



UIC Symposium

30 November – 1 December 2021



AMERICAN FOCUS

Panel 1: A bright future for American rail freight?

- Moderator: Mr. Anson Jack, Emeritus Professor, University of Birmingham
- Mr. Jeffrey F. Moller, AVP Transportation Systems & Practices, Safety & Operations, AAR
- Mr. Scott Cummings, AVP Research & Innovation, TTCI
- Ms. Caroline Healey, Executive Vice President and General Counsel, RAC
- Mr. Jorge Kohon, Consultant, Association of Latin American Railways, ALAF

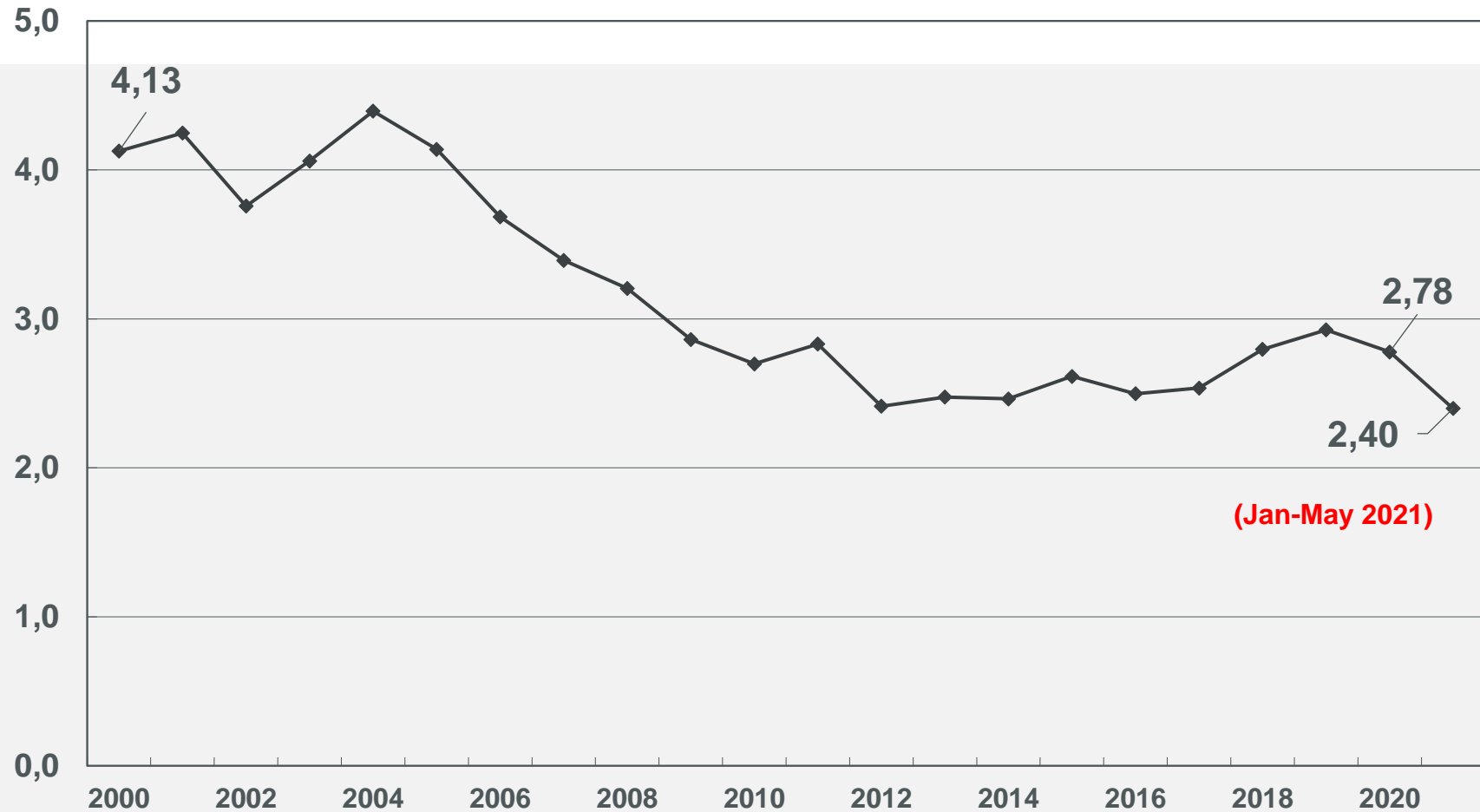


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Mr. Jeffrey F. Moller, AVP Transportation Systems & Practices, Safety & Operations, AAR

SAFETY - In 2020, US Train Accidents / Million Train-Miles Dropped 33% since 2000 and 2% since 2011



Sources: <http://safetydata.fra.dot.gov/officeofsafety/publicsite/summary.aspx>.

Note: Excludes grade crossing accidents. Data for 2020 and Jan-May 2021 are preliminary, as of August 2021.

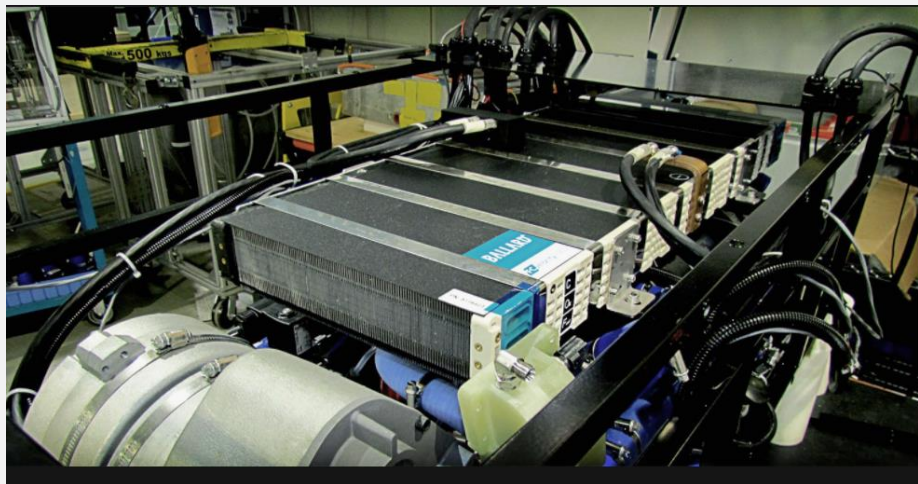
Locomotive Innovations



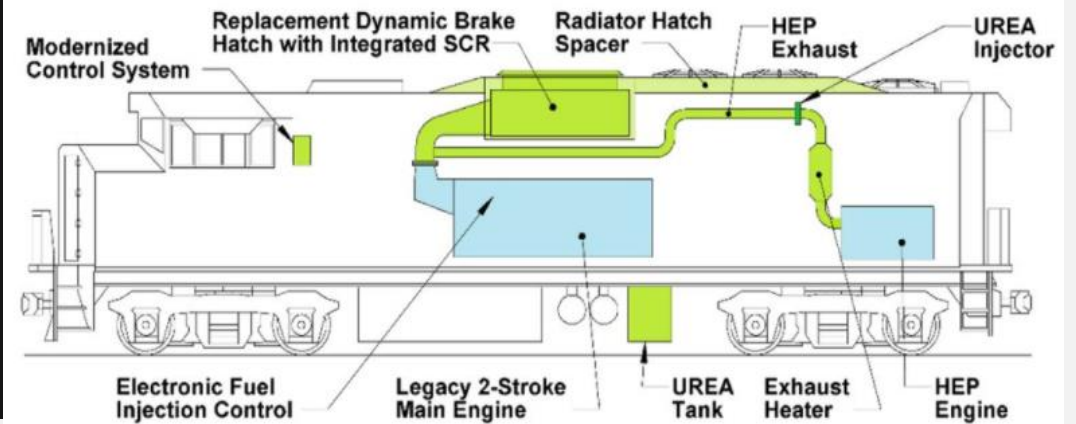
Credit: *Trains* magazine



Credit: *Railway Age* magazine



Credit: *Balland*

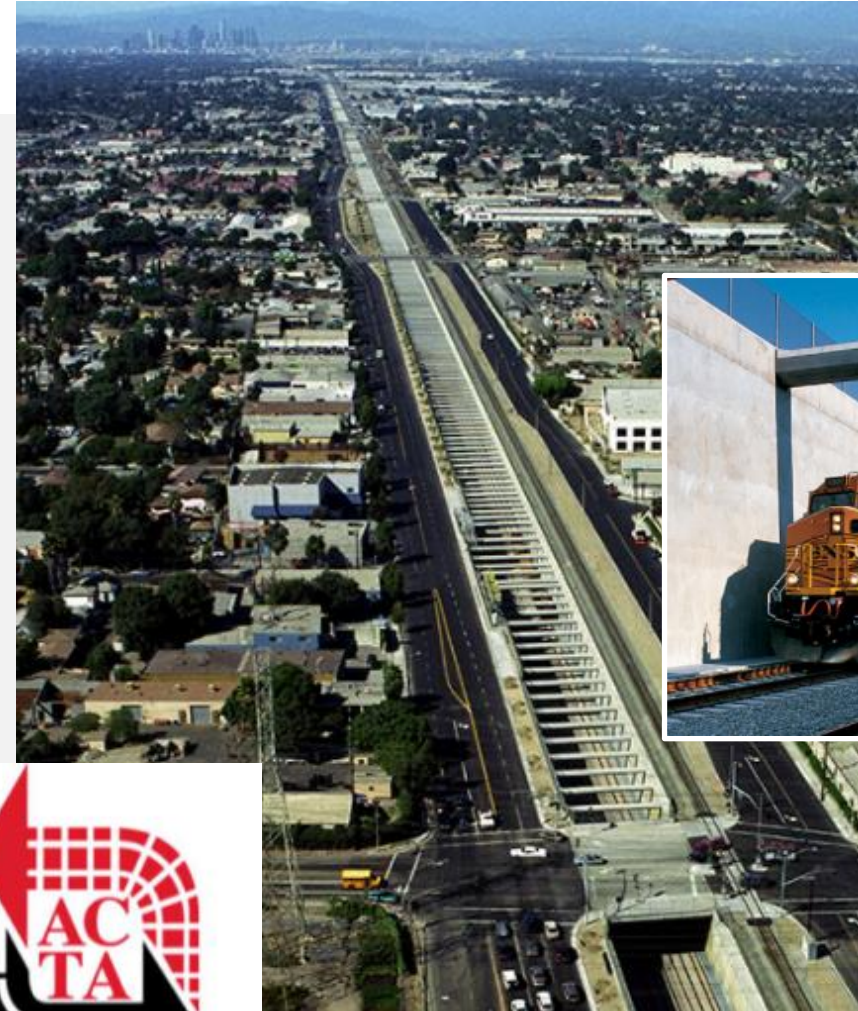


Credit: *Railway Age Magazine*

Successful Partnerships



Other Public – Private Partnerships



The background of the slide is a composite image. The top half shows a futuristic city skyline at night, with several tall buildings outlined in glowing neon (pink, blue, and yellow). The sky is dark blue with a grid of small, glowing white stars. The bottom half of the image, visible through the train window, shows a city street at night with lights and buildings. The text "Thank you for your attention" is centered in the middle of the slide, overlaid on a dark grey semi-transparent rectangular area.

**Thank you for
your attention**



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Mr. Scott Cummings, AVP Research & Innovation, TTCI

Challenges and Advantages

- Capital investment
- Historical regulation
- Commodity mix
- Workforce availability
- Operational bottlenecks
- Extreme weather events



- Land ownership
- Fuel efficiency
- Labor efficiency
- Safety
- Self-sufficient infrastructure

Cooperation and Competition

- Safety and regulation
- Interchange
- Pooled data
- Research and best practices
- Market share with other transportation modes
- Anti-trust
- Publicly traded
- Market share with other railroads



Timely Technology Adoption

- Objective assessment
 - Teams
 - Facilities
 - Tools
 - Direction
- Business vetting



Scannable Wheel Sticker



Automatic Equipment Identification

Bright Future Already Underway

- Reduced variation
 - Energy management systems
 - Automated inspection and detection for fixed and movable assets
 - Reduced slow orders and unscheduled train stops
 - Precision Scheduled Railroading
- Optimized effort
 - Data trending and skilled labor for fewer but more comprehensive rolling stock repairs
 - Incorporation of technology for infrastructure health assessments

Machine Vision Portal





**Thank you for
your attention**



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Ms. Caroline Healey, Executive Vice President and General Counsel, RAC

Impact of Canada's Railways



Infrastructure

42,730

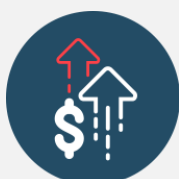
kilometers of freight
track operated



Employees

182,000

jobs supported
by rail¹



Taxes

\$1.8B

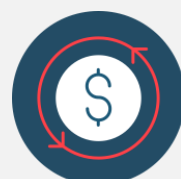
paid in taxes in 2020



Freight

5.5M

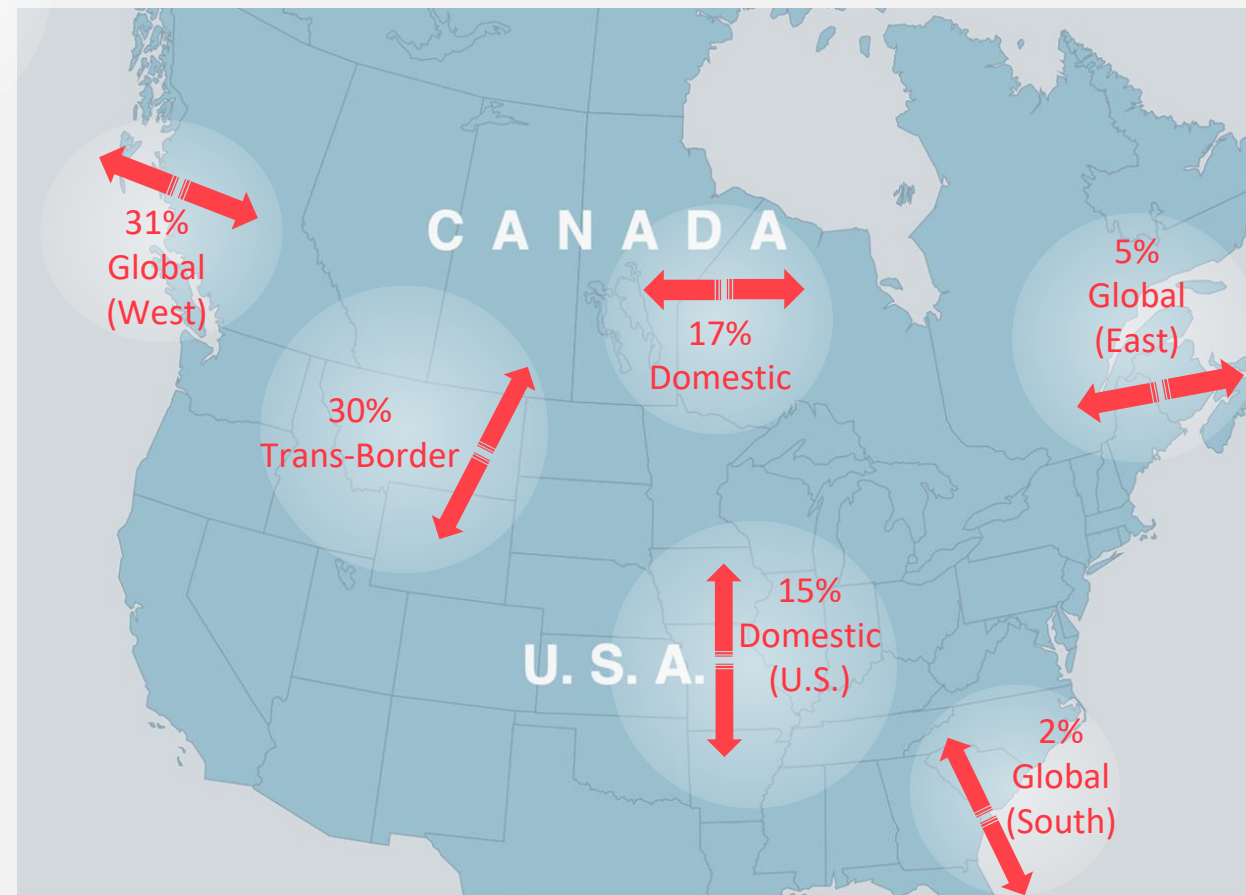
carloads



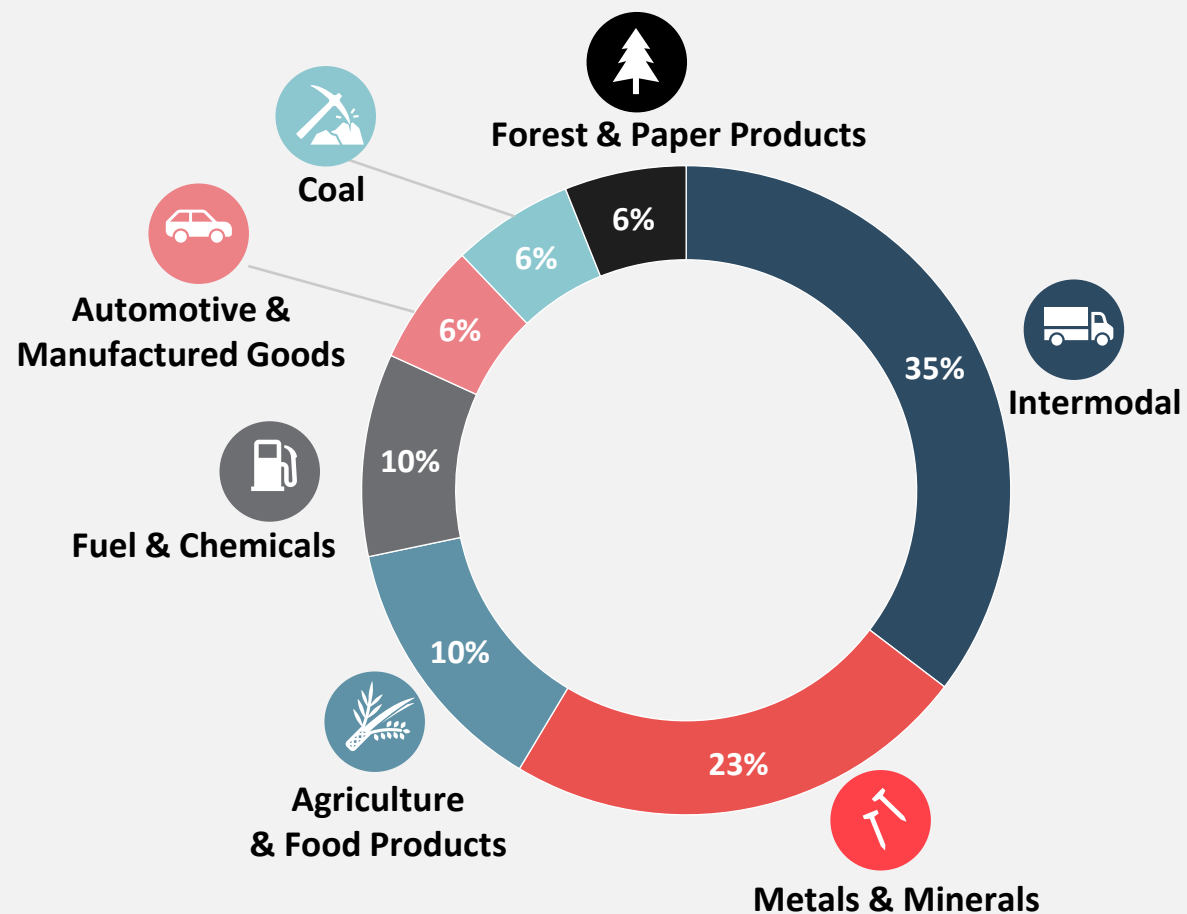
Investment

\$2.3B

in private capital
investment in 2020

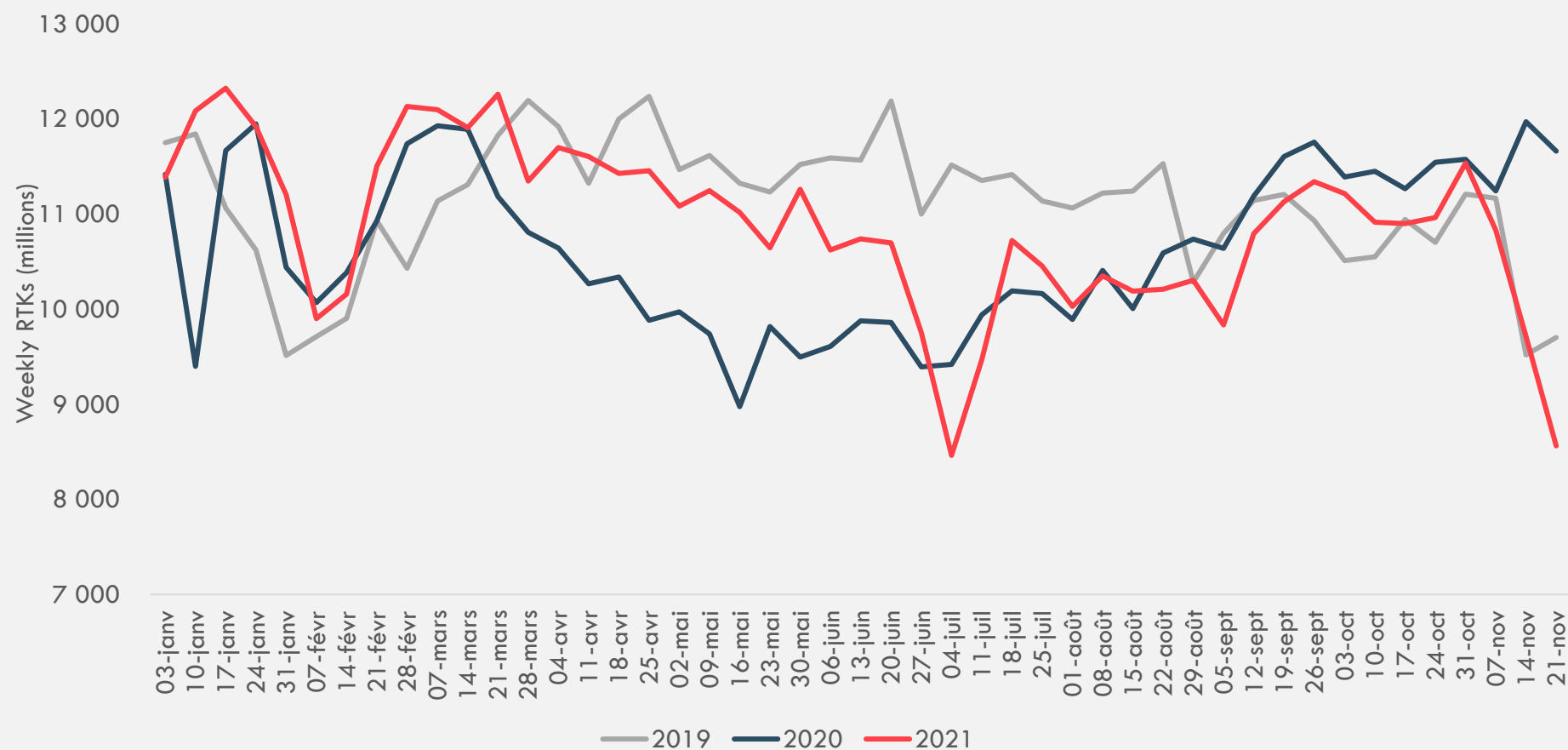


National Freight Portfolio



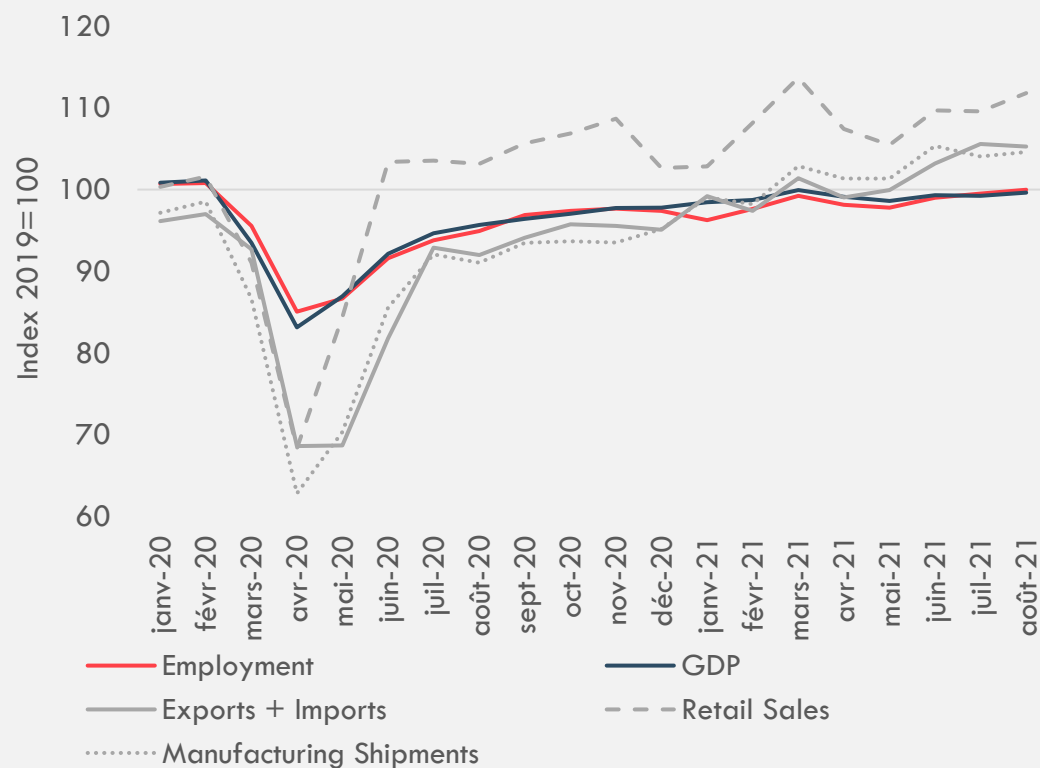
Class 1 Freight Activity

Canadian Class 1 Revenue Tonne-kilometres

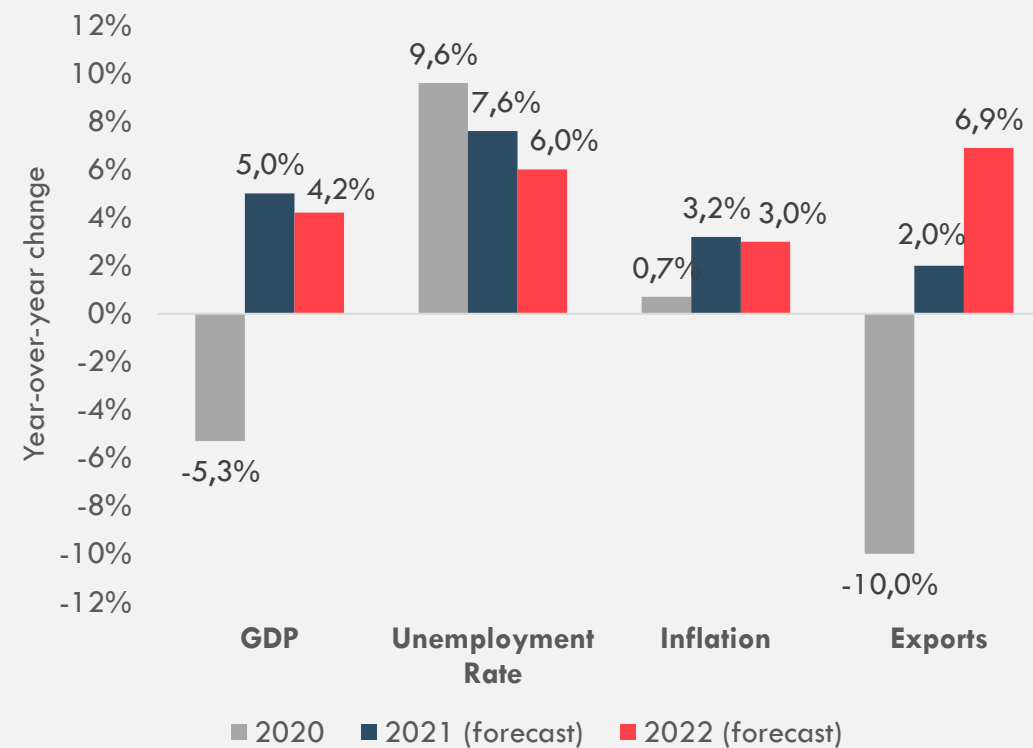


Canadian Economic Outlook

Canadian Economic Performance



Canadian Economic Outlook





**Thank you for
your attention**



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Mr. Jorge Kohon, Consultant, Association of Latin American Railways, ALAF



A Bright Future for American Rail Freight?



Jorge Kohon

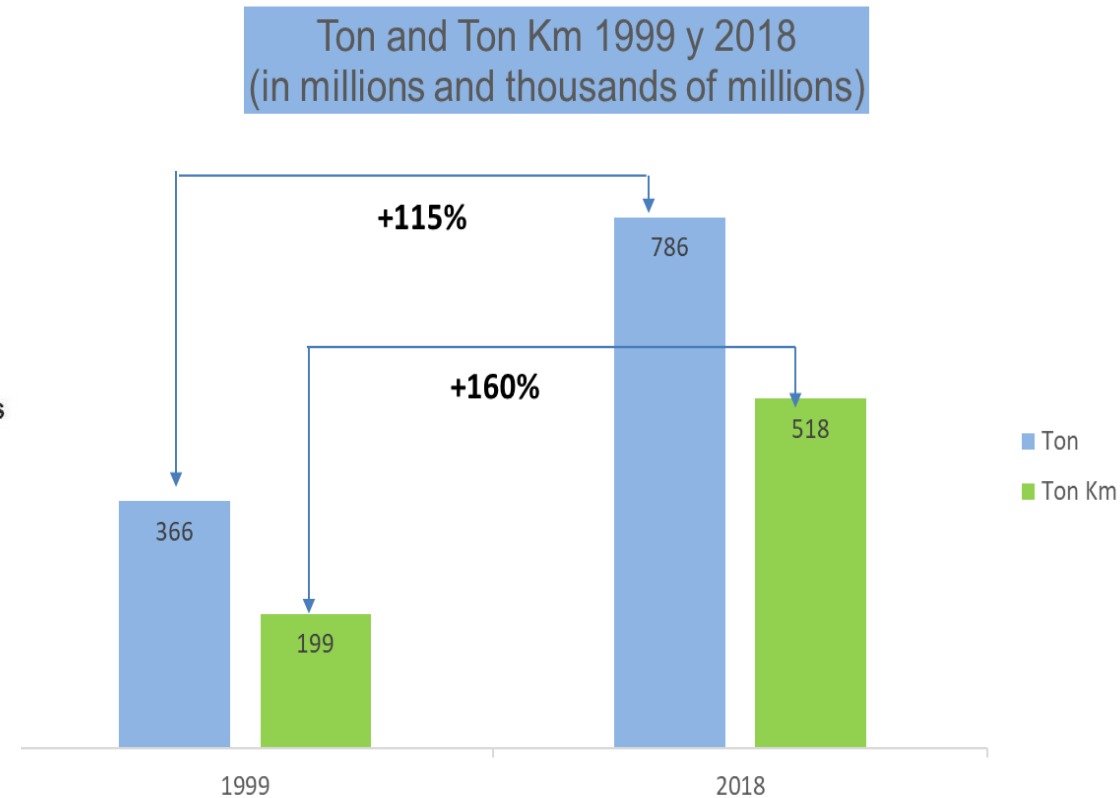
Consultant

Latin American Association of Railways (ALAF)

**Latin America and the Caribbean have
41 freight operators: 30 privately
managed and 11 publicly managed**

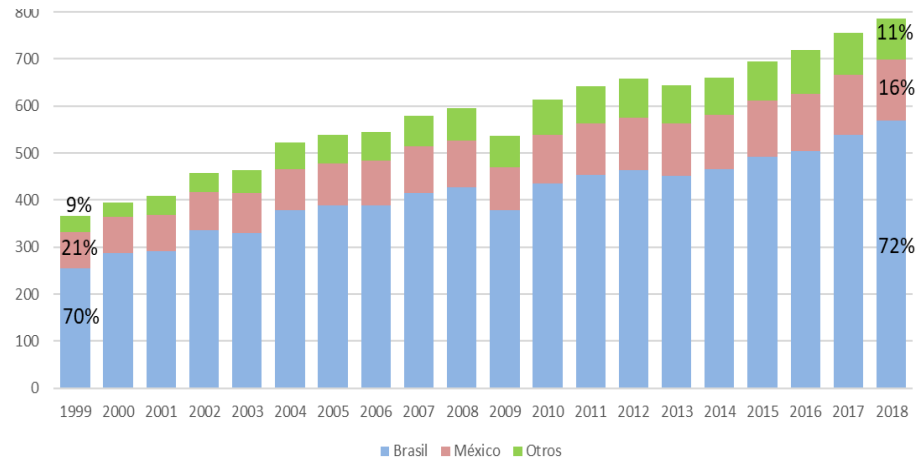


**Traffic has grown significantly
between
1999 and 2018** 23

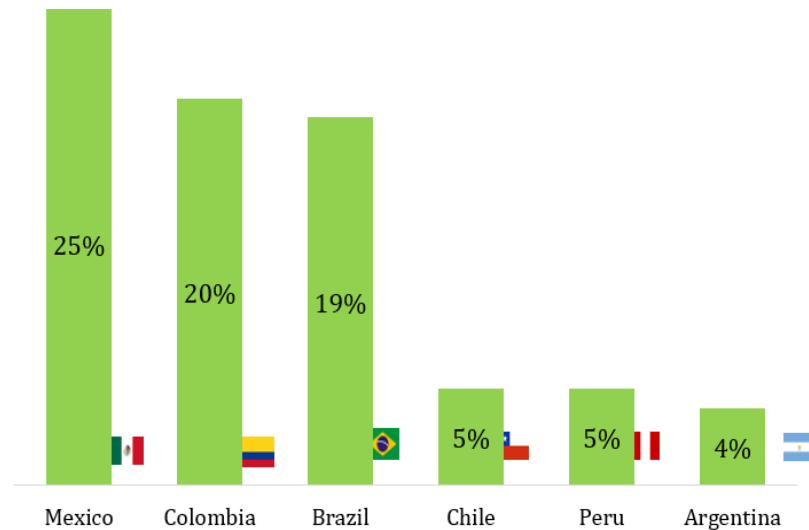


**The privately managed railway companies mobilized
more than 95% of the regional tonnage**

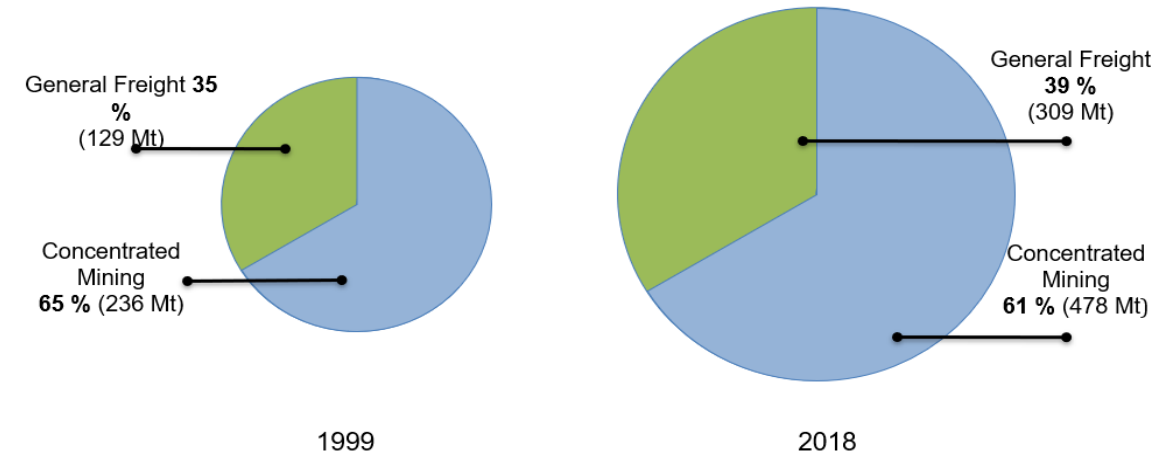
Brazil and Mexico provided 89% of the total tons transported in 2018



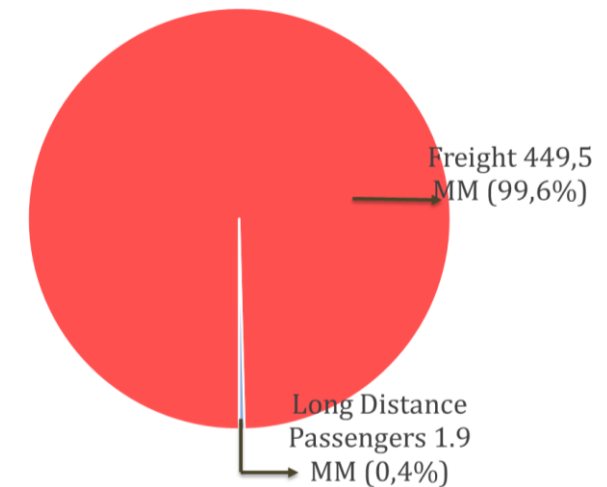
Mexico, Colombia and Brazil reach a relatively high market share vs. road



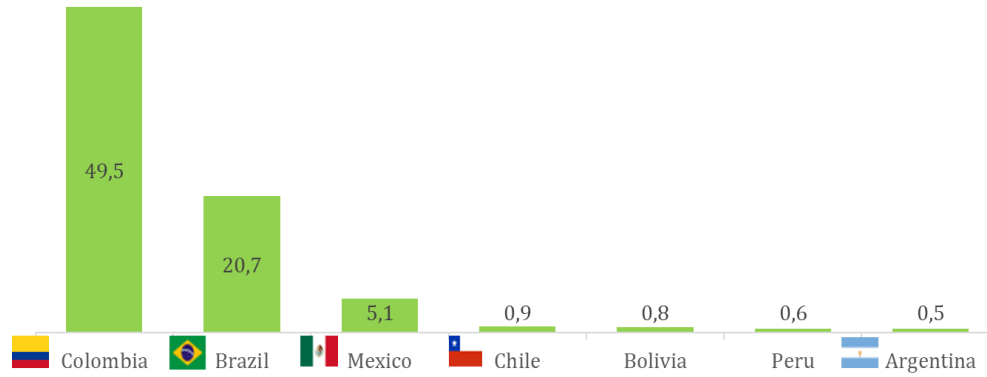
Concentrated mining constitutes more than 60% of the total tonnage transported



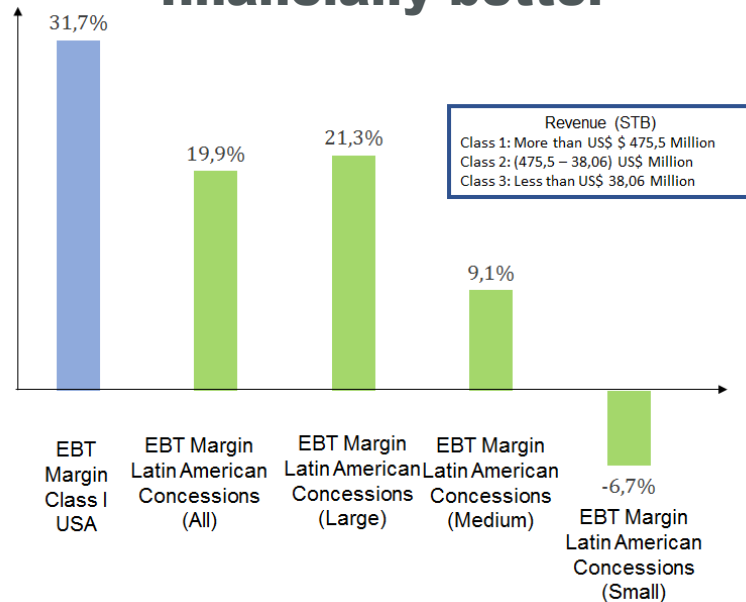
Freight prevails in the rail long distance network



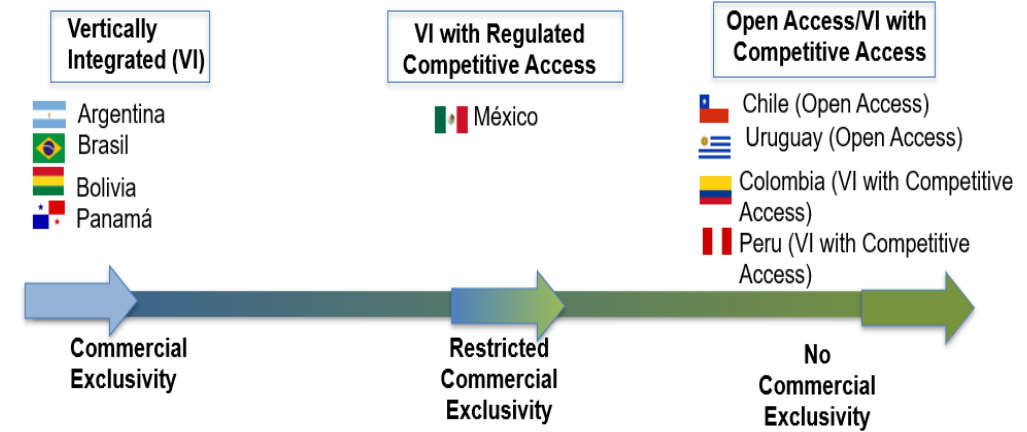
Countries show strong differences in terms of freight traffic densities (In millions of ton-km per Km)



EBT Margin: Large railways perform financially better



All management models coexist in Latin America 25



Even Including commuters, freight dominates LA railway activity (2008, in millions of Traffic Units: Ton-km + Pass-km)

| Activity | Latin America | Participation | World Total | Participation | % of LA in World Total |
|------------|---------------|---------------|-------------|---------------|------------------------|
| Freight | 365.722 | 93,2% | 8.845.153 | 78,0% | 4,1% |
| Passengers | 26.704 | 6,8% | 2.495.162 | 22,0% | 1.1% |
| Total | 392.426 | 100% | 11.340.315 | 100% | 3,5% |

¿Which is the Latinamerican rail agenda for the next 5-10 years?

- Although there are some turbulences (Mexico, Argentina), in general, the predominant role of concessions and the private sector in freight rail activity does not seem to be threatened
- Two topics could be the most relevant on the agenda:
 - Commercial exclusivity and intramodal competition
 - The long-term financial viability of small and medium size railways
 - The role of the states in the financing of infrastructure investments



**Thank you for
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Mr. Stephen Gardner, CEO, Amtrak

Amtrak is *America's Railroad*®

- Congress created Amtrak in 1970, and the company began operations in 1971
- Operate a nationwide rail system of High-speed, short-distance and long-distance routes, including the Northeast Corridor between Washington & Boston
- Amtrak's mission is to deliver intercity transportation with superior safety, customer service and financial excellence



32.5 million annual passengers supported by **18k employees*** on 300+ daily trains and 600+ Thruway connections



500+ destinations across **46 states, DC** and **3 Canadian provinces** (21k route miles (97% of route miles *not owned*)*



\$3.3 billion in annual revenue and an additional **\$7.1 billion** in economic impact*



Amtrak's Future: Northeast Corridor Infrastructure

- \$30 billion for Amtrak, states and commuter railroads to address decades of underinvestment and advance the Northeast Corridor major bridge, tunnel, station, and state of good repair projects, including:
 - The Gateway Program, including the Hudson Tunnel Project
 - B&P Tunnel replacement and East River Tunnel Rehabilitation
 - Susquehanna River, Connecticut River, and Pelham Bay Bridges
 - Major Station Expansions – Penn Station New York, Washington Union Station, Boston South Station
 - Upgrade of Core Systems – Electric Traction, Signaling, Interlockings
- Will advance Connect 35 Plan developed by the Northeast Corridor Commission, an entity made up of Amtrak, NEC States and DOT to facilitate planning and cooperation among 4 owners and 12 railway users of the NEC.
- Investments will increase reliability, reduce trips times and increase capacity

Amtrak's Future: Fleet, Stations & Corridor Development

- \$28 billion to Amtrak and States to advance state-of-good-repair capital projects, fleet acquisitions and service improvement and expansion across the nation:
 - **Fleet and facilities** - New passenger equipment for state supported and long-distance trains
 - **Stations** – Enhance Amtrak-served stations nationwide
 - **Corridor Development** - Amtrak will work with the DOT, state transportation departments and host railroads to enhance existing corridors and advance new corridor routes, including high-speed routes:
 - **Amtrak Connects Us** - Over the next 15 years, Amtrak's vision for expansion will connect up to 160 communities throughout the United States by building new or improved rail corridors in over 25 states

Amtrak's Future: Amtrak Connects Us



Delivers over
\$150 billion in
economic
benefit by 2035



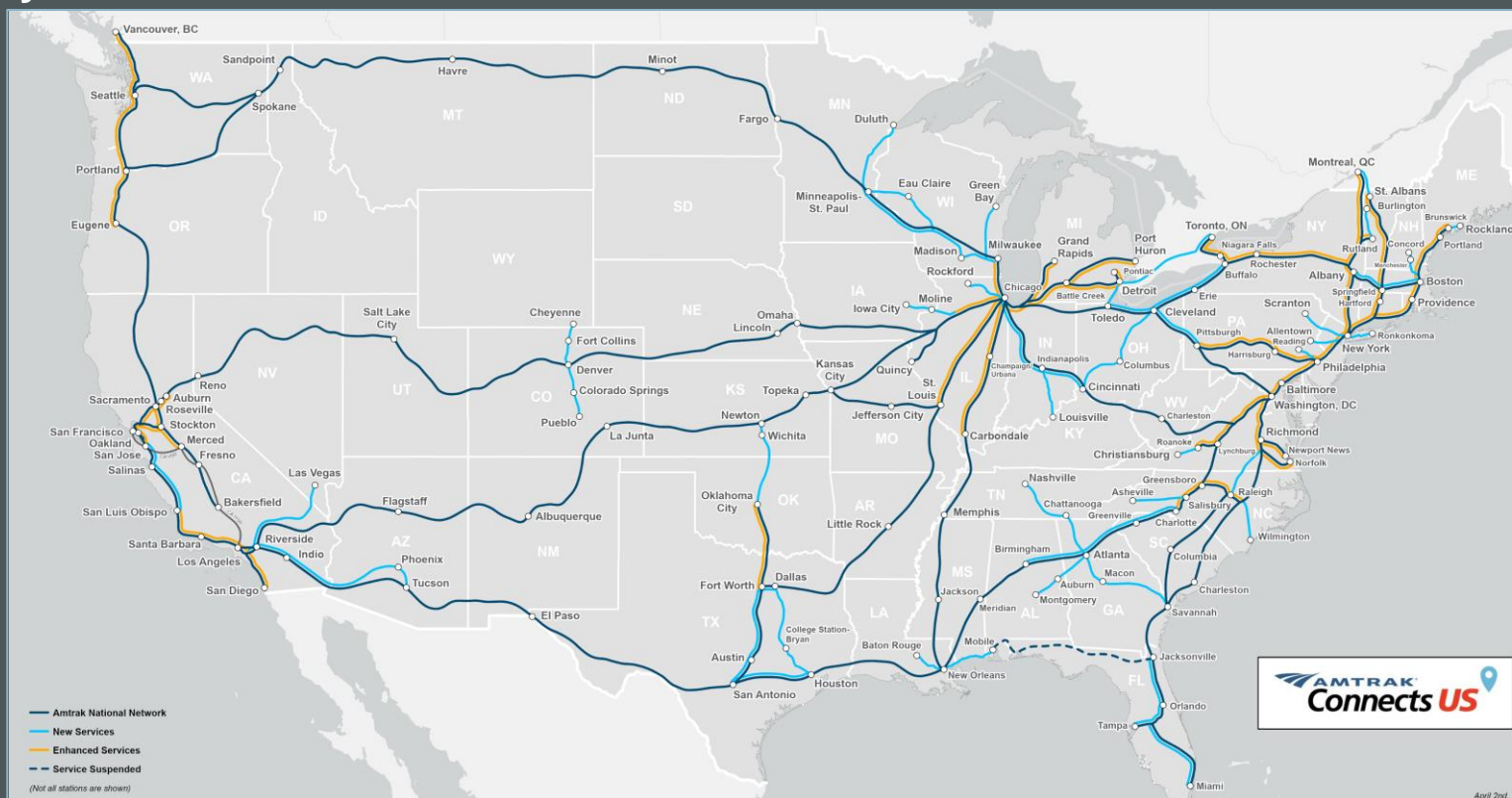
Connects
dozens of city
pairs up to **160**
communities



Creates more
than **half a**
million jobs



Reduces our
nation's **carbon**
footprint





**Thank you for
your attention**



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Mr. Martin Landry, Chief Commercial Officer, VIA Rail Canada

VIA Rail in Canada

Serving Canadians since 1977, from coast to coast to coast



3,175

Total employees

454

departures per week

Our trains left on time 84% of the time

430

train cars

73

locomotives

92% have been refurbished to be more efficient and environmentally friendly

121

stations

54 are heritage buildings

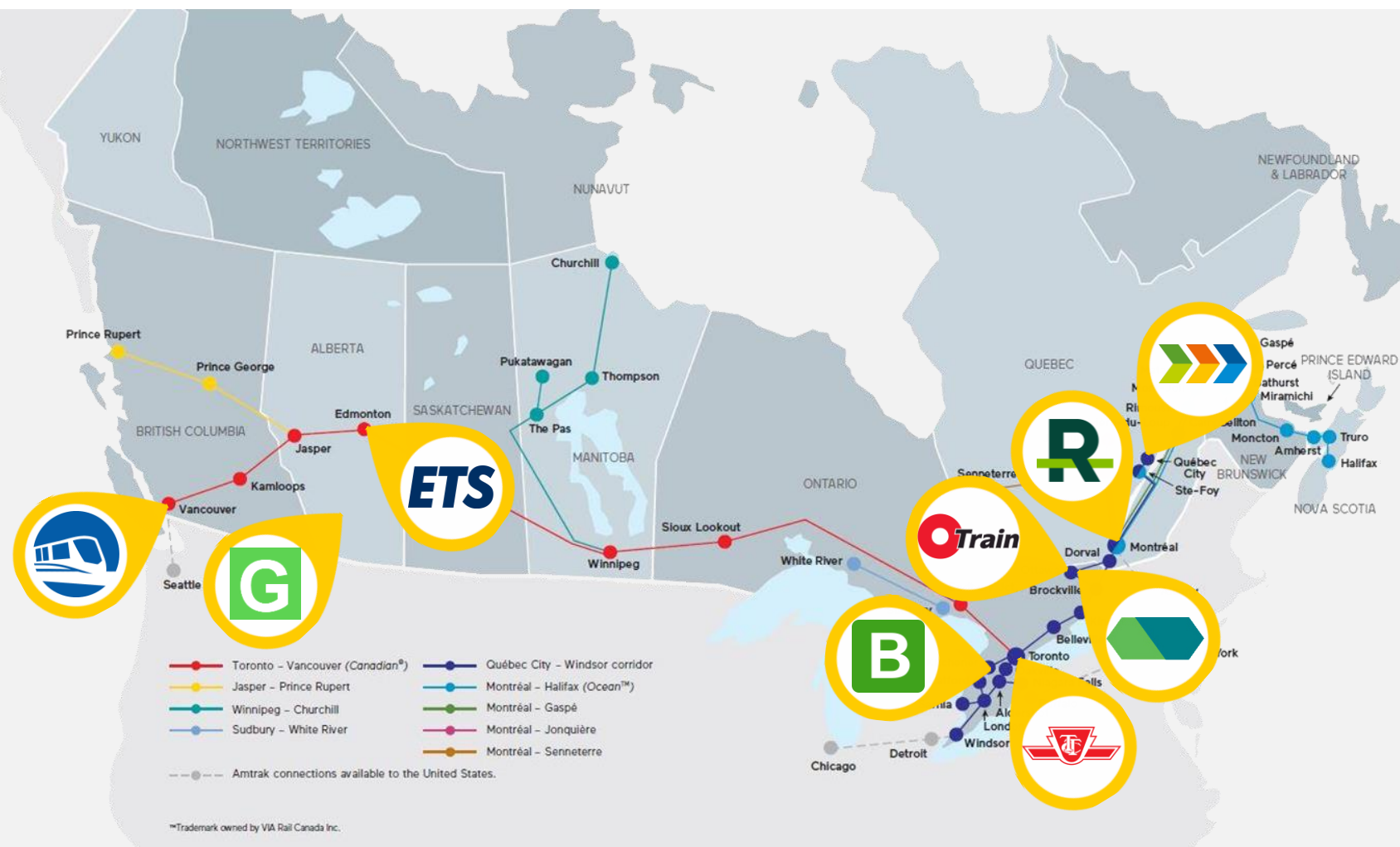
96% / 81%

% of ridership/revenue from the Windsor – Québec City Corridor

+400

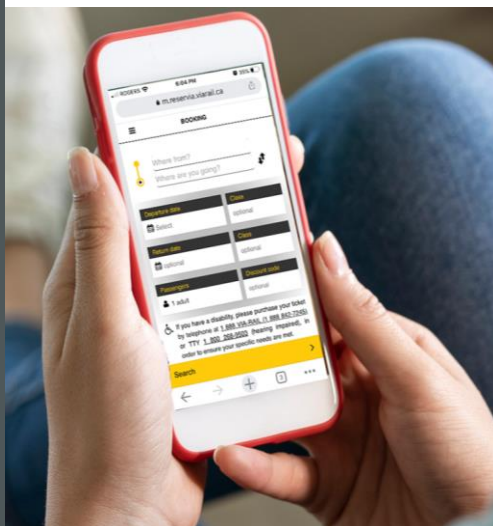
communities served

VIA Rail's network



Planning better for the future

Everest Project



Heritage Program



Fleet Replacement Program



HFR Project



The way forward

Headwinds / Challenges

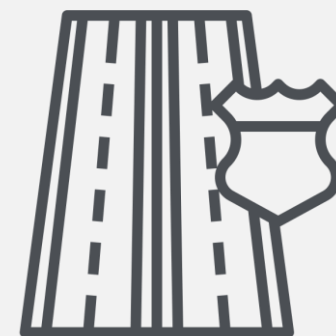
97%
of



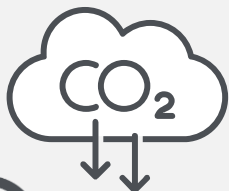
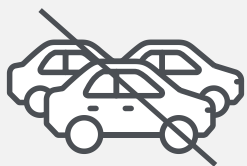
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\$



Tailwinds / Opportunities





**Thank you for
your attention**



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Mr. Paul P. Skoutelas, President and CEO, APTA

Rail Popularity in U.S.

Since 1999

- **52% Increase in Rail Ridership**
- **40 New Rail Systems**
- **39% Increase in Rail Vehicle Miles**

Bipartisan Infrastructure Deal

\$102.1 billion for passenger and freight rail,
\$86.7 billion (561%) increase from current levels

- Largest investment in passenger rail in 50 years
- \$66 billion in additional new funding
- \$12 billion for intercity and high-speed

High-Speed & High-Performance Rail Projects in U.S.



Examples of U.S. High-Speed Rail Projects



California



Texas



Florida



**Thank you for
your attention**



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Mr. Joubert Fortes Flores Filho, Chief of Board ANPTrilhos Brazil

ANPTRILHOS ASSOCIATES



Panorama of the Metrorail Sector – Brazil

1,116.5
km long



5.8
million
passengers/business day



5.324
operational passenger
cars



48
lines



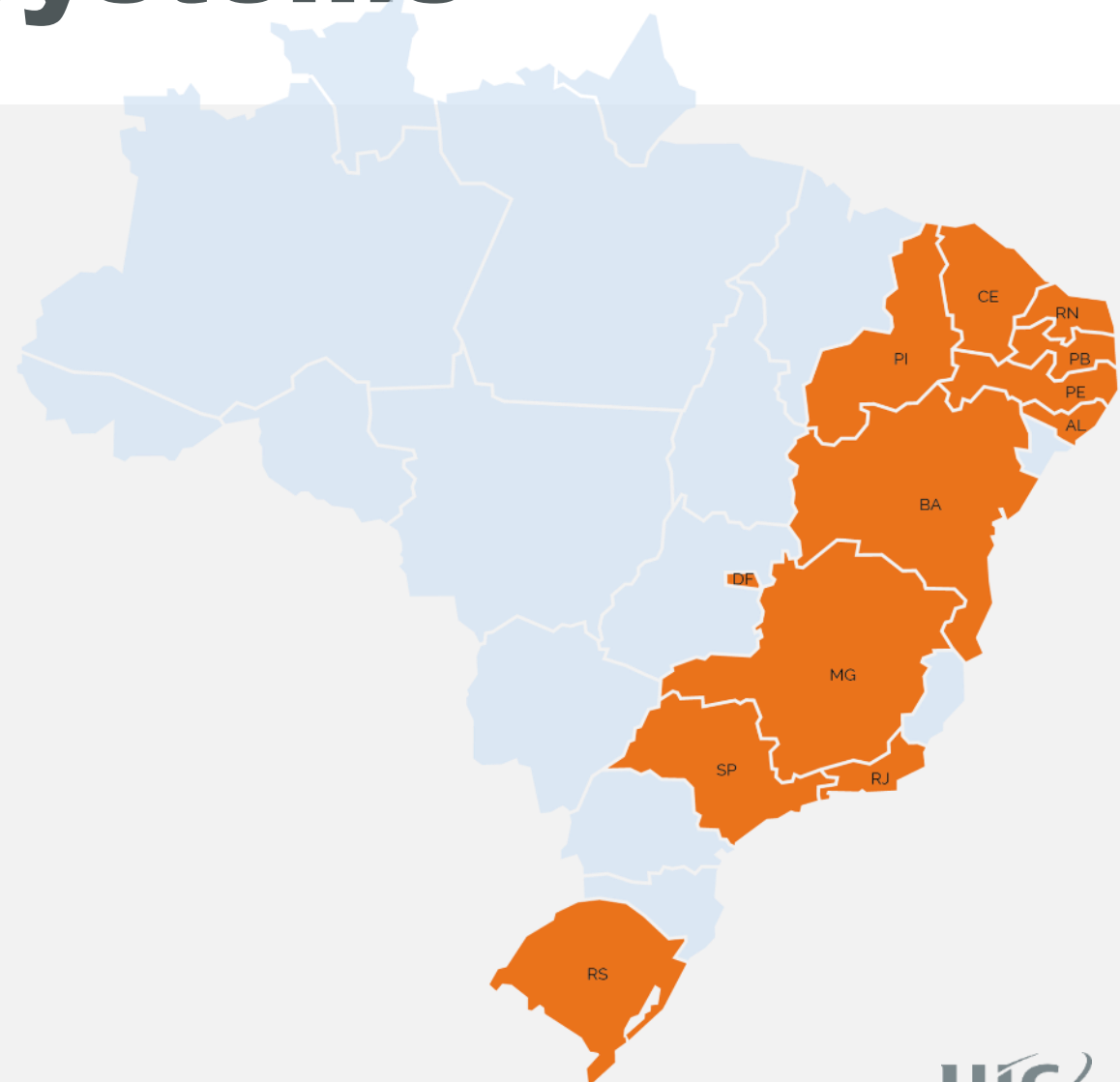
627
stations



Operators and Systems

Brazil has **21 systems** of urban transportation of passengers on rails, distributed in **11 States and the Federal District**, covering less than 50% of the Country.

These systems are operated by **15 companies**, **7** of which are private.



Ongoing Projects in Brazil – Passengers

BAHIA

Section 3 of Line 1 (subway)
Salvador Monorail

CEARÁ

East Line (subway)
South Line (light rail vehicle)

RIO GRANDE DO NORTE:

Purple Line (light rail vehicle)

SÃO PAULO:

Line 9-Emerald (urban train)
Line 4-Yellow (subway)
Line 2-Green (Subway)
Line 6-Orange (subway)
Line 17-Gold (monorail)



Ongoing Projects in Brazil – Freight Trains



29,320 km
of freight rail network

EAST-WEST INTEGRATION RAILWAY (FIOL in Portuguese)

Port of Ilhéus (BA) - Figueirópolis (TO), where it will connect to the North-South Railway

TRANSNORTHEAST RAILWAY

Sertão do Piauí - Pecém (CE) and Suape (PE) ports

NORTH-SOUTH RAILWAY – CENTRO-SOUTH TRAVEL

Porto Nacional (TO) - and Estrela D'Oeste (SP))

CENTRAL WEST INTEGRATION RAILWAY (FICO in Portuguese)

Campinorte (GO) - Água Boa (MT)

Source: ANTF / Revista Ferroviária



Grid Potential

122 studies of eligible
sections for passenger
transport in 20 Brazilian
states, totaling around
25,000 km of regional
train projects

*Source : ABIFER, BNDES, FALA Br,
Grupo ANTT 2013, Governo Distrito Federal,
Governo São Paulo, Governo Goiás,
PEF – MG, VLI*



Regional Train Projects



SP: Intercity Train
São Paulo-Campinas
135 km

DF: Brasília- Luziânia
70 km

MG: Mineiro Trains
02 lines: BH-Ouro Preto and
Mariana-Além Paraíba

The background of the slide is a futuristic cityscape at night. The sky is dark blue with a grid of glowing white dots and lines. Several tall, thin buildings are visible, some with glowing red and yellow outlines. A large, glowing yellow rectangular light fixture is positioned in the upper right. The city below is illuminated with various lights, including a prominent yellow light on the right side. A dark, semi-transparent overlay covers the middle section of the image, where the main text is located.

Thank you for your attention

The bottom section of the slide features a background of train windows. The windows are dark, and the train itself is a dark blue color. A dark, semi-transparent overlay covers the middle section of the image, where the main text is located.

Joubert Flores
Chairman of the Board of ANPTrilhos

contato@anptrilhos.org.br