one region have an overall impact on trade in other regions, as Canada's trade-supporting transportation system is complex and interdependent. Each region relies on the system's overall efficiency, to get its goods to market in a timely and cost-effective manner. For example, delays at the Port of Thunder Bay affect the ability of western grain shippers to get their goods to international markets.

Each region within Canada is unique and thus faces distinct goods movement transportation challenges; however, there are also common challenges across the transportation system. According to federal, provincial, and territorial governments, some of these broader findings include:

- Canada's ports are critical to our two-way trade with overseas markets. The effective flow of imports and exports to and from our ports is critical for Canadian producers and businesses involved in global supply chains, and for bringing products to consumers.
- Traffic congestion in and around Canada's largest cities has a significant impact on the speed and flow of trade within our national transportation network.
- Freight and passenger rail services vie for access to shared rail infrastructure, as freight volumes and passenger numbers increase across the country.
- Accessing affordable transportation services can be a challenge for rural and remote shippers.
- There is limited commercial land available to develop and expand trade infrastructure, in particular port infrastructure, on both the east and west coasts.



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The following section will aim to provide an overview of Canada's major physical impediments to trade along key trade-supporting transportation corridors. It is important to note, however, that public and private investments are being made to help address many of these impediments.

## Freight Rail Corridors

With more than 46,000 kilometers of track, the rail transport industry is an important element of Canada's transportation system. In Canada, the rail transport industry generates approximately \$16.3 billion per year in 2018, 95% of which comes from rail freight operations. In 2018, Canadian railways carried more than 328.5 million tonnes of freight.

Freight rail corridor bottlenecks tend to occur where a significant number of trains are utilizing the same track; for example, passenger service train trips along shared-use rail corridors. Rail impediments may also be structural; for instance, low-clearance crossings, and outdated signal systems that cannot efficiently accommodate a mix of higher-speed passenger trains and slower-speed freight trains, and slow speeds at rail-highway grade crossings. Shorline railways also contend with aging infrastructure.

Provinces, territories and the federal government identified the following major physical impediments to the rail freight system throughout Canada:

- B.C.'s Lower Mainland, largely associated with connections to and within the Port of Vancouver (including road-rail crossing infrastructure)
- Rail congestion in Edmonton and Calgary and their outlying areas
- Rail congestion through the Rocky Mountains
- Capacity constraints on CN Zanardi Bridge in Prince Rupert
- Rail access challenges for inland producers in the Western provinces, including connections between regional shortline rail and the mainline, and limited competition (higher shipping costs)
- Congestion at rail intermodal facilities in the Greater Toronto and Hamilton Area (GTHA)
- Competition for limited rail infrastructure in the GTHA
- Rail congestion within the Port of Montréal and
- Competing passenger and freight rail traffic on limited rail infrastructure.



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## Road Systems

Canada has more than a million kilometers of (two-lane equivalent) roads, roughly 38,000 km of which make up the National Highway System. Canada faces many challenges relating to its road transportation infrastructure. Some are unique to the country—such as its extensive land mass and often harsh climate, its high degree of urbanization, and its high level of trade dependency— and some are shared by others, including aging road and highway infrastructure, limited finances, issues of road safety, and environmental considerations. Given the challenges ahead, including maintaining an efficient road system to support Canada’s competitiveness in a global economy, the need for investment will undoubtedly continue.

Many of Canada’s most significant road-based freight bottlenecks are at major highway interchanges in the country’s largest urban areas. Trucks moving through urban areas often encounter congestion and network inefficiencies due to peak-period traffic volumes, work zones, and other impediments. In addition, the physical and operational constraints of the urban environment (street width, roadway design, one-way streets, time-of-day restrictions, etc.) make it difficult to navigate efficiently. Highway congestion and unreliable travel times in urban areas impact logistics systems and timing of shipments. Delayed shipments can have costly ripple effects on the production process.

Trucks are involved in the movement of most goods, even those that travel via other modes for part of the journey. Major urban centres host a number of Canada’s major container ports, cargo airports and distribution centres, which requires goods-laden trucks to navigate an urban environment. Surrounding land uses may also limit the ability of these ports and distribution centres to expand their facilities for increased capacity.

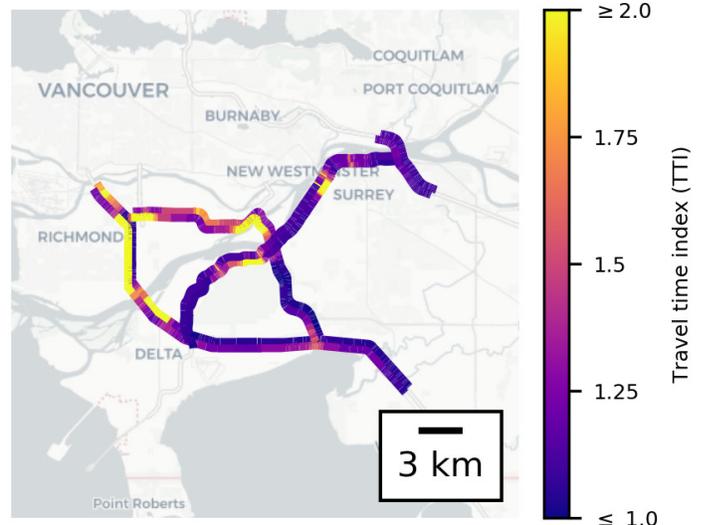
# Interim Report



## Vancouver, BC Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

*\*Travel Time Index (TTI) is the ratio of the peak-period travel time to the free-flow travel time. This metric tells us how much longer a trip takes during peak hours, compared to the same trip during off-peak hours. For example, if a trip usually takes 10 minutes during off-peak hours, but takes 20 minutes during peak hours, this would translate into a TTI of 2.00. A TTI of 1.00 represents free-flowing traffic.*

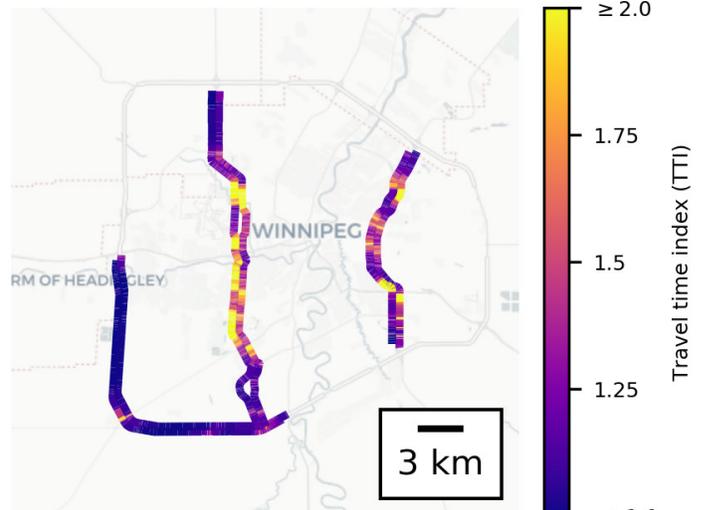
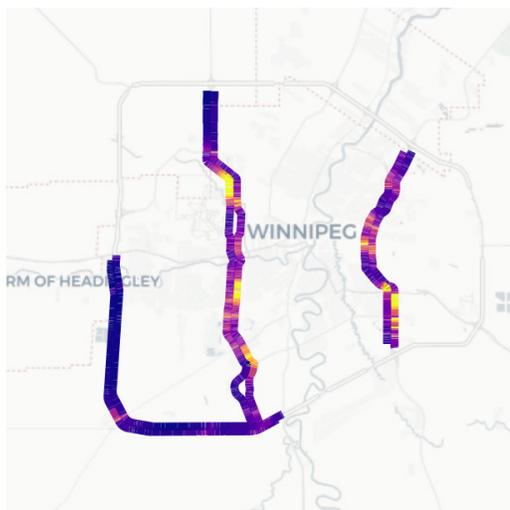
# Interim Report



## Winnipeg, MB Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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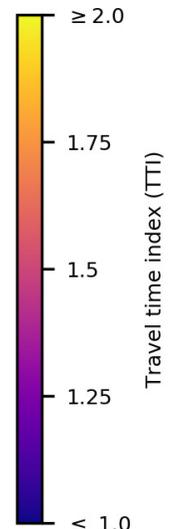
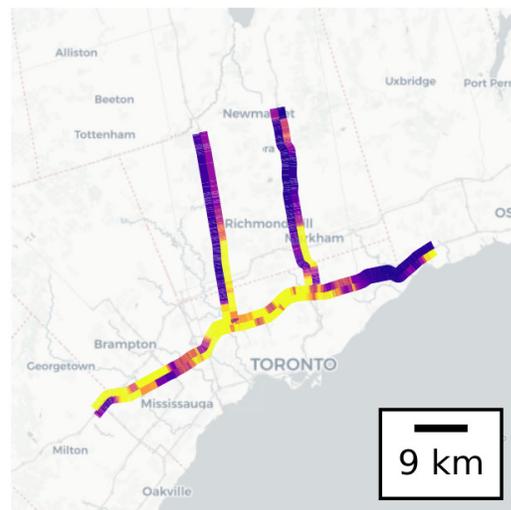
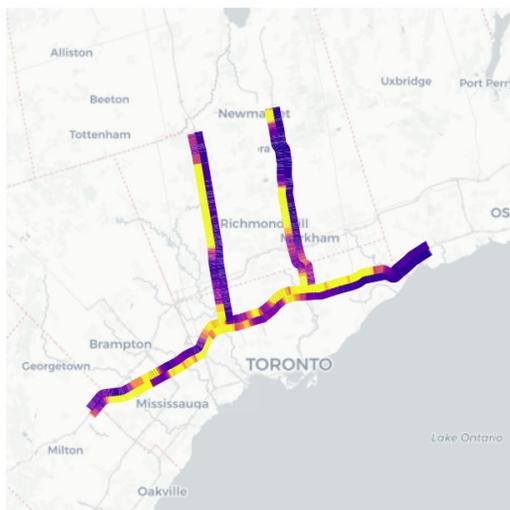
# Interim Report



## Toronto, ON Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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Provinces, territories and the federal government identified the following major physical impediments to the road system throughout Canada:

- Bottlenecks in B.C.'s Lower Mainland, largely associated with connections to and within the Port of Vancouver (including bridge and tunnel infrastructure)
- Congestion in Edmonton and Calgary and their outlying areas
- Congestion around Saskatoon
- Congestion in Manitoba through larger communities on PTH 1 and PTH 75
- Congestion in and around Toronto.<sup>12</sup> A recent study found that the Toronto area has 10 of the top 20 highway bottlenecks in Canada<sup>13</sup>
- Highway congestion along the 400-series highways and the Queen Elizabeth Way in the Greater Golden Horseshoe.
- Road congestion between the Greater Golden Horseshoe and the Niagara – United States border crossings
- Occasional congestion along portions of the Trans-Canada highway in northern Ontario
- Road congestion approaching the Port of Montréal
- Road congestion across the Montréal region
- Road congestion in the Québec City region
- Congestion in downtown Halifax caused by truck traffic to and from the port
- Capacity constraints on Highway 85/185 in Eastern Quebec/New Brunswick and
- Vulnerability of the Chignecto Isthmus Corridor in New Brunswick and Nova Scotia.

*See Appendix A for regional maps of the identified major physical impediments to the road system.*

# Interim Report

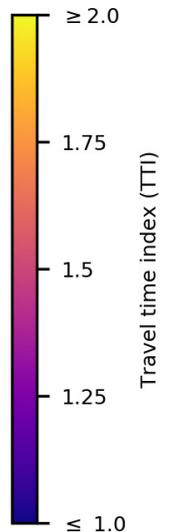
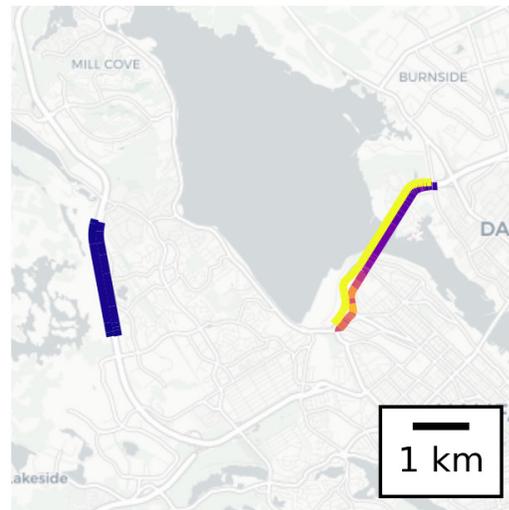


## Halifax, NS Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)



September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

*\*Travel Time Index (TTI) is the ratio of the peak-period travel time to the free-flow travel time. This metric tells us how much longer a trip takes during peak hours, compared to the same trip during off-peak hours. For example, if a trip usually takes 10 minutes during off-peak hours, but takes 20 minutes during peak hours, this would translate into a TTI of 2.00. A TTI of 1.00 represents free-flowing traffic.*

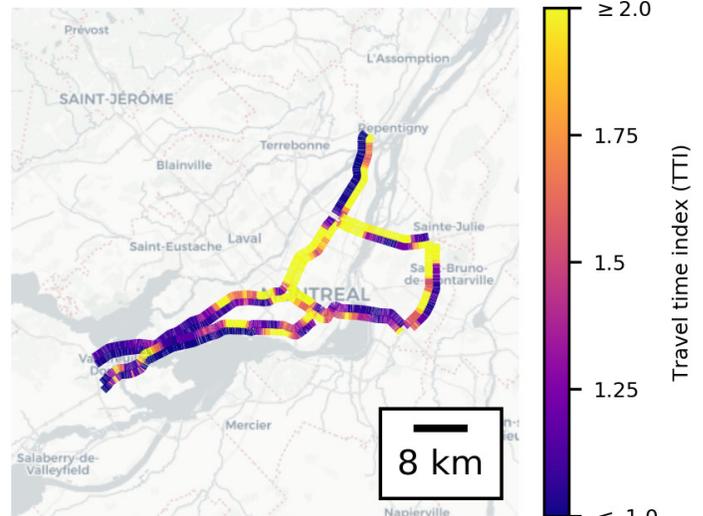
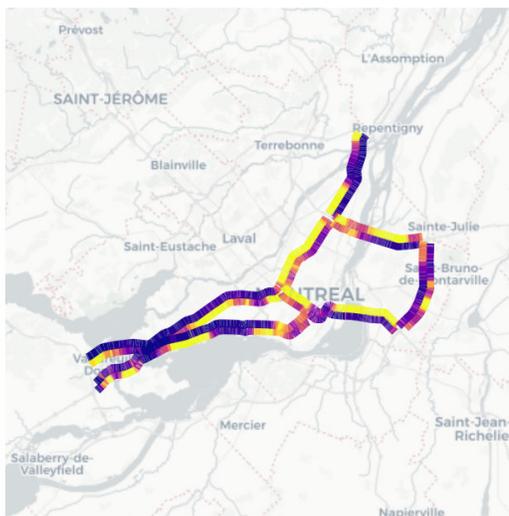
# Interim Report



## Montreal, QC Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

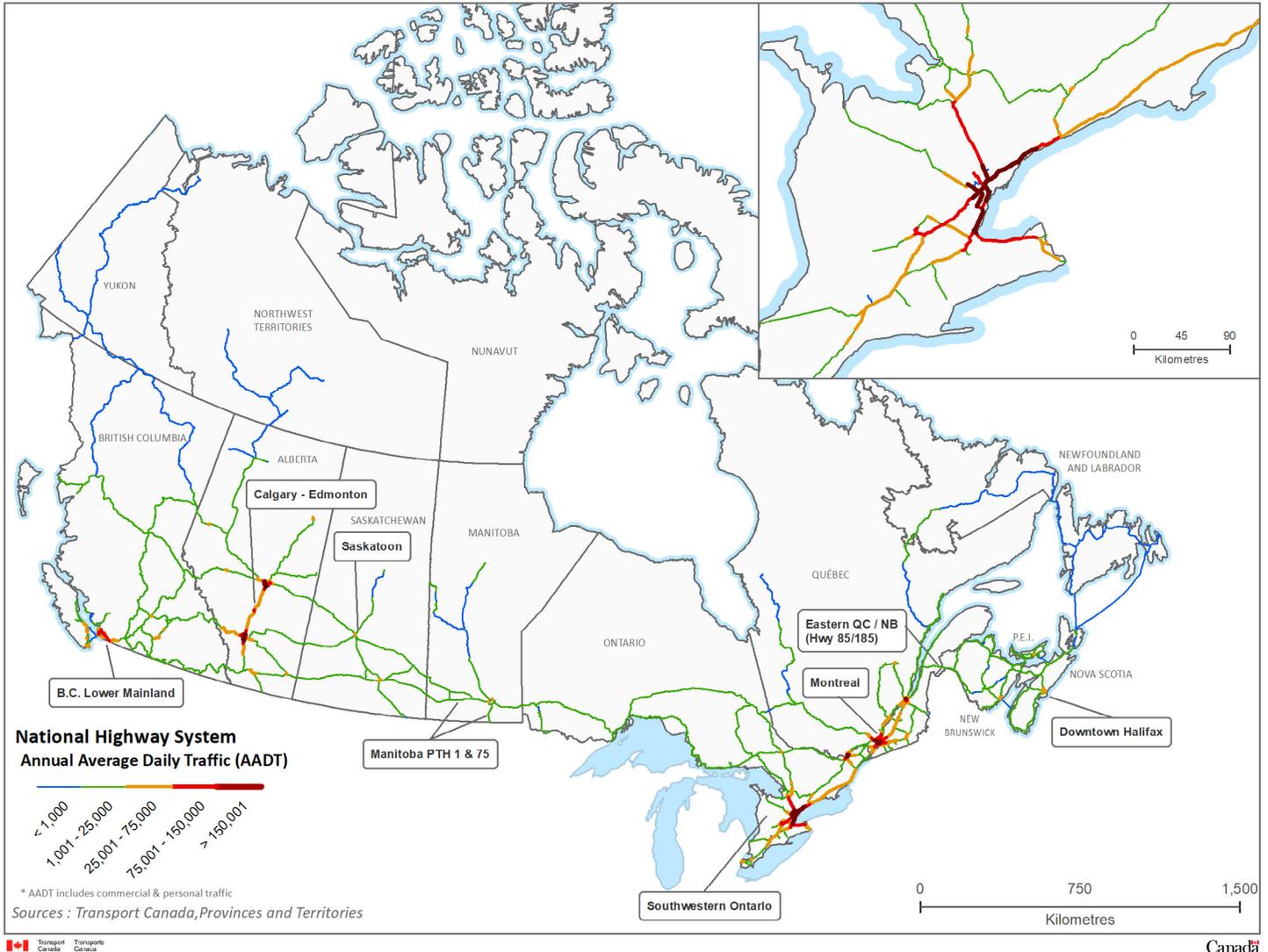
September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

*\*Travel Time Index (TTI) is the ratio of the peak-period travel time to the free-flow travel time. This metric tells us how much longer a trip takes during peak hours, compared to the same trip during off-peak hours. For example, if a trip usually takes 10 minutes during off-peak hours, but takes 20 minutes during peak hours, this would translate into a TTI of 2.00. A TTI of 1.00 represents free-flowing traffic.*

## National Highway System



**Image Description:** The map of Canada displays the National Highway System symbolized by color to represent the volume of traffic on the network using “Annual Average Daily Traffic” (AADT) data provided by the Provinces and Territories. Blue network segments have less than 1,000 daily vehicles, green from 1,001 – 25,000, Orange from 25,001 – 75,000, Red from 75,001 – 150,000, and Dark Red more than 150,000. Blue and Green segments are generally found in the North and less populated rural areas while Orange, Red, and Dark Red segments are found in and near larger urban areas.

The largest AADT values are found in Southern Ontario primarily Highway 401 in the Greater Toronto Area. This excerpt has been included in an inset map which can be found in the top right corner.

Text boxes have been included to highlight key segments on the network which includes from West to East: B.C. Lower Mainland, Calgary – Edmonton Corridor, Saskatoon, Manitoba PTH 1 & 75, Southwestern Ontario, Montreal, Eastern QC & NB Hwy 85/185, and Downtown Halifax.



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## Marine Ports

Ports are vital links in the supply chain and gateways that bring goods to market, making them an important part of Canada's economy. Marine transportation significantly contributes to trade, carrying \$246.5 billion worth of Canadian international trade (20.6% of Canada's total in 2019).

Ports face a variety of physical impediments that can limit their efficiency. For instance, channel depth, draft restrictions from bridges, and width restrictions pose a challenge for some ports, congested or inadequate transportation infrastructure surrounding a port can limit the flow of goods, and many ports are limited in their ability to expand the port's footprint due to competing land uses.

Provinces, territories and the federal government identified the following major physical impediments to the marine system throughout Canada:

- B.C.'s Lower Mainland, largely associated with connections to and within the Port of Vancouver
- Congestion at the Port of Montréal
- Water levels management between the Great Lakes and the St. Lawrence River
- Congestion at the Port of St. John's and
- Balance between navigation and impacts on riverside communities.

## Air

Air is an important component of Canada's overall transportation mix, with local, regional, national and international airlines flying cargo and passengers to destinations across the country and around the world. The Atlantic region, as well as rural/remote and northern regions are currently experiencing issues with limited air cargo capacity.



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## Yukon, Northwest Territories, and Nunavut

Canada's territorial North has unique transportation infrastructure challenges due to a vast territory to cover, populated with isolated communities, and a much smaller tax base to draw on than its provincial counterparts. In Canada's territorial North, as well as in northern areas of many provinces, there is considerable variability in transportation infrastructure's states of repair, capacity, and resilience to a changing climate. These challenges limit connectivity between communities and with larger continental transportation networks, and so too the flows of trade and commerce. In many instances, existing infrastructure is old or non-existent, resulting in reduced efficiency and reliability. For example, territorial governments are often obligated to enforce weight restrictions to ensure continued viability and safety of transportation routes, limiting the volume of goods that vehicles can carry. Furthermore, complications surrounding the continued supply of essential goods and movement of people for essential services were amplified by the global pandemic, resulting in additional food insecurity and other socio-economic hardships for Canadians living in the territorial North.

Yukon has a unique challenge compared to the other territories, as it does have a substantial road/highway network that is challenging to maintain and expand due to limited resources, a small population, and significant degrading forces (general harsh climate as well as thawing permafrost impacts).

Some of the key concerns for the territories include:

- Lack of infrastructure and lack of redundancy. Some communities heavily reliant on and only accessible by one mode of transport (most often air services).
- Lack of efficiency and reliability of existing infrastructure.
- Air travel constraints, such as short or unpaved runways, aging equipment, or the lack of electronic navigational aids.
- Impacts of climate change on transportation infrastructure, including permafrost degradation, rising sea levels and coastal erosion, a shorter season for ice roads and bridges, and lower water levels on the Mackenzie River.



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## Work Underway

Significant work is underway to address the various challenges outlined in the above sections. Each region within Canada is already working to improve the efficiency and resiliency of the trade-supporting transportation system.

Infrastructure investments are being made to accommodate population, economic, and trade growth. Federal, provincial and territorial governments recognize the importance of infrastructure to the economy and have invested strategically to ensure that trade corridors can accommodate growing demand, while also creating the conditions for private investment in transportation assets and infrastructure. Some key examples of work and discussions underway to tackle these infrastructure bottlenecks include:

- The Gateway Transportation Collaboration Forum – a collaborative effort to ensure the Vancouver gateway is ready to manage growing trade, with a focus on gateway capacity.
- Greater Vancouver Gateway Council and Greater Vancouver Urban Freight Council – the Gateway Council is an industry-led organization of senior executives from the seaports, airport, carriers and other companies engaged directly in the Gateway transportation business. The Greater Vancouver Urban Freight Council comprises 21 organizations with a stake in local goods movement.
- Ongoing collaboration with governments and industry through the Western Transportation Advisory Council (WESTAC) on enhancing the movement of goods within western Canada’s multi-modal transportation system.
- Alberta’s Calgary and Edmonton ring road – which will provide a means for commercial and passenger traffic to move more efficiently in and around the Calgary region.
- Manitoba’s recently released 30-year plan and blueprint for the capacity upgrade of the Winnipeg South Perimeter Highway.
- A project to increase air cargo capacity at Winnipeg James Armstrong Richardson International Airport, with \$30.4M in federal funding leveraging total investments of \$62M.
- Ontario’s transit expansion plan in the Greater Toronto Area, including the priority subway projects and the GO Transit Expansion Program – to alleviate congestion in the Greater Toronto and Hamilton Area.

# Interim Report

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- Ontario's regional transportation plans: Connecting the Southwest: A Draft Transportation Plan for Southwestern Ontario (January 2020); Connecting the North: A Draft Transportation Plan for Northern Ontario, Eastern Ontario, and the Greater Golden Horseshoe Transportation Plan – which examine transportation infrastructure along with issues and potential solutions for Ontario's regions.
  - Ongoing commercial trucking regulatory harmonization efforts between Ontario and Québec.
  - Québec's Sustainable Mobility Policy, with initiatives such as the establishment of a multimodal transportation network in support of international and interprovincial trade; projects for logistics hubs and industrial port zones.
  - Québec's work on its trucking network, with the objectives of directing heavy vehicles to a more appropriate road network, facilitating traffic control, etc.
  - The National Trade Corridors Fund (NTCF) is investing \$2.3 billion over 11 years, including \$800 million in dedicated funding for Arctic and Northern regions, to strengthen the efficiency and resilience of Canada's transportation infrastructure and address some of the bottlenecks listed in this report, including:
    - o A bundle of 16 projects in BC's Lower Mainland to build a more fluid road, rail and marine gateway through Canada's busiest port in Vancouver, with \$374M in federal funding leveraging total investments of \$967M. The majority of these projects were advanced through priority-setting by the Gateway Transportation Collaboration Forum.
    - o Three projects in partnership with the Montreal Port Authority, Province of Quebec and City of Montreal, contributing \$82.8M to improve road and rail access to the Port of Montreal and optimize intermodal movements within the port, leveraging a total investment of \$196.9M.
    - o Two projects to reduce congestion and increase efficiency of freight movements at the Port of Halifax, with \$47.5M in federal funding, leveraging total investments of \$99M.
    - o A bundle of five projects in Prince Rupert to improve rail fluidity and enable major expansion of container and bulk export capacity, including the expansion of the Zanardi Bridge, with \$161M in federal funding, leveraging total investments of \$324M.
    - o Two projects in Atlantic Canada to expand air cargo capacity at Halifax Stanfield International Airport and Greater Moncton Roméo LeBlanc International Airport, with over \$26M in federal funding, leveraging total investments of \$52.9M.
    - o Two projects supporting the optimization of land use at the Port of Hamilton, with over \$23M in federal funding, leveraging total investments of \$51.5M.
    - o Seven projects supporting road and highway improvements in Western Canada, with \$165M in federal funding, leveraging total investments of \$418M.
    - o Two projects supporting the expansion of air terminal buildings across Nunavut, with \$68M in federal funding, leveraging total investments of \$100M.
    - o Four projects across the North supporting road improvements to enhance connectivity, with over \$255M in federal funding, leveraging total investments of over \$344.8M.
  - On October 23, 2020, the federal Minister of Transport launched an Arctic and Northern Regions call for proposals under the NTCF for projects that address the transportation infrastructure priorities and needs of Arctic and Northern communities.

## Non-Infrastructure Irritants to Trade

When discussing ways to improve the trade-supporting transportation system, industry and others often identify certain impediments to efficiency. Some examples include:

- Unaligned commercial vehicle regulations between provinces and territories
- Labour shortages
- Competing land use development interests, which can limit expansion needs or increase costs
- Inefficient regulation and
- Infrastructure approvals processes.

The PCCTC task force undertook an exercise to identify some common irritants, including:

1. Border crossing – clearance regime: Given volumes, this system generally works well, but there are some delays in receiving clearance for specific equipment and parts used in construction.
2. Technology adoption: Can be a lengthy process to approve the use of new technology. Some success has been achieved through measures enabling pilot testing.
3. Lack of harmonization in regional and cross-border standards, specifications and regulations can create non tariff related trade barriers.
4. Bottlenecks in one area have knock-on effects throughout the network: Up to now, provinces and territories have independently prioritized trade-enabling infrastructure, although many projects have the potential to benefit multiple jurisdictions, as addressing a specific bottleneck can have cascading benefits across the country. More collaboration in prioritizing projects would be beneficial.
5. Limited government funding: Members of the PCCTC task force indicated that more federal funding would be welcome, particularly for projects that have the potential to benefit multiple provinces and territories. This would help to reduce the financial burden on partner provinces/territories/ municipalities when making strategic investments.
6. Lack of financial flexibility for port authorities: Canada Port Authorities require financial flexibility to preserve existing infrastructure and support long-term reliability and expansion of the trade corridor.
7. Land use planning/industrial land shortage: These large sites associated with the transportation of goods to and through a region serve a national function and are crucial to the economy. A clear, consistent and collaboratively-developed approach will support their protection.
8. Data- and information-sharing between the private and public sectors and between federal, provincial/territorial governments: Need for more effective and efficient sharing of data and information in the supply chain.
9. Approval processes: For example, environmental approvals related to routine transportation projects that are subject to the Canadian Navigable Waters Act and the Canadian Environmental Assessment Act; consolidating approval requirements among all three levels of government, in respect of jurisdictional responsibilities, for high-priority projects.
10. Restricted access in northern and remote communities: higher costs and limited transportation options (e.g., air) limits access to Canada's national trade corridors and the ability to fully participate in trade and economic growth.



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## Continued Work of this Task Force

In phase 2 of its mandated tasks, the Pan-Canadian Competitive Trade Corridor Initiative (PCCTC) Task Force will work with support organizations such as the Canadian Council of Motor Transport Administrators (CCMTA); the Task Force on Vehicle Weights and Dimensions (VWD) Policy; WESTAC; Multimodal Transportation Data Working Group, and the Regulatory Innovation Team. The PCCTC Task Force will leverage existing work and will help, where possible, to complement this work.

Some examples of work already underway that the PCCTC Task Force hopes to complement include:

- Transport Canada's Regulatory Innovation Team is working to identify regulatory barriers and the cumulative regulatory costs that might hinder supply chain robustness and the ability of Canadian businesses to respond effectively to supply chain disruptions. As a component of a three-year Transportation Sector Study of transportation regulatory impacts on supply chain competitiveness, the team has recently launched both targeted and generalized surveys on transportation activities and regulatory barriers within supply chains.
- The Task Force on Vehicle Weights and Dimensions Policy has been working diligently to address several issues. For example, they have:
  - Made progress on addressing weight allowances for self-steer quad semi-trailers depending on tire sizes
  - Addressed weight allowances for liquid natural gas fuelled vehicles
  - Addressed steering axle weight limits for truck tractors
  - Harmonized the weight limit for wide base single tires of different sizes.

In phase 2 of this work, the PCCTC Task Force will further examine common irritants to trade and make recommendations to further address them.



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## Setting up for Phase 2

In phase 2, the PCCTC Task Force will explore policy and planning improvements, including climate resilience measures that could serve to enhance the competitiveness of the system. It will also provide a framework for increased cross-sector, multijurisdictional, and multimodal coordination and partnerships. This work will include creating a joint federal, provincial and territorial framework for Canada's trade-supporting transportation system that could include common strategic objectives and principles and developing a plan with options to enhance the performance of Canada's strategic trade corridors. The objectives, long-term outcomes and key areas of focus form the basis of this framework and will guide the work in phase 2. Although the work of phase 2 will focus on issues with a pan-Canadian lens, diverse regional challenges will also be taken into consideration.

The phase 2 work will leverage the findings within this report as a base for further exploration and analysis. The PCCTC Task Force's final report will be presented to the Council of Ministers Responsible for Transportation and Highway Safety in early 2022.

# Appendix A





# Appendix A – Highway Congestion

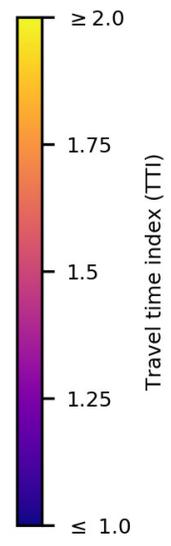
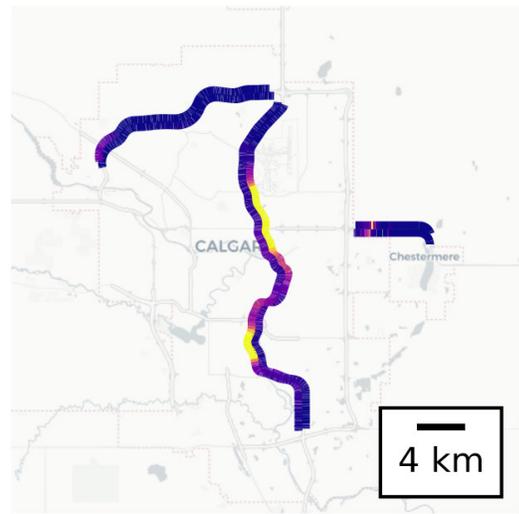
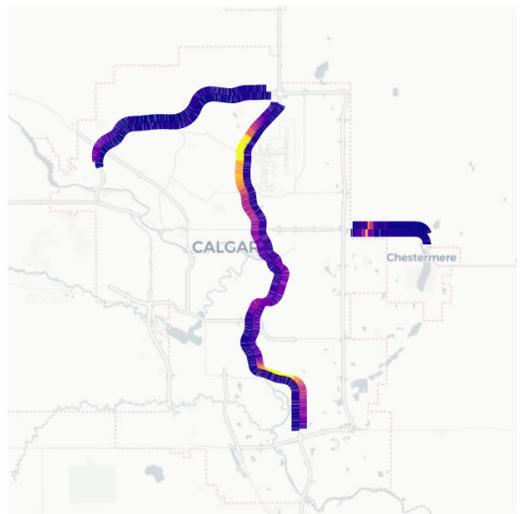
The below maps capture Travel Time Index\* in some of Canada’s larger urban centres, during peak periods (Monday-Friday, 6am-10am and 3pm-7pm).



Calgary, AB  
Travel Time Index  
Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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# Appendix A

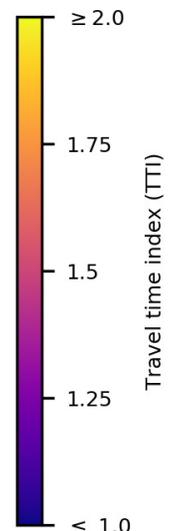


## Saskatoon, SK Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)



September 2019, PM (3pm - 7pm)



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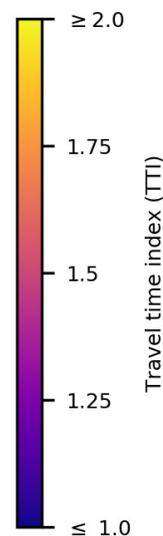
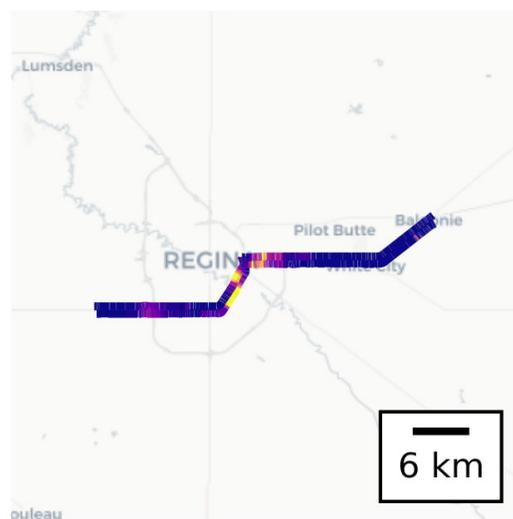
# Appendix A



## Regina, SK Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

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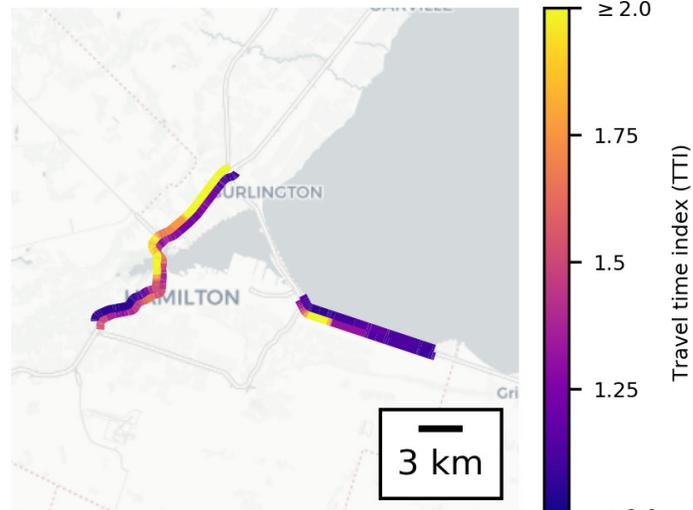
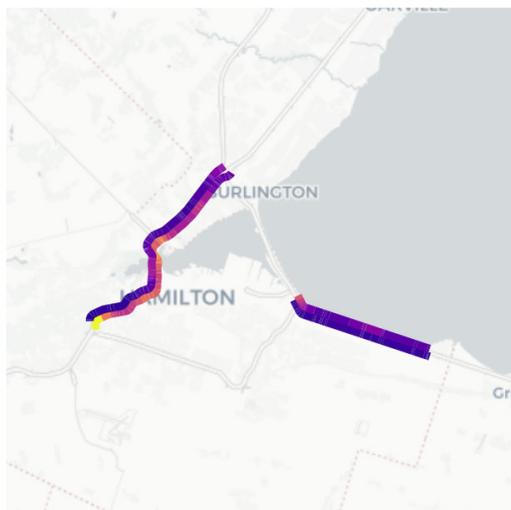
# Appendix A



Hamilton, ON  
Travel Time Index  
Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

*\*Travel Time Index (TTI) is the ratio of the peak-period travel time to the free-flow travel time. This metric tells us how much longer a trip takes during peak hours, compared to the same trip during off-peak hours. For example, if a trip usually takes 10 minutes during off-peak hours, but takes 20 minutes during peak hours, this would translate into a TTI of 2.00. A TTI of 1.00 represents free-flowing traffic.*

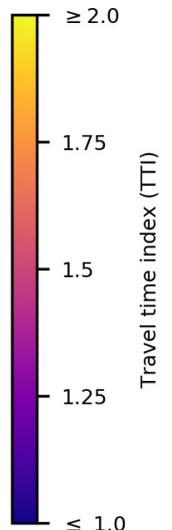
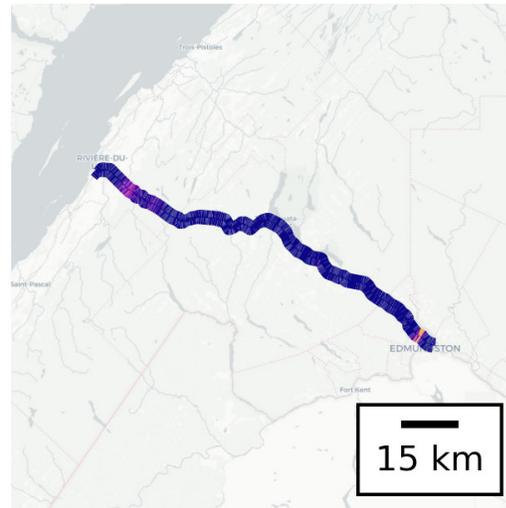
# Appendix A



## QC AUT-85 / RTE-185, NB HWY-2 Travel Time Index Monday - Friday, by peak period

September 2019, AM (6am - 10am)

September 2019, PM (3pm - 7pm)



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Speed data from HERE Technologies.

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# Endnotes

- 1 Trade Data On-Line, Industry, Science and Economic Development Canada (based on data from Statistics Canada and the U.S. Census Bureau)
- 2 *Ibid.*
- 3 *Ibid.*
- 4 *Canadian Freight Analysis Framework; Statics Canada.*
- 5 *Ibid.*
- 6 *Trade Data On-Line, Industry, Science and Economic Development Canada (based on data from Statistics Canada and the U.S. Census Bureau)*
- 7 *Bush, E. and Lemmen, D.S., editors (2019): Canada's Changing Climate Report; Government of Canada, Ottawa, ON. 444 p.*
- 8 *Transport Canada; Rail Traffic Database*
- 9 *Transportation in Canada 2019, Statistical Addendum: Table RA6: Overall Rail Traffic Characteristics, 2010–2019)*
- 10 *Transportation in Canada 2019, Statistical Addendum: Table M17: Cargo Handled by Canada Port Authorities (CPAs), 2010-2019.*
- 11 *Transportation in Canada 2019, Statistical Addendum: Table A17 : Top 10 Busiest Canadian Airports in Terms of Loaded/Unloaded Revenue Cargo1, by Sector, 2010-2019TC.*
- 12 *Movement of Goods Series: Report #5: Three Bold solutions for the Toronto-Waterloo Corridor*
- 13 *Movement of Goods Series: Report #5: Three Bold solutions for the Toronto-Waterloo Corridor, page 22.*

# Acknowledgements

February 2021

The PCCTC would like to thank its members for their contribution and dedication to this work. The Task Force was comprised of the following members:

**British Columbia:** Jason Macnaughton; Vikki St- Hilaire

**Alberta:** Alan Windhorst

**Saskatchewan:** Barry Gallivan; Ryan Cossitt

**Manitoba:** Jason Senyk; Anjanette Zielinski

**Ontario:** Derek Deazeley; Shaunna Hubert; Dylan Kekanovich

**Québec:** Louis-David Dugal

**New Brunswick:** Shannon Sanford

**Nova Scotia:** Royden Trainor

**Newfoundland and Labrador:** Herbert Butt

**Prince Edward Island:** Alex Dalziel

**Yukon:** Richard Gorczyca; Matthew Adaman

**Northwest Territories:** Lindsey Oosenbrug-Trinh; Darren Locke; Rob Thom; Allison Scott

**Transport Canada:** Neil Weatherdon; Amy Casey; Michael Ferguson; Annie-Josée Caron; Richard Ramsahoye; Jeffrey Salvail; Idzva Tsatsa Kotwas; Amanda Cinquino; Iain Tyrrell; Matthieu Grenier; Dale Walsh; Mylaine Des Rosiers