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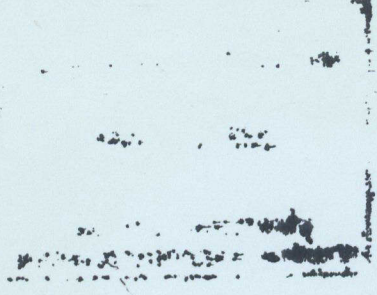


## SERVING NORTH AMERICA FROM CANADA

*A combination of  
world-class infrastructure  
and unsurpassed access  
makes Canada the perfect  
base for operations in the  
world's richest market*

Canada





This document is intended to inform companies considering locating in Canada. It explains how Canada's sophisticated transportation and communications infrastructure facilitates access to the entire North American market.

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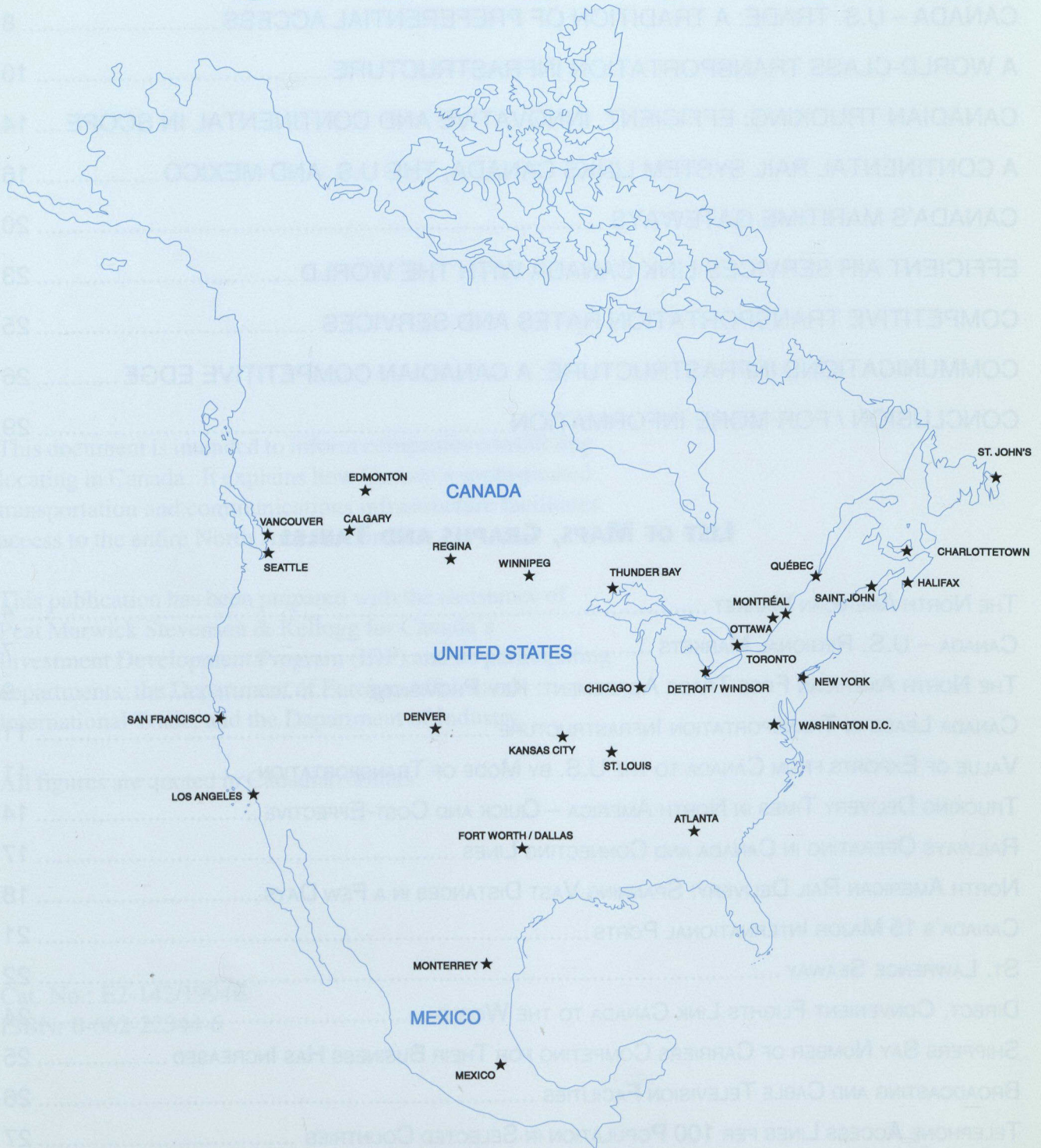
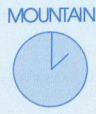
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# THE NORTH AMERICAN MARKET





## THE NORTH AMERICAN MARKET

Canada and the United States form the largest trading partnership in the world, with two-way trade exceeding \$268 billion in 1993. Canada ships almost three-quarters of its exports to the U.S., and receives about two-thirds of its imports from the U.S.

A sophisticated, cost-effective transportation and communications system supports these massive trade volumes.

Together, the two countries have 280 million consumers and a gross domestic product in excess of \$7 trillion. GDP per capita exceeds \$25,000 in both countries.

In addition to their close physical proximity, Canada and the U.S. share a common language, similar business practices, and the same time zones.

On an average day, more than half a million residents of Canada and the U.S. cross the border, with no need for a visa or passport.

The huge, affluent Canada-U.S. market just got bigger. Effective January 1, 1994, the North American Free Trade Agreement (NAFTA) integrated the rapidly growing Mexican market into one free trade area. With the addition of Mexico, companies based in Canada have preferred access to a market of 360 million people, with a combined GDP of more than \$8.5 trillion.

The efficient, well-maintained infrastructure, built to deliver goods and services throughout this vast North American market, enables companies based in Canada to serve global markets as well. Excellent marine and air transportation links, combined with a location between Europe and Asia, make Canada a good choice for companies doing business worldwide.

*"Canada offers a solid basis for long-term high-tech investments. The country has a good infrastructure with a modern transport network, an excellent communications system and optimum energy supply."*

**William B. Waite**  
**President and Chief Executive Officer**  
**Siemens, Canada**

*"We ship throughout North America by rail, truck, and barge. To us, there is no border between Canada and the U.S."*

**Terry Lichtfield, Manager**  
**Transportation & Distribution**  
**Canadian Oxy Chemicals**  
**Group Electronics Ltd.**



## UNPARALLELED MARKET ACCESS

*"The continent has shrunk to overnight delivery by air and three days by truck from all of the major industrial centres. We look at North America as one big country."*

**Max Persaud, Manager  
Corporate Logistics  
Philips Electronics Ltd.**

*"Roughly 95% of our shipment moves by truck, with excellent service and rates. Crossing the border is no problem as long as your paperwork is in order."*

**Leo Ruscheinski  
Traffic and Customs Officer  
Ebco Industries**

### **CANADA: AT THE HEART OF REGIONAL MARKETS**

The huge North American market is often viewed as one market comprised of three regions:

**The Eastern Region** has the greatest concentration of industry based on automobiles, steel, computers and petro-chemicals, and the largest urban population. It also plays an important role as a gateway to Europe. Regional economic output is \$4.4 trillion – larger than the economies of France and Germany combined. The region has a population of almost 171 million.

**The Central Region** has a diverse manufacturing economy based on chemicals, aerospace, oil, gas, agriculture and natural resource endowments. It has a population of over 51 million. Economic output in this region is close to \$1.3 trillion and exceeds that of the United Kingdom.

**The Pacific Region** is the base for a range of industries from electronics and aerospace to forest products and agriculture. It is also a gateway to Asia. The Pacific Region economy is larger than that of France at over \$1.4 trillion and has a population of nearly 54 million.

Major Canadian cities are located at the heart of these regional markets. More than three-quarters of Canadians live within 160 kilometres of the Canada–U.S. border.

There are more than 110 million consumers within a day's drive of southern Ontario. Montreal, Halifax and Moncton are within a day's drive of New York, Boston, and Philadelphia. Winnipeg is just 17 hours by road from Chicago and 8 hours from Minneapolis. On the Pacific coast, it takes just 48 hours to ship by truck from Vancouver to Los Angeles.

A Canadian location gives investors the best of both worlds: a host of business and personal advantages with cost-effective access to major North American markets.



# CANADA – U.S. REGIONAL MARKETS



	Pacific Region	Central Region	Eastern Region
Population (million)	53.7	51.4	170.9
Gross Regional Product (\$ billion)	\$ 1,462	\$ 1,265	\$ 4,373
Major industrial activity	aerospace electronics forest products agriculture fisheries	chemicals aerospace oil and gas food processing agrifood	automobiles steel computers petrochemicals fisheries



## CANADA – U.S. TRADE: A TRADITION OF PREFERENTIAL ACCESS

*“This company’s manufacturing has been integrated since 1972. We are now moving towards our vision of North American manufacturing mandates. The free trade agreement has facilitated this process.”*

**Tony Marranta**  
*Executive Director, Logistics*  
**3M Canada Inc.**

There is a long history of economic cooperation between Canada and the U.S. One example is the Canada–U.S. Auto Pact, signed in 1965. Under the terms of this agreement, U.S. automobile manufacturers have used cost-effective Canadian plants to produce for the North American market. As a result, Canada has been a net exporter of automobiles. Canadian automobile plants manufacture 18 per cent of all vehicles produced in North America.

### **THE CANADA–U.S. FREE TRADE AGREEMENT**

A more recent example of cooperation is the Canada–U.S. Free Trade Agreement (FTA), which came into effect on January 1, 1989. All goods made in Canada are covered by the FTA if they meet North American content requirements. Most Canadian exports now enter the U.S. duty-free. Tariffs on the remaining exports are being progressively phased out, and will be eliminated completely by December 31, 1998. In fact, many tariffs are being phased out sooner than called for by the FTA due to requests from Canadian and U.S. business leaders.

The FTA has had a dramatic impact on Canada-U.S. trade. Canada’s exports to the United States have risen almost 38 per cent – from \$105.5 billion in 1989 to \$145.3 billion in 1993. And these gains were registered in the face of a relatively high exchange rate on the Canadian dollar and an economic recession in North America. Imports from the United States have risen in the same period from \$93.5 billion to \$123.5 billion.

During this period increases in specific sectors included a 71 per cent increase in exports of office, telecommunications and precision equipment; a 49 per cent increase in chemical products; and 163 per cent in textile materials.

Free trade creates a range of business options for international investors in Canada. The absence of tariffs makes it attractive to supply the entire North American market from a Canadian plant.

Many multinationals are giving their Canadian subsidiaries North American or global mandates to take advantage of economies of scale in their manufacturing processes. Companies adopting this strategy include 3M, Dow, DEC,



IBM, Bell Helicopter Textron, and Procter and Gamble.

For example, 3M is building a new industrial tape plant in Brockville, Ontario and is expanding three existing plants in Ontario and Manitoba. U.S. tariff cuts included in the FTA were cited by 3M as an important factor in these investment decisions.

Under the FTA, Canadian products receive "national treatment" on most sales to U.S. government departments. New bilateral panels work to speed settlement of trade disputes and ensure fair appli-

cation of trade laws. Wherever possible, Canadian and U.S. standards, testing and certification procedures are being harmonized. And business travel and temporary residency have been made easier for Canadian and American professionals and service providers travelling to the other country.

**THE NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA)**

Effective January 1, 1994, the North American Free Trade Agreement (NAFTA) improves the FTA and adds Mexico to this free trade zone.

Mexico has provided immediate duty-free access for many of Canada's key export interests including agricultural and fish products, many metals and minerals, most telecommunications equipment, many types of machinery, and certain wood and paper items. Mexican tariffs in sectors such as furniture, pharmaceuticals, and some wood and finished metal products will be phased out over 10 years.

Most of Mexico's non-tariff barriers such as import licences will be eliminated within 10 years.

**THE NORTH AMERICAN FREE TRADE AGREEMENT: KEY PROVISIONS**

<i><b>Tariffs eliminated</b></i>	<i>Tariffs on Canadian exports to Mexico will be phased out over 10 years. Mexico has provided immediate duty-free access for many of Canada's key export interests.</i>
<i><b>National Treatment</b></i>	<i>Canada, the U.S., and Mexico treat each other's goods, services, and investors as they treat their own. International investors with investments in Canada are covered by NAFTA if they use Canada as a "home base" to make investments in the U.S. or Mexico.</i>
<i><b>Secure Market Access</b></i>	<i>NAFTA provides secure access for Canadian exports to the U.S. and Mexico.</i>
<i><b>Dispute Settlement</b></i>	<i>Settlement or determination of remedies regarding anti-dumping and countervailing disputes is by bi-national panels, not domestic courts. Disagreements between investors and NAFTA governments may be settled through international arbitration.</i>
<i><b>Government Procurement</b></i>	<i>All three countries have agreed to provide substantially increased access to government procurement opportunities not only in goods, but also in services, including construction services.</i>
<i><b>Business Travel</b></i>	<i>Simplified procedures expedite business travel. Eligible business people can be granted temporary entry without prior approval procedures.</i>
<i><b>Intellectual Property</b></i>	<i>NAFTA includes comprehensive coverage of intellectual property rights to encompass standards of rules and enforcement.</i>



## A WORLD-CLASS TRANSPORTATION INFRASTRUCTURE

*"We ship all over North America using highway and intermodal carriers. Overall, I would rate the distribution network as excellent."*

**Charlie Connors**  
**Deployment Coordinator**  
**Michelin Tires (Canada) Ltd.**

*"Deregulation has led to better transportation services. We have seen a significant improvement in rail transit times and reliability. On the trucking side, carriers have expanded their direct service networks and reduced the amount of interlining."*

**David Tough**  
**Manager, Distribution Services**  
**Dow Chemicals Canada Inc.**

*"Our plants produce frozen foods for the Canadian, U.S. and overseas markets. Our operations require excellent access to quality temperature-controlled transportation services."*

**David McInroy**  
**Traffic Manager**  
**McCain Foods Limited**

A 1993 report published by the World Economic Forum rates countries on several competitiveness criteria. Four of these criteria — roads, railroads, air transport and ports of access — deal with the adequacy and flexibility of transportation infrastructure relative to business requirements. Canada's average rating for these criteria was the highest among G-7 nations.

Transportation is the cornerstone of Canada's industrial strength. Its ports handle some 400 million tonnes of commodity annually. Each year, rail companies move more than 250 million tonnes of freight on 91,000 kilometres of track. Canada's airports handle 1.6 billion tonnes/kilometres annually.

### **NORTH-SOUTH CONNECTIONS**

Shipments from Canada to the U.S. travel by road, rail, air, marine, pipeline, and intermodal services.

Road transport is dominant, a fact which reflects the large flow of manufactured goods and the integration of regional markets. Increasingly, inter-

modal services are competing with trucking companies for this traffic.

Rail is the mode of choice for many bulk shippers, particularly for exports of resource products from western Canada.

Marine carriers also handle bulk shipments. Marine travel is concentrated in the Great Lakes/St. Lawrence Seaway system and on the east and west coasts of North America.

Flights from Canadian airports serve all major North American and global destinations. More than 20 million passengers pass through Canadian airports each year. Air cargo services permit overnight delivery from Canadian centres to customers throughout North America and overseas. For example, Northern Telecom uses air freight to provide next day service throughout North America for shipments of communications equipment.

Civil aviation services between Canada and the United States are provided under a bilateral agreement. The two countries are working to liberalize the agreement to expand



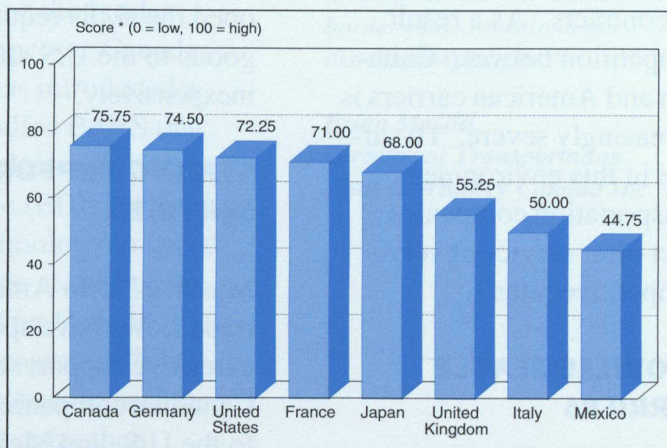
Canada-U.S. connections in line with expanding business requirements.

Intermodal transportation combines the best attributes of more than one mode. Railways are making important investments in intermodal terminals and equipment to ensure their competitiveness in this growing segment of the market. Double stack container service is available to central Canada from Vancouver and Halifax. Specialized container trains provide timely, high-quality service to Canadian and U.S. cities. CP Rail has direct access to the port of Philadelphia via one of its U.S. subsidiaries. Access to other U.S. ports is available through interchanges with U.S. carriers.

### A FLEXIBLE, DEREGULATED TRANSPORTATION SECTOR

The National Transportation Act of 1987 sharply reduced regulation of Canadian transportation companies. It provides for more flexibility in

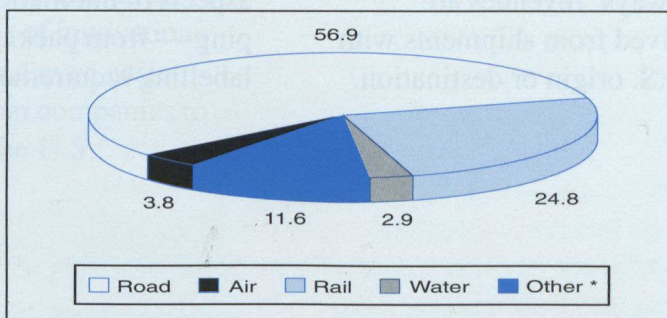
### CANADA LEADS IN TRANSPORTATION INFRASTRUCTURE



\* Score measures the extent to which transportation infrastructure is developed to meet business requirements of company competing internationally. Score measures adequacy of roads, railroads, air transport and port access.

Source: The World Competitiveness Report, 1993.

### VALUE OF EXPORTS FROM CANADA TO THE U.S. (\$ BILLION) BY MODE OF TRANSPORTATION (1992)



\* Covers shipments by pipelines and hydroelectric distribution and small-value exports.

Source: Statistics Canada (Catalogue 65-202, Exports: Merchandise Trade).



pricing, routing, market entry and exit – as well as the right to enter into confidential service contracts. As a result, competition between Canadian and American carriers is increasingly severe. To survive in this environment, transportation companies must offer service at very competitive rates.

### **KNOWLEDGEABLE CARRIERS**

Canada–U.S. trade is an important source of business for Canadian carriers. The Canadian for-hire trucking industry earns about one-fifth of its intercity revenues from transborder business. Several trucking companies specialize in this area. More than one-third of Canada's two major railways' revenues are derived from shipments with a U.S. origin or destination.

Since transborder business is a vital part of their operations, Canadian carriers have developed the skills required to get goods to the U.S. quickly and inexpensively.

### **STRONG SUPPORT SERVICES**

Massive North American trade flows have spawned extensive support services for Canadian companies that ship to the U.S. and Mexico. Customs brokers take care of documentation requirements and handle the clearance process.

Equipped with increasingly automated systems, Canadian customs brokers provide fast and full professional services. They are familiar with all aspects of international shipping — from packaging and labelling requirements to the

relative cost-effectiveness of different routings to and from Canada. Brokers also provide advice on such aspects as export restrictions, letters of credit and insurance requirements. And they regularly review tariff classifications applied to their clients' shipments to ensure that they pay no more than the required duties or taxes.

Freight forwarders consolidate shipments from several sources to take advantage of volume discounts, and arrange and control all segments of a multimodal shipment. Forwarders assist in areas such as route planning and arranging insurance coverage. Specialists are readily available to help managers design an efficient and cost-effective distribution system.



Companies doing business in Canada also benefit from a nationwide system of 142 privately-owned warehouses licensed and bonded by the federal government. Their services include the leasing of warehouse and office space to third parties, provision of facilities for opening and closing cargo, and such operational conveniences as free parking space for trailers, waiting rooms for drivers and round-the-clock security. Warehouses in all large metropolitan centres offer on-site customs inspection, bar-coded storage and handling and after-hours clearance. In total they offer about 1.2 million square metres of handling, inspecting and storage space and approximately 100,000 square metres of leasable office space.

### **EFFICIENT BORDER CROSSINGS**

There are many locations where one can move goods and services between Canada

and the U.S., and the Canadian and U.S. governments are actively cooperating to streamline the border crossing process. Canada Customs has introduced a program called PARS that combines electronic data interchange (EDI) and bar coding technology to speed up clearance at the border. FIRS, another Canada Customs program, allows regular shippers to arrange pre-clearance for their goods. Similar programs have been put in place by the American government. For example, the U.S. Line Release System uses bar coding and EDI to speed up release of shipments. A program called ACH allows duty payments to be transferred directly to a U.S. Customs account. These types of innovations are making it even easier for Canadian companies to export to the U.S.

*"Pratt & Whitney has a world-wide distribution network. Customs operations have been streamlined to the point that the Canada-U.S. border plays no role in our distribution system..."*

**Brian McGill**  
*Director of Transportation  
Pratt & Whitney Canada Inc.*



## CANADIAN TRUCKING: EFFICIENT, INNOVATIVE AND CONTINENTAL IN SCOPE

### EXTENSIVE DISTRIBUTION NETWORKS

Trucking companies have year-round access to a highly developed road network. When all roads are included, the Canadian system is more than 800,000 kilometres long. A national highway system connects major population centres.

In response to market demands and deregulation, trucking companies on both sides of the border have expanded their networks. Many Canadian carriers offer direct service to major U.S. destinations. For example, Carnation Foods, a division of Nestlé Canada, ships over 45 million kilos of frozen fries to McDonald's in Chicago and other midwestern centres, from a plant in Carbury, Manitoba.

At the same time, U.S. carriers are actively expanding into Canada. By 1991, more than 5,300 U.S. trucking companies had acquired Canadian

operating licences. The result has been very stiff competition in the transborder sector.

### ADVANCED TECHNOLOGY

The trucking industry has adapted well to the demands of just in time (JIT) manufacturing. Carriers for companies such as General Motors are consistently meeting their scheduled delivery windows.

Trucking companies have invested in communications equipment and information systems to track shipment progress from origin to destination. Just as important, they have expanded employee training to develop the skills required for quality customer service.

### TRUCKING DELIVERY TIMES IN NORTH AMERICA — QUICK AND COST-EFFECTIVE

	New York (hours)	Chicago (hours)	San Francisco (hours)	Mexico City (hours)
<b>Halifax to:</b>	24	56	144	120
<b>Montreal to:</b>	18	25	120	110
<b>Toronto to:</b>	12	20	108	115
<b>Winnipeg to:</b>	72	36	84	70
<b>Calgary to:</b>	82	46	58	78
<b>Vancouver to:</b>	108	70	36	88



Canadian and U.S. authorities are cooperating in the use of Automatic Vehicle Identification (AVI) technology to speed the movement of truck traffic between the two countries. Trucks are being equipped with inexpensive transponders which, after the first encounter with a weigh station, make it possible to signal their prior clearance to subsequent stations along the road and to receive clearance to proceed without stopping. It is expected that the system will eventually be in general use throughout North America.

### **COMPETITIVE RATES**

Strong competition is keeping trucking rates low. Many carriers bring fresh produce to Canada from the southern

U.S. and Mexico. Backhauls are relatively common on longhaul runs, providing very competitive rates on shipments from Canada to the U.S. and Mexico. About 20 Canadian carriers penetrate the Mexican market at present. About 100 run to the southern U.S.

NAFTA will progressively eliminate remaining barriers to international transportation services. Three years after the agreement is in effect, Canadian and U.S. trucks will be permitted to pick up and deliver in Mexican border states. After six years, they will be able to service the entire country. And after 10 years, Mexico will permit 100 per cent investment in Mexican trucking firms.

*"Canadian truckers are seeing a shift in traffic patterns from east-west to north-south. Companies have expanded their transborder service networks, particularly for truckload shipments. Competition is very strong in the transborder sector."*

**Gilles Bélanger**  
**President**  
**Canadian Trucking Association**

*We were considering a number of different sites in Canada and the U.S... The key factor favoring Calgary was the ability to ship goods cheaply to markets in the northwest U.S. and California... We found haul rates from Calgary to the U.S. were actually cheaper than shipping out from there [Montana].*

**Robert Hryniak**  
**President, Greenfield Plastics Corp.**



## A CONTINENTAL RAIL SYSTEM LINKS CANADA, THE U.S. AND MEXICO

*"Intermodal transportation will play a key role in transborder and domestic markets. Double stack container service is well-suited to high-density, long-haul lanes. For shorter hauls, other technologies such as RoadRailer are helping us compete with the truckers."*

**Gilbert Mackie**  
**Executive Vice-President**  
**CP Rail**

Historically, the development of both Canada and the United States as nations has been linked with the development of their rail systems. Today, railways are still the backbone of transportation in both countries, providing the most economical way to move commodities and full loads of freight inland over long distances. Intermodal services increase the railways' abilities to meet customer needs.

It is a time of severe competition and restructuring in the North American rail system. The result is very competitive rates for shippers and increasing alliances between rail companies.

### **AN INTEGRATED SYSTEM**

Most of the Canadian systems are operated by two major carriers: Canadian National (CN) and Canadian Pacific (CP Rail). Canada is also served by several U.S. railways, including Burlington Northern, Norfolk Southern and Conrail.

CP Rail's daily, fast container trains connect Montreal, Toronto, Vancouver, Detroit, Chicago, New York and Philadelphia in a network of 36 specialized intermodal terminals, including its new \$30 million high-capacity terminal near Toronto.

In preparation for expanded traffic throughout North America, CN and CP have expanded their networks on a continental scale. In the United States they have purchased rail lines and formed partnerships with major U.S. railroads and truck lines. Evidence of this integration of rail systems can be seen in the new logos introduced by both CN and CP. They have also knit together Canada-Mexico freight connections through agreements with the Mexican state railway and with U.S. railways and barge lines.

During 1990, CP Rail acquired a U.S. rail carrier (Delaware & Hudson), and expanded its stake in a second company (Soo Line) to 100 per cent ownership. These acquisitions have been integrated with its Canadian operations to form CP Rail System.



# RAILWAYS OPERATING IN CANADA AND CONNECTING LINES



— C.P. Rail and Associates      — Canadian National Railways and Associates      — U.S. Railways

Source: The Railway Association of Canada.



CN has three U.S. rail subsidiaries: Grand Trunk Western, Central Vermont, and Duluth, Winnipeg & Pacific. These subsidiaries are being integrated with its Canadian operations to form CN North America.

CN is going ahead with a \$150 million program to build a second, larger tunnel to improve access between Southern Ontario and Michigan. When completed, this tunnel will accommodate both double-stack containers and tri-level automotive cars.

North and South sometimes meet in the middle. In Omaha, 35.6 million litres of water per year, transported by bulk container from British Columbia, Ontario and Nova Scotia, are funnelled into glass bottles manufactured in Mexico and moved north by Union Pacific Railways. The end product: Clearly Canadian mineral water, which is sold across the United States and around the world.

**NORTH AMERICAN RAIL DELIVERY:  
SPANNING VAST DISTANCES IN A FEW DAYS**

	<b>New York</b> (hours)	<b>Chicago</b> (hours)	<b>San Francisco</b> (hours)	<b>Mexico City</b> (hours)
<b>Halifax to:</b>	96	77	180	205
<b>Montreal to:</b>	48	36	144	169
<b>Toronto to:</b>	48	24	130	155
<b>Winnipeg to:</b>	72	36	120	191
<b>Calgary to:</b>	102	66	96	215
<b>Vancouver to:</b>	120	96	72	250

Source: CN North America.

**INNOVATIVE SERVICE**

Strategic alliances between Canadian and U.S. railways speed the flow of goods to market, improve border crossings, and provide quality intermodal services. For example, CP Rail has teamed up with Norfolk Southern to bring RoadRailer technology to the Ontario market. CN has established an alliance with U.S. trucker J.B. Hunt to provide rail-truck intermodal services.



CN innovations include strategic alliances with Burlington Northern, Union Pacific, and Norfolk Southern that will improve its service to much of North America.

CP Rail has developed containers exclusively for domestic use. Individual containers can be off-loaded at rail destinations and loaded directly onto highway flatbeds for immediate delivery to final destinations. This service is a great advantage over piggy-backing, which requires that all units be off-loaded at a rail destination before any can be prepared for trans-shipment.

CN North America in partnership with APL Land Transport Services has introduced the first Canada-U.S.-Mexico container service. The new service connects CN's Toronto-Montreal-Maritime line with APL's service from Chicago to Mexico City via Laredo, Texas.

U.S. rail carriers have successfully penetrated several Canadian markets. For example, Burlington Northern has become a strong competitor for shipments of forest products from the province of British Columbia. Maersk and American President Lines have teamed up with U.S. railways to bring double-stack container trains from the U.S. port of Seattle to Toronto and Montreal.

Canadian railways have inaugurated double stack container service at Halifax and Vancouver which can save up to 25 per cent in costs compared to operating conventional container trains. Double-stacking is another advantage of the intermodal system and offers a highly competitive doubling of the amount of freight carried. CP and CN have both invested millions of dollars to modify tunnels and underpasses on existing rail networks across Canada.

## **ADVANTAGE CANADA**

A partnership called Advantage Canada, among Canada Ports Corporation and CP Rail and CN North America, has been established to facilitate cargo transportation throughout Canada, the U.S. and Mexico. It seeks lower costs, reliable delivery times, and damage-free handling of goods.

Advantage Canada promotes the use of intermodal systems and the development of systems for the exchange of electronic data among carriers. Advantage Canada has also supported the establishment of Gateway Councils at most of the major ports in Canada to work on the continued improvement of intermodal transportation.



## CANADA'S MARITIME GATEWAYS

*"Some of our Canadian plants ship a significant portion of their total production to markets in the U.S. and around the world. We look upon our carriers as partners, and we have found them willing to try new ideas to better serve our customers."*

**Gerry Casey, Manager  
Distribution  
Du Pont Canada Inc.**

### ATLANTIC AND PACIFIC

Few countries are surrounded by as much water as Canada. Canada touches upon the Atlantic, Pacific and Arctic Oceans and possesses an inland river system flowing from the Great Lakes to the Atlantic.

Ports and marine activity have become increasingly coordinated with the total Canadian transportation system and today are an essential part of Canada's intermodal transportation network.

### MARKET ACCESS

Several of Canada's deep-water ports are strategically located near large U.S. markets. Many of these facilities are open year round. Modern container ports at Halifax, Saint John, Montreal and Vancouver – combined with inland container trains – make Canada an efficient and cost-effective location for supplying North American and world markets.

For example, Lykes Inc. provides liner service from Saint John, New Brunswick to Vera Cruz and Altimeira, Mexico, via Charleston, North Carolina. The voyage takes eight days and ships leave Canada

every 21 days. Other lines offer unscheduled service to Mexican ports "on inducement" (i.e. depending on the nature of the commodity and the size and value of the shipment).

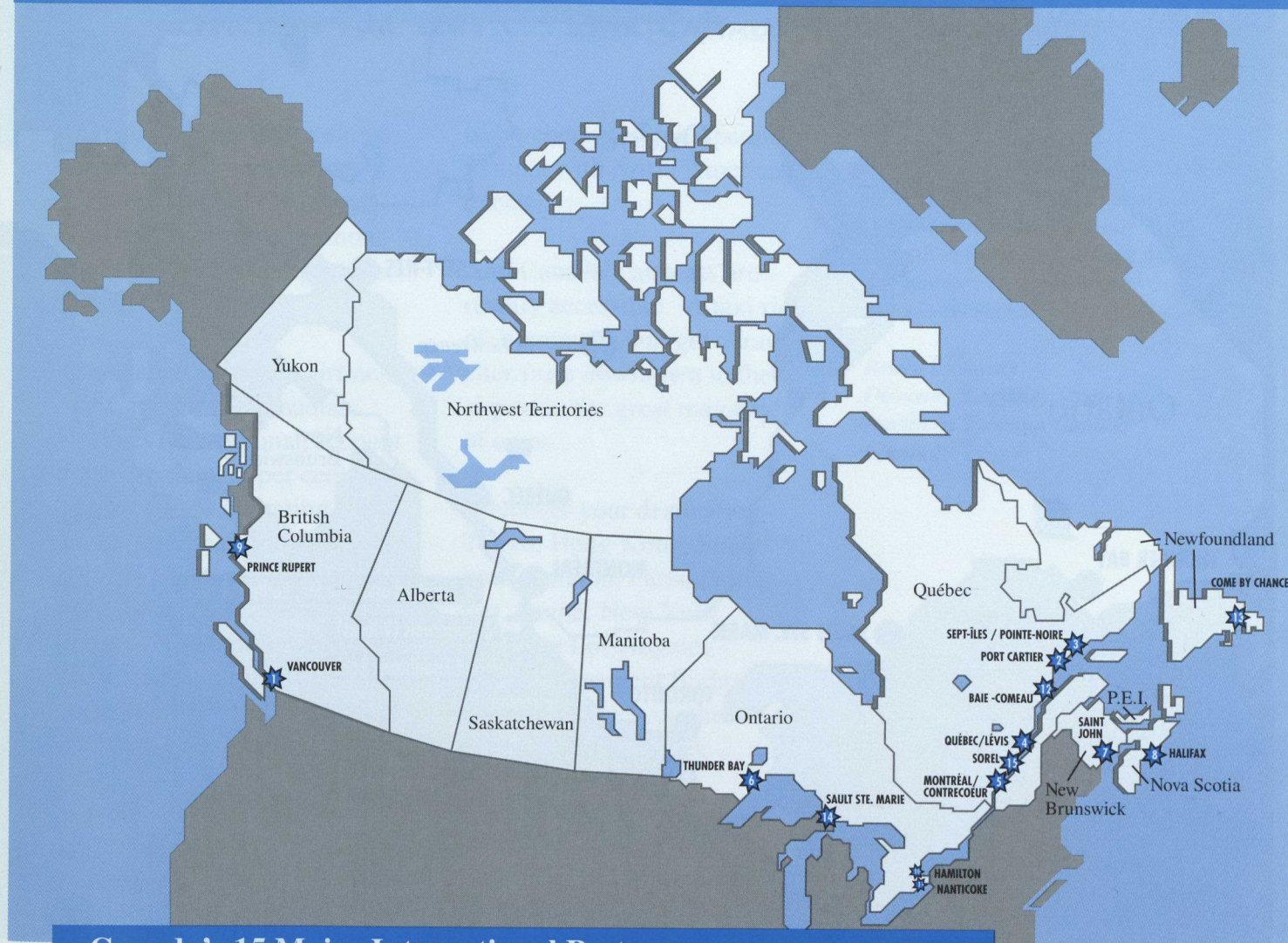
The St. Lawrence Seaway allows marine shipments to reach directly the heart of North America. The Seaway serves the entire eastern region of the North American market giving shippers direct marine access to Montreal, Toronto, Buffalo, Detroit, Chicago and Duluth. In all, it serves an area containing some 61 million people and much of the industrial heartland of North America. Ports along the Seaway handle bulk and general cargoes, including grain, iron ore, coal, and manufactured goods.

### MODERN TECHNOLOGY

Canada continues to be a world leader in the use of self unloading technology, which minimizes unloading time and costs for bulk goods. In the forest products sector, for example, highly automated, specialized vessels deliver Canadian newsprint to U.S. destinations using innovative handling techniques to reduce crew size.



## CANADA'S INTERNATIONAL PORTS



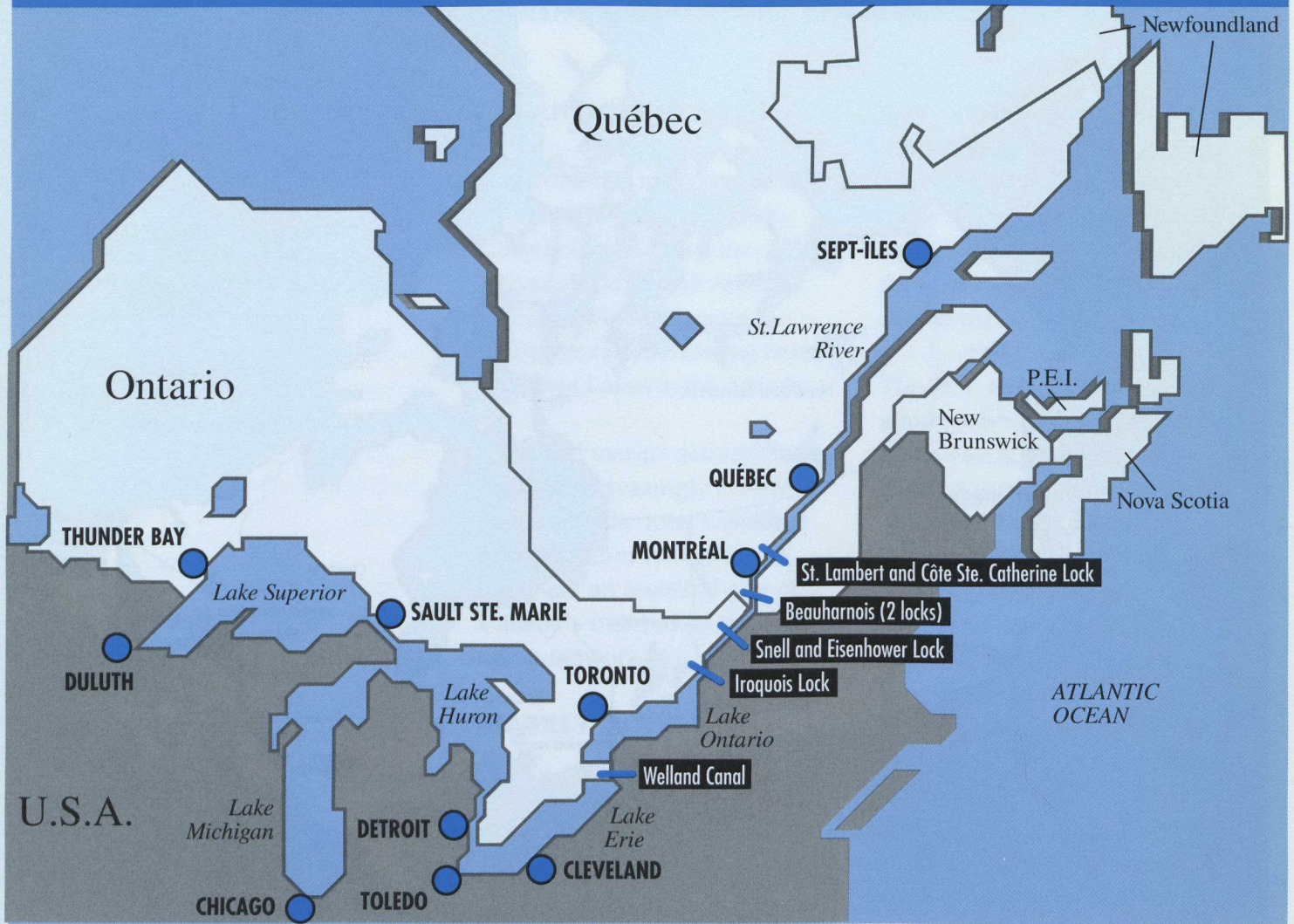
### Canada's 15 Major International Ports — Depth and Total Tonnage

1. VANCOUVER (B.C.)	minimum 4.6 m	maximum 15.5 m	70,713,780 tonnes
2. PORT-CARTIER (Qc.)	average 15.2 m		22,923,000 tonnes
3. SEPT-ÎLES/POINTE-NOIRE (Qc.)	minimum 7.6 m	maximum 18 m	21,918,867 tonnes
4. QUÉBEC/LÉVIS (Qc.)	minimum 6.7 m	maximum 14.7 m	18,536,074 tonnes
5. MONTRÉAL/CONTRECOEUR (Qc.)	minimum 7.6 m	maximum 10.7 m	17,469,987 tonnes
6. THUNDER BAY (Ont.)	minimum 8.2 m	maximum 9.1 m	17,363,153 tonnes
7. SAINT JOHN (N.B.)	minimum 7.7 m	maximum 37 m (12.2 m for the other wharfs)	17,094,222 tonnes
8. HALIFAX (N.S.)	minimum 8.3 m	maximum 15 m	14,892,266 tonnes
9. PRINCE RUPERT (B.C.)	minimum 7.9 m	maximum 20 m	13,255,573 tonnes
10. HAMILTON (Ont.)	average 8 m		11,383,050 tonnes
11. NANTICOKE (Ont.)	average 8.2 m		8,699,915 tonnes
12. BAIE-COMEAU (Qc.)	minimum 8.5 m	maximum 9.5 m	8,374,954 tonnes
13. COME BY CHANCE (Nfld.)	minimum 12.2 m	maximum 30.5 m	6,208,427 tonnes
14. SAULT STE. MARIE (Ont.)	average 6.1 m		4,967,075 tonnes
15. SOREL (Qc.)	minimum 4.9 m	maximum 9.1	4,648,254 tonnes

Sources: STATISTICS CANADA. (Catalogue 54-205, Shipping in Canada, 1991);  
Canadian Coast Guard – Harbours and Ports Directorate; Canada Ports Corporation.



# ST. LAWRENCE SEAWAY



Source: The St. Lawrence Seaway Authority.



## EFFICIENT AIR SERVICES LINK CANADA WITH THE WORLD

Canada has nine international airports. Many, including Gander, Mirabel (Montreal), Toronto, Winnipeg, Edmonton, and Vancouver, provide 24-hour service.

Canada's two largest airlines, Air Canada and Canadian Airlines International, account for more than 85 per cent of the industry's operating revenues. Four major regional airlines and some 370 other carriers account for the remainder. Between them, they carried 32.3 million passengers in 1991, and about 640,000 kilos of goods.

Air Canada and Canadian Airlines International have networks of affiliated carriers that operate feeder services to regional hubs. Both airlines have developed strong international links through direct flights and alliances with airlines around the world. Frequent flights and short transit times make it easy to travel to U.S. destinations.

### **PASSENGER SERVICES**

Excellent passenger service and accessible airports make it easy for executives,

researchers, and sales people to meet with North American clients.

And Canada's airports are readily accessible. A taxi ride of 20 minutes will get a traveller from downtown to the airport in the great majority of cases.

Whatever your destination – Tokyo, Hong Kong, Singapore, London, Paris, Frankfurt, Rome, New York, Chicago, Los Angeles – direct, convenient flights from Canada can get you there every day of the week.

Frequent flights from Canada's major airports serve European, American, and Asian destinations. For example, about 50 carriers serve Toronto and Montreal respectively, and 19 serve Vancouver, offering frequent, convenient services for business travellers and their families. Close to 900 flights arrive and depart Toronto's Pearson International Airport daily. Montreal's airports (Dorval and Mirabel) handle more than 650 flights per day; and Vancouver has close to 800 flights daily.

*"Delivery times are critical in our business, and shipping by air is one way we have of meeting the needs of our customers. From our Canadian locations we have next day delivery to major North American centres."*

**Bruce Richards**  
*Director, Logistics Strategy*  
**Northern Telecom Canada Limited**



## AIR CARGO

Major airlines offer special services for moving cargo including premium express services to U.S. destinations, and to Mexico. Services are available which provide door-to-door delivery of shipments on the next business day with pick-up and delivery included in the cost. Major airlines are equipped to carry a variety of freight cargoes, ranging from electronic components to tropical fish and flowers. A sea-air traffic service is available, which permits transfer of cargo at ports for transshipment to continental destinations in North America.

These services are supported by computerized tracking and tracing systems which link the cargo operations of major

airlines directly with customers, post offices, and freight forwarders.

## DIRECT, CONVENIENT FLIGHTS LINK CANADA TO THE WORLD

	New York (hour/min.)	Chicago (hour/min.)	Los Angeles (hour/min.)	Mexico City (hour/min.)	London (hour/min.)	Tokyo City (hour/min.)
<b>Halifax to:</b>	2:15	2:54	6:01	7:15	6:01	15:46
<b>Montreal to:</b>	1:17	2:18	6:24	6:40	6:30	15:05
<b>Toronto to:</b>	1:26	1:40	5:16	4:50	6:25	13:30
<b>Winnipeg to:</b>	3:35	1:50	5:45	6:15	8:40	12:45
<b>Calgary to:</b>	5:05	3:05	3:00	6:29	9:05	11:05
<b>Vancouver to:</b>	5:53	3:52	2:45	6:19	9:10	9:45



## COMPETITIVE TRANSPORTATION RATES AND SERVICES

Quality service is one half of the equation for transportation efficiency. The other half is competitive pricing. Canadian transportation companies offer both - and in all modes.

Strong competition has kept trucking rates low. Competition is particularly stiff in the transborder sector, where the number of carriers has increased dramatically. In many cases, rates have fallen over the past few years.

In the domestic market, Canadian railways also face new competition as a result of the National Transportation Act. For example, the railways can be forced to let other carriers use their infrastructure to gain access to shipper facilities. Furthermore, shippers unhappy with proposed rates can apply for final offer arbitration. Railways have responded by investing in technology to reduce their administrative and operating costs, and eliminating unprofitable branch lines. Both Canadian railways have been quick to negotiate confidential service contracts with their major customers. Average revenue

per tonne-kilometre, an indicator of overall rail rates, has fallen since the mid-eighties.

Under the pressure of fierce global and North American competition, Canadian airlines offer highly competitive passenger and cargo rates.

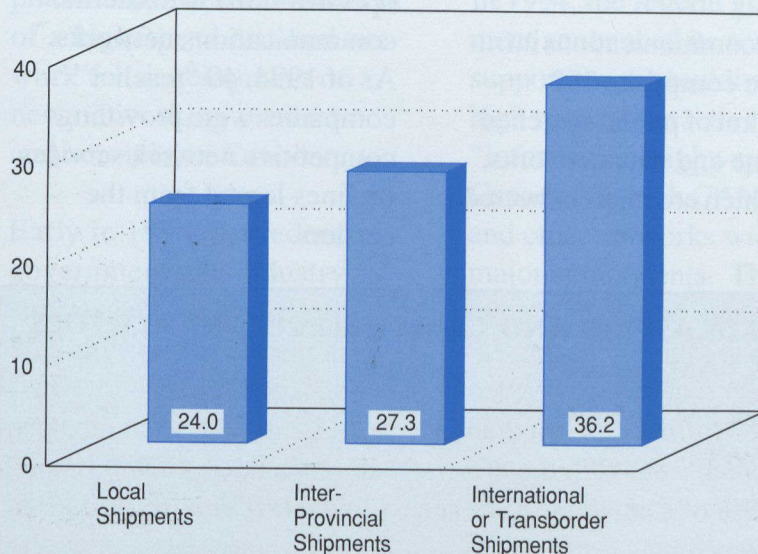
Canadian cities are located near the heart of important North American regional markets. World-class transportation infrastructure and competitive carriers make it quick and cost-effective to ship throughout North America and around the globe.

*"Many of our customers count on just-in-time delivery. Overall, we are quite pleased with the performance of our carriers. We have found they react quickly and professionally to our needs."*

**George Glade**  
**Traffic Manager**  
**Bristol Aerospace Limited**

### SHIPPERS SAY NUMBER OF CARRIERS COMPETING FOR THEIR BUSINESS HAS INCREASED

% of shippers reporting more carriers competing for their shipments during 1990



Source: National Transportation Agency of Canada Survey, 1992.



## COMMUNICATIONS INFRASTRUCTURE: A CANADIAN COMPETITIVE EDGE

Canada's communications infrastructure has evolved in response to the challenge of building a national community over vast distances.

The nation boasts many pioneering firsts, from the invention of the telephone in Ontario in 1874, through the 1972 deployment of the first national geostationary satellite telecommunications network, to completion of the world's longest fibre optic communications network in the 1980s.

Today, companies based in Canada have the competitive advantage of one of the world's most advanced systems of public and private networks.

The telecommunications infrastructure comprises 252 million km of public switched telephone and data networks, all of which are interconnected

with satellite, cellular telephone and mobile radio networks. Despite the size of the country, telephone service in Canada is virtually universal, with 16 million access lines bringing service to 99 per cent of households.

Businesses and homes in Canada are served by three national telecommunications networks. Two major carriers, The Stentor Alliance of 10 telephone companies, and Unitel Communications Inc. provide telephone services, while Teleglobe Canada supplies the linkage for overseas telecommunications service. In addition to the big three, 50 smaller independent companies serve various regions of Canada. Telesat Canada operates Canada's satellite communications networks. As of 1994, 40 "reseller" companies were providing competitive network services on lines leased from the carriers.

Canada has one of the most highly developed broadcasting systems in the world. The listening and viewing audience is served by over 1,000 AM and FM radio stations and 719 television stations. Cable television, pioneered in Canada, has now become the primary carrier of television signals to the home. More than nine of ten Canadians are connected to the cable system, which now includes pay TV and pay-per-view services.

Mobile telephone services are provided on the world's longest contiguous cellular networks by two national carriers, Rogers Cantel Inc. and Mobility Canada. Voice and data services to cars, trucks, ships and aircraft will be expanded with the launch by a private consortium of the MSAT satellite in 1994.

### PRIVATE NETWORKS

The business infrastructure includes a highly developed system of private voice and data networks operated by large companies and, in some cases, by third party suppliers. They include Local Area Networks (LANs) that link personal computers in a

#### **BROADCASTING AND CABLE TELEVISION FACILITIES**

- 613 AM stations
- 389 FM stations
- 719 TV stations
- 95% of Canadians have access to cable TV
- 250,000 satellite dishes for direct-to-home reception



## CONCLUSION

variety of settings including business and government offices, university campuses and hospitals.

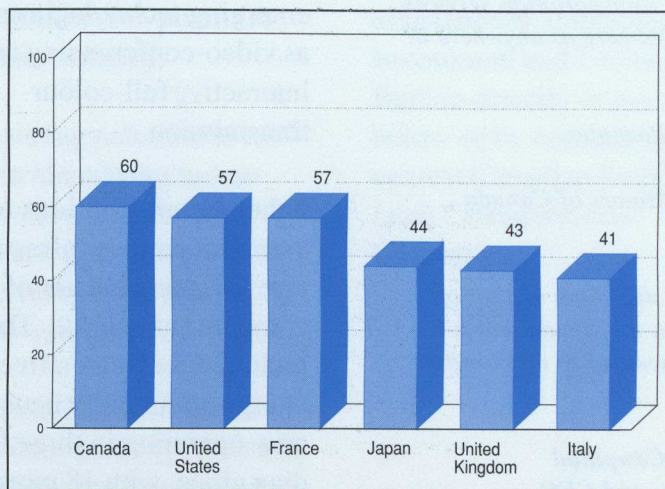
Canada's communications infrastructure is constantly being improved. Canadian telecommunications carriers, for example, are currently investing between \$5 billion and \$6 billion a year to maintain and upgrade their networks.

In 1993, the federal government and Canadian industry announced the cooperative launch of a major new communications infrastructure project – the \$1.2 billion Canadian Network for the Advancement of Research, Industry and Education (CANARIE).

Financed mainly by the private sector, CANARIE will link existing regional computer networks in each of Canada's 10 provinces.

CANARIE will bring researchers and educational communities into an interconnected, interactive network – and will also provide the gateway to international networks.

## TELEPHONE ACCESS LINES PER 100 POPULATION IN SELECTED COUNTRIES



Launched in 1993, the first \$100 million phase of the project calls for upgrading of CA\*Net, Canada's existing national R&D and educational network. As one of its main elements, the first phase calls for establishment of a high-speed test-bed network for development of new networking products and services in Canada.

Early in 1994, the federal government and industry announced the award of \$6.2 million for a total of 14 CANARIE Phase One projects to be conducted by 50 participating organizations including universities and research institutions. This

government/industry investment will lever investments of over \$23 million.

## THE INFORMATION HIGHWAY

In 1994, the federal government announced its active support for the building of a high speed, interactive "Information Highway" in Canada of which CANARIE and other networks will be major components. This interconnected and interactive "Highway" or network of networks will put a variety of new services within reach of Canadian homes, businesses, schools, hospitals, government offices and libraries.



*"Canada is also a good place to do business. Banking, communications and transportation services are as good here as anywhere in the world."*

**Georges Peapples**  
**President**  
**General Motors of Canada**

*"We find that there is a lot of innovation in Canada and it is very economical to do research here."*

**Michael Cowpland**  
**Chairman and CEO**  
**Corel Corporation**

The system will have the high band-width required for emerging technologies such as video-conferencing and interactive full-colour transmission.

Other recent additions to the communications infrastructure include a cluster of computer networks. They include FreeNet – a free-of-charge community network now operating in three Canadian cities, with 18 more planned for the future.

Other networks include OCRInet which links universities, research institutions and broad-band service developers in the national capital area.

Also under construction is an educational network called SchoolNet. When complete, it will connect Canada's 16,000 schools with each other, and with databases and other information sources throughout the world.

## **THE INFORMATION TECHNOLOGY INDUSTRY**

Canada's internationally-renowned information technology (IT) industry comprises some 13,500 firms employing 278,000 people.

The sector encompasses telecommunications equipment and services, computers, software and services, instrumentation, microelectronics, consumer electronics and office equipment.

Firms include the global giant Northern Telecom and its R&D affiliate, Bell-Northern Research, and other major contenders such as Bell Canada, Mitel, Newbridge Networks and SHL Systemhouse. As well, several multinationals have established major bases in Canada, including Digital, IBM and Xerox.

One of the fastest-growing sectors in the economy, the information technology industry has grown at a rate of 7.4 per cent per year and in 1992 its revenues accounted for 5.8 per cent of the nation's GDP.

Canadian information technology (IT) companies are responsible for approximately three per cent of worldwide production. During the 1990s the value of IT exports increased from \$9.2 billion to \$9.9 billion. Destination markets included the U.S., the E.C., the Pacific Rim and Latin America.



## CONCLUSION

The foregoing facts and testimonials from Canada's business community demonstrate that Canada's transportation and communications infrastructure represents sound business reasons for serving North American and global markets from Canada. More specific information is available on request from the address below.

The Investment and Technology Bureau of Canada's Department of Foreign Affairs and International Trade can help in other ways:

- in preparing company-specific briefs for potential investors, answering questions and describing relevant business conditions;
- in presenting specific Canadian investment opportunities to potential investors abroad;
- in assisting potential investors in identifying investment sites, investment partners, and appropriate government and private-sector contacts;
- in identifying appropriate Canadian partners for small and medium-sized companies with advanced technologies, interested in serving North American or global markets from Canada;
- in supplying current information on Canadian government policies, programs and incentives.

Potential investors can obtain additional information and assistance by contacting the Investment and Technology Bureau directly at the address below or by contacting the nearest Canadian Embassy, High Commission or Consulate.

## FOR MORE INFORMATION

INVESTMENT AND TECHNOLOGY BUREAU  
Department of Foreign Affairs and International Trade  
Lester B. Pearson Building  
125 Sussex Drive  
Ottawa, ONTARIO  
Canada K1A 0G2

Telephone: (613) 995-4128  
Fax: (613) 995-9604  
Telex: 053-4450









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