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Bio-Industries

Canada's International Business Strategy

1996-1997



Team Canada - Equipe Canada

Canada's International Business Strategy

is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities.

The following documents are available:

- | | |
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| Overview | 14. Forest Industries |
| 1. Advanced Manufacturing Technologies | 15. Information Technologies and Telecommunications |
| 2. Aerospace and Defence | <i>Overview</i> |
| 3. Agriculture, Food and Beverages | <i>Telecommunications Equipment and Services</i> |
| 4. Arts and Cultural Industries | <i>Software Products, Computer Services and New Media</i> |
| 5. Automotive | <i>Geomatics</i> |
| 6. Bio-Industries | <i>Computers, Peripherals and Instrumentation</i> |
| 7. Business, Professional and Educational Services | <i>Electronic Components</i> |
| 8. Chemicals, Plastics and Advanced Materials | 16. Medical and Health-care Products and Services |
| 9. Construction Products and Services | <i>Medical Devices</i> |
| 10. Consumer Products | <i>Pharmaceuticals</i> |
| <i>Apparel</i> | <i>Health-care Services</i> |
| <i>Textiles</i> | 17. Metals, Minerals and Related Equipment, Services and Technology |
| <i>Footwear</i> | 18. Oil and Gas Products and Energy Equipment |
| <i>Sporting Goods</i> | 19. Resource Equipment and Technology |
| <i>Pleasure Boats and Equipment</i> | <i>Agricultural Technology, Machinery and Equipment</i> |
| <i>Tools, Hardware and Housewares</i> | <i>Ocean and Marine Shipboard Technology</i> |
| <i>Residential Furniture</i> | 20. Space |
| <i>Business and Institutional Furniture</i> | 21. Tourism |
| <i>Giftware and Crafts</i> | 22. Urban Transit and Rail Equipment |
| 11. Electrical Power Equipment and Services | |
| 12. Environmental Industry | |
| 13. Fish and Seafood Products | |

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: 1-800-267-8376.

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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Biototechnology is the application of biological and engineering knowledge to produce goods and services through the applied use of living organisms or their components. Biototechnology is not an industrial sector in itself, but a broad enabling technology with applications across a wide range of industries. In Canada, commercial applications of biotechnology are predominantly in three main areas: health care; resources; and environmental protection.

Bio-industries in all of these sectors are distinguished from their non-bio counterparts by their relatively high level of research and commitment to ongoing innovation. Thus far, the greatest impact of biotechnology has been in the health-care sector, where it has become an integral part of the new drug discovery process. The application of biotechnology in the other sectors is still at much earlier stages.

Canadian Position

Overview

The Canadian biotechnology effort is small when compared with that of the U.S. and Japan, but compares favourably with that of other countries on the basis of per-capita population. Approximately 300 companies employing 13 000 people form the broadly defined bio-industry in Canada. The majority of Canadian biotechnology firms are small companies with less than 50 employees. Since standard codes do not exist for biotechnology companies or their products, statistical data on sales and exports are generally not available except through special surveys.

Health-care Biotechnology

Canada has a world-class bioclinical research base in its medical schools and teaching hospitals. As a result, over 50 percent of Canadian biotechnology firms are in the health-care sector. In 1993, these firms exported products worth approximately \$300 million. Over the period 1989-93, exports grew at a rate of 20 percent per year. This rate of growth is expected to continue, since a growing number of Canadian-developed therapeutic and diagnostic products are now in clinical trials.

Therapeutics

Companies in the therapeutic segment of the health-care biotechnology sector are heavily committed to research and development (R&D), product development and clinical trials. The bulk of the products, some of which represent billion-dollar-a-year markets, have yet to reach the marketplace. Hence, there is a real need to attract investment to support the commercialization process, and for alliance partners to help with the regulatory approval process and product marketing. Canadian strengths are in research relating to genetic diseases, vaccine development, and therapies for cancer and certain neurodegenerative diseases. On the services side, a related Canadian strength is in providing clinical trial services to pharmaceutical companies.

Diagnostics

Companies in the diagnostic segment of this sector are challenged by the fast pace of technological change, as well as by the demands of health-care systems worldwide for cost containment. Leading-edge products will be effective in penetrating the highly competitive diagnostic markets in the United States, Europe and Japan. For more conventional products, sales opportunities are opening up in the emerging markets of Latin America and Asia-Pacific, where demand is growing for proven, low-cost products that diagnose infectious diseases.

Agriculture Biotechnology

Canada has developed a strong competitive position in animal husbandry (embryo transplants, high-quality bovine semen), animal protection (veterinary vaccines), plant breeding, biological fertilizers and biological pest control. About 20 percent of the Canadian bio-industry is in the agriculture sector. In 1993, agriculture biotechnology exports were approximately \$400 million. Over the period 1989-93, the annual average rate of growth for exports was 7 percent.

Some companies in this segment of the industry have been quite successful in developing international business, while others are at much earlier stages. International business opportunities, as in the case of aquaculture biotechnology, will be primarily in developing countries in Latin America and Asia-Pacific, where population growth will fuel demand for products and technologies that support sustainable agriculture, and where biotechnology has already been identified as a priority for national investment.

Resource Biotechnology

Resource biotechnology includes applications in aquaculture, mining and forestry. Companies in this field make up about 10 percent to 15 percent of the Canadian bio-industry. Resource biotechnology is recognized as an "enabling technology" because of its ability to enhance the competitiveness of traditional industries. Hence, the economic impact and overall importance of resource biotechnology should not be measured only by the value of sales from, or the number of employees in, the biotech companies, but also by the impact of the technology on the competitiveness of the primary industry.

Aquatic Biotechnology

Aquatic biotechnology can be grouped into two sub-units: aquaculture biotechnology, which deals with fish health and brood stock optimization, and aquatic bioprocessing, which is concerned with obtaining valuable compounds from marine organisms. The short- and medium-term export opportunities are primarily in aquaculture biotechnology, since the world aquaculture production, currently valued at \$40 billion, is expected to increase sevenfold over the next 30 years to help meet the protein needs of a growing world population.

Canadian capabilities in aquaculture biotechnology have developed because of the marine science expertise available here and because of bio-environmental constraints that have resulted in unique domestication difficulties (e.g. slower growth rates and enhanced stress). Although Canada accounts for less than 1 percent of world aquaculture production, companies in this field, which represent about 5 percent of the total bio-industry in Canada, have a disproportionately high percentage of the global market for their products and services. Canadian strengths include diagnostics and vaccines for fish and shellfish diseases, as well as genetic characterization to support brood stock optimization. International business development initiatives have so far focussed on developed country markets (e.g. the United States and Norway) and high value-added species. Future initiatives will focus on developing country markets in the largest aquaculture producing areas of the world (Asia-Pacific and Latin America).

In this subsector, the potential exists to develop international competitive advantage by clustering firms with complementary capabilities. Industry Canada is working with the Canadian Institute of Biotechnology and several other federal agencies to develop a marketing package that exploits this concept.

Mining and Forestry Biotechnology

In the mining sector, biotechnology has applications in leaching metals (e.g. copper) from their ores, in preventing acid mine drainage and in treating mining effluents. In the forestry sector, biotechnology has applications in developing superior lines of trees, as well as in disease and pest control. In both sectors, Canada has considerable research strengths, but insufficient commercial capabilities that are focussed on export markets to promote at this time.

Environmental Biotechnology

Increasingly, biological systems are being used to diagnose and solve environmental problems in air, water and soil. Conventional methods that consider the biological component as a "black box" still predominate. However, research is intensifying in Canada and worldwide in the following areas:

- selecting naturally occurring organisms that break down specific toxic substances;

- improving the understanding of the conditions that make these organisms work more effectively; and
- developing genetically modified organisms specifically designed to break down certain persistent toxic chemicals.

Approximately 10 percent of the Canadian bio-industry is in the environmental sector. About 15 to 20 Canadian firms have developed the biological/microbiological expertise to form the core of an emerging environmental bio-industry. The much larger group of consulting engineering firms that are acting in site remediation, wastewater treatment, etc., but that have little or no in-house biological expertise, should be encouraged to use biotechnology as an environmental problem-solving tool. In 1993, Canadian sales of environmental biotechnology services were estimated to be about \$25-\$50 million, and exports about \$10-\$20 million.

Canadian companies in the bio-environmental field need to maintain awareness of advances in technology and identify foreign partners for export market penetration. Conferences such as the Environmental Biotechnology Brokerage Event (Brussels, November 23-24, 1995) and the OECD Workshop on Wider Application and Diffusion of Bioremediation Technologies (Amsterdam, November 19-22, 1995) provide useful opportunities to address both needs. Formation of strategic alliances is especially important, since most of the Canadian environmental firms with biological/microbiological expertise are small and focussed on niche markets, and will only be able to penetrate international markets if they partner to provide the full-service capabilities offered by their multinational competitors.

International Environment

Worldwide, it is estimated that between 3000 and 4000 companies, employing about 250 000 people, represent the more broadly defined bio-industries that utilize biotechnology in some aspect of their products and services. The number of companies whose core business involves biotechnology is much smaller, at approximately 2000 to 2500, employing about 150 000 people.

Biotechnology is still in its early stages of development, similar to where the software or telecommunications industries were 15 to 20 years ago. Nevertheless, its influence and socio-economic impact are expected to be at least as pervasive. The impact in health care is already being felt, as a growing number of biopharmaceuticals are now on the market and over 50 percent of new drugs in North American clinical trials are products of biotechnology. In the agri-food sector, it is predicted that by the year 2005, 50 percent of the crops grown in developed countries will be transgenic. As for the environment, the market in the U.S. and Western Europe for bioremediation of toxic waste sites is expected to increase fivefold, from \$200 million in 1993 to \$1 billion in 2000.

Around the world, most biotechnology companies are heavily committed to R&D programs, and only relatively few have sufficient products on the market to be considered profitable. An estimated \$15 billion to \$20 billion worth of biotechnology products were sold worldwide in 1994. It is estimated that global sales of biotechnology products will grow rapidly in the next few years to reach \$75 billion to \$100 billion by the year 2000. Whether this potential will be realized depends on how well biotechnology regulations are implemented and harmonized internationally, as well as how public opinion accepts biotechnology products.

Canadian bio-industries' main international competitors are found in the United States, Japan and Europe. The U.S. has by far the most developed and diversified bio-industry, with over 1300 core biotechnology firms employing more than 100 000 people. Statistics for Japan are difficult to compare with those for other countries, since biotechnology in that country is mostly developed within large corporations (e.g. Kirin Brewery) where biotechnology is not usually the prime focus. Nevertheless, even though the industrial paradigm is different, Japan is second only to the U.S. in the development of its bio-industries, and is positioning itself for the future through continued commitment to research and technology development or acquisition on both the domestic and international fronts. The European bio-industry began to develop later than its U.S. and Canadian counterparts, but now has over 400 core biotechnology firms.

Bio-industries are also developing in other regions of the world. Australia has an emerging bio-industry (approximately 30 core firms employing an estimated 600 people). Israel has over 60 biotechnology firms (four are listed on NASDAQ) active in agriculture, aquaculture, health care, environment and fine chemical product development. In both countries, as in Canada, the driving force is provided by small companies growing out of a strong foundation of basic life sciences in academia and government. Recent visits to both these countries by Canadian representatives have found good potential for joint R&D projects.

Southeast Asia has a number of major corporations in the resource and agri-food sectors that are beginning to focus on biotechnology as a tool for producing value-added products. A number of core biotechnology firms are beginning to develop in the region, especially in Singapore. Latin America has similar developments, with large agri-food companies such as breweries diversifying into value-added products through biotechnology, but also with a few core firms such as BioSidus, a biopharmaceutical manufacturer in Argentina.

Main Challenges

Company Size

The majority of Canadian biotechnology companies are small and medium-sized enterprises (SMEs) with niche products or services. In many cases, foreign competition comes from much larger companies with more comprehensive product lines. The small Canadian firm is at a disadvantage because often its niche products only solve part of a problem, and because it has limited resources to gather market intelligence and promote its products abroad.

Promoting Canadian Bio-Industries Abroad

Efforts to promote Canadian bio-industries abroad have focussed mostly on helping Canadian firms find alliance partners and investment from the United States and Western Europe. In other important markets such as Asia-Pacific and Latin America, awareness of Canadian biotechnology capabilities is low.

Another issue relating to promotion is that biotechnology products often differ from their non-biological counterparts. For example, biological fertilizers are specific to certain types of

plants and soils and function in quite a different manner than their chemical counterparts. Trade and investment promotion initiatives need to take this into account. Trade commissioners and commercial officers in Canadian embassies need more information and training to better represent the interests of Canadian bio-industries abroad.

Regulation, Competitiveness and Market Access

In 1995, the first approvals of genetically engineered crops were issued for commercial purposes in Canada: two varieties of herbicide-resistant canola were approved for planting, and several tomato varieties having a long shelf life or high solids content were approved for import and sale, not for planting.

The domestic regulatory environment is a major factor affecting the international competitiveness of biotechnology companies. Countries that have set up more stringent or less responsive regulatory regimes for biotechnology products have experienced loss of investment as well as movement of R&D and manufacturing to countries with more favourable regulatory regimes.

This year, Canada will promulgate environmental biotechnology regulations for micro-organisms and plants as well as regulations for novel foods. The objective is implementation of a regulatory system that effectively manages risk and that is harmonized with the regulatory systems of Canada's major trading partners.

Currently, there is no mutual acceptance between countries of regulatory approvals for products of biotechnology, which may pose problems of market access. One of the first Canadian products that might be affected is the herbicide-resistant canola seed destined for processing into oil and meal in Europe and Japan.

Investment

The Canadian bio-industry, like its counterparts in the U.S. and Europe, is experiencing increased difficulty in raising capital, at a time when its capital requirements are rapidly expanding. While alliances with multinational pharmaceutical firms may address, to a large extent, the needs of biotechnology companies in the health-care field,

other sources are needed to address the capital requirements in the resource and environmental sectors.

Strategic Direction

Industry Canada is developing a National Sector Team (NST) for biotechnology, in collaboration with the Department of Foreign Affairs and International Trade (DFAIT), the Industrial Biotechnology Association of Canada and the Canadian Institute of Biotechnology. The NST will be a network of key organizations in government and the private sector. It will be the primary instrument for planning and launching federal initiatives to address both international business development and the domestic business environment. The following areas are ones in which the Government intends to work through the NST to address some of the above challenges relating to international business development.

Helping Small Companies Compete Internationally

In a number of cases, small companies have overcome their size limitation by forming clusters or networks that combine their resources to market complementary products and services in a more comprehensive manner. Canadian companies in aquaculture and agriculture biotechnology are already beginning to work together in this manner.

Over the next several years, the NST will focus on working with clusters of companies in aquaculture, agriculture and environmental biotechnology, and bio-diagnostics to promote co-operative efforts in identifying and penetrating target markets. Funds have been allocated under the National Biotechnology Strategy over the next two years to help address the market information needs of the clusters and to help them develop promotional packages for targeted markets.

Upgrading Canadian Trade/Investment Promotion Capabilities

There is a need to develop flexible marketing tools that can be used by government (particularly trade commissioners) as well as by the private sector to promote business development abroad

by Canadian bio-industries. A number of examples of printed and electronic marketing material have been developed, which showcase Canadian capabilities in biotechnology and profile the international business development interests of Canadian companies. Government and industry will work together through the NST to determine how the different media may be integrated and used to provide the most cost-effective international promotion of the industry. The aim will be to have targeted marketing packages developed for the aquaculture and agriculture biotechnology segments by the end of 1996.

Regulation and Market Access

Regulatory harmonization and market access will continue to be important issues for the bio-industry in the short- to medium-term. The NST will put a team in place this year to identify problems in this area. This team will also develop policy advice for the federal government on regulatory harmonization with other jurisdictions and on issues related to foreign market access.

Investment

DFAIT will continue work begun in 1994-95 to identify sources of capital for expansion of selected Canadian biotechnology companies. The focus for this year will be on the agricultural and environmental areas.

Technology Transfer

The NST, which will include representation from the National Research Council's Industrial Research Assistance Program (IRAP), will develop a strategy to promote the access of Canadian bio-industries to new technologies via licensing agreements or R&D alliances. The Canada-Israel Industrial Research and Development Foundation is one example of the kinds of focussed initiatives that might come from this strategy.

Setting Geographic Priorities

Consultations to date with individual companies, associations and business brokers in the biotechnology field have resulted in the following general conclusions:

- **United States:** The U.S. will remain the first market of choice and the major source of foreign investment for most Canadian biotechnology companies.

Recommendation: Maintain a highly focussed level of partnering activity, with emphasis on health-care and environmental biotechnology.

- **Europe:** Bio-industries are growing, and Europe is becoming an important source of greenfield investment into Canada, and of investment and alliance partners for Canadian biotechnology companies.

Recommendation: Expand partnering activities moderately, focussing on health care and environmental biotechnology and one-on-one meetings.

- **Latin America and Asia-Pacific:** The rapidly growing economies of emerging market countries in Asia-Pacific and Latin America are where growth in world markets is expected in the short to medium term. Biotechnology has been recognized as a key technology for sustainable development in Thailand, Indonesia, China, Taiwan, Mexico, Chile, Argentina and Brazil, especially in applications relating to agriculture, aquaculture and environment.

Recommendation: Put new resources from the National Biotechnology Strategy Funds into gathering market information and promoting Canadian biotechnology applications relating to agriculture, aquaculture and environment in emerging market regions. Plan targeted visits to and from Canada to begin identifying alliance partners.

- **Japan:** Japan is a major market for certain products of biotechnology, especially in the health-care field. It is also a potential source of investment for near-market leading-edge products. However, it is one of the most difficult markets to penetrate, and there is a significant mismatch in size between Canadian and Japanese biotechnology companies.

Recommendation: Be highly selective with regard to promotional activities and screen Canadian companies carefully to ensure they are prepared to deal with Japan.

The large number of biotechnology-related events that occur each year requires that government and industry together focus their promotional efforts to target only a few key events in order to have impact with limited resources.

Efforts to promote Canadian biotechnology companies at events abroad have also suffered from lead times that are too short. Companies have said that they frequently require almost a full year to prepare for a particular event, especially if the event occurs in a different linguistic and cultural setting and they need to assimilate and translate key market, business and regulatory information materials.

Contacts

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Activity	Date	Location	Dept.	Contact
Asia-Pacific South				
World Aquaculture Conference: Strategic Partnering Seminar	01-Feb-96	Bangkok	IC	709-772-4910
Aquaculture Biotechnology Study: Southeast Asia	01-May-96	Bangkok	IC	709-772-4910
International Biotechnology Symposium on Yeast: Info Booth	26-Aug-96	Sydney	DFAIT	613-995-7652
East Asia				
Biotechnology Shanghai 1996: Seminar	20-Jun-96	Shanghai	DFAIT	613-996-6987
Biotechnology Strategic Alliance Seminar	01-Nov-96	Seoul/Pusan	DFAIT	613-996-2807
Fifth Pacific Rim Biotechnology Conference: Seminar	01-Nov-96	Seoul	IC	613-954-1035
Livestock Vaccine Seminar	30-Jan-97	Taiwan	DFAIT	613-996-2807
Latin America and the Caribbean				
Latin American Aquaculture: Market Study	01-May-96	Unknown	IC	613-954-1035
Aquaculture Broodstocks Technologies: Market Study	01-May-96	Unknown	IC	613-954-1035
Ag-bio Market Studies: Mexico, Brazil, Argentina, Colombia, Venezuela	01-Jun-96	Unknown	IC	613-954-1035
Intellectual Property Protection/Environmental Health Regulations in Latin America: Study	01-Jun-96	Various Cities	IC	613-954-1035
Buenos Aires Harbour Contaminated Sediments Bioremediation Project: Technology Transfer	01-Jul-96	Buenos Aires	NRCAN	613-992-1855
Expo Pesca: Strategic Partnering Seminar	01-Nov-96	Santiago	IC	709-772-4910
United States				
Canada/U.S. Comparative Advantages in the Bio-Enviro Sector: Publication	Ongoing	Boston/Atlanta/ Chicago/New York	DFAIT	613-992-5339
Biotechnology Mission from the U.S.	01-Apr-96	Toronto	DFAIT	613-944-9482
Medical-FDA Training Seminars	01-Apr-96	Toronto/Montreal/ Vancouver	DFAIT	613-944-9482
Biotechnology Breakfast Seminars	01-Apr-96	Houston	DFAIT	613-944-9482
Biotechnology Newsletter	01-Apr-96	San Diego	DFAIT	613-944-9482
Biotechnology Breakfast Seminars	01-Apr-96	New England	DFAIT	613-944-9482
Incoming Mission from the U.S.: Tour of Canadian Biotech Infrastructure	01-Apr-96	Various Cities	DFAIT	613-944-9482
Biotechnology Micro-Missions from U.S. Southeast	01-Apr-96	Various Cities	DFAIT	613-944-9482
Tour of Canadian Biotech Infrastructure	01-Apr-96	Canada	DFAIT	613-944-9482
New England Biotechnology Market Study	01-May-96	Boston	DFAIT	613-944-9482
Biopharmaceutical Strategic Partnering Study	01-May-96	Boston	DFAIT	613-944-9482
Aquatech Conference: Mission from Baltimore	01-May-96	St. John's	IC	709-772-4910

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
BIO '96: Info Booth, Seminar	09-Jun-96	Philadelphia	DFAIT	613-944-9482
Agri Bio Mission from the U.S.	11-Jun-96	Prairie Provinces	DFAIT	613-944-9482
Agricultural Biotechnology Conference: Partnering Seminar and Mission from the U.S.	11-Jun-96	Saskatoon	IC	306-975-4391
Biotechnology Breakfast Seminar	01-Aug-96	Atlanta	DFAIT	613-944-9482
Biotechnology Mission	01-Sep-96	Cleveland	DFAIT	613-944-9482
Biotechnology Strategic Partnering Seminar/ Pharmaceutical Venture Capital	01-Sept-96	Princeton	DFAIT	613-944-9482
Biotechnology Partnership Forum	01-Oct-96	San Diego	DFAIT	613-944-9482
Bio-Contact Quebec: Mission from the U.S.	01-Oct-96	Québec City	DFAIT	613-944-9482
Agribition: Biotech Seminar	01-Nov-96	Regina	IC	306-975-4391
Biotech Institutions: Study	01-Dec-96	Atlanta	DFAIT	613-944-9482
Biotechnology Strategic Partnering Seminar	01-Jan-97	Princeton	DFAIT	613-944-9482
Biotechnology Partnering Seminar	01-Mar-97	Rochester, N.Y.	DFAIT	613-944-9482
BIO '97: Sponsorship Prepayment	07-Jun-97	Houston	DFAIT	613-944-9482

Western Europe and the European Union

Business Financing for Emerging Biotechnology Firms	Ongoing	Various Cities	DFAIT	613-995-7920
European Strategic Alliances Program	Ongoing	TBD	DFAIT	613-995-5339
Biotechnology Mission from Italy	11-Jun-96	Montreal/Toronto/ Saskatoon	DFAIT	613-996-1530
BIO EXPO France: Info Booth	01-Oct-97	Paris	DFAIT	613-996-1530

For up-to-date and detailed information on the activities in this document and those contained in other sectors, you may consult the CIBS Compendium. This on-line compilation of activities planned by the federal and provincial governments is continuously revised and is accessible via the Department of Foreign Affairs and International Trade World Wide Web site, at the following address: <http://www.dfait-maeci.gc.ca>

Acronyms and Initialisms used in Canada's International Business Strategy

(This list does not include...)

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Acronym	Full Name	Other Info	Definition
AAFC	Agriculture and Agri-Food Canada		International Business Opportunities Centre
ACOA	Atlantic Canada Opportunities Agency		Industry Canada
APEC	Asia-Pacific Economic Cooperation forum		International Development Research Centre
ASEAN	Association of South East Asian Nations		International financial institution
BBS	Business Bulletin Board System		International Standards Organization
BOOT	Build, Own, Operate, Transfer		International Trade Advisory Committee
BOSS	Business Operating System		International Trade Centre
CCC	Canadian Council of Ministers of the Environment		Ministry of Agriculture, Fisheries and Food of Quebec
CIBS	Canada's International Business Strategy		Multilateral development bank
CIDA	Canadian International Development Agency		Multinational enterprise
CIS	Commonwealth of Independent States		North American Free Trade Agreement
CSA	Canadian Standards Association		North Atlantic Treaty Organization
DFAIT	Department of Foreign Affairs and International Trade		National Research Council
DFO	Department of Fisheries and Aquaculture		Natural Resources Canada
DND	Department of National Defence		Natural Resources Canada — Canadian Forest Service
EC	Environment Canada		National Sector Team
EDC	Export Development Canada		Organization for Economic Co-operation and Development
EU	European Union	CARR McLEAN 38-296	Program for Export Marketing Development
FITT	Forum for International Trade Training	CEML	Research and development
FORDQ	Federal Office of Regional Development — Quebec	R&D	science and technology
FSU	former Soviet Union	S&T	Sectoral Advisory Group on International Trade
FTA	Canada-U.S. Free Trade Agreement	SAGIT	small and medium-sized enterprise
GATT	General Agreement on Tariffs and Trade	SME	United Nations Environmental Program
GDP	gross domestic product	UNEP	Western Economic Diversification
GNP	gross national product	WED	World Trade Organization
HRDC	Human Resources Development Canada	WTO	



Acronyms and i Business Strate

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AAFC	Agriculture and Agri-Food Canada	IBOC	International Business Opportunities Centre
ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
APEC	Asia-Pacific Economic Co-operation forum	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOOT	build, own/operate, transfer	ITAC	International Trade Advisory Committee
BOSS	Business Opportunities Sourcing System	ITC	International Trade Centre
CCC	Canadian Commercial Corporation	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIBS	Canada's International Business Strategy	MDB	multilateral development bank
CIDA	Canadian International Development Agency	MNE	multinational enterprise
CIS	Commonwealth of Independent States	NAFTA	North American Free Trade Agreement
CSA	Canadian Standards Association	NATO	North Atlantic Treaty Organization
DFAIT	Department of Foreign Affairs and International Trade	NRC	National Research Council
DFO	Department of Fisheries and Oceans	NRCan	Natural Resources Canada
DND	Department of National Defence	NRCan-CFS	Natural Resources Canada — Canadian Forest Service
EC	Environment Canada	NST	National Sector Team
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development — Quebec	S&T	science and technology
FSU	former Soviet Union	SAGIT	Sectoral Advisory Group on International Trade
FTA	Canada-U.S. Free Trade Agreement	SME	small and medium-sized enterprise
GATT	General Agreement on Tariffs and Trade	UNEP	United Nations Environmental Program
GDP	gross domestic product	WED	Western Economic Diversification
GNP	gross national product	WTO	World Trade Organization
HRDC	Human Resources Development Canada		



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