

DIGITAL MEDIA

Canada's competitive advantages

Foreign direct investment in Canada's digital media industry

FOREIGN INVESTORS IN CANADA

- Activision Blizzard
- Autodesk
- Babel Media
- Beenox (Activision)
- BioWare (EA)
- Capcom
- Cyanide Studio
- Digital Domain
- Eidos (Square Enix)
- Electronic Arts
- Eyetronics
- GameHouse (RealNetworks)
- Gameloft
- Longtail Studios
- Microsoft Game Studios
- Nickelodeon
- Pixar Animation Studios
- Red Urban (Omniparc)
- Rhythm & Hues
- Rockstar Games
- Tecmo Koei
- THQ
- Ubisoft Entertainment
- Warner Bros. Interactive Entertainment
- WPP
- Viacom
- Zynga

- Canada is the world's leading location for foreign direct investment (FDI) in video games, attracting one quarter of all jobs created worldwide by foreign investors from 2003-2011.¹
- Nearly 100 foreign companies established greenfield FDI projects in the creative industries sector in Canada between 2003 and 2011.²
- FDI in Canada's information and communication technologies (ICT) industry reached an accumulated \$19.94 billion* in 2011.³

RECENT INVESTMENT EXAMPLES

Eidos Interactive

Eidos Interactive, a large U.K.-based game publisher and subsidiary of Square Enix (Japan), announced in 2011 that it was to establish a second studio in Montréal (Square Enix-Montréal), creating 150 jobs, while expanding its existing Montréal studio by 100 employees. Eidos-Montréal developed the award-winning *Deus Ex: Human Revolution*, part of the Deus Ex franchise.

Rhythm & Hues Studios

Rhythm & Hues Studios, a U.S.-based visual effects studio known for its computer-generated 3D character animation, opened a studio in Vancouver, British Columbia in 2011. The studio will eventually employ approximately 200 digital artists and crew.

Microsoft Game Studios

In 2012, Microsoft Game Studios opened a new gaming studio in Victoria, British Columbia. The company also has a studio in Vancouver, which it opened in 2011. Microsoft Game Studios develops and publishes games for the Xbox and Xbox 360 video game systems, Windows operating system and online platforms.

GameHouse

GameHouse, the gaming division of U.S.-based RealNetworks, doubled the size of its current gaming studio in Victoria, British Columbia in 2012. GameHouse Canada specializes in creating popular games on Facebook, Google+, and other emerging social platforms.

Gameloft

In 2011, Gameloft, a French developer and publisher of downloadable video games, opened a new studio in Toronto, Ontario, creating over 200 jobs. The Toronto facility will focus on developing mobile games for the iPhone, iPad and other tablets and smartphones, and for social media such as Facebook.

Pixar

Pixar Canada, the satellite studio of animation company Pixar and a subsidiary of Walt Disney, added 50 additional staff in 2011 to its studio in Vancouver, British Columbia. The studio makes short animations using characters from Pixar's feature films.

¹ fDi Markets database, fDi Intelligence from the Financial Times Ltd (2012)

² fDi Markets database, fDi Intelligence from the Financial Times Ltd (2012)

³ Foreign Affairs and International Trade Canada, Trade and Economic Statistics (2011)

*Unless otherwise noted, all values in this publication are in Canadian dollars.

Digital innovation in Canada

INNOVATION SNAPSHOT

- Canadian companies are at the forefront of brand integration and advertising in mobile games, and are implementing the latest technologies, such as location-based, augmented reality and check-in capabilities.
- Canada has significant expertise in simulation technologies, and is home to Electronic Arts' motion capture studio, one of the largest of its kind in the world.
- The Canadian animation and digital effects industry is world-leading. Producers of Hollywood feature films regularly favour Canadian-developed multimedia technology, such as Maya and Houdini software.
- Canada's Scientific Research and Experimental Development (SR & ED) tax incentive program is one of the most favourable worldwide. For foreign investors, combined federal and provincial tax credits can be worth up to 30% of qualifying R & D expenditures.⁴
- Between 2003 and 2011, more than 1,000 multimedia-related patents were granted by the United States Patent and Trademark Office to inventors based in Canada. Of that total, 323 were video gaming patents.⁵

Case Study: Canadian Digital Media Network

The Canadian Digital Media Network (CDMN) is a national Centre of Excellence for digital media. Formed in 2009, the CDMN brings together industry, government and academia, and acts as a catalyst for commercialization. The network unites research facilities and support organizations, creating new companies and helping start-ups develop and commercialize new technologies.

Case Study: National Animation and Design Centre (Centre NAD)

Centre NAD, Montréal, in partnership with Cégep de Jonquière and the Université du Québec à Chicoutimi (UQAC), is a leading centre for computer graphics training in Canada. Research areas include production and creation processes, animation, interactivity, and production and creation tools. The centre plays a significant role within the film, television and video game industries contributing to the evolution of the digital media industry in Canada.

Case Study: GRAND

GRAND is a research network and commercialization engine whose goal is to address complex issues in digital media and transform multidisciplinary research into user-centred solutions. It is a federally funded network of Centres of Excellence supporting research in entertainment, healthcare, education, environmental sustainability, and public policy. The network connects researchers at 25 Canadian universities with more than 60 industry, government, and non-profit partners.

LEADING CANADIAN COMPANIES

- Arc Productions
- Behaviour Interactive
- Big Stack Studios
- Big Viking
- Breakthrough Entertainment
- Capybara
- CinéGroupe
- Crush
- Digital Extremes
- Frima
- Klei Entertainment
- Koolhaus Games
- HB Studios
- Leviathan Studios
- Other Ocean Interactive
- Nelvana
- Rainmaker Entertainment
- Side Effects Software
- Thinkbox Software
- Toonboom
- XMG Studios

⁴ Invest in Canada, Do Your Research and Development In Canada (2012)

⁵ fDi Benchmark estimates based on United States Patent and Trademark Office (2012)

Canada's digital media industry

TESTIMONIALS

"Social game development is the number one priority for our company in 2012 and [Canada] is an attractive area for expansion due to [its] high calibre of talent combined with a great quality of life."

Matt Hulett,

Chief Gamer, GameHouse

"[Canada] is a vibrant centre of game creators with industry-leading talent, and one of the most important bases of our global network of game development within the Square Enix Group."

Yoichi Wada,

President and CEO, Square Enix

"Ubisoft made the decision to wager on Quebec's immense creative potential...Ten years later, the Montréal studio has been the driving force behind the conception and development of legendary brands... Today, we are pursuing our strategy centered on innovation by increasing investments in our creative teams based in Quebec."

Yves Guillemot,

CEO and Co-founder, Ubisoft

The Canadian interactive media sector includes over 3,000 companies, collectively employing more than 52,000 people. The estimated revenue from interactive digital media in Canada is \$3.8 billion.

Digital games

In 2011, revenue of the global video game market was US\$65 billion, up 4% over 2010⁶, and the industry is forecast to grow to US\$86.8 billion by 2014.⁷

Canada is a major player in this truly global industry, both in terms of size and the quality of talent and resources. Canada's video gaming industry has grown by 11% annually over the past two years, to \$1.7 billion in 2011. The industry is expected to grow by 17% per annum over the next two years.⁸

Top-selling global game franchises that have been developed by Canadian studios include EA/BioWare's *Mass Effect*, EA Sports' *FIFA Soccer*, and Ubisoft's *Assassin's Creed*. Popular mobile/social games that have been developed in Canada include *FishWorld* (Big Viking Games), *About a Blob* (DrinkBox Games) and *Margaritaville Online* (THQ).

Animation and digital effects

Animation and digital effects are driving the growth of the film industry. The top 20 grossing films of all time and the top 10 grossing films of 2011 were driven by high-end visual effects or computer-generated animation. Today, visual effects represent as much as 40% of a production budget, which can be more than US\$50 million for major studio films. The animation and digital effects industry in Canada is an important part of the digital economy, and is world-renowned for its innovation and creativity.

Canadian-based companies have created animation and effects for films such as *The Hunger Games* (Ubisoft), *The Girl with the Dragon Tattoo* (Digital Domain), *Small Fry* (Pixar Canada) and *Gnomeo & Juliet* (Arc Productions), as well as television series such as *Babar* (Nelvana) and advertising campaigns for M&Ms (Topix) and General Motors (Crush) among others.

⁶ Reuters, Factbox: A look at the \$65 billion video games industry (2011)

⁷ Secor Consulting, Canada's Entertainment Software Industry in 2011

⁸ Secor Consulting, Canada's Entertainment Software Industry in 2011

CANADA'S KEY STRENGTHS IN DIGITAL MEDIA

Critically acclaimed development

Canadian-based digital media developers have created game titles such as *Mass Effect 3* (BioWare), *A Game of Thrones: Genesis* (Cyanide Studios), *Madden NFL 11* (iPad version, Koolhaus Games) and *The Amazing Spider-Man* (Beenox/Activision). Academy Award nominees featuring Canadian-developed effects include *Avatar*, *Iron Man 2* and the Harry Potter series.

Breadth and depth of the digital media industry

Vibrant clusters, both large and small, of video game developers and animation and digital effects companies have developed across Canada, providing publishers the ability to build and test all components of new products locally. Canada has a huge talent pool of skills and expertise in digital media.

World-leading R & D

The five films nominated for a special effects Academy Award in 2012 all used Autodesk software, developed in Canada. In 2012, Side Effects Software, the Toronto-based creator of Houdini 3D animation tools, won the Academy Award for Scientific and Technical Achievement.

Attractive incentives

Federal and provincial governments in Canada provide generous incentives for digital media companies, including tax credits applied to labour costs of computer animated or digital special effects productions, along with tax credits for eligible expenditures on digital media products which can include regional bonuses.

SKILLS AND RESEARCH

Canada employs 544,900 people in the ICT sector⁹, and over 52,000 are employed in interactive media. There were approximately 16,000 people working in the Canadian video games industry in 2011, with an estimated 11,000 more in auxiliary activities, making Canada the third largest video games industry worldwide after the U.S. and Japan.¹⁰ The country has a world-class higher education system with 22 Canadian universities appearing in the top 500 universities of the world.¹¹ Canadian universities offer programs in computer science and software engineering at undergraduate, graduate and PhD levels, and six Canadian universities appear in the top 100 universities for Computer Science.¹² There are a number of specialized digital media institutes, programs and research groups in Canada including:

- Digital Media Zone at Ryerson University, Toronto
- National Animation and Design Centre (Centre NAD), Montréal
- Centre for Digital Research & Development (CDRIN), Cégep de Matane
- Graduate Program in Digital Futures, OCAD University, Toronto
- Master of Digital Experience Innovation (MDEI) offered at the dedicated digital media campus at the Waterloo Stratford Campus, University of Waterloo
- Master of Digital Media (MDM) offered at the University of British Columbia
- Professional Diploma in Animation for Game, Visual & Special Effects, Centre for Arts & Technology, campuses at Kelowna, Fredericton and Halifax



© FishWorld, Big Viking Games

⁹ Industry Canada, ICT Sector Employment (2009)

¹⁰ Secor Consulting, Canada's Entertainment Software Industry in 2011

¹¹ Shanghai Jiao Tong University, Academic Ranking of World Universities 2011

¹² Shanghai Jiao Tong University, Academic Ranking of World Universities 2011

Digital media clusters

BRITISH COLUMBIA

Key strengths:

British Columbia is home to the highest number of interactive game companies in Canada and the third largest film and television industry in North America. There are over 1,000 companies in British Columbia's digital media industry, and Vancouver is a hub of cutting-edge video-game developers and digital effects companies.

Leading companies:

Activision Blizzard, Capcom, Digital Alchemy Entertainment, Digital Domain, Electronic Arts, GameHouse (RealNetworks), Klei Entertainment, Koolhaus Games, Leviathan Studios, Microsoft Game Studios.

Incentives:

British Columbia offers an Interactive Digital Media Tax Credit, and a Digital Animation or Visual Effects Tax Credit, both worth 17.5% of eligible labour costs.

ALBERTA

Key strengths:

There are over 300 companies in Alberta's digital media industry, including companies in social media content and applications, interactive entertainment, content and applications for mobile devices, e-learning, interactive marketing, and gaming. Alberta is also becoming a creative force in the area of 3D animation. Top quality work on such films as *Mr. Magorium's Wonder Emporium* and *Ghost Rider* continues to build the province's reputation in the sector.

Leading companies:

Big Stack Studios, BioWare (EA), Satellite Animation Studios.

SASKATCHEWAN

Key strengths:

There are an estimated 210 digital media companies in Saskatchewan, employing approximately 680 people. These innovative companies include video game developers, convergent creators, computer animation studios, and creative technology providers.

Leading companies:

DIG, Tyrell Media, Alien Trap, Midnight Synergy.



MANITOBA

Key strengths:

Manitoba is home to a growing number of local independent developers working on creative ground-breaking games and technologies for the latest platforms. There is also an active contingent of high-quality firms working on animation and visual effects, including work on such films as *X-Men III*.

Leading companies:

Complex Games, Evodant, Infinite Ammo, Project Whitecard, Thinkbox Software.

Incentives:

Manitoba offers an Interactive Digital Media Tax Credit, which is a 40% refundable tax credit on labour costs, up to a maximum of \$500,000.

NEWFOUNDLAND AND LABRADOR

Key strengths:

Newfoundland and Labrador is home to video game developers, as well as companies with expertise in digital nautical charts. The province boasts a highly skilled, productive workforce, across a broad range of skill sets.

Leading companies:

Applecore Interactive, Best Boy Entertainment, Nautical Data International.

PRINCE EDWARD ISLAND (P.E.I.)

Key strengths:

P.E.I. is experiencing sustained growth in the digital media sector. The province is home to a number of gaming studios producing and testing games for the iPhone, Android, BlackBerry, iPad, iBookstore, DS, Wii, XBLA, PC and other platforms.

Leading companies:

Electronic Arts, Other Ocean Interactive, Sculpin QA, Smart Melon Games, Taris Studios, Telos International, Yodoki games.

Incentives:

P.E.I. offers an Innovation and Development Labour Rebate, worth 37.5% of eligible labour costs. It also has a targeted economic development strategy for digital media, Gameplan, which aims to develop a highly skilled workforce in video gaming through GameForce, its high school design course, and GameGarage, its gaming studio scheme for new graduates.

NOVA SCOTIA

Key strengths:

Nova Scotia is experiencing sustained growth in the digital media sector, and is one of Canada's fastest-growing and most highly skilled video game talent pools. Halifax is a highly educated cluster with a tech-savvy workforce. Leading games companies in Nova Scotia create everything from high-end console games, to Flash and 3D casual games.

Leading companies:

Fourth Monkey, HB Studios, Huminah Huminah Interactive, Longtail Studios, Twisted Oak.

Incentives:

The province offers a Digital Media Tax Credit, worth 50% of eligible labour costs or 25% of total expenditures.

QUEBEC

Key strengths:

Over 500 companies are active in the interactive digital media industry in Quebec, employing more than 12,000 people. Quebec is becoming one of the most attractive places in the world for interactive digital media companies. Montréal is first worldwide in terms of jobs created from FDI in the video games and digital content sector¹³, and investors include several large international gaming companies.

Leading companies:

Autodesk, Babel Media, Beenox (Activision), Behaviour Interactive, BioWare (EA), CinéGroupe, Cyanide Studios, Eidos (Square Enix), Electronic Arts, Eyetronics, Frima, Gameloft, THQ, Toonboom, Ubisoft, Warner Bros Interactive Entertainment.

Incentives:

Quebec offers a Production of Multimedia Tax Credit, worth up to 30%* of qualifying labour costs for commercial titles, and a bonus for French titles. The province also offers a Computer Animation and Digital Special Effects Tax Credit, worth 10% of qualifying labour costs for film and television production and 20% of qualifying labour costs for production services.

*With an additional 7.5% tax credit for labour costs incurred in the translation and creation of a French language version of video games.

¹³ fDi Markets database, fDi Intelligence from the Financial Times Ltd (2012)



ONTARIO

Key strengths:

Ontario has a large interactive digital media industry, with over 1,000 companies and approximately 16,000 employees. The province is recognized worldwide for its high-quality artists, designers, animators and programmers. Ontario is host to important industry events including the Toronto International Film Festival, which is recognized as the most important film festival after Cannes. Ottawa is host to the Ottawa International Animation Festival which profiles Canadian talent in the sector.

Leading companies:

Arc Productions, Big Viking, Breakthrough Entertainment, Copybara, Crush, Digital Extremes, Gameloft, Nelvana, Red Urban, Rockstar Games, Side Effects Software, Tecmo-Koei, Ubisoft, XMG Studio, Zynga.

Incentives:

Ontario offers an Interactive Digital Media Tax Credit, worth 40% of eligible labour costs and a maximum of \$100,000 in marketing and distribution expenditures, as well as a Computer Animation and Special Effects Tax Credit, worth 20% of total labour costs.

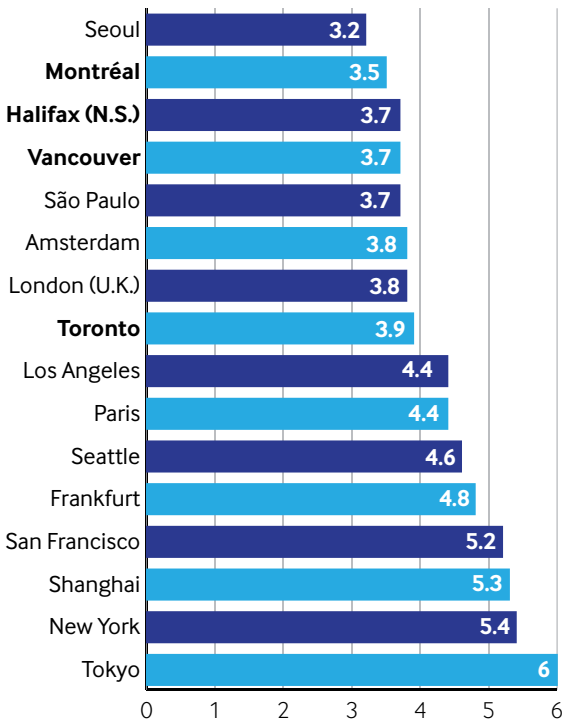
Canada's cost advantages

ADVANTAGE: LABOUR COST SAVINGS

For a typical video game design centre, companies can make labour cost savings of over \$2 million per annum by investing in Canadian cities compared to Japanese and U.S. locations.

Total labour costs (\$ million)

This chart looks at the total labour costs for a video game design centre with a total head count of 40 people. Labour costs include employee salary plus statutory employer social security contributions. Private healthcare costs are also included for U.S. and Canadian cities.



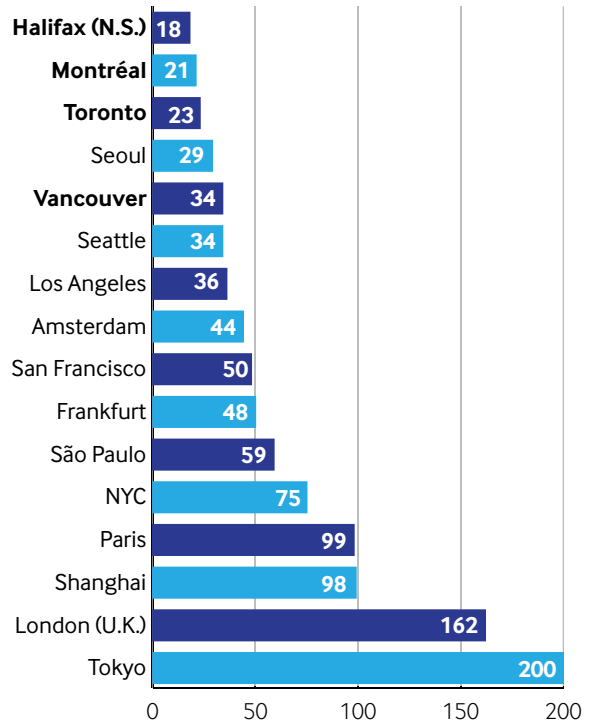
Source: fDi Benchmark Database, fDi Intelligence from the Financial Times (2012)

ADVANTAGE: COMPETITIVE OFFICE COSTS

Canada is a very cost-competitive location in terms of office rent. Office costs are half the cost of comparable cities in the U.S. and a fraction of the cost of many European, Japanese and emerging market cities.

Office rent per square foot per annum (\$)

This table shows the cost per square foot of prime Grade A office space in each location.



Source: fDi Intelligence based on Cushman & Wakefield (Q4 2011)

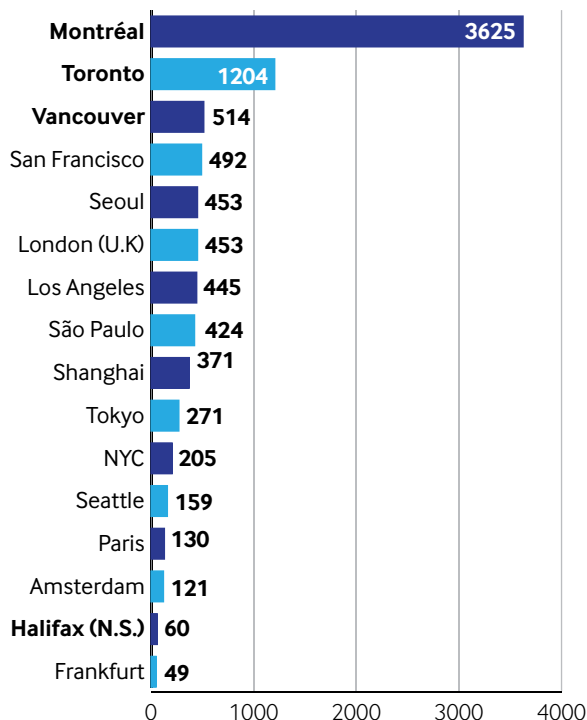
Canada's competitive advantages

ADVANTAGE: TRACK RECORD IN ATTRACTING FDI IN DIGITAL MEDIA

Over 8,000 jobs have been created in Canada from greenfield FDI projects in the video games, applications and digital content sub-sector. Montréal is the leading city worldwide in terms of jobs created, and Toronto and Vancouver have created more FDI jobs in video games than San Francisco, London (U.K.), Seoul and Tokyo.

Number of inward greenfield FDI jobs in video games, applications and digital content

This chart shows the estimated number of greenfield FDI jobs created in each city between 2003 and 2011.



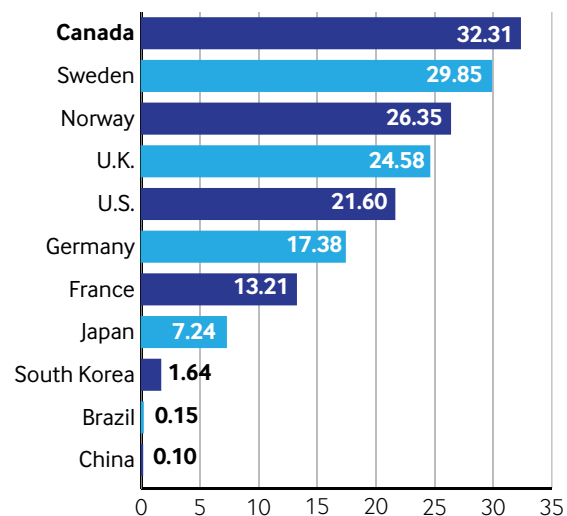
Source: fDi Markets database, fDi Intelligence from the Financial Times Ltd (2012)

ADVANTAGE: HIGHEST PENETRATION OF VIDEO GAMES

Total Canadian imports of video games¹⁴ amounted to US\$1.1 trillion in 2010. Canada has a higher per capita spending on imports of video games than the U.S., as well as most European and Asian countries. With the highest market penetration of competing locations, Canada is an attractive test base for new video games.

Imports of video games per capita (US\$)

This chart shows national imports of video games on a per capita basis.



Source: fDi Intelligence based on UN Comtrade Database (2010)

¹⁴ HS code 950410: Video games used with a television receiver

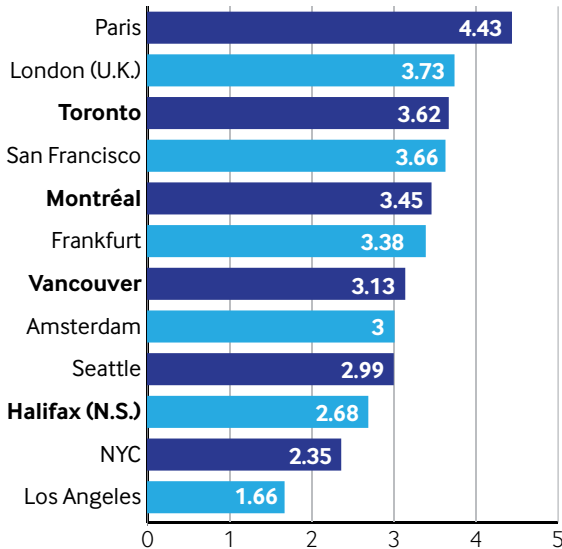
Canada's competitive advantages

ADVANTAGE: SIZE OF INDUSTRY-SPECIFIC LABOUR FORCE

Canadian cities have high proportions of their workforce employed within ICT services. Toronto has a higher proportion of ICT services workers compared to San Francisco. Montréal, Vancouver and Halifax have a higher proportion than New York and Los Angeles.

Proportion of employment in ICT Services (%)

This chart shows the proportion of the workforce employed in the ICT services sector.



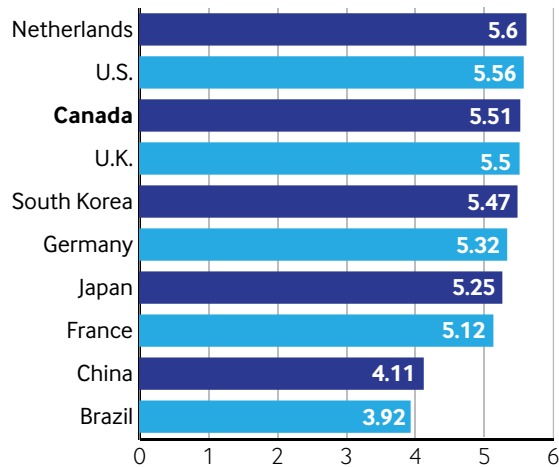
Source: Eurostat NUTS 2 (2007/08); Statistics Canada Census Metro Area (2006) and United States Bureau of Labor Statistics MSA (2009) NACE 72, 64.2 / NAICS 517, 518, 5415

ADVANTAGE: NETWORK READINESS

Canada is well positioned to exploit the opportunities offered in ICT, ranking ninth globally, ahead of major Asian and European countries.

Networked Readiness Index (Rank 1-7)

This chart shows competitor locations and their overall network readiness, defined as a measure of their propensity to exploit the opportunities offered by information and communications technology. (1= worst; 7= best)



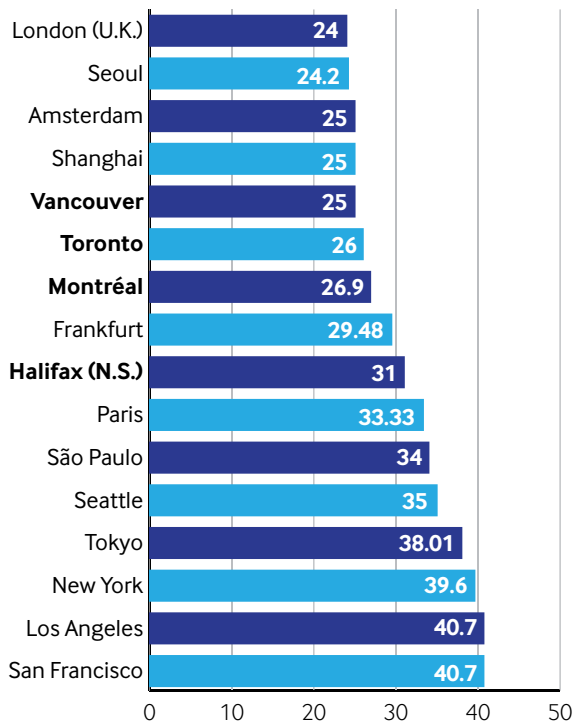
Source: World Economic Forum Global IT Report 2012

ADVANTAGE: FAVOURABLE CORPORATE INCOME TAX

Canada offers among the most attractive corporate income tax levels of any comparable country. Companies locating in Canadian cities can expect to pay lower corporate income taxes than in the U.S., Japan, Brazil and France.

Corporate tax (%)

This chart shows the corporate income tax rates payable by companies. Figures are expressed as tax payable as a percentage of companies' gross profit.



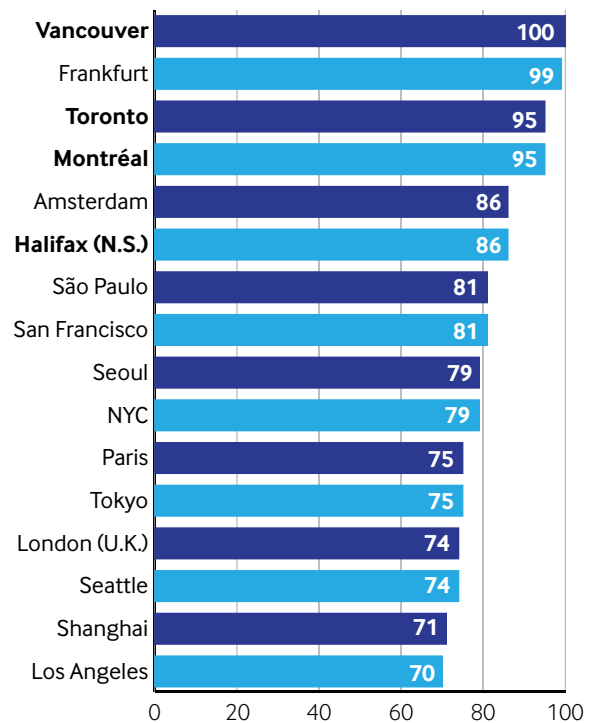
Source: KPMG (Country and Canadian Provinces; 2012) and Tax Foundation (U.S. States; 2011)

ADVANTAGE: OUTSTANDING QUALITY OF LIFE AT AN AFFORDABLE COST

Canadian cities offer the highest quality of life in the world. Vancouver was rated the most liveable city in the world by the Economist Intelligence Unit in 2011 and also tops the fDi Intelligence index. Canadian cities are highest ranking when considering both quality of life and cost of living.

Attractiveness of cities

This chart shows the overall attractiveness of cities based on combining their quality of life and cost of living, with a 50% weight attached to each.



Source: fDi Intelligence from the Financial Times (2011). Vancouver = 100

Invest in Canada to achieve global excellence

A welcoming business environment

Canada is the best place to do business in the world.

Source: Forbes Magazine, October 2011

A growing economy

Canada has been the top performer among the G-7 in GDP growth over the 2008 to 2011 period.

Source: Consensus Economics, April 2012

A highly educated workforce

Canada has the highest proportion of post-secondary graduates among members of the Organization for Economic Co-operation and Development (OECD).

Source: Education at a Glance 2011, OECD

Financial stability

Over the past four years, Canada's banking system has repeatedly been declared the soundest in the world.

Source: Global Competitiveness Report 2009-2012, World Economic Forum (WEF)

Low tax rates

Canada's combined federal-provincial statutory corporate income tax rate of 26% is more than 13% below the U.S. and among the lowest when compared to G-7 countries.

Source: Department of Finance Canada and the OECD Tax Database 2012

Scientific research and experimental development

Canada offers some of the most generous R & D tax incentives in the industrialized world, with combined federal and provincial tax credits that can currently save foreign investors, on average, up to 30 cents on the dollar invested in R & D in Canada. Canada also has the G-7's lowest costs in R & D-intensive sectors (up to 10.7% lower than the U.S.).

Source: Department of Finance Canada and KPMG Competitive Alternatives, 2012

NAFTA

The North American Free Trade Agreement (NAFTA) gives investors access to nearly 457 million consumers and a combined continental GDP of about US\$17.2 trillion.

Canada continues to seek more free trade agreements with economic and emerging powers to increase trade and investment.

Source: World Bank, World Development Indicators Database, 2012

A great place to invest, work, and live

Canada is one of the most multicultural countries in the world, home to world-class universities, a universal health care system, and clean and friendly cities. Canada has the highest quality of life among G-7 countries and consistently ranks among the world's top countries in Human Development.

Source: Statistics Canada; United Nations Human Development Report, 2011; OECD Better Life Index, 2011

Front cover images © A: SSX, Electronic Arts (EA); B: *Immortals* using Maya by Autodesk - Image Engine Design Inc; C: *Deus Ex: Human Revolution*, Eidos-Montréal; D: *Babar and the Adventures of Badou*, Nelvana Canada; E: *Motion Sports Adrenaline*, Longtail/Ubisoft; F: *Gnomeo & Juliet*, Arc Productions; G: *Mass Effect 3*, Bioware; H: *Skylanders: Spyro's Adventure*, Frima/Activision.



Invest in Canada

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