



[SOFTWARE]
Canada's competitive advantages

CANADA'S SOFTWARE SECTOR

Canada has a large cadre of highly skilled software development professionals with a broad range of expertise and experience. Labour costs for high value-added activities in Canada are particularly advantageous when compared with costs in the United States, Japan and Europe. These advantages, combined with Canada's full and free access to the large U.S. software market, make the country an ideal nearshore destination for value-added software development activities.

ENTERPRISE APPLICATION SOFTWARE (EAS)

Canada is well positioned to tap into the global EAS market and has easy access to the world's largest IT market – the United States. Canadian firms and foreign investors in Canada are leaders in enterprise applications for customer relationship management, digital content creation, data, project and portfolio management, supply chain management and web conferencing. Canada's home-grown industry leader OpenText Corporation is joined by numerous international investors, including Adobe Systems Incorporated, International Business Machines Corporation (IBM), Hewlett-Packard Company, Cisco Systems, Inc., CGI Group Inc., Infosys Limited, Tata Consultancy Services Limited, SAS Institute Inc., Wincor Nixdorf, Microsoft Corporation, Oracle Corporation, The Sage Group plc and SAP AG.

CYBER-SECURITY

Canada's commitment to fighting cybercrime offers companies opportunities to develop solutions for governments, health care, and the financial services sectors. In the past few years, six foreign investors with locations in Canada crossed the \$1-billion threshold for cyber-security revenue: Symantec Corporation, IBM, McAfee Inc., Trend Micro Incorporated, Check Point Software Technologies Ltd., and Cisco Systems, Inc. Five of these top six companies carry out cyber-security research and development (R & D) activities in Canada. Also of note for other foreign investors is the fact that U.S. security software firm Entrust Inc. has its largest office located in Ottawa, Ontario.

HEALTH IT

Health IT is a significant industry in Canada with expenditures totalling \$4.2 billion in 2013. Canadian Health IT vendors cover several technology areas, including picture archiving and communication systems, drug information systems, electronic health records, electronic medical records, laboratory systems, clinical information systems, and administrative and financial systems. Canadian firms have especially developed world-leading technologies in digital imaging, electronic data capture and wireless and communications. Multinationals active in Canada include: Agfa, Philips Healthcare, IBM Canada Healthcare, Canon Canada, Cerner Canada and McKesson Canada.¹

CASE STUDY: IBM

In April 2012, IBM launched its first formal research and development (R & D) lab in Canada through a \$175-million investment, in a consortium with seven Ontario universities. The federal and Ontario provincial governments are also backing the project, with the country investing up to \$20 million and the province contributing up to \$15 million. The public/private collaboration, led by University of Toronto and Western University on the academic side, is expected to create 145 high-level research jobs in Ontario.²

¹ Branham Group Inc., *Digital Health NOW*, 2013.

² IBM - Groundbreaking research collaboration creates a new economic cornerstone for Canada, 2012.

SOFTWARE CLUSTERS IN CANADA

SNAPSHOT: WHO'S IN CANADA?

20-20 Technologies Inc. | 3M Company | Accenture | Agfa HealthCare | Amazon.com, Inc. | Autodesk Inc. | BlackBerry | BridgeWays Inc. | CGI Group Inc. | Cisco Systems, Inc. | Constellation Software, Inc. | Computer Modeling Group Ltd. | Corel Corporation | Coveo Solutions Inc. | DOSarrest Internet Security LTD | BeyondTrust, Inc. | Facebook, Inc. | Foster Moore Limited | Fujitsu Canada, Inc. | Google Canada | Hootsuite Media Inc. | HP Enterprise Services, LLC | IBM | Intel Corporation | Intuit Canada ULC | LGS Group Consulting Corporation | Microsoft Corporation | Mitel Networks Corporation | Mphasis Wyde Canada | OpenText Corporation | Oracle Corporation | Q1 Labs Inc. | QNX Software Systems Limited | Radialpoint SafeCare Inc. | Salesforce.com, Inc. | Shopify Inc. | Samsung Electronics Co., Ltd. | SAP AG | Thales Group | Timeless Technologies Inc. | Twitter, Inc. | Wipro Limited



SOFTWARE SECTOR AT A GLANCE³

- » Number of Companies: **28,684**
- » Revenues: **\$49.1 billion**
- » Employment: **313,014**
- » Contribution to Canada's GDP: **\$26.2 billion**
- » R & D expenditures: **\$2 billion**

BRITISH COLUMBIA

- » **Vancouver:**
Software and Games, Computer Systems Design/Data Processing, Electronic Instruments, Microelectronics

ALBERTA

- » **Calgary:**
Computer System Design, Wireless Technologies, Geomatics, Electronic Instruments

ONTARIO

- » **Toronto:**
Software, Digital Media, Microelectronics
- » **Ottawa:**
Networking, IT Infrastructure, Photonics, Software
- » **Kitchener-Waterloo:**
Wireless Technologies, Software, Mobile Media

QUEBEC

- » **Montréal:**
Computer System Design & Services, Software (including Digital Media), Telecom Equipment, Microelectronics/Photonics

³ Industry Canada. *Canadian ICT Sector Profile*. (2012)

CANADA'S ADVANTAGES

A highly educated and experienced workforce, competitive labour costs, world-class R & D and favourable tax rates and benefits, along with a savvy and fast-growing consumer market, make Canada a world-class investment destination for software companies.

A CANADIAN PRIORITY SECTOR

ICT is one of the four priorities of the Government of Canada's science and technology strategy and there is a national digital economy strategy supporting this initiative.⁴ This strategy aims to help the ICT sector, including foreign investors, create new products and services, accelerate the adoption of digital technologies and improve cyber-security practices. The Government of Canada has increased funding for research and innovation through the federal granting councils, the Institute for Quantum Computing, the National Optics Institute, the Industrial Research Assistance Program (IRAP), the MiQro Innovation Collaborative Centre, Canada's Advanced Research and Innovation Network (CANARIE), the Canadian Digital Media Network and the Graphics, Animation and New Media Canada Network.⁵

HIGHLY QUALIFIED AND DIVERSE GLOBAL WORKFORCE

Canada's ICT workforce is highly educated, with 75 percent of all workers having graduated from post-secondary programs.⁶ Furthermore, Canada's world-wide reputation for talent diversity has allowed it to develop clusters of ICT excellence in cities such as Ottawa, Kitchener-Waterloo, Toronto, Montréal, Calgary and Vancouver. Canada's advantage lies in its ability to produce highly qualified ICT workers, while attracting internationally educated professionals from virtually every corner of the globe.

TRACK RECORD IN ATTRACTING FOREIGN DIRECT INVESTMENT

Between 2003 and 2013, Canadian cities attracted 387 foreign direct investment projects in software and IT services.⁷

LOW TAXES

Progressive reductions in both federal and provincial taxes have created a significant advantage for companies operating in Canada. According to KPMG's *Competitive Alternatives 2014* study, the effective corporate income tax rate for a typical software development operation in Canada is 19.7 percent, the lowest rate among the G-7 countries and 16.6 percentage points below the tax rate in the United States.

COMPETITIVE COSTS

In the 2014 study by KPMG, Canada ranked first among a group of nine developed markets for cost of locating software development operations. Canada offers foreign investors a 12.9 percent cost advantage over the United States in this vertical. This advantage combined with access to the large U.S. software market makes Canada an ideal nearshore destination for value-added software development activities.

WORLD CLASS EDUCATION SYSTEM

Canada has a world-class higher education system, with 22 Canadian universities included in the Top 500 Academic Ranking of World Universities 2011, and six universities appearing in the Top 100 Academic Ranking of World Universities in Computer Science. In 2010, a total of 1.5 million students were enrolled in Canadian universities in degree-related programs. Canadian universities conduct \$10 billion of research annually.⁸

⁴ Industry Canada. *Government of Canada Launches National Consultations on a Digital Economy Strategy*. (2010).

⁵ Industry Canada. *Growing the Information and Communications Technology Industry*.

⁶ The Information and Communications Technology Council: *Analysis of Labour Force Survey Data for the Information Technology Occupations 2000-2010*, (March 2011).

⁷ fDi Markets. *Canada's Software and IT Services*. Consulted October 2013.

⁸ Research Infosource. *Canada's Top 100 Corporate R & D Spenders (2012)*.

SUPPORT PROGRAMS AND INNOVATION

Canada Media Fund fosters, develops, finances and promotes the production of Canadian content and applications for all audio-visual media platforms.

Mitacs is a government-funded not-for-profit organization that funds technology-specific internships and fellowships through Canadian universities.

National Research Council Canada – Industrial Research Assistance Program (IRAP) provides innovative help for small and medium-sized enterprises in Canada. Services include advisory services, funding for innovation, networking and youth employment.

National Research Council Canada – Youth Employment Program provides financial contributions towards the salary of a post-secondary graduate for R & D and commercialization.

Scientific Research and Experimental Development (SR&ED) provides income tax credits and refunds for expenditures on eligible R & D activity in Canada on wages, materials, some overhead and SR&ED contracts.

Export Development Canada (EDC) and **Business Development Bank of Canada (BDC)** provide flexible financing programs and solutions tailored to support foreign direct investment in Canada.

STRONG R & D CAPABILITIES

The ICT industry is the largest private-sector R & D investor in Canada. In 2012, 22 Canadian companies spent more than \$100 million on R & D and nine of these were in the ICT sector.⁹

Universities across Canada offer a range of computer science-related undergraduate and postgraduate courses. There are over 100 university or college ICT-specific R & D centres located in the Greater Toronto Area alone, with the University of Waterloo ranked as one of the top universities in the world for its research in various ICT sectors.

Examples of research centres, incubators, and accelerators in Canada are:

- The Accelerator Centre® (Waterloo, Ontario)
- Canadian Photonics Fabrication Centre (National Research Council Canada, Ottawa, Ontario)
- CANARIE (Ottawa, Ontario)
- Canadian Digital Media Network (Kitchener, Ontario)
- Centre for Computational Mathematics in Industry and Commerce (University of Waterloo, Waterloo, Ontario)
- Centre for Global eHealth Innovation (Toronto General Hospital and University of Toronto)
- Communications Research Centre Canada (Ottawa, Ontario)
- Communitech (Waterloo, Ontario)
- Founder Fuel (Montréal, Quebec)
- GrowLab (Vancouver, British Columbia)
- High Performance Computing Centre (University of Saskatchewan, Saskatoon, Saskatchewan)
- Institute for Computer Research & Institute for Quantum Computing (University of Waterloo, Waterloo, Ontario)
- Laboratory of Combinatorial Mathematics and Computing Science (Université du Québec à Montréal, Montréal, Quebec)
- Laboratoire de vision et systèmes numériques (Université Laval, Québec, Quebec)
- Launch36 (Moncton, New Brunswick)
- MaRS (Toronto, Ontario)
- Mprime (Vancouver, British Columbia)
- The Institute for Information Technology (National Research Council Canada, Fredericton, New Brunswick)

⁹ Research Infosource. *Canada's Top 100 Corporate R & D Spenders* (2012).

INVEST IN CANADA TO ACHIEVE GLOBAL EXCELLENCE

A WELCOMING BUSINESS ENVIRONMENT

Canada is ranked as the best country for business in the G-20.

Source: Forbes and Bloomberg

A HIGHLY EDUCATED WORKFORCE

Canada's workforce is the most highly educated among members of the OECD, with half of its working-age population having a tertiary-level education.

Source: Organisation for Economic Co-operation and Development (OECD)

LOW TAX RATES

Canada's overall marginal effective tax rate on business investment is by far the lowest in the G-7 — about 17 percentage points lower than that of the United States.

Source: Department of Finance Canada

COMPETITIVE R & D ENVIRONMENT

Canada offers the lowest business costs in the G-7 for R & D-intensive sectors, with a 15.8 percent cost advantage over the United States.

Source: KPMG

FINANCIAL STABILITY

For six consecutive years, the World Economic Forum has declared Canada's banking system to be the soundest in the world.

Source: World Economic Forum (WEF)

UNPARALLELED MARKET ACCESS

Canada's NAFTA advantage gives investors access to 470 million consumers. Many Canadian production hubs are actually closer to U.S. markets than American production sites — of Canada's 20 largest cities, 17 are within an hour-and-a-half drive of the U.S.

Source: The World Bank

A GREAT PLACE TO INVEST, WORK, AND LIVE

Canada is one of the globally most multicultural countries with world-class universities, a universal health care system and clean and friendly cities in addition to having the second highest standard of living in the G-20, as measured by GDP per capita.

Source: The World Bank

"Canada is one of the world's leaders in mobile-software development. Venture capitalists have started taking note. Google is certainly taking note."

Chris O'Neill, Managing Director,
Google Canada

Unless otherwise noted, all values in this publication are in Canadian dollars. Content is based on the latest available information at time of publication.



FOREIGN AFFAIRS,
TRADE AND DEVELOPMENT CANADA

investincanada.com

Invest in Canada

Foreign Affairs, Trade and Development Canada
111 Sussex Drive, Ottawa, Ontario, K1N 1J1 CANADA

Catalogue number:
FR5-38/6-2013E-PDF

ISBN 978-1-100-23087-0

Winter 2014



Follow us on Twitter! @invest_canada