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CANADA'S RAILWAYS

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# Pacific Northwest Association of Rail Shippers

Marc Brazeau  
President & CEO

September 18, 2019

# Canada's railway franchise



## About the RAC

Class 1: CN, CP and US carriers

Short line: 50+ across Canada

Passenger: Commuter, Intercity, Tourist

500 rail industry suppliers.

# Our Board of Directors



- Jeff Ellis, Chief Legal Officer & Corporate Secretary, CP (RAC Chair)
- Jean-Jacques Ruest, President and CEO, CN (RAC Vice-Chair)
- Cynthia Garneau, President & CEO, VIA Rail Canada Inc.
- Sean Finn, Executive Vice-President, Corporate Services & Chief Legal Officer, CN
- Louis Gravel, President, Genesee & Wyoming Canada
  
- Corina Moore, President and CEO, Ontario Northland Transportation Commission
- Derek Ollmann, President, Southern Railway of British Columbia Ltd.
- Gordon Peters, President, Cando Rail Services Ltd.
- Robert Taylor, Assistant Vice President North American Advocacy, CP
- Phil Verster, President and CEO, Metrolinx

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[www.railcan.ca](http://www.railcan.ca)

# Our network in Canada

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## Locomotives

2,842

in service last year and used to haul, on average 99 cars per train.

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## Rail Cars

5.2+ M

originated carloads in Canada.

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## Employees

31,780

dedicated railroaders committed to safety and excellence.

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## Customers

+10,000

companies using our network to compete in domestic and international markets.

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## Main-track kilometers

42,557

privately owned, operated and maintained.

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## Average length haul

1,524

kilometers.

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## Revenue per tonne-km

3.16

cents to move one tonne of freight one kilometer.

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## Traffic

\$310 B

in goods handled by our network in Canada.

Source: RAC, Rail Trends 2018

@RailCanada

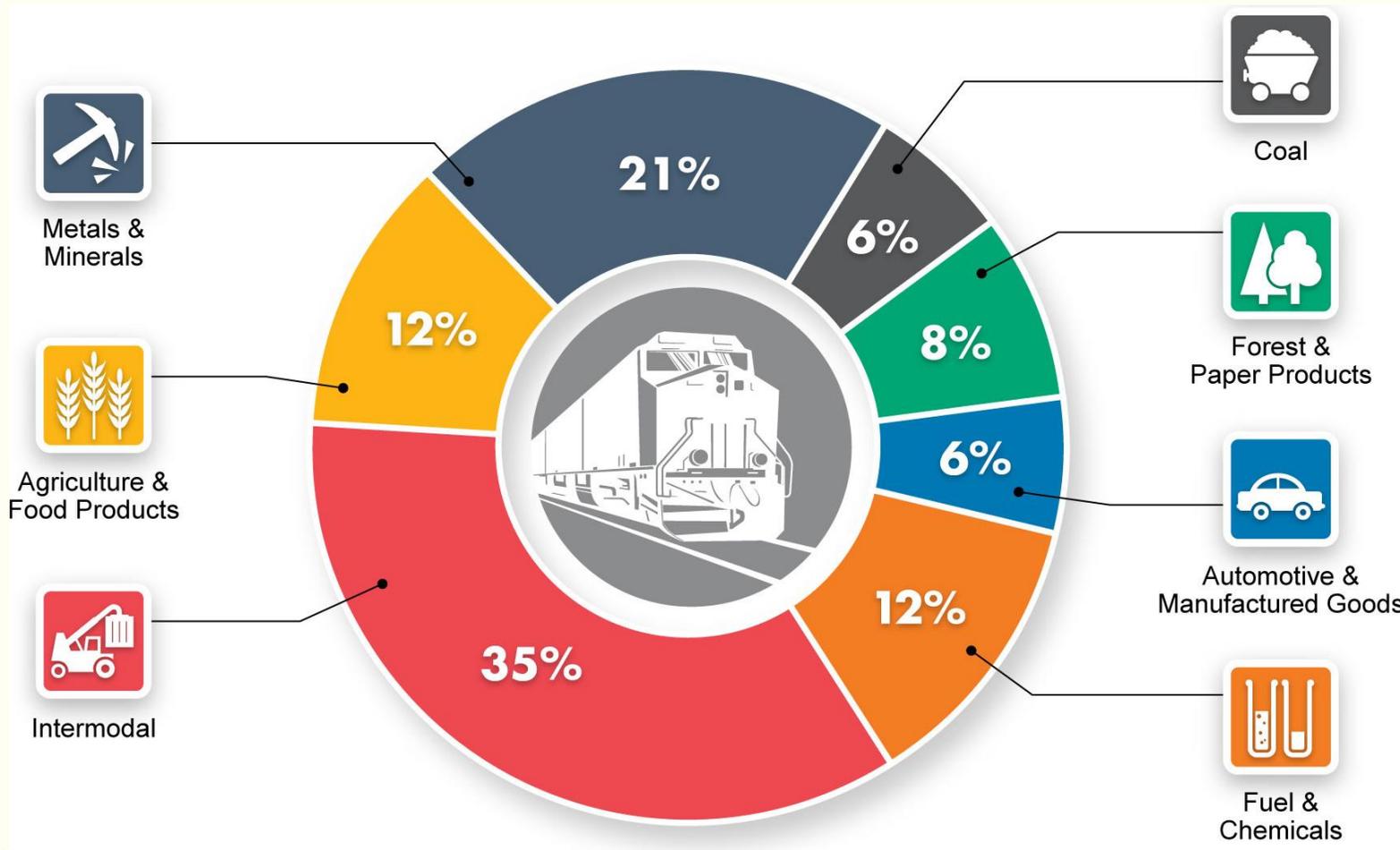
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# Our diversified portfolio

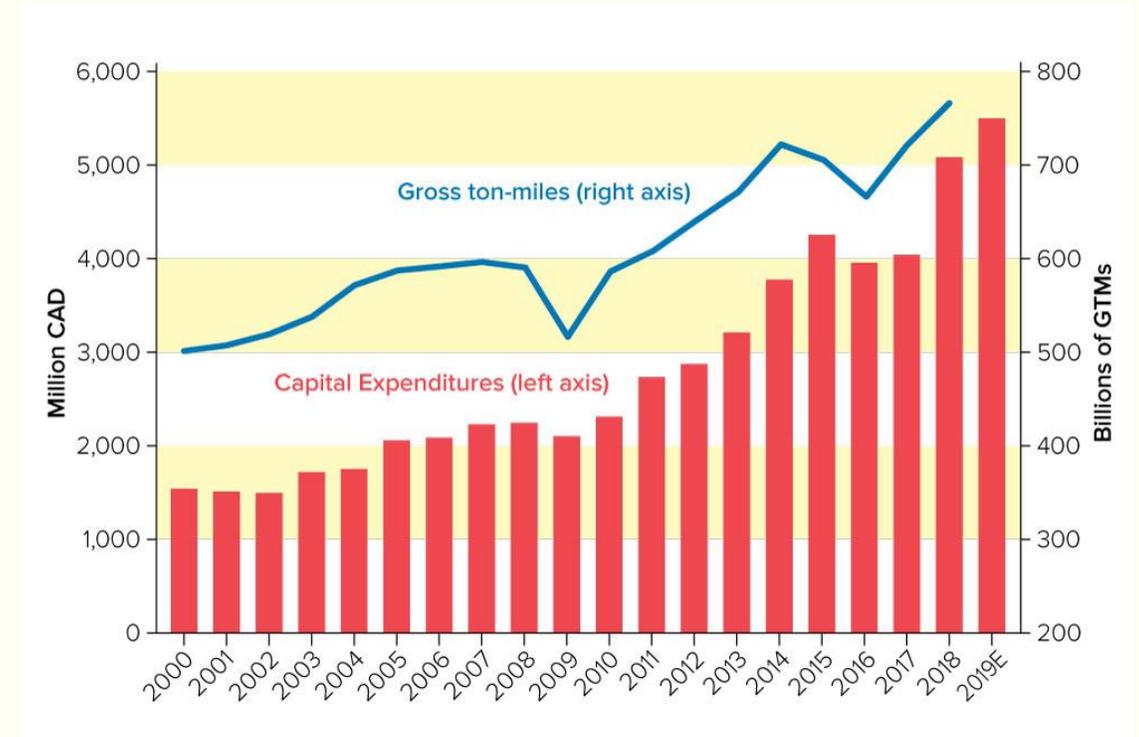


Sources: RAC, 2018. Rail Trends 2017 database.

# Railway investments support growth

- CAPEX in 2019 exceeds \$5.5B.
- CAPEX facilitates growth and capacity.
- A resilient railway network is required to grow the economy and capitalize on trade agreements.

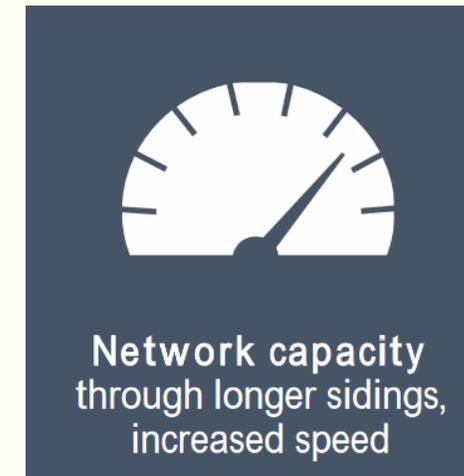
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Sources: Railway Association of Canada, 2019. Rail Trends 2017 database.

# Investing in capacity

- Infrastructure: yard and terminal expansions, new track, sidings.
- Rolling stock: hundreds of new and refurbished locomotives and thousands of new rail cars.
- People: thousands of new railroaders coming on board.



Source: CP Investor Day 2018

FINDINGS

# CANADA'S RAILWAYS ENJOY A 85% POSITIVE REPUTATION

ABACUS DATA

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# REPUTATION OF RAILWAY SECTOR

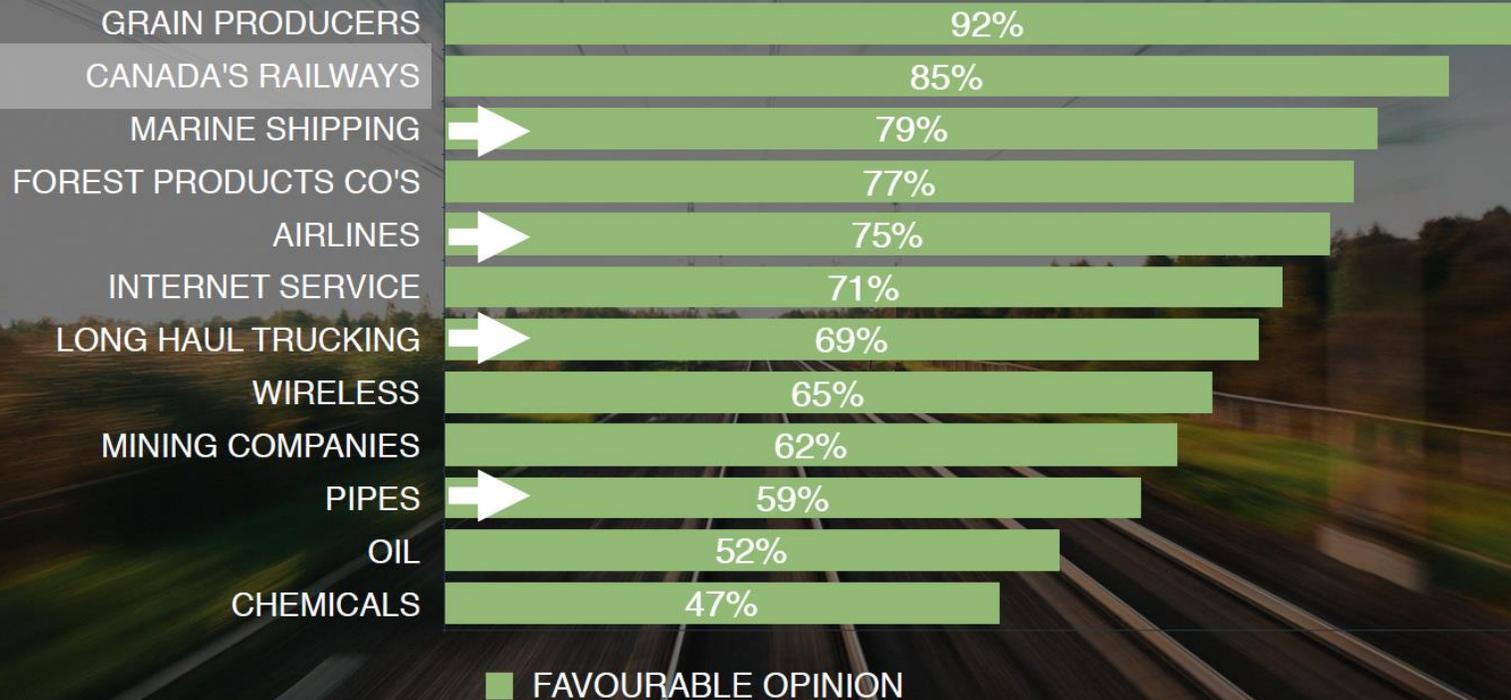


■ FAVOURABLE OPINION

ABACUS DATA

For each one, please tell me if you have a very favourable, somewhat favourable, somewhat unfavourable or very unfavourable impression?

# REPUTATION OF RAILWAY SECTOR



ABACUS DATA

For each one, please tell me if you have a very favourable, somewhat favourable, somewhat unfavourable or very unfavourable impression?

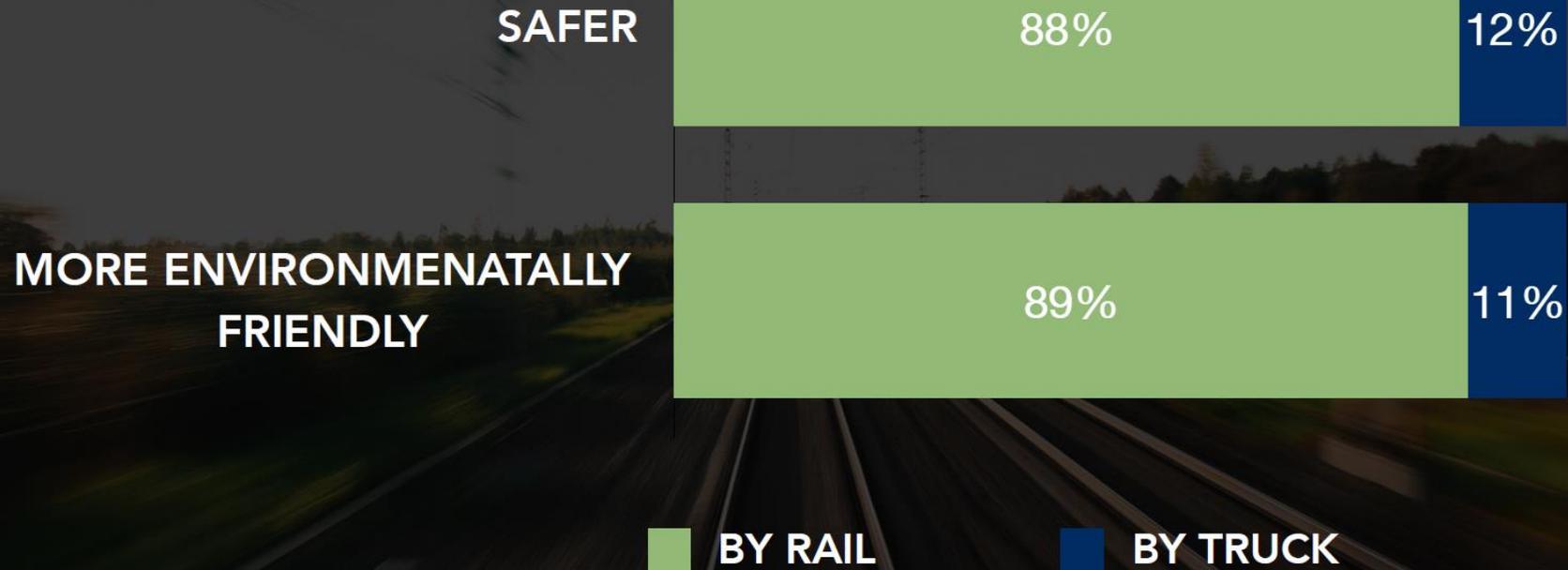
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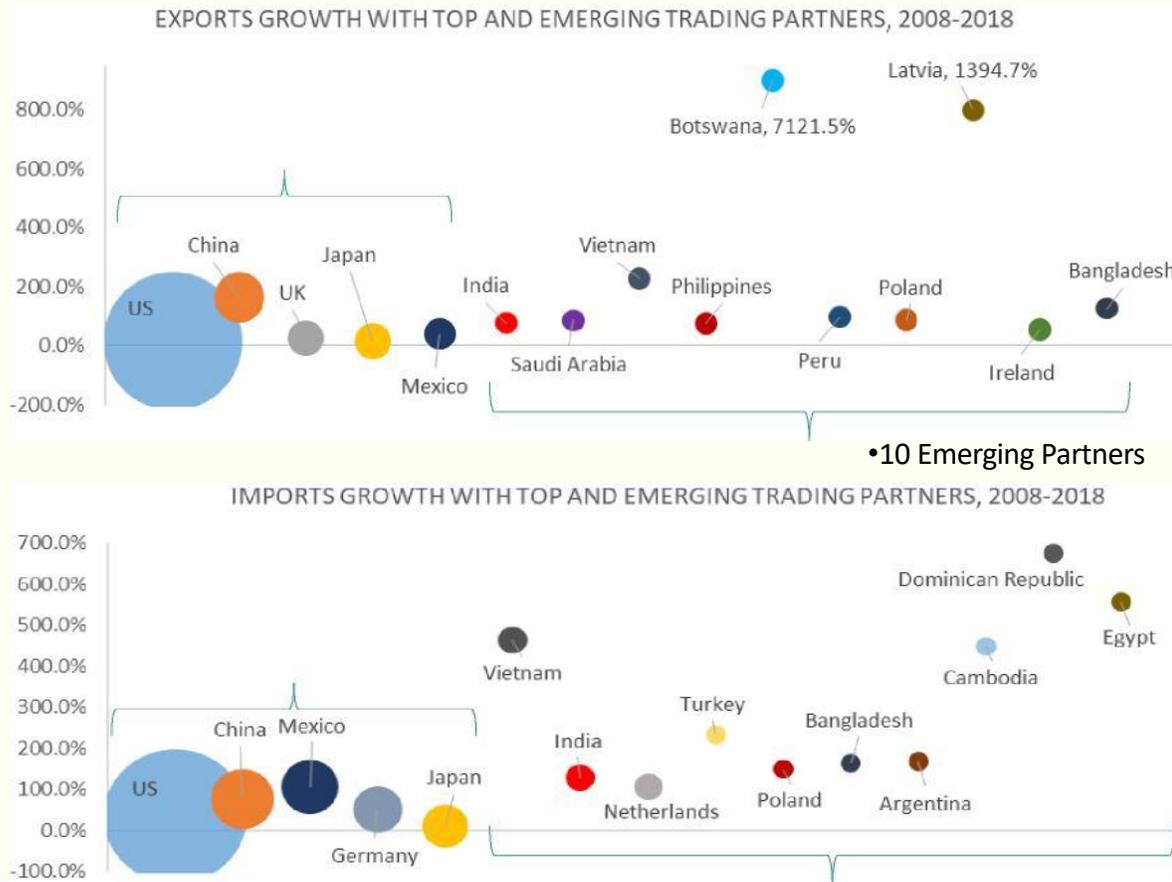
# SHIPPING FREIGHT



ABACUS DATA

All else being equal, do you think it is safer to ship freight between two cities by rail or by truck? /  
Do you think it is more environmentally friendly to ship freight between two cities by rail or by truck?

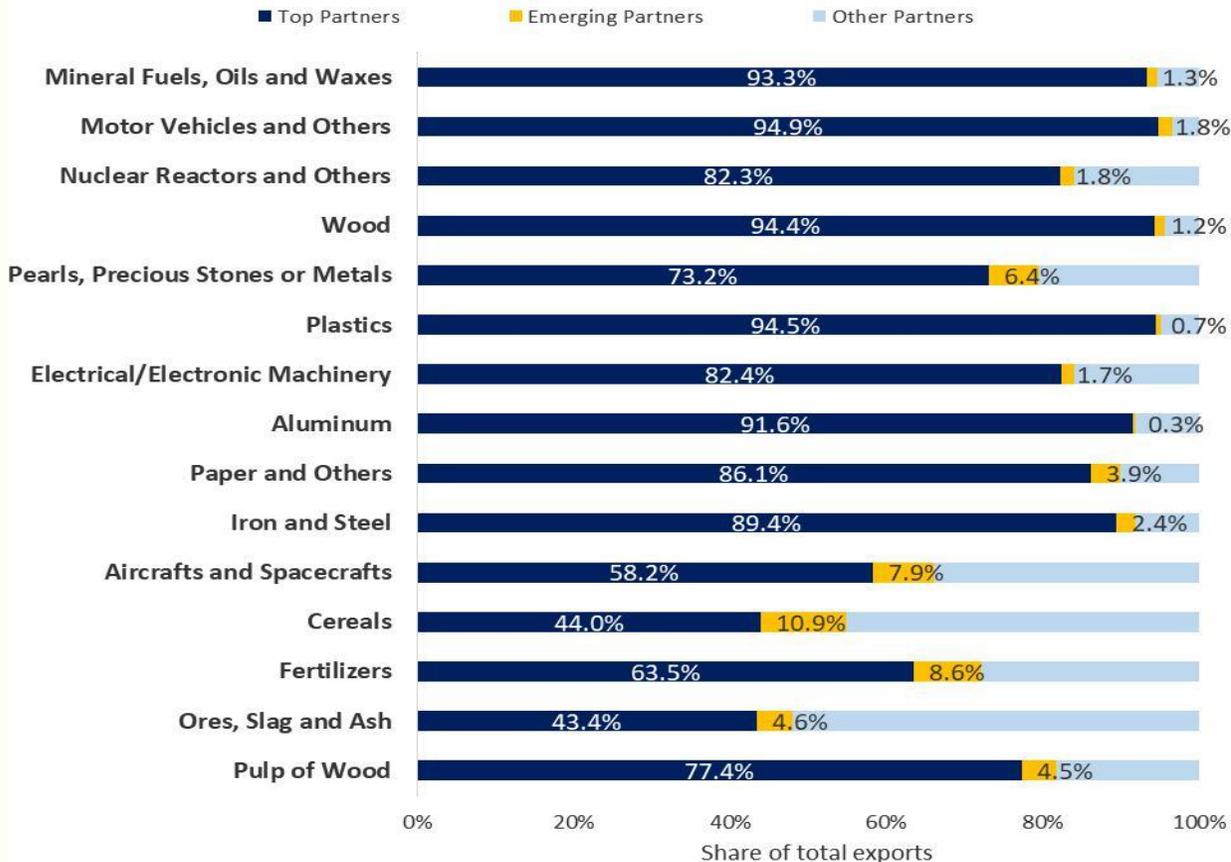
# Although the U.S. remains our main trading partner, Canada has diversified its imports and exports destinations over the last decade



- The top 5 export destinations represent 86% of total exports while the top 5 origins represent 76% of total imports.
- The U.S. still represents 75% of Canada's total exports and 51% of total imports. Those shares have remained fairly stable over the last 10 years.
- The 10 emerging destinations represent 2.2% of total exports while the 10 emerging countries of origin represent 4.4% of total imports.
- Exports to the top 5 trading partners increased 21% from 2008 to 2018 while they increased by 114% for the 10 emerging partners.
- Imports from the top 5 trading partners increased 43% from 2008 while they increased 200% from the 10 emerging partners.

# Canada overseas exports are mostly lower-value bulk commodities...

TOP CANADIAN EXPORTS FOR TOP AND EMERGING DESTINATIONS, 2018



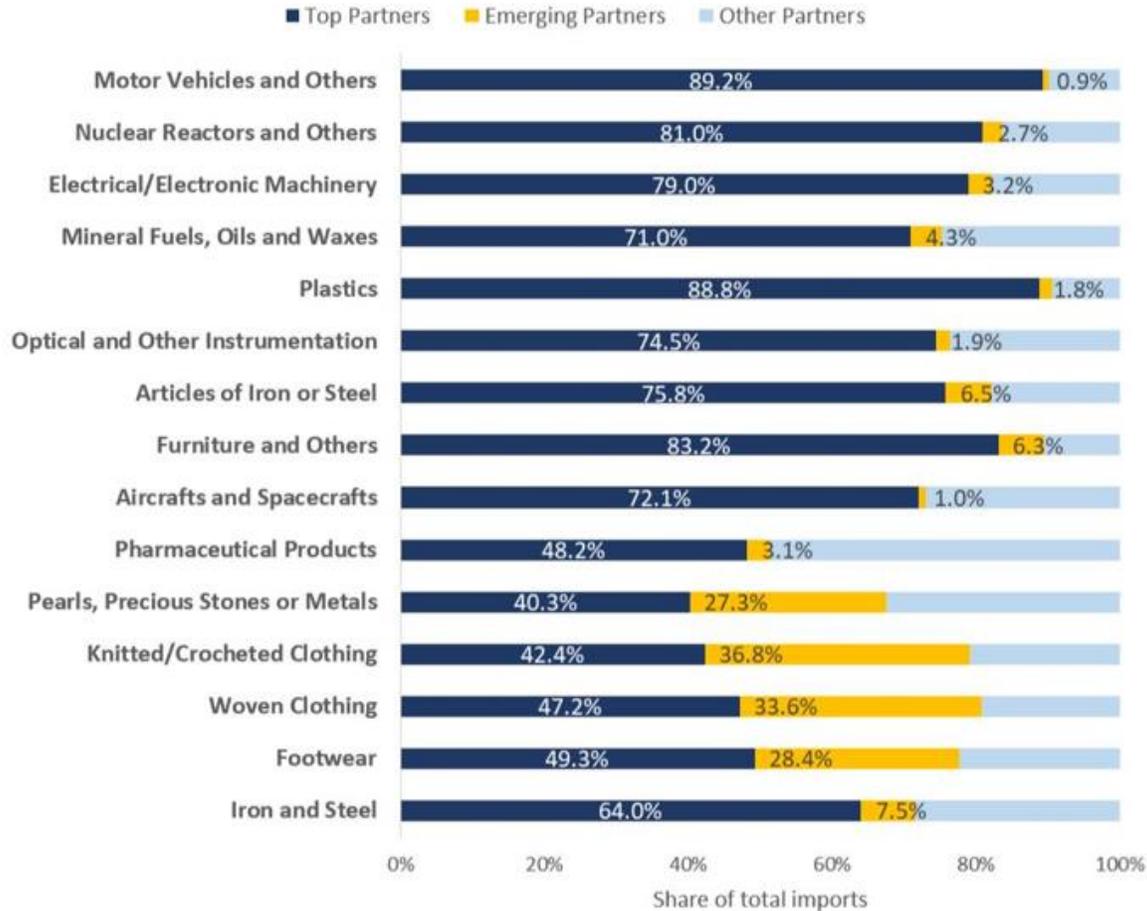
•Growth 2008-2018

Top	Emerging
-5.5%	14577.0%
42.6%	1183.2%
32.0%	9.2%
95.9%	219.5%
51.2%	1271.4%
34.8%	13.8%
-9.6%	-4.4%
12.0%	21.3%
-19.0%	0.6%
10.9%	109.4%
14.2%	618.1%
27.4%	69.4%
-16.5%	-24.8%
40.1%	47.0%
45.6%	86.6%

- Canadian exports are highly oriented toward low-value bulk commodities and are less diversified in terms of destinations than imports.
- In 2018, mineral fuels, oils and waxes, represented 22% of total exports with the next five top representing 30%.
- Whereas most Canadian exports destined to other international destinations will use marine transportation, exports to the U.S. depend heavily on trucking and rail.
  - Motor vehicles and others represent 13.4% of total Canadian exports, the U.S. market representing 91.3% of this share and moved almost exclusively by rail and road.

# ...and imports more high-value finished goods

TOP CANADIAN IMPORTS FROM TOP AND EMERGING ORIGINS, 2018



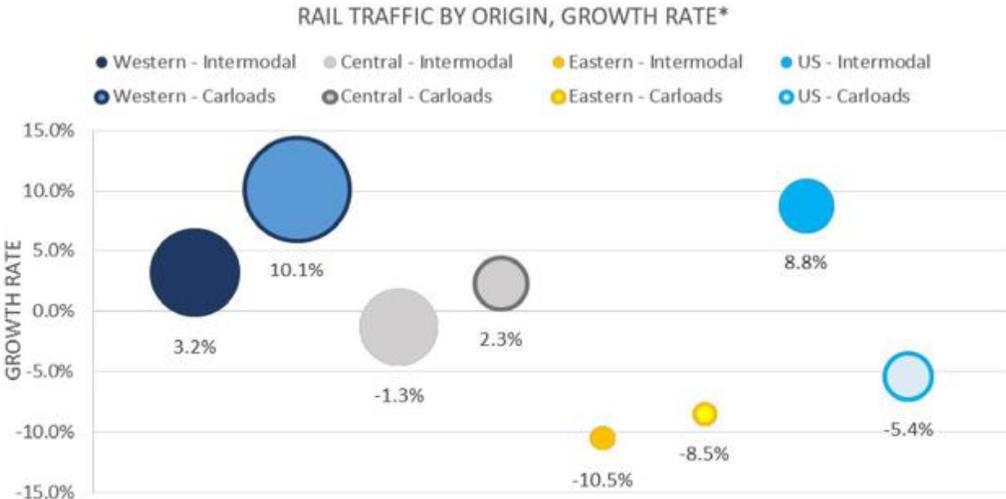
•Growth 2008-2018

Top	Emerging
49.5%	832.3%
39.7%	196.5%
42.3%	457.1%
83.8%	179.7%
52.3%	213.3%
33.6%	100.8%
20.4%	187.4%
43.4%	154.8%
50.8%	165.4%
64.9%	30.7%
1.3%	820.8%
9.8%	180.5%
17.6%	443.6%
-11.2%	218.5%

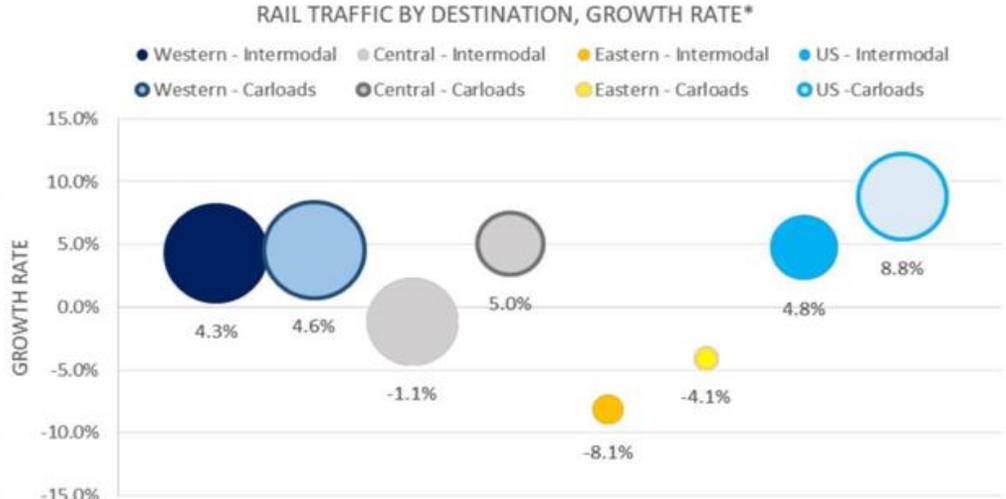
- High-value finished goods make up a significant share of Canada's imports.
  - Imports of top high-value goods (motor vehicles and others, nuclear reactors and others, electrical/electronic machinery, optical and other instrumentation and pharmaceutical products represents 46.6% of total Canadian imports while only 27.4% of exports).
- Due to the nature of the goods imported and the higher diversification of origin countries for imports, container inbound traffic through Canadian ports is heavy and port infrastructure plays a significant role in moving these goods.

# Total rail traffic growth was uneven across the network

- Total rail traffic (origin and destination) for September 2018 to April 2019 compared to the same period last year increased 2% for intermodal and 6% for carloads.
- In Western Canada, total rail traffic increased 3.8% and 7.9% for intermodal and carloads.
- In Central Canada, total rail traffic declined by -1.2% for intermodal and increased by 3.7% for carloads.
- In Eastern Canada, rail traffic declined by -9.3% and -6.7% for both intermodal and carloads.



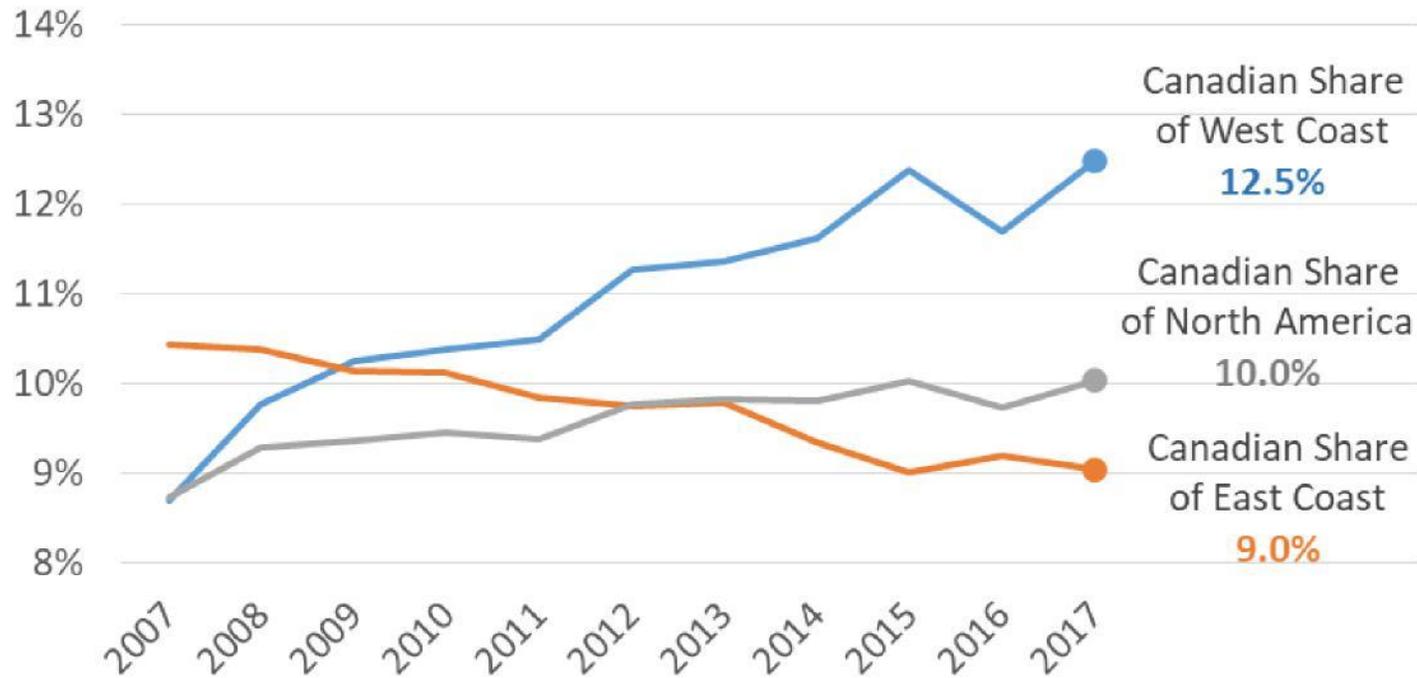
\* Growth rate is based on total traffic for the period Sept. 2018 to April 2019 compared to same period in 2017/2018.



\* Growth rate is based on total traffic for the period Sept. 2018 to April 2019 compared to same period in 2017/2018.

# Despite strong traffic growth, the system remains competitive, with growing market share of North American traffic on the West Coast

## Canadian Market Share of North American Container Traffic



Sources: Transport Canada, American Association of Port Authorities

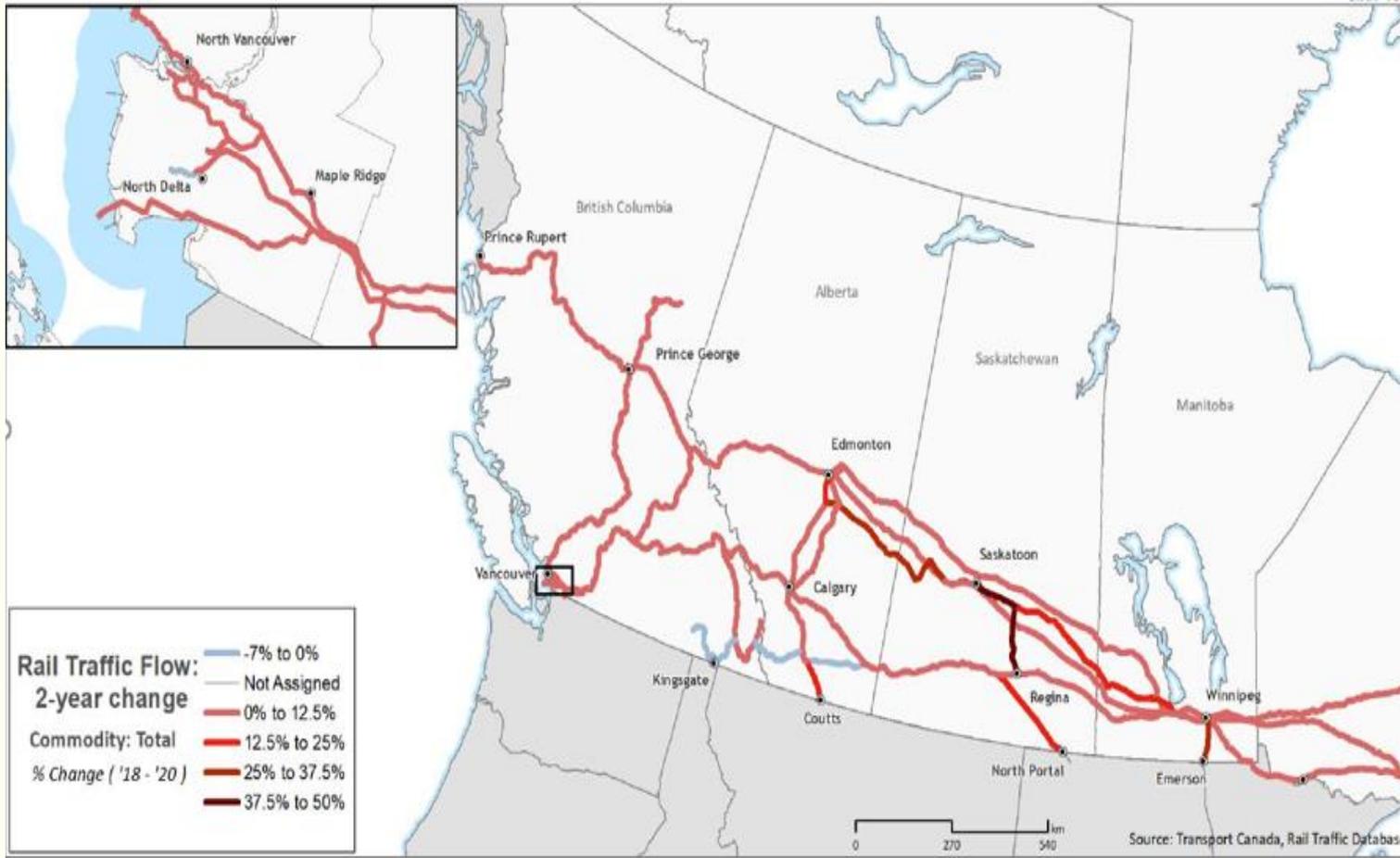
- Canada's Share of North American container port traffic has been relatively flat over the past 10 years
- The Canadian West Coast has been competitive, increasing market share 3.8% over the past decade
- The Canadian East Coast ports have lost 1.4% market share of North American East Coast traffic.
- However Canadian East Coast ports continue to grow just not at the rate of the US east coast ports

# In Western Canada, the BC Lower mainland faces operational challenges amid intensifying freight traffic

- The Lower mainland is characterized by **heavy rail and road traffic** servicing the **Port of Vancouver**
- A large **mix of commodities** transit through this area as the port is **Canada's largest gateway** between North American and International Markets
- Many operational challenges exist in the Lower mainland including:
  - Rail interswitching points,
  - Bridges and tunnels to access the North Shore and
  - Supply chain coordination between marine and inland transportation modes



# Western Canada – Two Year Outlook



After robust volumes in 2018, anticipated that there will be no elevation of pressure on **ports** (2-7%).

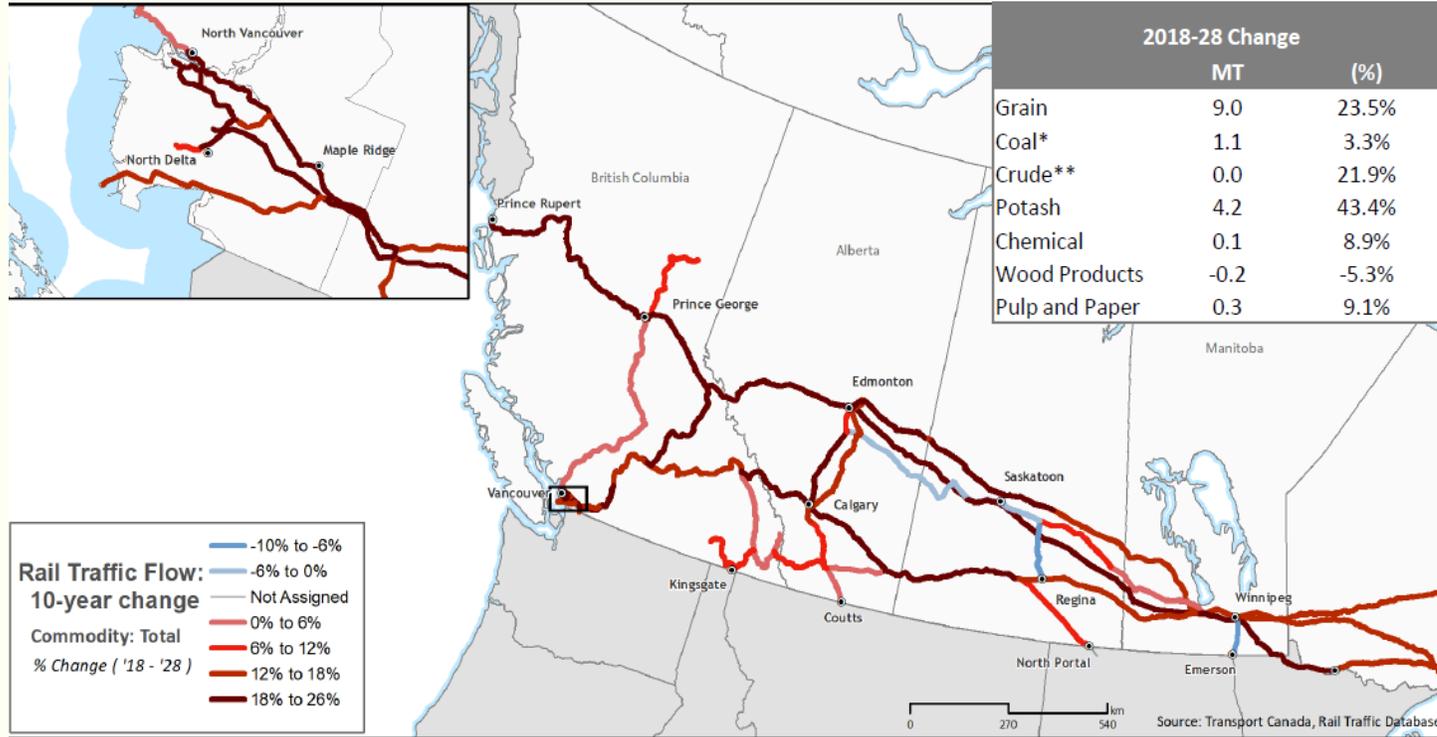
- Inbound shipments will see greatest growth. Although, trade uncertainty will weigh on potential.
- Grain and potash will be key drivers of out bound traffic growth.

For hire long-haul **trucking** (6-8%) will continue to be dominated by intra-provincial shipments.

- Growth in the Calgary-Edmonton corridor may contribute to existing congestion issues.
- Strong export oriented growth may place additional pressure on traffic in Vancouver area.

# Bulk commodity export flows will continue to shift transportation orientation westward

• Western Bulk & Container Shipments to the Ports of Vancouver, Prince Rupert and Thunder Bay (2028)



- Transportation demand to/from western corridors and ports are expected to grow around 15% (16.8%)
- Strong growth in grain and potash shipments will drive overall increase, putting additional pressure on key Western terminals
- Including other manufactured goods, West port destined bulk is expected to increase by more than 17 MT
- Bulk commodity flows to the USA will continue to exert pressures on key rail corridors

# Implications of Risks for Baseline Transportation Outlook

### Macroeconomic risks

- Global slowdown may constrain forecast results below current baseline due to current contraction in trade flows
- Deteriorating Canada/China relations may reduce shipments to west coast ports
- Deteriorating US/China relations may reduce incoming intermodal shipment to west ports and outgoing shipments to boarder crossing. May also restrict export of goods.
- New trade opportunities may provide a boost to Canadian exports to west ports and boarder crossing

### Commodity risks

- Lower grain yield growth will alleviate pressure on all ports
- Further pipeline delays will place pressure on network segments connecting production to border crossings
- Canadian potash market share may not be maintained, resulting in a decrease in shipments to Kingsgate crossing and ports

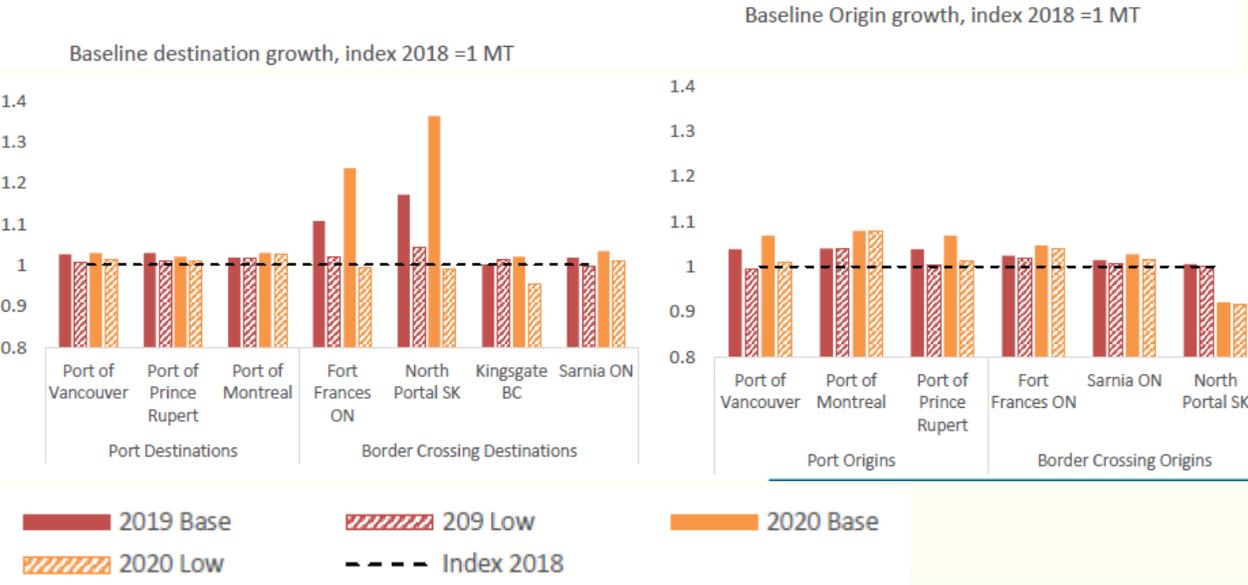
### Transportation technology and logistics

- New hopper cars may decrease total carloads on the network but may also improve shipment volumes.
- More challenging weather may reduce shipments network-wide and create additional bottlenecks for west coast port shipments

### Downside scenario

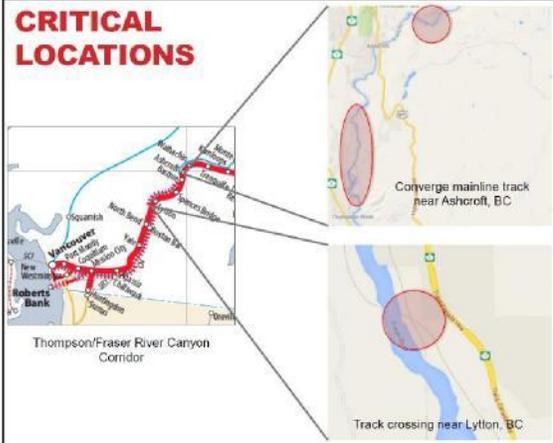
- Downside view sees demand lower than baseline (reduced trade flows) but pressure persisting at 2018 levels for most network segments.

Short-term Rail Forecast			
Downside Forecast 2018-2020			Baseline Forecast 2018-2020
Grain	Slower yield growth	↓	Weak prices but improved growing conditions →
Crude Oil	Curtailment reduction and low-range global prices	→	Curtailment reduction and medium-range prices ↑
Potash	Disruption normalizing but demand growth	↑	Solid demand and overseas supply disruption ↑
Coal	Macro slowdown weighs more heavily	→	Asian infrastructure spending →
Wood Products	Further delay of pent-up demand	→	Pent-up demand realized ↑
Pulp and Paper	Digitalization, reduction in Chinese demand	↓	Digitization continues to shrink industry ↓
Automotive	Interest rate hike weighs more heavily on demand	↓	Plant closure, interest rate hike ↓
Chemical Products	Faster market normalization	↓	Gradual market normalization →
Consumer Goods	Macro slowdown weighs more heavily	↑	Growth in household consumption (Quebec) ↑
Miscellaneous	NA	↑	NA ↑
<b>Total</b>		→	↑



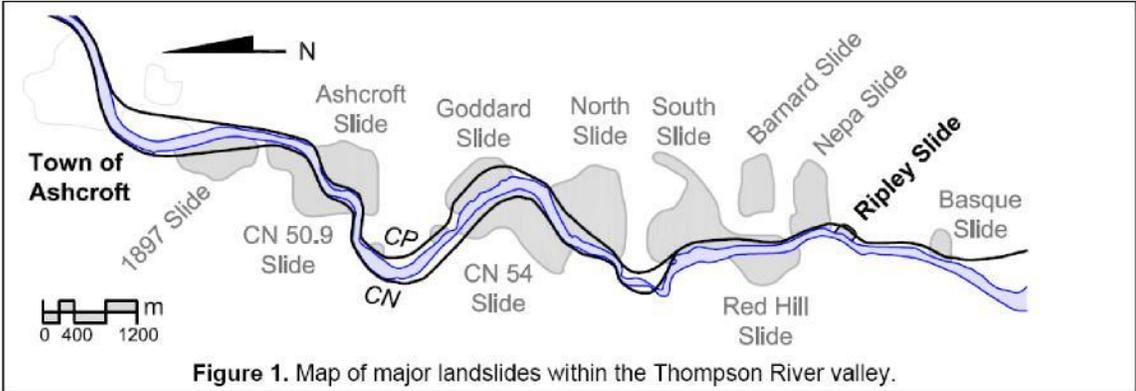
# Climate change vulnerabilities are putting additional pressures on transportation supply chain capacity and affecting efficiency

- In Western Canada, **landslides** near Ashcroft, British Columbia; **floods** in Winnipeg and the U.S. mid-west; rising sea levels; and **heavy winds** at the Port of Vancouver are all likely to impact rail traffic and port activities.
- In Central Canada, extreme weather events will continue to affect fluidity in the **high density areas**.
- In Eastern Canada, **key infrastructure connecting the eastern gateway** to central Canada such as the Chignecto Isthmus, are at risk of flooding with little resilience options in place. More frequent and intense storms in the Atlantic are also imposing challenges.
- In Northern Canada, **thawing permafrost** threatens the efficiency and safety of transportation infrastructure.
- Status quo could be costly for the Canadian economy. **Adapting the transportation** system to climate change is necessary to mitigate the impact of extreme weather-related events. Climate change has already had financial impacts on Canada and these costs are expected to continue growing.

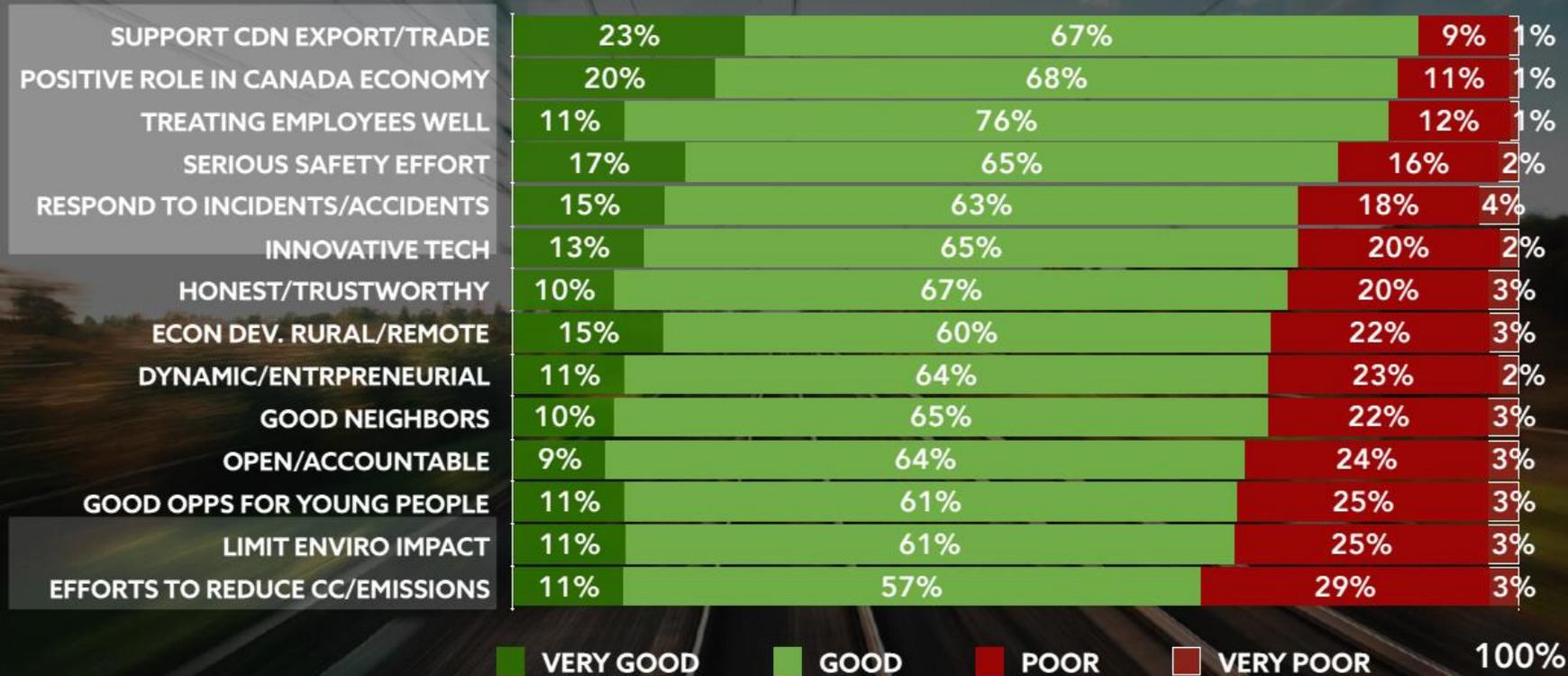


### GEOTECHNICAL HAZARDS

- Fraser/Thompson River Canyon corridor an area of concern regarding geotechnical hazards
- 9 derailments occurred in the corridor between 2004 and 2009
- CN/CP Rail have extensive slope protection programs and ground hazard warning systems through corridor



# PERFORMANCE OF CANADA'S RAILWAYS



ABACUS DATA

Thinking specifically about railway companies in Canada, please rate their performance in these areas



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