

Fastest Growing Industries: Tech Industry

A guide for newcomers to British Columbia



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1. Overview of the Tech Industry

Introduction

The Tech Industry is growing by 6% per year, twice as fast as B.C.'s entire economy. Tech GDP has grown at double the pace of the provincial economy since the 2008 recession.

2016 British Columbia technology report card
<https://home.kpmg.com/ca/en/home/insights/2016/10/british-columbia-technology-report-card-2016-edition.html>
 Vancouver Economic Commission: Technology
<http://www.vancouvereconomic.com/focus/technology/>

The Technology industry in British Columbia is one of the province's strongest contributors to B.C.'s GDP and is a key driver of economic prosperity and diversity. It outperforms traditional BC sectors such as forestry, mining, and oil & gas and employs more people than the mining, oil & gas, and forestry sectors combined.

B.C.'s high technology sector generated approximately 7% of the province's GDP in 2015, contributing

\$14.1 billion to BC's overall economic output.

Revenue of British Columbia's high tech sector climbed 5.0% in 2015, to \$26.3 billion the highest level ever recorded. The technological innovations pioneered by this sector are of

BC's High Technology Sector - GDP 2015
 (chained 2007 dollars)

	\$ million	% change 2014/2015
Manufacturing	1,548	3.4
Services	12,582	2.2
High Tech Total	14,130	2.4
B.C. Total	210,910	3.1

Source: Profile of the British Columbia High Technology Sector - 2016 Edition (BC Statistics)

critical importance in supporting the growth of all other 'non-tech' economic sectors. The '2016 BC Technology Report Card, Scaling up BC's tech ecosystem' (<http://www.wearebctech.com/advocacy/publications/publication/industry-reports/2016-kpmg-bc-tech-report-card>), reveals that tech sector revenue grew by an impressive 14.4 per cent since 2014. On a national basis, BC's tech sector grew faster than Ontario and Quebec, and outperformed the US national average.

There are **over 9,000** established Technology companies** in BC along with 18,750 emerging companies. About 93% of these businesses are in service sector industries. More than two-thirds (69%) of BC's high technology businesses are located in the *Mainland/Southwest Region*, with the bulk of those situated in Greater Vancouver. These include a number of high tech clusters such as alternative energy companies, digital media and gaming developers, biotechnology firms and a burgeoning wireless sector. The *Vancouver Island/Coast* region is home to approximately 15% of the province's high tech businesses, with the majority located in the Victoria Capital region, and another 8% of BC's tech businesses reside in the Thompson-Okanagan region.

**in 2015, high tech businesses with employees in B.C. increased 1.9%, to 9,905. The largest growth was in computer and related services, which added 183 net new companies.

For more information and profiles of specific Tech Industry companies in BC, see <http://bctechbase.com/#/dashboard>

Employment in BC's high technology sector increased 2.9% in 2015 to 101,780, the highest level ever recorded. The motion picture production & post-production industry led the growth with 19.2% increase, followed by software publishing at 10.8%, and other computer and related services at 6.0% increased employment. In 2015, almost 86% of BC's high tech workers were employed in a service industry; the remainder in manufacturing jobs.

In 2015, **wages and salaries** paid by British Columbia's high tech sector grew 4.5% to over \$8.4 billion, the highest level ever recorded, and fifth consecutive year that wages reached a new peak. The Technology industry sector pays 75%

higher wages than the average BC Worker receives. In 2015, average weekly earnings of high tech employees were \$1,590 per week, compared to just \$910 for the average B.C. worker.

Exports: Services & Commodities

The value of B.C.'s high technology **exports** continues to climb:

Service Exports: in 2015, B.C.'s **high tech services** exports jumped 6.7%, to \$4.2 billion (including professional, scientific & technical services, and computer related services)

Commodity Exports: in 2015, there was a 20.4% jump in the value of B.C.'s **high technology commodity** exports to almost \$1.4 billion. (Two-thirds of B.C.'s high tech export commodities are concentrated in two groups: computers and telecommunications equipment and aerospace products).

SECTOR FACTS...

Venture capital investments in B.C. have doubled since 2012 to **\$464 MILLION** in 2015.

Commodity exports jumped 20% in 2015 to almost **\$1.4 BILLION**.

Industries as diverse as eCommerce, health, sports, and publishing are increasingly using digital media in new and innovative ways.

B.C. is home to the world's largest cluster of top visual effects and animation studios. There are more than 50 visual effects and animation studios located in the province.

Sources:

BC Statistics: Profile of the BC High Technology Sector, 2016

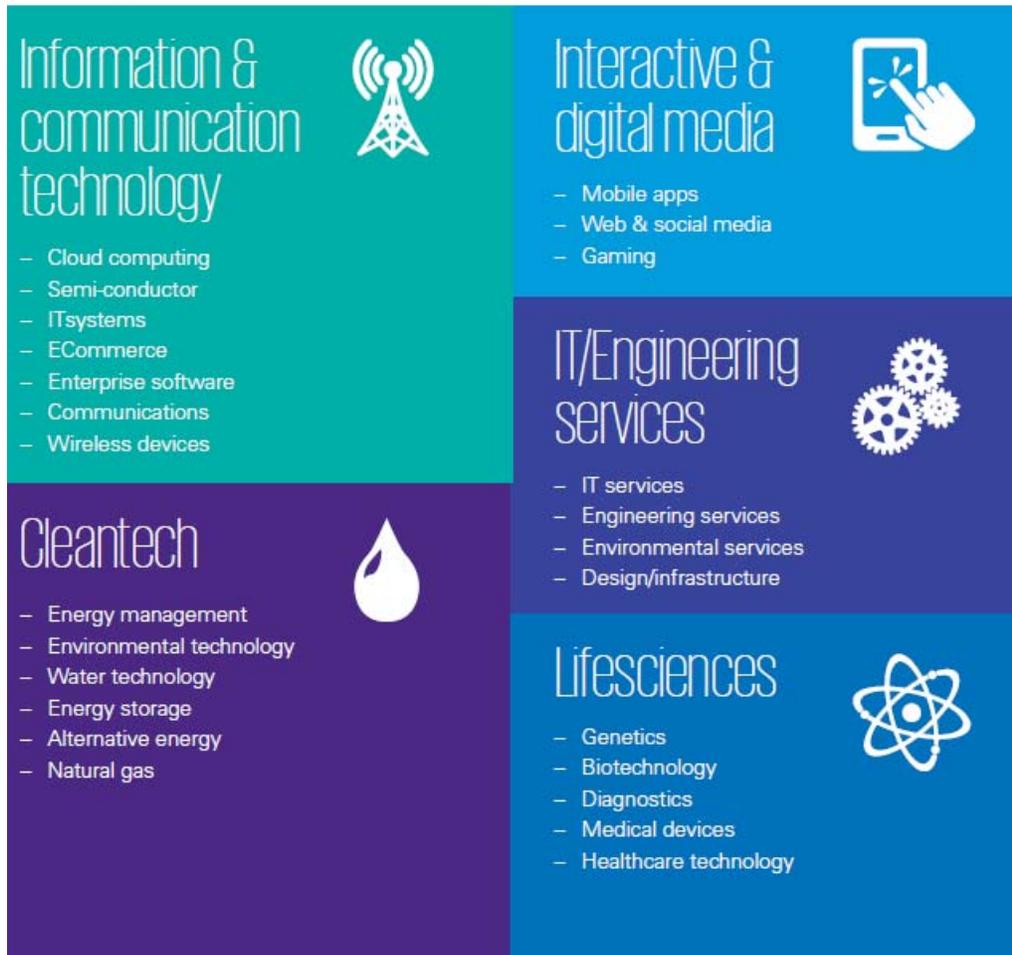
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/BusinessIndustry/HighTechnology.aspx>

BC Jobs Plan: 5 year Update

https://bcjobsplan.gov.bc.ca/app/uploads/sites/21/2017/01/JobsPlan_5YearUpdate_web-1.pdf

Key Sectors in BC's Tech Industry

Key sectors BC's Tech Industry



Source: <https://assets.kpmg.com/content/dam/kpmg/ca/pdf/2016/10/BC-tech-report-card-FY16.pdf>

Other key subsectors include

- Motion picture and video industries
- Digital Entertainment & Interactive (DE&I)
- Publishing industries

****The Information & Communication Technology (ICT) Sector****

The ICT sector includes: Software as a Service (SaaS), social media, business intelligence, security and financial tech, e-commerce, and web technologies with wireless technology at the forefront of this sector. BC now has 1,200 wireless companies employing 10,200 people, with industry revenues topping \$3 billion. This sector boasts some major global and local players, including Microsoft, Amazon, Cisco Systems, Samsung, SAP, and Zenefits, as well as Absolute Software, ACL Service, TELUS, BuildDirect and Vision Critical.

Vancouver is ranked in the *top 20 Startup Ecosystems in the world* for *Information & Communications Technology (ICT)*. Recent success stories include HootSuite and Avigilon, which together created more than 1,000 jobs and became part of the Canadian 'Narwhal Club' for startups with valuations beyond \$1 billion.

Sources:

Profile of the British Columbia High Technology Sector - 2016 Edition (BC Statistics)

<http://www.bcstats.gov.bc.ca/StatisticsBySubject/BusinessIndustry/HighTechnology.aspx>

2016 British Columbia technology report card: Scaling up BC's tech ecosystem (KPMG)

<https://home.kpmg.com/ca/en/home/insights/2016/10/british-columbia-technology-report-card-2016-edition.html>

Final Engagement Report, Stakeholder Engagement, Technology LMP (Labour Market Partnership)

https://www.workbc.ca/getmedia/8ec1670b-ba96-4ceb-bf3c-f55c3bdf362e/Technology_Vancouver-Economic-Development-Society_Engagement-Report_Jan16.pdf.aspx

Vancouver Economic Commission, Focus on Technology

<http://www.vancouvereconomic.com/focus/technology/>

BC Technology & Green Economy Sector Update

http://bcjobsplan.gov.bc.ca/app/uploads/sites/21/2017/01/BCJobsPlan_4YearProgressUpdate_web.pdf (p. 23-24)

BC Jobs Plan 5 year update: Technology & Innovation

https://bcjobsplan.gov.bc.ca/app/uploads/sites/21/2017/01/BCJobsPlan_5YearUpdate_web-1.pdf

Compass Co. 2015 Global Startup Ecosystem Ranking

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<http://blog.compass.co/the-2015-global-startup-ecosystem-ranking-is-live/>

3 Vancouver tech startups are valued at over \$1 billion

<http://www.vancitybuzz.com/2015/12/vancouver-tech-startups-worth-1-billion/>

Projects in BC

Venture Accelerator Projects take entrepreneurs through a structured market-validation program and help connect them with business experts and fellow entrepreneurs to speed up the growth of their company:

BCIC Venture Acceleration Program -- <http://bcic.ca/for-entrepreneurs/vap/>

BCIC (BC Innovation Council, an agency of the BC government), supports and coordinates the BC Acceleration Network – the network connects technology entrepreneurs with experts to build a business and accelerate its growth.



Foresight CleanTech Accelerator Centre

<http://foresightcac.com/>

The CleanTech industry in Canada is worth in excess of

\$12 billion, with *one-fifth of all companies located in Vancouver*. B.C.'s Foresight **Cleantech Accelerator Centre** is the only business accelerator for the clean tech industry in Western Canada. It fosters the growth of small and medium size businesses (SMEs) in the development and commercialization of viable technology solutions to create and produce energy efficiently and responsibly.

Assistance includes:

- connecting clients with corporate partners, universities, government agencies and local service providers.
- providing lab & office facilities
- sourcing investment capital and funding networks
- mentoring by industry experts in research & commercialization

Additional Sources:

BC Tech Strategy

<https://bctechstrategy.gov.bc.ca/>

Accelerating BC Tech Business

<http://bctechstrategy.gov.bc.ca/economy/accelerate-your-b-c-tech-business/>

\$100 Million BC Tech Fund

<https://bctechstrategy.gov.bc.ca/bctech-fund/>

BC Technology Report Card 2016: scaling up BCs tech ecosystem

<https://assets.kpmg.com/content/dam/kpmg/ca/pdf/2016/10/BC-tech-report-card-FY16.pdf>

2. Occupations in the Tech Industry

Over the years 2016 to 2025, migrant workers to the province are expected to fill 35 percent of the future labour supply additions.

BC 2025 Labour Market Outlook

High Demand (Top Opportunity) Occupations in BC's Technology

Industry (across all BC Regions):

- *Computer & information system managers*
- *Information systems analysts & consultants*
- *Computer programmers & interactive media developers*
- *Software engineers & designers*
- *Web designers & developers*

- *Computer engineers*

High Demand Occupations for individual regions

Mainland / Southwest BC Region

THE 10 OCCUPATIONS FORECAST TO EXPAND FASTEST IN THE REGION ARE:

OCCUPATION	ANNUAL AVERAGE EMPLOYMENT DEMAND GROWTH
Other technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts	3.6%
Support occupations in motion pictures, broadcasting, photography and the performing arts	3.5%
Producers, directors, choreographers and related occupations	3.4%
Film and video camera operators	3.2%
Audio and video recording technicians	3.1%
Actors and comedians	3.0%
Web designers and developers	3.0%
Telecommunication carriers managers	2.9%
Computer programmers and interactive media developers	2.8%
Information systems testing technicians	2.8%

**Note: Health Occupations are not included. See listing of Top High Opportunity Health Professions in previous section.*

THE FIVE INDUSTRIES FORECAST TO EXPAND THE FASTEST IN THE REGION ARE:

INDUSTRY	ANNUAL AVERAGE EMPLOYMENT DEMAND GROWTH
Motion Picture and Video Industries	4.1%
Warehousing and storage	3.9%
Computer systems design and related services	3.8%
Telecommunications	3.1%
Primary metal manufacturing	3.0%

Vancouver Island Region

THE 10 OCCUPATIONS FORECAST TO EXPAND FASTEST IN THE REGION ARE:

OCCUPATION	ANNUAL AVERAGE EMPLOYMENT DEMAND GROWTH
Underground production and development miners	3.1%
Ground and water transport ticket agents, cargo service representatives and related clerks	2.7%
Engineer officers, water transport	2.7%
Computer programmers and interactive media developers	2.4%
Water transport deck and engine room crew	2.4%
Software engineers and designers	2.4%
Web designers and developers	2.4%
Boat and cable ferry operators and related occupations	2.3%
Information systems analysts and consultants	2.2%
Customer services representatives – financial institutions	2.1%

Source: *British Columbia 2025 Labour Market Outlook*

<https://www.workbc.ca/getmedia/00de3b15-0551-4f70-9e6b-23ffb6c9cb86/LabourMarketOutlook.aspx>

Forecast of Labour Market Conditions for the Tech Industry in BC

The 2016 BC Technology Report Card identifies ***access to talent as the biggest issue that BC's technology companies now face in expanding their businesses***. BC post-secondary institutions graduate fewer engineering and technology related degrees, on a per capita basis, compared with other Canadian provinces, and BC remains below the OECD average in granting technical doctoral degrees. To achieve full potential, the tech sector needs to educate, attract and retain the best talent in the world - both specialized tech talent as well as senior level executive talent with the expertise necessary to help companies to scale to global leaders.

Although employment grew at a healthy 22 per cent in the period from 2004 to 2009, the growth rate in jobs has softened in the past five years, growing at just 5.7 per cent. During the same period, ***average tech wages increased by 25 per***

cent to over \$82,000 per year, a 76 per cent increase over the average BC wage. While the tech sector continues to provide among the highest paying jobs, the companies trying to recruit are increasingly sounding the alarm on the talent crisis, particularly in technical and executive roles.

Source: 2016 BC Technology Report Card: Scaling up BC's Tech Ecosystem (KPMG) <https://assets.kpmg.com/content/dam/kpmg/ca/pdf/2016/10/BC-tech-report-card-FY16.pdf>

3. Finding Jobs in the Tech Industry

Online Job Postings

- **Indeed.ca**
http://ca.indeed.com/advanced_search
- **BCTechJobs.ca**
<https://www.bctechjobs.ca/>
- **Creative BC – career resources**
<http://www.creativebc.com/community/education-and-careers>
<http://www.creativebc.com/community/education-and-careers#getting-started-in-the-motion-picture-industry/joining-the-unions>
- **DigiBC – Digital Media + Wireless Association of BC**
http://www.digibc.org/jobs?current_page=1&sort_type=featured_recent&filter=%7B%7D&display_type=default
- **Playback Careers –(production, broadcasting and interactive media)**
<http://playbackonline.ca/careers/>
- **TechJobs.ca**
<http://www.techjobs.ca/en>
- **T-Net**
<http://www.bctechnology.com/jobs/search.cfm>
- **Vancouver Film School Job Board**
<https://www.myvfs.com/jobboard>

- **Vancouver Games Jobs**
<http://www.vancouvergamejobs.com/>
- **Vancouver's VFX, Animation, & Games Job Board**
<http://vfxvancouver.com/>
- **Neuvoo**
<http://neuvoo.ca/en>
- **WorkBC**
<https://www.workbc.ca/Jobs-Careers/Find-Jobs/Jobs.aspx>
- **BC Jobs.ca**
<https://www.bcjobs.ca/>

Creating a List of Potential Employers

You can use directories to produce lists of employers in this industry in British Columbia. Contact them directly to find out if they're hiring.

- **BC Tech Association**
<http://www.wearebctech.com/community/member-directory>
- **BC Tech Association: BC Techbase**
<http://bctechbase.com/#/companies>
- **BCTechnology.com – startup & top IT employers**
<http://www.bctechnology.com/tech-careers.cfm>
- **Creative BC – Interactive & Digital Media Contacts**
<http://www.creativebc.com/industry-sectors/industry-contacts/interactive-and-digital-media>
- **Creative BC – Digital VFX Contacts**
<http://www.creativebc.com/industry-sectors/motion-picture/post-and-digital-visual-effects>
- **Local Video Game Companies – Vancouver**
<http://gamejobhunter.com/blog/local-video-game-companies-vancouver/>
- **Reel West Digest. Membership Directory**
<http://reelwest.com/digest>

over 1400 companies/organizations & individuals providing services and facilities for the film, video, internet and digital production industry in Western Canada

- **Reference Canada**

<http://www.vpl.ca/digital-library/reference-canada>

Click on "Start Search" beside Canadian Businesses, then select the "Advanced Search" button. Select both "Keyword/SIC/NAICS" under Business Type and "City" under Geography. In the top search box enter ***enter the type of work that is relevant to you***, e.g. *"animation" or "interactive media" or "data communication"* and click SEARCH. Select the appropriate headings. Lower down, select the Province, choose the cities, and click the "View Results" button.

Available from the VPL Digital Library | Explore our Digital Library page

NOTE: *You can access this database from a Library computer. If you are using a computer from outside the Library, you will need a Vancouver Public Library card to login to this database.*

4. Additional Resources

Still looking for more information? Try looking at the following resources:

- **BC Tech Association**

<http://www.wearebctech.com/>

- **BCTechnology.com**

<http://www.bctechnology.com/>

- **DigiBC – Digital Media & Wireless Association of BC**

<http://www.digibc.org/>

represents companies working in mobile & wireless, video games, animation & special effects, social media, online marketing and emerging next gen technologies

- **Canadian Media Production Association, BC Producers Branch – CMPABC**

<http://cmpabc.com/>

- **Creative BC** (independent non-profit BC government agency)

<http://www.creativebc.com/>

promotes the development of creative industries in British Columbia and provides a

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single point of access for industry programming, production support services, tax credit administration, international marketing and policy development.

- **Spark CG Computer Graphics Society**
<http://sparkfx.ca/>
- **Vancouver Economic Commission: Digital Entertainment & Interactive**
<http://www.vancouvereconomic.com/focus/digital-entertainment-interactive/>
- **Vancouver Post Alliance VPA –post production industry in BC**
<http://www.vancouverpostalliance.com/>
- **British Columbia: Film, Television and digital media**
<http://www.britishcolumbia.ca/invest/industry-sectors/technology/film-television-and-digital-media/>

Reel West

<http://reelwest.com/>

film, television, video, and multimedia production in Western Canada

Questions? Please ask the Information Staff at the Central Library or telephone 604-331-3603.

Please note that the information in this guide is also available online through the Skilled Immigrant InfoCentre website at <http://skilledimmigrants.vpl.ca/>.