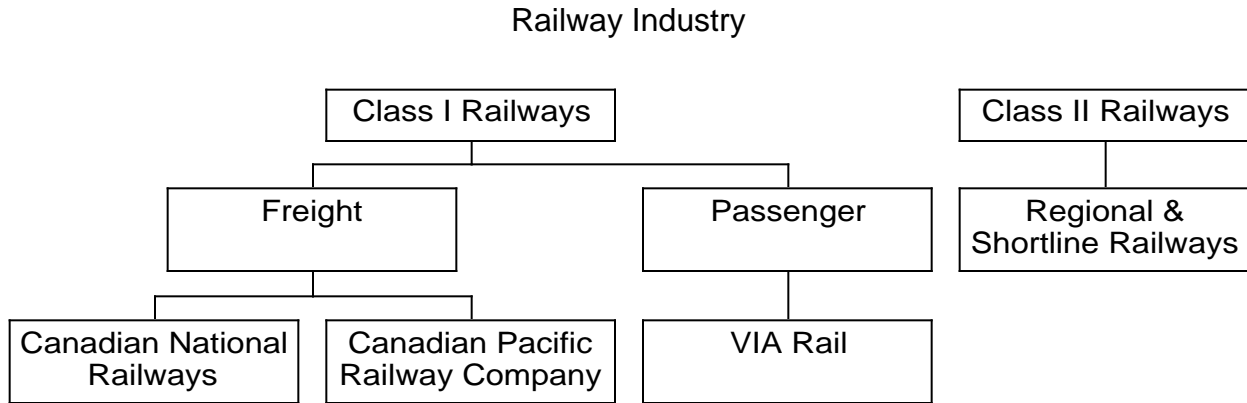


Transportation by Rail

- Canada's Railway Industry (Moving Freight, Moving People)
- Running the System (Rail Lines, System Evolution, Regulatory Setting)
- Key Indicators



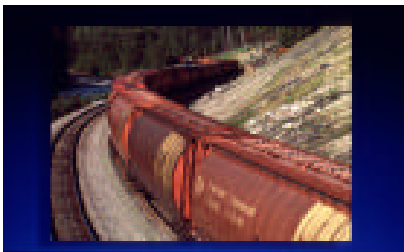
Canada's Railway Industry



Historically, the railways have played a critical role in developing Canada's regions. Railways have often been regarded as instruments of economic and social development.

Canada has more than twice the rail lines per person than the US, and more than six times that found in western Europe. However, Canada's huge land area, harsh terrain and climate, and small population make it difficult and expensive to build and maintain enough rail lines to link all of the people and communities scattered over a large area. This is reflected in a relatively low measure of rail lines compared to the land area.

Rail is highly efficient for carrying heavy loads over long distances. One rail car can carry 110 tonnes, about four times what a truck can carry. Canada's rail freight industry is made up of two major companies, Canadian National Railways and Canadian Pacific Railway Company, and some 50 smaller ones.



VIA Rail is Canada's major inter-city passenger rail carrier. It currently serves two main markets: between cities in Ontario and Quebec; and on two transcontinental routes that cater to tourists. It also serves sparsely populated regions of Quebec, Ontario, Saskatchewan, and British Columbia and remote areas such as Churchill, Manitoba.

WESTAC, Moving Forward

Moving Freight

Rail freight services in Canada are provided by three classes of carriers:

Class I: To be included as a Class I railway, a carrier must have annual revenues of over \$250 million for two consecutive years. The Class I freight railways in Canada are [Canadian National Railways](#) and [Canadian Pacific Railway](#). CN and CPR derive most of their income from bulk

and containerized freight on both domestic and US routes. Together, they account for over 90% of all railway output (revenue tonne-kilometres) in Canada.

Class II: Class II railways have annual revenues of less than \$250 million and account for about 9% of the tonne-kilometres moved by rail. Class II railways are the 50 shortline and regional railways operating in Canada. The largest regional railway is BC Rail with 2,174 route-kms. Most Class II carriers transport resource products. They originate or terminate traffic and provide switching for Class I railways.



The shortline railway industry is growing – the main players are RailAmerica, [OmniTRAX](#), Genesee Rail-One, Railtex and Iron Road.

Class III: These railways typically operate bridges, tunnels and stations.

Moving People

Most inter-city passenger rail service is provided by [VIA Rail](#) (92% of all inter-city passengers). An estimated 85% of VIA's passengers and 70% of the trains serve the Quebec City-to-Windsor corridor.



In the past, VIA Rail has received a large share of its revenues from federal government subsidies, but this has declined dramatically in recent years. In 1993/94, 15% of VIA's revenues were from subsidies; in 1997/98, it was less than 4%. In 1997, despite increases in operating revenues and reductions in costs, VIA Rail recovered just 39% of its total costs.

VIA Rail is an independent Crown corporation, created in 1978. It operates over the lines of CN, CP and OmniTRAX from the East to the West coasts and from the Great Lakes to Hudson Bay.

VIA highlights (1997 data):

- Carries about 3.8 million passengers yearly;
- Has 3,000 employees;
- Operates 430 trains per week, 300 of them in the Quebec-Windsor corridor;
- Uses 424 passenger cars;
- Leases 14,000 km of track from CN;
- Serves 450 Canadian communities.

VIA's services fall into four basic categories:

1. **Quebec City- Windsor corridor**
2. **Western Services** operating between Toronto and Vancouver and popular with Canadian and foreign tourists (Canadian, Skeena, Malahat)
3. **Eastern Services**, linking the Atlantic regions with Central Canada
4. **Northern Services**, serves sparsely populated regions of Quebec, Ontario, Saskatchewan and British Columbia.

Several smaller passenger railways (e.g., BC Rail; Rocky Mountaineer; Algoma Central; Ontario Northland; Quebec; North Shore and Labrador Railways) carried 339,000 passengers, most on tourist services, in 1997.

Commuter rail, serving large urban centres such as Montreal, Toronto and Vancouver, carries an estimated 30 million riders annually.

Running the System

Rail Lines

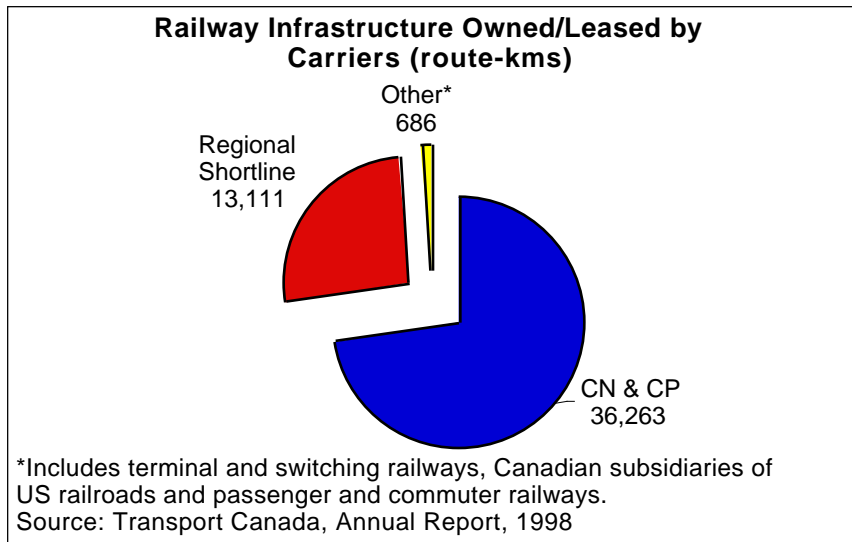
Railways were built-up from the late 1800s: by 1900 there were 29,000 km of track in Canada, and by 1930, there were more than 90,000 km. This changed little right up until 1985, at which point there was 95,670 km. However, rationalization after 1985 reduced that by 22%, to 74,950 km, by 1997. The **Canada Transportation Act (CTA)**, 1996, has streamlined the process for railways to sell and transfer (i.e., to a shortline operator) rail lines.

The commonly used measure of rail-track infrastructure is the route-km, which is the length of the route over which a railway operates its service. With this measure, industrial tracks, sidings, and tracks in rail yards are excluded, and the length is counted only once where there is more than one parallel rail line.

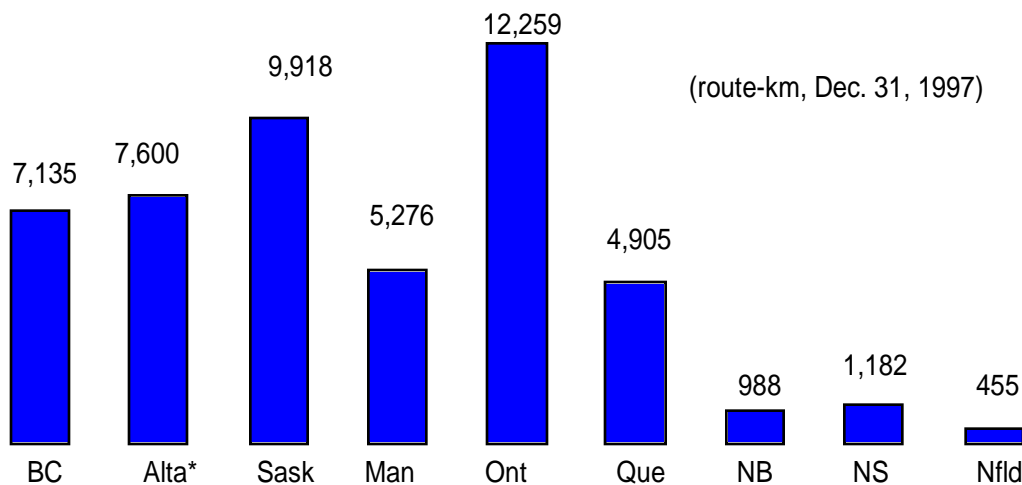
Canadian railways operated trains over 50,000 route-km of rail lines in 1998. Approximately 36,300 route-km, or 73%, are owned or leased by CN Rail and CP Rail, with most of the remaining lines owned or leased by regional and shortline carriers.

Of the total 50,000 route-kms:

- The Western Provinces have 60%;
- Ontario and Quebec have 35%; and
- Atlantic Canada has 5%.



Distribution of Rail in Canada



* Includes the Northwest Territories

Source: Rail in Canada 1997, Statistics Canada

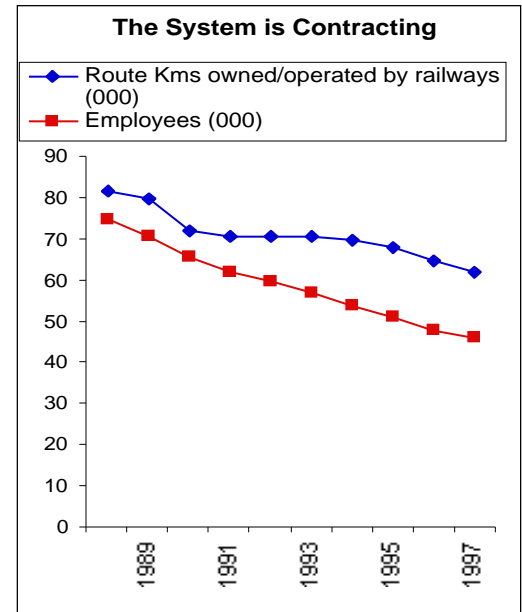
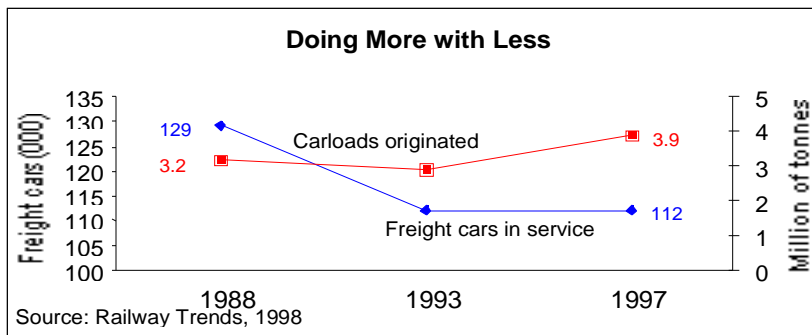
- In 1997, there were 112,136 freight cars and 3,328 locomotives in service in Canada.
- CN's major infrastructure investment over the past few years has been the building of the tunnel between Sarnia, Ontario and Port Huron, Michigan that can accommodate tri-level automobile carriers and double-stack container trains.

- CPR has invested to expand capacity in the Windsor-Detroit tunnel in order to accommodate the growth in traffic. CPR also opened its Expressway (formerly Iron Highway) terminal on the western outskirts of the Greater Toronto area (*the Expressway* is a trailer-on-train alternative to congested highways). The terminal permits the extension of the popular roll-on/roll-off technology for moving truck trailers in the Montreal-Toronto-Windsor-Detroit corridor.



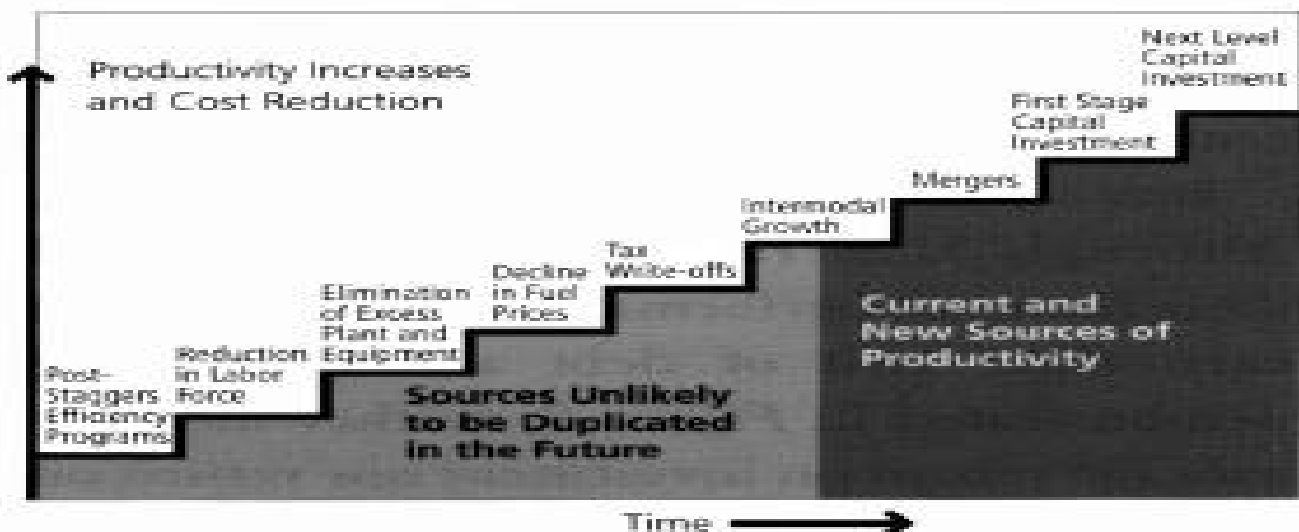
System Evolution

In the 1990's, competition from other railways, trucks and ships were rising steadily. Customers also demanded faster, lower-priced services that they needed to survive in world markets. In order to stay competitive most of the railway performance gains were by reducing the labour force, shedding surplus track and streamlining their operations. Canadian railways have made significant progress in doing more with less.



A study by Mercer Management Consulting Inc. (1997) states that past sources of productivity gains have either been largely exhausted (labour reductions, rationalization, mergers), or are very unlikely to be an option in the future because they were “one-time” events. Future productivity gains will have to be through technological gains: capital expenditures in state-of-the-art, efficient plant and equipment.

Sources of Railroad Productivity



Source: With permission from the Railway Association of Canada, “Myths and Realities of Rail Access and Competition Issues”, October 1998, p. 9.

Regulatory Setting

Railways operating in more than one province or internationally are regulated by the federal government under the Canada Transportation Act. Transport Canada regulates several aspects of railway operations, including:

- Approval of line abandonments or transfers (change of ownership);
- Setting interswitching rates;
- Setting competitive line rates for captive shippers who wish to access the services of another carrier located beyond interswitching limits; and
- Approval of maintenance standards, operating rules and equipment standards.

All transportation of dangerous goods comes under federal responsibility.

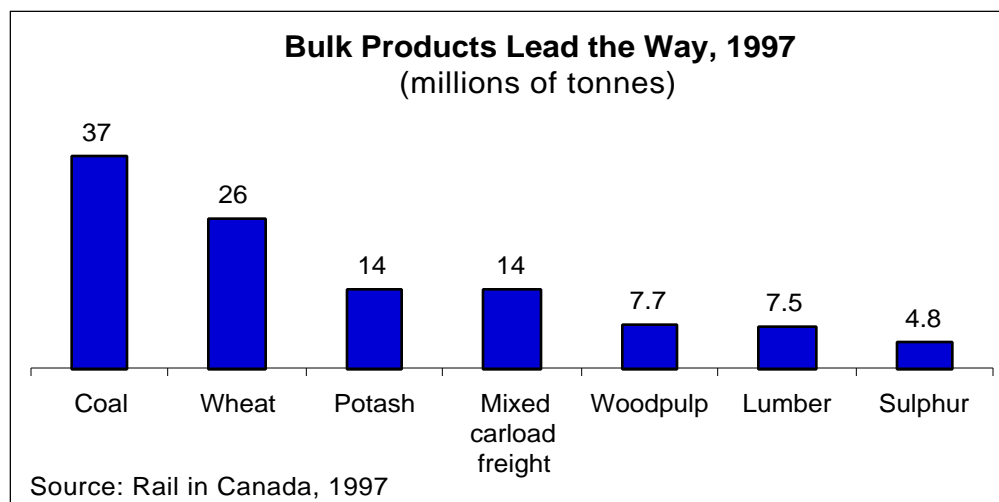
Railways operating entirely within a province fall under provincial jurisdiction and are regulated by provincial governments. There is a high level of uniformity between federal and provincial regulations in terms of operating and equipment standards.

Key Indicators

Railways carry bulk products and goods packed in containers. Railways are the most economical form of land transport to carry freight cargo over long distances. On average, rail transport is about 30% of the cost of truck transport.

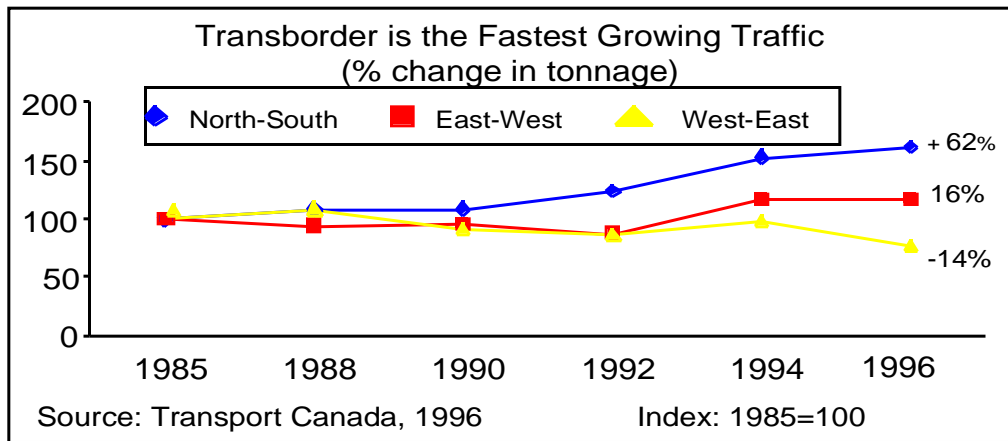
In 1997, railway freight traffic in Canada totalled 291 million tonnes. The top 10 commodities accounted for 70% of that volume. Most of these commodities are transported to ports for export by water. Large volumes are also delivered directly to the US—mainly lumber, potash, newsprint, wood pulp, and containers on flat cars (COFC).

- Class I carriers have a diversified traffic base of bulk commodities.



- While bulk shipments continue to dominate, higher valued container traffic now accounts for an appreciable share of the total rail traffic originating in Canada. It is also the fastest growing rail business segment.

A major shift has also occurred in the directional flow of the commodities transported by rail in the last decade.



Global markets and sourcing, as well as a more liberal trade environment (e.g., NAFTA, GATT) have encouraged more north-south traffic and the railways are changing their operations accordingly.