



## Responsibility for economic regulation

	Municipal governments	Provincial, territorial governments	Federal government <sup>a</sup>
Air			✓
Marine			✓
Roads <sup>b</sup>	✓	✓	✓
Rail		✓ <sup>c</sup>	✓
Pipeline		✓	✓

a) Transportation of dangerous goods is under federal law and companion provincial acts and regulations.

b) Where a mode crosses provincial, territorial or national boundaries, it falls under federal regulation. In Canada, most transportation is a federal responsibility; provincial and local governments are involved mainly in roads. Federal responsibility for interprovincial trucking and bus has been delegated to provincial and territorial governments

c) Railways operating entirely within a province come under provincial regulation.

## Powerful trends are shaping transportation

Canada's transportation system was built to serve our trading needs, recognizing the abundance of our bulk commodities. These commodities – moved to ports on the east and west coasts, or directly south to the US – still dominate the volumes moving on our freight

## Canada's National Airports System

- 1,800 facilities registered as landing and takeoff sites, includes: 26 National Airport System airports, 70 regional/local, 31 small/satellite and 13 remote airports
- Terminals built by governments on public lands; local airport authorities financially responsible for new infrastructure
- Air navigation system operated by NAV Canada using 7 area control centres and more than 100 airport control towers and flight service stations
- Traffic handled by National Airport System airports: 95% of total passengers, 98% of total freight
- Domestic passenger travel (1997): 50.5 million enplaned/deplaned passengers
- Freight traffic moved by Canadian air carriers (1997): 800,000 tonnes

system and are vitally important, particularly to Western Canada. But conditions are changing.

The volume of high-value consumer goods is growing quickly, demanding new hubs, handling methods, superhighways and trade routes. Transportation must respond to the needs of communities and business for smooth connections among roads, airports, railways and ports – all supported by state-of-the-art communications.

Some of the most powerful trends and developments shaping our transportation system today are:

- **“The customer rules”** – Transportation exists because someone or something has to move. Understanding and anticipating customer needs is more important than ever because today's customers demand more.
- **A new focus for governments** – Canada has a long history of commercial success and social responsibility. Under financial pressures, the federal government has been unable to sustain its traditional levels of support in transportation – the focus is now on strategic investments that enhance efficiency and promote the safety of people and the environment. Under today's policy, reflected in the *Canada Transportation Act, 1996*, Canada uses a market approach: the system is allowed to respond freely to the changing needs of

### Major Canadian Natural Gas Pipelines



### Major Canadian Crude-Oil Pipelines



- 540,000 kilometres, including 95,000 kilometres of large transmission pipelines and more than 400,000 kilometres of lines for gathering (from producers) and distributing (to consumers)
- Pipelines are privately owned, operated and maintained
- Proportion of Canada's crude-oil energy carried by pipelines: 40%
- Natural gas shipments (1997): 5.6 trillion cubic feet (54% exported)
- Oil and refined product shipments (1997): 760 million barrels (49% exported)

shippers and the travelling public. The result is a federal government that has divested itself, for the most part, of operating ports, airports, airlines, railways and other parts of the system. This, in turn, places additional responsibilities and financial pressures on provincial and municipal governments.

- **“Bigger is better”** – As in other industries, transportation has been consolidating to raise profits and shareholder value and to develop the critical mass needed to compete on a global scale. However, consolidation creates new pressures on companies to manage their resources more innovatively and to consistently provide the excellence demanded by today's customers.
- **Lower costs through “just-in-time”** – Companies are doing business on a global scale in search of bigger markets and lower costs. Gaining a competitive edge depends on quick, reliable deliveries to keep inventories and costs low. The “scheduled economy” applies particularly to high-value manufactured products.
- **The price squeeze** – Industrial commodity prices fluctuate widely, but have been trending downward over many decades. The causes include more efficient processes that use less raw material, a greater

supply of substitute products, more production from Third World and other countries, and more recycling. As a consequence, costs must be reduced to stay competitive, particularly when transportation is a large part of the value of commodities. In turn, transportation companies must respond by reducing prices, to allow producers to make money even at the bottom of the price cycle.

- **The rise of value-added** – Lower commodity prices have motivated producers to add value to their products by processing them further before they are shipped. Western Canada's export performance in particular has been bolstered by value-added products in the wake of the Asian market downturn in the late 1990s, which particularly affected the West. Saskatchewan's value-added shipments increased by 150% between 1992 and 1997, and value-added activity in Alberta increased by 134%.<sup>1</sup> Manitoba and BC have also seen healthy increases, and there are many more opportunities yet to be tapped in agriculture, forestry, food products, and machinery and equipment. Value-added products diversify our economic base beyond its historical reliance on bulk commodities.

<sup>1</sup> Alberta Department of Economic Development, “The Role of Value-Added Products in Provincial Economies and Exports” (October 1998).



### What is value-added?

*Goods that receive little or no processing are called “primary goods” or “raw materials.” They can be sold to others, who manufacture or process them further into a useable product. Increasingly, Canadian producers of primary goods are looking to do the further processing themselves, thereby adding value to the goods. The result is a higher final selling price and profits for the initial producer, as well as more jobs in Canada.*

Value (\$)		Value-Added (\$\$)		More Value-Added (\$\$\$)
wheat	→	flour	→	cookies
iron ore	→	steel	→	car



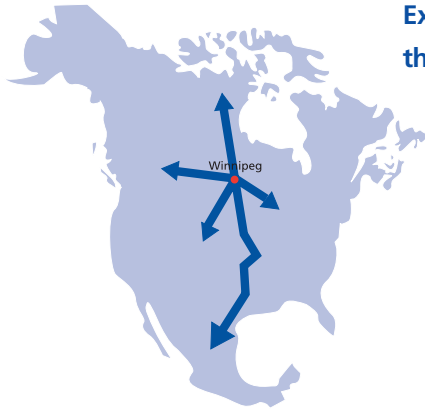
### The container “revolution”

*Before container shipping, manufactured goods were carried in wooden crates of varying sizes in the holds of cargo ships. Getting a shipment to the customer was something of a random process that depended on how the shipment was packed and what handling difficulties were encountered en route. Cargo was susceptible to damage and even theft during transport, so retailers were advised to anticipate supply disruptions and had to keep large inventories. In 1955, Malcolm MacLean, the owner of a US trucking firm, tried putting trailers onto ships to test-run a new method of shipping. This started the “container revolution,” one of the more significant developments in transportation in the 20th century. In 1966, his new company, Sea-Land, introduced the first container service to Europe. Today, containers are shipped around the world in specialized ships, truck-trailers, double-stack trains, and aircraft.*

*Most intermodal transportation uses containers. A container is a sealed metal box used to carry freight door-to-door, without the contents being handled. This protects the goods from the elements and allows them to be easily transferred between modes. Container volumes are expressed as 20-foot-equivalent units, or TEUs. One TEU is a metal box measuring 8' x 8' x 20'. A 40-foot container equals two TEUs.*

- **Rise of intermodal shipping** – Your camera, imported dishes, and new car were likely delivered by intermodal transportation – using two or more transportation modes in combination. Intermodal takes advantage of the strengths of different modes for seamless, secure shipping. Some 15 million containers of goods move each year between North America and overseas; Canada’s share is 10%. Container volume has grown by a dramatic 6% per year since the 1980s. For ports such as Montreal, Vancouver and Halifax, and for Canadian railways and trucking firms, intermodal traffic represents a key growth area.
- **Our neighbour never sleeps** – Canada competes vigorously with the US in North American and international markets. In 1998, the *US Transportation Equity Act* (TEA-21) authorized federal transportation spending of US\$218 billion by 2003 to improve the US transportation network. That figure represents more than the combined economies of our four Western provinces. Canada needs to maintain a strong, modern and diverse transportation system, both to win new business and to hold onto traffic and jobs that a more efficient US system might draw away. Once diverted, traffic is extremely difficult to win back.





### Example of a Trade Corridor: the Mid-Continent Trade Corridor

- **Corridor and gateway thinking** – Gateways are the points of entry into major trading regions. Corridors connect gateways as directly and efficiently as possible. Trade and transportation gateways and corridors – where the best parts of the transportation system are brought together seamlessly – provide the necessary concentration of resources to safely and quickly move large volumes of freight and many passengers. Situating business along these routes offers significant economic development opportunities.

Successful gateways and corridors feature consistent and simplified regulations, common standards between jurisdictions and modes, and appropriate infrastructure.

- **Computers are everywhere** – Computers are used in every aspect of transportation, giving today's customer an unheard-of level of control and range of options. This is having an enormous impact on the support systems in transportation companies and on the manner in which customer service is being managed. For example, an airline passenger can now use e-commerce to find the best airfare and routing, make reservations and pay for the travel, all without receiving a paper ticket. An international

shipper can submit the requisite Customs information electronically to expedite the freight shipment. Global positioning technology uses a satellite to allow a shipping representative in Montreal to tell a customer where a shipment is, to within a few metres, on its ocean journey to Europe.



So what do these trends mean? Governments are facing public demand for better service wrung from lower taxes. Industry is under pressure from globalization, free trade, and tough competition. Workers face reduced job security, downward pressure on wages, and increased demands for flexibility and productivity.

In the past, the formula was straightforward: develop the transportation system and prosperity would follow. Today, things are much more complex. The new imperatives, for governments, industry and workers alike, are to find new efficiencies, encourage innovation and embrace new technologies that will keep Canada's transportation sector strong and internationally competitive.