



Western Canada Where the Spirit of Innovation Finds a World of Opportunity

Western Canada is an ideal place to do business. Anyone searching for new trade and investment opportunities will be attracted by the wealth of advantages embodied in Canada's four western provinces, British Columbia, Alberta, Saskatchewan and Manitoba.

Easy access to markets and suppliers, competitive business costs, the availability of natural resources and innovative technologies, superb infrastructure and a quality workforce are all factors for which Western Canada presents distinct advantages. The region also offers some of the best living conditions in the world. Canada's West has provided fertile soil for hundreds of innovative industries, and there's plenty of room for more to grow.

Strategic Business Location

Consider Western Canada's location for its strategic features:

- **Close proximity to thriving economic regions** throughout North America and the Asia-Pacific region.
- **Efficient access to consumers and suppliers** through truck, air and rail services fully integrated with U.S. networks.
- **Nine major airports** including international airports in Vancouver, Calgary, Edmonton, Saskatoon, Regina and Winnipeg with **direct flights to the United States**.
- **Deep-sea ports with short shipping times between North America and the Asia-Pacific region** and world-class facilities servicing Asia and Western Canada.
- Vancouver is a **corridor to Asian markets** and resources, while Winnipeg is a gateway to the U.S. Midwest and Mexico.
- With broadband coverage second in the world only to Korea, Canada has a **superior information and communication technologies infrastructure** vigorously supported by provincial and federal governments.
- With a strong trade surplus, Canada offers **an ideal base for exporters** and its extensive **network of free export development services and intelligence** is available to all companies that produce goods and services in Canada.

Western Economic Diversification Canada



Competitive Business Costs

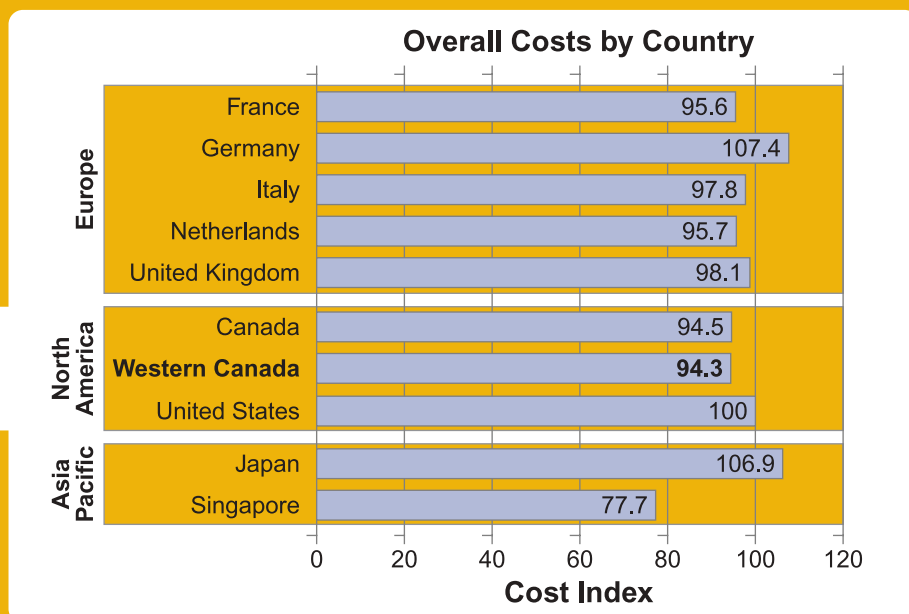
The cost of labour, transportation, utilities and taxes are among the key factors that cut into the bottom line. *Competitive Alternatives* (2006), KPMG's guide to international business costs, found that **Canada leads the G7 countries in low business costs, with a cost advantage of 5.5 points over the United States.** In Western Canada, **the average cost of doing business is 5.7 points less expensive than in the United States.** The Western Canadian cities in the study are all less expensive to do business in than comparable U.S. cities. All industries are less expensive to operate, some by as many as 18 points under their counterparts in the United States.

Among the countries analyzed by KPMG, Canada has

- the lowest costs for industrial facilities and electricity;
- the second lowest labour costs;
- competitive corporate tax rates for manufacturing operations; and
- lower expenses for benefit plans.

A Most Impressive R&D Tax Incentive Program

The Government of Canada's R&D tax incentive program is intended to encourage Canadian businesses in their search for new, improved or technologically advanced products and processes. Companies can apply for credits for wages, materials, machinery, equipment and overhead.





Natural Resources and Innovative Technologies

One of Western Canada's distinct advantages is its ability to efficiently extract and process its rich endowment of natural resources—petroleum and natural gas, timber, minerals and productive farmland. Now innovative technologies are also starting to distinguish the region.

Extensive R&D throughout the West has led to the development of technologies that enhance resource development and also contribute to economic diversification. Universities, governments and private companies collaborate to create technologically sophisticated industry clusters. Enclosed in this package are profiles of the **aerospace, agri-food and value added agriculture, biotechnology, environmental technologies, information and communications technology, and medical device industries**. Diversification is partly fueled by the development of a strong local market, particularly among new industries.

Primary and secondary industries in Western Canada benefit from their proximity to energy sources, raw materials and other resources, like water, that are necessary for production processes. Meanwhile, oil and gas produced in the West supply regional industries, as do regional sources of electricity.

Merging Innovation and Technology to Maximize Benefits from a Vast Range of Natural Resources

- Extensive R&D is being devoted to technologies that mitigate pollution in the production of oil and gas, and to technologies for the development of alternative fuels.
- Biotechnology techniques are being used to develop plants with novel traits like herbicide tolerance and pest, insect and virus resistance.
- The harvesting of timber now uses highly trained technicians armed with global positioning systems to locate stands for harvest and using joy sticks to fell trees.
- Modern sawmills and pulp and paper mills combine computers, robotics and precision instruments and machines to increase productivity and meet environmental standards.
- Technological innovations such as truck and shovel mining, hydro-transport and low-energy extraction are making oil sands extraction, upgrading and refining more profitable.
- Mining companies have increased their efficiency through mine-wide production systems, computerized 3-D seismology, robotic mining, directional drilling and measurement-while-drilling.

A Reliable, Supportive Infrastructure

Western cities enjoy

- efficient and extensive transportation networks;
- stable and affordable water, sewer and electric utilities;
- sophisticated research facilities and consortia, and science and business parks, and
- excellent broadband connectivity.

In recent years, tens of millions of dollars have been invested in Western Canada in municipal infrastructure projects by the federal, provincial, and municipal governments. Federal Budget 2006 renews the Government of Canada's commitment to local infrastructure by maintaining current financial support and adding significant additional funding.

Western Economic Diversification Canada



A Highly Skilled Workforce

Post-secondary education through universities, colleges and technical institutes is of high quality in Canada and government funding keeps student tuition costs low. The governments of Canada and the western provinces sponsor some 300 programs and services to provide training and skills. **There are 12 public universities in the West and dozens of colleges and technical institutes with programs to train individuals for most industries.** The private sector is also becoming more involved in educational partnerships and educational institutions work cooperatively with industry to develop students with the right training and skills to hit the ground running.

Canada is creating **an environment to attract the best and brightest from around the world.** The Government of Canada has implemented a program to facilitate the immigration of skilled workers and each provincial government has a program to encourage skilled workers to immigrate to their province. In Budget 2006, the government took measures to create an agency for the assessment and recognition of the credentials of foreign-trained immigrants, while getting those who are trained and ready to work in their fields of expertise into the workforce quickly.

An Enviably Quality of Life

All major western Canadian cities offer

- competitive cost of living;
- low health care and education costs;
- reasonable housing costs;
- low crime rates;
- excellent health care facilities;
- thriving cultural scenes; and
- abundant recreational opportunities.

The Western Advantage

Western Canada is a unique region with its own issues and priorities, benefits and qualities. The region contains 30 per cent of Canada's geography and population, and produces 32 per cent of the country's gross domestic product. **Recent real economic growth in the four western provinces exceeds the Canadian average,** which is among the highest in the world.

Western Canada ranks tops in lifestyle, enabling business to attract and retain talent from around the world. According to the 2006 Mercer Human Resources Quality of Living report, **Vancouver ranks third in the world for quality of life.** The same report found that **Calgary ranks first as the cleanest city.** That almost 20,000 companies have chosen Calgary as the location for their head office speaks volumes about the city and the region of which it is a part.

The Western advantage is more than just a phrase—it's a way of life and a way of doing business.



AEROSPACE

“Our company ranks Canada first internationally for access to well-educated workers. We get great people—graduates from first-rate engineering courses offered by Canadian universities.”

— Alain M. Bellemare, President,
Pratt & Whitney Canada

Western Canada’s Aerospace Industry Advantage

With annual revenues upwards of \$3 billion, Western Canada’s aerospace industry is taking off. Throughout the region, an estimated 17,000 people are directly employed in the industry, the majority of them contributing engineering, technical or management expertise. Western Canadian firms specialize in important markets, including

- repair and manufacturing of regional and commercial aircraft;
- maintenance, repair and overhaul of small gas turbine engines; and
- provision of parts and service for flight simulators.

Accounting for 14 per cent of Canada’s total \$22 billion industry performance, they are a key reason why **Canada’s aerospace industry is the fourth largest in the world**, behind only the United States, Britain and France.

Competitive Strengths

Maintenance, Repair and Overhaul (MRO)

- Proven expertise in large commercial and military transports, regional and business aircraft, helicopters and general aviation aircraft.
- Complete nose-to-tail service, covering the entire spectrum of line and heavy maintenance.
- Overhaul and modification of complete aircraft, engines and accessories, aircraft structures, systems and components, and avionics and instruments.

MRO Industry Leaders

- Standard Aero, headquartered in Winnipeg, is the world’s largest independent small turbine engine repair and overhaul company, conducting significant business with the US Air Force, among other aerospace and defence customers.
- Field Aviation and 25 other MRO companies in Calgary are working to develop a cluster of expertise in after-market products and services.
- Cascade Aerospace in Abbotsford, British Columbia, is one of North America’s top 10 MRO organizations and just won a contract valued at up to \$423.4 million to provide support for Canada’s fleet of C-130 Hercules aircraft.

Aerospace Assemblies, Sub-assemblies and Parts Industry

- Manufacturing strengths in primary flight structures, including horizontal and vertical stabilizers, wing and fuselage components, and sub-assemblies.
- Leading-edge capabilities in the fabrication of metal, composites and plastic aircraft components.

Aerospace Assemblies, Sub-assemblies and Parts Leaders

- Bristol Aerospace in Winnipeg specializes in the manufacture of aircraft structural components. Bristol Aerospace and the MDA Corporation in Richmond, British Columbia, are the only companies involved in the design and manufacture of small satellites in Canada.
- SED Systems in Saskatoon, Saskatchewan, has been a leading provider of sophisticated communication systems to the satellite industry for over 20 years. Clients include major satellite operators, manufacturers and broadcasters such as Intelsat, Boeing, Hughes, Lockheed Martin, WorldSpace and the European Space Agency.
- Boeing Canada Technology in Winnipeg operates the largest aerospace composite manufacturer in Canada, and is a Tier I and II supplier for Boeing’s 787 Dreamliner family of next-generation aircraft.
- Avcorp Industries in Delta, British Columbia, is a leading supplier of primary and secondary flight structures, including stabilizers, flight control surfaces, fuselage components and interior panel assemblies.

Why Invest in Western Canada's Aerospace Industry?

Cost-Competitive and Trade-Friendly

Canada's business costs rank as the lowest among the G7 countries with a 6.5-point advantage over the United States, a 13-point advantage over Germany and a 15-point advantage over Japan. Canada's labour and benefit costs are the lowest in the G7 (Source: 2006 edition of KPMG's *Competitive Alternatives*, a guide to international business costs).

Low-Cost Leaders of Western Canada

- Winnipeg is the leading low-cost aerospace manufacturing location among cities in the Midwestern and Pacific regions of North America.

Highly Skilled and Productive Workforce

The value added by employees in aerospace manufacturing was 24 per cent higher than the manufacturing average over the 1993–2003 period. **Canada has more post-secondary graduates per capita than any other country, including more than 25,000 engineering and science graduates annually.** Western Canada's universities and colleges have internationally recognized programs to train aerospace engineers, aviation technicians and aircraft maintenance engineers.

More Reasons to Invest in Western Canada

- Gain access to leading Canadian aerospace multinationals, such as CAE, Bombardier Aerospace and Magellan Aerospace
- Work with top-tier original equipment manufacturers, including Avcorp Industries, Standard Aero and Spar Aviation Services
- Benefit from generous R&D tax treatments
- Profit from low operating and business costs
- Gain access to American aerospace companies, such as Boeing in Seattle, Washington, and Cessna in Wichita, Kansas
- Springboard into the aerospace manufacturing industry in California

Solid Research and Development Infrastructure

Canadian-based aerospace firms annually invest more than \$1 billion in research and development. A network of research and development institutions in Western Canada, which includes the Cold Lake, Alberta, Aerospace Engineering and Test Establishment, contributes to advances in this technology-intensive industry while industry associations in every province support its growth and development.

Western Canada—A Developing Centre of Advanced Technology

- **British Columbia:** capabilities in earth observation and remote sensing
- **Alberta:** an emerging unmanned vehicle systems sector and an active defence electronics sector
- **Saskatchewan:** focus on satellite-based communication systems, products and services
- **Manitoba:** a leader in composites manufacturing and home to the Composites Innovation Centre

A Climate for Growth

In 2003, Brussels-based Asco Industries—a specialist in aircraft components—chose Delta, British Columbia, as its base for North American operations. The aerospace company had been searching for a North American location for four years to be closer to major customers that include Avcorp, Bombardier and Boeing. Assisted by the Canadian embassy in Brussels and the provincial government, Asco purchased the Canadian company Ebco Aerospace near Vancouver and renamed it Asco Aerospace Canada Ltd. More recently, ambitious plans to continue to build up Asco's North American presence have seen the parent company invest up to \$20 million to modernize and increase the size of the Delta facility, which includes one of the largest five axis gantry profilers in Canada.

"Our goal in creating Asco Aerospace Canada is to grow business with current and new customers in the North American market. We also intend to invest in additional capabilities, such as design and 'lean manufacturing' techniques, in order to better position ourselves with our clients and to take on new projects for civil and military aircraft."

— Christian Boas, President and CEO, Asco Aerospace Canada.



AGRI-FOOD

“There’s a perception of quality that goes along with the name of Canada and that’s a huge advantage for our marketing.”

— Murad Al-Katib, President, Saskcan Pulse Trading Inc.

Western Canada’s Value-added Agri-Food Advantage

From premium wine to nutraceuticals and organics, Western Canada has developed a diverse, cost-competitive and research-driven agri-food industry. Western Canadians use innovative science and technology to turn quality ingredients into exceptional products. Along with a range of raw agricultural materials, the region has a world-renowned food inspection system, a strong, cost-effective research capacity, and a collaborative environment among governments, universities, health institutions and industry. **Western Canada is a centre of global excellence for the research and production of a wide variety of award-winning agri-food products** and a major investment destination for food and beverage companies.

Competitive Strengths

Canola and Canola Oil

- **World leader in canola seed production**, averaging 6.2 million tonnes per year.

- Global centre for spring canola research focused on improving yield, quality and resistance to disease.
- Industrial capacity in processing and manufacturing canola into a variety of products such as high oleic canola oils, margarines and animal and specialty feed ingredients.

Increased Global Demand for Canola Oil

- The Cargill Oil Seed Processing facility currently processes 2,400 tonnes per day of canola out of Clavet, Saskatchewan. Although the facility is the largest soft-seed plant in North America, in July 2006, Cargill announced plans to expand the facility and increase its canola crush to 3,000 metric tonnes per day. The expansion is linked to Cargill’s focus on the increased global demand for vegetable oil.
- Bunge Canada operates four canola-processing plants in Western Canada. In January 2006, it announced plans to expand the oilseed crusher and oil refinery capacity at its Nipawin, Saskatchewan, plant to better serve growing consumer demand for nutritional oils.

Grapes and Wine

- Rapidly growing wine industry in British Columbia: From 13 wineries in 1984, there are now 133, and licences pending for another 24.
- Internationally recognized for the quality of its wines: BC wines have won 950 medals in international competitions.
- Meeting the high standards set by the Vintners Quality Alliance since 1990: Sales of British Columbia’s VQA wine reached a record \$134

million in the year ending March 2006, climbing from 10 to 20 per cent annually since VQA standards were established.

- Recognized as the world leader in ice wine production: 40 to 50 wineries in British Columbia and Ontario produce ice wine that meets the exacting growing standards and production standards of the VQA.

Functional Foods and Nutraceuticals

- Leader in development and manufacturing of essential fatty acid products.
- Expert in formulation and manufacturing of vitamins, minerals and antioxidants.
- Industrial capacity in value-added processing and extraction of nutritionally valuable constituents.

Functional Foods and Nutraceuticals Leaders

- Bioriginal Food and Science in Saskatoon is the world’s leading supplier of essential fatty acids.
- Vita Health Products in Winnipeg is Canada’s largest manufacturer of private label vitamins, minerals, herbal products, dietary supplements and over-the-counter drugs.
- Forbes Medi-Tech in Vancouver is globally recognized for developing proprietary functional food ingredients derived from plant sterols.
- CV Technologies in Edmonton combines eastern herbal remedies with western scientific methods to make COLD-FX, the official cold and flu remedy of the NHL.

Why Invest in Western Canada's Agri-Food Industry?

"We decided to expand in Nipawin, Saskatchewan, because we have a talented base of employees and strong relationships with local growers and the surrounding community."

— Larry Clarke, General Manager, Bunge North America's Oilseed Processing operations

Canada is **the world's fourth largest exporter of agriculture and agri-food products**. Canadian agri-food products are exported to more than 175 countries, with 63 per cent going to the United States, 10 per cent to Japan and 5.9 per cent to the European Union. In the past decade, the value of Canada's agri-food exports has more than doubled to \$26.2 billion in 2005, making the agri-food sector a key driver of Canada's economy.

More Reasons to Invest in Western Canada

- Low operating and business costs
- Generous R&D tax treatments
- Seamless access to the United States
- Advanced food technologies
- Reliable access to safe and high-quality raw materials

Cost-Competitive and Trade-Friendly

Canada's business costs rank third lowest among the G7 countries with a 4-point advantage over the United States, a 5.2-point advantage over Germany and an 8.5-point advantage over Japan. Canada's labour and benefit costs are the lowest in the G7. (Source: 2006 edition of KPMG's *Competitive Alternatives*, a guide to international business costs)

Low-Cost Leaders of Western Canada

- Edmonton, Calgary and Saskatoon are the three leading low-cost agri-food processing locations among cities in Midwestern North America.
- In cities in the Pacific region of North America, Vancouver placed second as the most cost-competitive agri-food processing location.

Solid Research and Development Infrastructure

Canada's international reputation for ensuring food safety and quality is a result of its commitment to growth in the food industry, its access to top-notch research facilities and its financial support and tax incentives for research and development. The Canadian Food Inspection Agency provides world-class production standards across the food and agriculture industry. A network of state-of-the-art facilities for applied research and development includes the Canadian Centre for Agrifood Research in Health and Medicine in Winnipeg, the University of Manitoba's Richardson Centre for Functional Foods and Nutraceuticals, the POS Pilot Plant Corporation in Saskatoon and the Food Processing Development Centre in Leduc, Alberta. The quick and easy access companies have to Government of Canada trade and market development programs also contributes to the success of the Canadian agriculture and agri-food industries.

A Climate for Growth

In 1989, Nisshin Seifun Group Inc. of Japan purchased Rogers Foods Ltd., a flour and cereal mill situated in British Columbia's North Okanagan Valley. Nisshin recently invested more than \$20 million to double its capacity to take advantage of domestic markets, as well as exciting new market opportunities in the United States. With demand growing for its products, Rogers Foods is building a new, 12,000-square-metre mill in Chilliwack that will process 250 tonnes of grain daily.

"Besides the advantage of excellent road and rail transportation corridors, we selected Chilliwack because of the community's commitment to agriculture and agricultural infrastructure. The support provided by the city through Chilliwack Economic Partners Corporation and the Mayor's Office was also a factor in deciding that we should become long term members of the Chilliwack business community."

— Vic Bell, President, Rogers Foods.



BIOTECHNOLOGY

“Canada provides broad access to early-stage capital, world-class scientific research and progressive universities. This combination offers all kinds of opportunities for entrepreneurship in biotechnology.”

— Ian McBeath, President and CEO, Inflazyme Pharmaceuticals Ltd., Richmond, British Columbia

Western Canada’s Biotechnology Advantage

Biotechnology, whether used to create new vaccines, improve crop varieties or create alternative fuels, is breaking ground around the globe. **Canada is ranked second only to the United States for biotechnology.** In Western Canada, the biotechnology sector has expanded rapidly in the last decade in revenues, new companies and the diversity of products. Currently Western Canada biotech revenues stand at \$656 million from 190 biotech companies, with more than 3,000 employees.

Competitive Strengths

Pharmaceuticals and Human Health

- British Columbia ranks as one of the top 10 locations in North America for the size of its biotechnology cluster. The majority of its biotechnology companies are

engaged in health research including **QLT and Angiotech, which are among the world’s first profitable biotech companies.**

- **Manitoba is a hub for biopharmaceutical manufacturing activity** and, along with British Columbia, has one of the fastest growing biotechnology sectors in Canada. The province is home to several industry-leading firms including Cangene and Biovail, and is supported by research labs like the Canadian Science Centre for Human and Animal Health, which is located in Winnipeg. Key focus areas include cardiovascular and respiratory diseases, neuroscience, metabolism and nutrition, cell biology and gene therapy, infectious diseases, diagnostics and contract research.
- Alberta’s biotech sector is widely **recognized for research excellence in genomics and proteomics, bioinformatics and immunotherapeutics**, and includes firms such as BioMS Medical, whose lead technology for the treatment of multiple sclerosis is currently in Phase 3 clinical trials across Canada and Europe, and Isotechnika Inc., which is developing therapeutics for the treatment of autoimmune diseases and for use in the prevention of organ rejection in transplantation.

Agricultural Biotechnology Facilities

- Saskatchewan is one of the **world’s leading research centres in agricultural biotechnology** with recognized capabilities in agricultural genomics, new crop varieties, nutraceuticals and functional foods and animal health. For example, the Canadian Light Source in Saskatoon has a unique capacity in protein identification that has applications in seed development and structure assessment, and in animal feed and health areas.
- There are several new ethanol plants either in the planning stage or currently under construction. Husky Energy of Calgary recently built a new \$145 million facility on its existing site in Minnedosa, Manitoba, and new plants are expected to start operations in 2006 in Weyburn, Saskatchewan, and Lloydminster, Alberta.

“The science and the initial infrastructure were here, and Calgary is where we laid down our roots.... We have been able to recruit the necessary talent locally almost without exception.... Alberta is a great strategic location for us and our success proves that.”

— Andrew Baum, President and CEO, SemBioSys Genetics

Additional Benefits of Western Canada’s Biotechnology Industry

- Extensive government and industry support
- BIOTECANADA, a national association representing the broad spectrum of biotech constituents
- Leading-edge industry associations in each of the western provinces

Why Invest in Western Canada's Biotechnology Industry?

Cost-Competitive and Trade-Friendly

Canada ranks first among G7 countries as the most cost-competitive investment location for biotechnology with a 10.1 point advantage over the United States, 18.3 point advantage over Japan and a 23.4 point advantage over Germany. Western Canada provides an even greater advantage with 11.8 points over the United States and 20 points over Japan. Canada also offers the lowest labour and benefits costs and the lowest corporate income tax rate in the G7. (Source: 2006 edition of KPMG's *Competitive Alternatives*, a guide to international business costs)

Solid Research and Development Infrastructure

The Canadian government invests more per-capita dollars on education than any other country in the world. More than half of all adult Canadians have been educated at a university, college or technical school. Canada has also implemented a fast-track immigration system for skilled workers, helping universities and firms to attract top talent from around the world.

There are more than 30,000 biotech investigators in 16 Canadian universities affiliated with a network of some 100 teaching hospitals and research institutes. Additionally, each of the four western provinces has a network of first-class local and national government R&D facilities such as the Plant Biotechnology

Institute in Saskatoon and Winnipeg's Institute for Biondiagnostics and the Canadian Science Centre for Human and Animal Health, the only facility worldwide with Level 4 biocontainment labs for humans and animals.

Public Investment in Western Canada's Research and Development

Most of Western Canada's biotechnology companies have been built on discoveries in universities, research hospitals and government laboratories. **The University of British Columbia, for example, has spun off 117 different companies since 1984** while the University of Saskatchewan's Vaccine Infectious Disease Organization is credited with five world first animal vaccines and has more than 70 patents in the United States with more than 30 pending.

Over the past several years, the Government of Canada has substantially increased its support for R&D, and funding for individual biotech firms. For instance, Genome Canada's three western regional centres—Genome BC, Genome Alberta, and Genome Prairie—are currently funding and managing 45 large-scale genomics and proteomics research projects.

Extensive Federal Support

"The Government of Canada's focus is making sure that the business environment is supportive of biotechnology industries. We want to encourage stronger partnerships among industries involved with biotechnology and between those firms and public research institutions, as well as attract more foreign investments and funding R&D."

— Maxime Bernier, Minister of Industry

Strategic Alliances and Commercial Successes

Many Western Canadian biotech companies have forged strategic global partnerships and attained extraordinary commercial success.

- TAXUS, a coronary stent system developed by Vancouver's Angiotech Pharmaceuticals, has been implanted in more than a million patients worldwide and is **the most successfully launched product in medical history with sales totalling US \$2.14 billion in 2004**, enabling Angiotech to achieve the status of World Economic Forum Technology Pioneer and BIOTECanada's 2004 Biotech Company of the Year.
- In 2003, Calgary's SemBioSys Genetics acquired technology assets and intellectual property related to the manufacture of biopharmaceuticals from Syngenta, a world-leading agribusiness. It has also forged partnerships with Dow AgroSciences, Arcadia Biosciences, Martek Business Corporation and Lonza in the United States. With revenues of more than \$2.4 million in 2005, SemBioSys was named BIOTECanada's 2005 Biotech Company of the Year.
- Winnipeg's Cangene is a world leader in the development, manufacture and distribution of specialty hyperimmune plasma and biotechnology products. One of Canada's largest and most profitable biotechnology companies with headquarters in Manitoba and a facility in Baltimore, Maryland, Cangene uses patented manufacturing processes to produce plasma-derived and recombinant therapeutic proteins and is a key supplier of biodefense programs in the US, Canada and the UK.



ENVIRONMENTAL TECHNOLOGIES

“BW Technologies has derived significant benefits by being located in Alberta. Key advantages have included the ability to raise funds from established entrepreneurial investors, Alberta’s favourable cost of doing business, and a well-educated work force committed to meeting any challenges.”

— Neil R. Campbell, Director,
International Sales, BW Technologies

Western Canada’s Environmental Technologies Advantage

There are more than 2,960 environmental technology firms in Western Canada, representing almost 40 per cent of the Canadian total. With more than 56,000 people currently employed in Western Canada’s environmental technology sector, the **workforce is growing 60 per cent faster than that of the Canadian economy** as a whole. Western Canada is well positioned to continue to generate, adapt and integrate marketable technologies, thanks to

- a strong network of skilled engineering and technical talent nurtured in cutting-edge specialized educational programs across the region;
- progressive commercialization incentives; and
- a well-established resource sector.

These dynamic assets coupled with access to the burgeoning environmental solutions markets of the United States, which is estimated at \$1.1 billion, and the Asia-Pacific region make Western Canada the ideal location for environmental technology investment.

Competitive Strengths

Waste and Wastewater Treatment Solutions

- Edmonton, Alberta’s Gold Bar wastewater treatment plant, which cleans 100,000 megalitres annually, is one of the more innovative facilities in North America, while Earth Tech’s Swan Hills Hazardous Waste Treatment Centre is the only facility of its kind in Canada and one of the few in the world.

Alternative Energy Sources

- British Columbia has the largest concentration of fuel cell expertise in Canada. Other Western Canadian “home-grown” alternatives to fossil fuels include clean fuel technologies, small-scale hydro and biomass co-generation systems, such as a full-scale wood waste gasification system developed by Vancouver’s Nexterra that will be used to heat an existing lime kiln at Weyerhaeuser’s Kamloops cellulose fibre mill.

Environmental Management Excellence

- Several Western Canadian environmental firms are world leaders in environmental and engineering services, including Saskatoon’s CanGlobal Management, which has developed environmental information systems for clients in North America, Central and South America, and Central and Eastern Europe; and Stantec Consulting, which has consulted on a variety of waste treatment facility and environmental remediation projects in Canada, the United States and abroad.

Western Canada—A Hotbed for Environmental Solutions

- **Alberta:** Canada’s third largest environmental industry, supporting the province’s resources and manufacturing industries, particularly those related to energy
- **British Columbia:** established clusters in fuel cell technologies, water and wastewater treatment and increasingly in green buildings
- **Manitoba:** industry dominated by environmental research and development with significant strengths in geothermal, biofuels, transportation refuelling systems and wind energy
- **Saskatchewan:** mainly focused on environmental services, such as impact studies, audits and regulations, related to energy, agriculture and mining sectors

Why Invest in Western Canada's Environmental Technologies Industry?

Western Canada's Low-Cost Business Advantage

Canada is ranked high among the nine countries surveyed from Europe, North America and the Asia-Pacific region in KPMG's *Competitive Alternatives*, a guide to international business costs. The 2006 survey also found that the cost of doing business in Edmonton, Saskatoon, Winnipeg, and Calgary was on average at least four points lower than their counterparts in the United States.

Solid Research and Development Environment

The Government of Canada continues to support and work with the environmental technology sector on several important initiatives, including regulatory regimes, fiscal incentives and demonstration projects. One such demonstration project is the Weyburn CO₂ Monitoring and Storage Project in Saskatchewan. Managed by the Petroleum Technology Research Centre, the project demonstrated the economic feasibility of injecting CO₂ into aging oil reservoirs for enhanced oil recovery while storing the CO₂ underground instead of releasing it to the atmosphere. The Canadian Light Source synchrotron, a major research facility, at the University of Saskatchewan is another exceptional project. The facility, which officially opened in October 2004, is being used by mining companies such as Areva to assess mine tailings for identification and monitoring purposes.

Environment-related Expertise at Your Doorstep

- Excellent university programs to support R&D efforts
- Solid selection of skilled patent and trademark law firms
- Growing number of research laboratories and technology testing facilities
- Easy access to market intelligence and environmental marketing expertise
- Range of first-class government, university and private R&D facilities

Innovative Engineering Creates Burgeoning Global Opportunities

Innovation within Western Canada's engineering community has resulted in numerous companies that are focused on developing creative solutions and contributing to sound resources management across Canada and around the world.

- Kraus Global in Winnipeg is a **worldwide leader in alternative refuelling station packages** for compressed natural gas (CNG), liquefied petroleum gas (LPG) and compressed hydrogen fuel. The company has more than 3,000 installations around the world, including the first CNG bus stations in Mexico, a comprehensive LPG refuelling infrastructure in Turkey, the world's first retail-style hydrogen dispensers for "fast fill" dispensing in Munich, and the first indoor CNG bus refuelling facility in the world in London, Ontario.

- Ground Effects Environmental Services was named Saskatchewan's Trade and Export Partnership's 2005 Exporter of the Year. The Regina-based company has **developed more than 70 new products** since its inception in 1998 and 96 per cent of its sales are exports to countries such as the U.S., Japan, China, Trinidad and Australia.
- Sequoia Energy, a Canadian wind developer, recently partnered with U.S.-based Global Renewable Energy Partners to develop the \$90-million St. Léon Wind Energy Farm located 150 kilometres southwest of Winnipeg. The installation is **one of Canada's largest wind farms and the first independent power project in Manitoba**. All of the power generated from the St. Léon turbines is sold to Manitoba Hydro under a 25-year agreement.

Technology Commercialization

"Western Canada's competitive advantage in research and development of environmental technologies means higher productivity and a rising quality of life. Canada's New Government supports technology commercialization as an essential component of our future economic prosperity."

— Carol Skelton, Minister of National Revenue and Minister of Western Economic Diversification



INFORMATION AND COMMUNICATIONS TECHNOLOGIES

“Canada has world-class universities and skills, a solid telecommunications infrastructure, and it’s one of the most connected countries in the world. It also has a growing reputation for providing a business climate that fosters innovation and breeds success.”

— Ed Kilroy, President,
IBM Canada Ltd.

Western Canada’s Information and Communications Technologies Industry Advantage

From multimedia, video games and software design to information technology and wireless technology, Western Canada is carving a niche for itself in the information and communications technologies (ICT) industry. Hundreds of up-and-coming enterprises, a number of established mid-sized firms and many global companies are building the reputations of Vancouver, Winnipeg, Saskatoon, Edmonton and Calgary as homes to dynamic industry clusters. These clusters of world-class expertise are **generating \$20.3 billion in revenues and employing approximately 100,000 people.**

Competitive Strengths

Wireless Technology

- Leading capabilities in all areas of the wireless value chain, from wireless telecommunications, infrastructure and devices to enabling software and mobile applications.
- Unique focus on oil and gas industries, including global positioning systems for the energy sector.

Wireless Leaders and Innovators

- **British Columbia:** includes leading players, such as Sierra Wireless and MDSI, as well as innovators like Colligo and Contec
- **Alberta:** home to a fast-growing wireless communications industry that includes firms like Wi-LAN and CSI Wireless
- **Saskatchewan:** location of world-leading companies such as Vecima Networks, which designs and manufactures wireless communication products, and International Road Dynamics, a maker of highway traffic management products and systems
- **Manitoba:** includes global companies such as AML Wireless and InfoMagnetics Technologies, which is internationally recognized for satellite, terrestrial and microwave antennae design

New Media and Gaming

- Proven expertise in digital animation, visual effects and post-production services.
- State-of-the-art film and television production facilities and services in every province, making Western Canada a key location for Hollywood productions.
- Thriving interactive game industry generating revenues in excess of \$1.2 billion per year.
- Over 150 companies, including some of the top game companies in the world.
- Active and rapidly growing software sector specializing in e-commerce solutions and e-learning.

Video Game Leaders and Innovators

- Electronic Arts in Burnaby, British Columbia, is the world's biggest interactive entertainment software company, bringing in more than \$2 billion in revenue each year. It has been added to Standard & Poor's 500 index.
- BioWare, an electronic entertainment company located in Edmonton and specializing in video games, recently participated in a \$300 million merger with Pandemic Studios to form one of the strongest independent game development companies.
- Frantic Films in Winnipeg is a groundbreaking live-action, visual effects, 3D animation and commercial production company whose growing roster of clients includes Warner Bros., Paramount Pictures, 20th Century Fox, ABC Television, History Television and Life Network, to name a few.

Why Invest in Western Canada's Information and Communications Technologies Industry?

Companies like Nokia, Sierra Wireless and many more have all either set up major operations or are working closely with Western Canadian partners. That's because Western Canada offers many types of investment opportunities for success, including

- direct investment;
- partnerships, strategic alliances and joint ventures;
- subcontracting; and
- research and development collaborations.

More Reasons to Invest

- Reduce costs by outsourcing manufacturing activities
- Access to the United States and Canadian markets
- Partner with Western Canadian companies
- Profit from generous R&D tax treatments
- Market to more Internet users per capita than any other country in the world
- Take advantage of one of the highest broadband penetration rates in the world, second only to Korea

Cost-Competitive and Trade-Friendly

Canada's business costs rank the lowest among the G7 countries with a 7.0-point advantage over the United States in software development, and a 6.2-point advantage in web and

multimedia development. Canada's labour and benefit costs are the lowest in the G7. (Source: 2006 edition of KPMG's *Competitive Alternatives*, a guide to international business costs)

Low-Cost Leaders of Western Canada

- Edmonton, Winnipeg and Calgary are three of the top four leading low-cost telecommunications locations among cities in Midwestern North America.
- In cities in the Pacific region of North America, Vancouver is the second most cost-competitive telecommunications location.

Highly Skilled and Productive Workforce

Canadian universities produce more than 25,000 graduates a year in mathematics, engineering, and pure and applied sciences. This translates into an ICT workforce with a high level of education and training. In 2004, 38 per cent of all workers in the industry had a university degree, compared to a national average of 21 per cent.

Solid Research and Development Infrastructure

Western Canada's ICT industry invested \$62.4 million in research and development in 2002. A high-powered R&D environment, which includes networks of centres of excellence such as the Mathematics of Information Technology and Complex Systems, and the Canadian Design Research Network, fosters collaboration between industry, government and academia. In Saskatchewan, the

Canadian Light Source Nano Structures Facility will enable the development and pilot production of next-generation device structures for electronic and wireless-optical communications applications. The ICT industry as a whole is given brainpower and innovative technologies by TRILabs, the largest ICT R&D consortium, with locations in Edmonton, Calgary, Regina, Saskatoon and Winnipeg.

A Climate for Growth

Norwegian software company eZ systems recently selected Vancouver as the location for its new North American head office. Because eZ's growth strategy includes expanding its American and Canadian customer base, an office close to new and existing customers and partners makes sense for the growing company. After considering Silicon Valley and Boston, they looked at Vancouver and its dynamic software industry. Vancouver will allow eZ systems to more effectively market its enterprise open source software and support its North American clients. It also includes an excellent local talent pool, lower costs and peer companies working in the same space.

"Vancouver is a great city to grow a technology business in. It has a strong local IT community, is a gateway to several major markets and—most importantly—provides an excellent fit for our Scandinavian corporate culture."

— Zak Greant, Managing Director, North America for eZ systems.



MEDICAL DEVICES

“Thanks to the skills and dedication of our Manitoba workforce, both the health care and corrosion protection operations have earned internationally recognized ISO quality registration.”

— Ernie King, Vice-President,
Manufacturing and Engineering,
3M Canada Company

Western Canada's Medical Device Industry Advantage

Relatively young and very diverse, Western Canada's medical device industry is already having a global impact. Products that include specialty contact lenses, artificial heart valves, diagnostic imaging systems, orthopaedic prosthetics and medical laboratory diagnostic instruments are improving everyday living and saving lives—as well as contributing to Canada's economy. With sales of medical devices by Canadian firms generating \$3.8 billion in 2003 and increasing to \$5 billion in 2005, much of the world is benefiting from Canadian technology. Exports, primarily to the United States, but also to Germany and Japan, account for almost 60 per cent of the industry's total net sales.

In Western Canada, **more than 200 companies employing an estimated 4,000 people are developing, manufacturing and selling their medical devices.**

Many innovative firms are concentrated in Vancouver, British Columbia, supported by the research carried out at the universities in the province. The University of British Columbia is the first-ranked academic institution and third-ranked organization overall in Canada for the number of U.S. patents granted between 1997 and 2002, behind only Nortel Networks and Siemens. Calgary, Edmonton and Winnipeg are other leading cities investing in the research-based device industry. The pioneering activity of Western Canadian device and drug-device companies, such as VSM MedTech, RIVA (Robotic IV Automation) and QLT, are attracting the attention of the investment community.

Award-Winning Products

- Helen Keller Prize for Innovation in Eye Care, QLT Inc., Vancouver, for Visudyne, which treats wet (neovascular) age-related macular degeneration, the leading cause of blindness in people over the age of 50.
- Best New Radiology Vendor, Innovative Magnetic Resonance Imaging Systems, Winnipeg, which designs and manufactures surgical imaging systems for neurological, spinal and soft tissue procedures.
- Medical Imaging Product Value of the Year Award, Imaging Dynamics Company (IDC), Calgary, for its Xplorer 1600 digital radiography system.

Competitive Strengths

Cardiovascular Devices and Treatments

- In Burnaby, British Columbia, a division of the Sorin Group has developed and manufactures a unique heart valve made from biological material derived from bovine tissue. It normally requires no ongoing anticoagulant therapy, making it preferable for many patients.
- Vancouver-based Angiotech Pharmaceuticals pioneered drug-coated stents, one of the most promising breakthroughs for the medical device industry and the foundation of the multi-billion-dollar global stent business.

Assistive Technologies

- Madentec Limited, in Edmonton, Alberta, is a world-leading supplier of assistive technologies, designing and manufacturing products that provide people with physical disabilities 100-per cent hands-free access and control of computers and communication devices. The award-winning company has identified a new market for its technology solutions: now dentists and surgeons who use Madentec products can perform sterile procedures while manipulating medical images remotely.

Why Invest in Western Canada's Medical Device Industry?

Foreign-owned companies looking for commercial partners will find that Western Canadian medical device firms operate in niche markets and develop partnerships with complementary firms. For example, Phenomenome Discoveries in Saskatoon, Saskatchewan, which uses its proprietary metabolomics technology to study the global effects of genetic and environmental changes on living organisms, welcomes strategic partnerships. Foreign companies will also find a market for the sale of intellectual property.

More Reasons to Invest

- Relatively short development windows and rapid market access
- Less costly and time-consuming clinical trials than for pharmaceuticals
- Multiple access points to assess, participate in, and benefit from research developments
- Immediate and full write-off for all expenditures in R&D capital equipment, and appreciable tax credits
- Low operating and business costs
- Generous R&D tax treatment

Cost-Competitive and Trade-Friendly

Canada's business costs rank the lowest among the G7 countries with a 4.1-point advantage over the United States, an 11.3-point advantage over Germany and a 10.2-point advantage over Japan. Canada's labour and benefit costs are the lowest in the G7. (Source: 2006 edition of KPMG's *Competitive Alternatives*, a guide to international business costs)

Low-Cost Leaders of Western Canada

- Saskatoon, Edmonton, Winnipeg and Calgary are the four leading low-cost medical device locations among cities in the Midwestern United States and Western Canada.
- In cities in the Pacific region of North America, Vancouver is the second most cost-competitive medical device location.

Highly Skilled and Productive Workforce

Canada's health science research community comprises more than 30,000 investigators in 16 medical schools, and approximately 100 teaching hospitals and research institutes. Among the OECD countries, Canada has the highest percentage of individuals with at least a college or university education.

Solid Research and Development Infrastructure

The medical device industry draws on world-class research conducted in Western Canadian universities, research institutes and hospitals. The Government of Canada has funded

research support programs, including the Canadian Institutes of Health Research, which provides funding for health research in 13 key areas. Ten health-related networks of centres of excellence for areas such as photonic innovations, robotics and intelligent systems, and microelectronic devices, circuits and systems, are also available to facilitate prototype development, production and manufacturing, as well as R&D and access to specialized input. A dedicated medical beamline at the recently established Canadian Light Source in Saskatoon, Canada's only synchrotron research facility, has enormous potential to support discovery and innovation in medical diagnostics and treatment, as well as pharmaceutical drug development.

A Climate for Growth

McKesson Corporation, a pharmaceuticals distributor headquartered in California, was looking to strengthen its distribution network and improve its technology portfolio. In 2002, McKesson purchased A.L.I. Technologies of Richmond, British Columbia, for \$536 million, the largest cash acquisition of a B.C. technology company at the time. A.L.I. Technologies had developed a state of the art medical digital imaging system. Now known as McKesson Medical Imaging Group, the company provides digital imaging systems to a wide variety of medical installations throughout the world. The head office of the McKesson Medical Imaging Group remains in Richmond.