



BC Tech Submission to the Select Standing  
Committee on Finance and Government  
Services' Annual Budget Consultation

**JUNE 2019**

# A Call to Action

It is no surprise that BC's fast-growing tech sector is a leading economic driver of growth in BC; technology is a tool empowering businesses, people, and governments to tackle important problems and improve lives. BC's tech sector is delivering this strong performance while being held back by two limiting factors:

- A shortage of **talent**
- An environment that could better support **scale**

BC's \$25 Billion opportunity is to tackle these two challenges effectively and double not only the size of our tech industry but also the technology adoption and innovation in every BC industry.

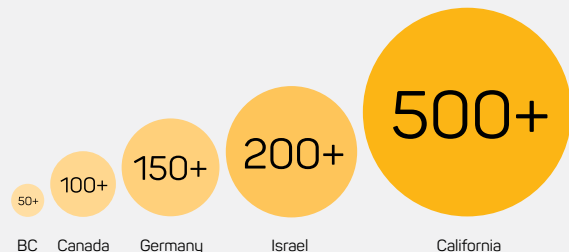
The KPMG BC Tech Report Card 2018 graded BC a 3rd straight A on economic output indicators. But our grade on input indicators did not progress from the B- we received in 2016. The 2018 report card delivered a clear call to action to address two key weaknesses: **Talent** and **Scale**. The vast majority of BC Tech companies have 10 or fewer employees and the 2018 Tech Report Card showed no growth in the number of tech companies with 50 or more employees.

Companies with 50 or fewer employees can produce many economic and social goods: new ideas, products and solutions, purposeful employment, fast growth and engaging workplace cultures. They are rightly celebrated as success stories. But they are not yet at the scale where they can provide economic strength and stability for the long term. They are not yet the anchors that form the basis of every thriving tech ecosystem. And yet not every jurisdiction struggles in the same way.

This is a made-in-BC problem that needs a made-in-BC solution. BC's failure to incent, encourage and develop scaleups, commercialization, senior talent and new graduates in sufficient numbers is a critical weakness at the heart of our ecosystem.

## BC's Biggest tech companies are small:

The threshold to be one of the largest 10%\* of tech companies in BC is an employee count of 50. The comparable threshold for Canada is 100 which trails Germany at 150, Israel at 200, and California at 500.



*\*Excluding microbusinesses*

## OUR OPPORTUNITY

**Today, technology is more than an industry, it is an engine that fuels the development and growth of all industries.**

BC's growing tech industry is a key source of innovation GDP, job growth, and economic diversity. It is time for BC to seize the potential of the emerging technology and innovation economy—it will transform every part of our economy for the better. We don't need any more problem description—we need proposals, experimentation, and solutions. Through a detailed process of consultation, research and debate BC Tech has arrived at 11 key recommendations in 2 critical areas: Talent and Scale.

# 11 Key Policy Recommendations

## SCALE

### OUTCOME:

Double the number of anchor companies in BC.

## RECOMMENDATIONS







1.  Create a BC Transformation Fund of \$1B over ten years to accelerate BC's transition to the economy of the future.
2.  Increase Innovate BC's annual budget by \$20M for 2020/2021, with a progressive incremental increase of a further \$20M over five years.
3.  Strengthen and extend DataBC's mandate to strategically manage BC's public data to accelerate platform growth and improve access to data.
4.   Update refundable SR&ED and Industrial Research Assistance Program (IRAP) ceiling and employee limits to increase these programs' scaling power.
5.  Introduce a superdeduction for 150% of qualifying tech commercialization costs for BC-headquartered tech companies to promote market success and scale-up.
6.  Establish a \$50M procurement fund for BC companies to strengthen BC's technology procurement and optimize for innovation and Value-for-BC.

## TALENT

### OUTCOME:

Increase the tech talent pool to fulfill BC's enormous economic growth potential.

## RECOMMENDATIONS

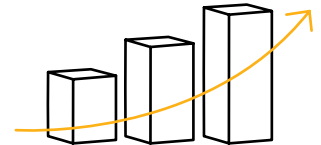
1.  Fund an additional 2,000 tech-relevant public post-secondary graduates to meet industry demand.
2.   Make the federal Global Talent Stream (GTS) permanent and extend the up-front BC foreign buyers' housing tax exemption to GTS nominees to ensure fairness. Extend the BC Provincial Nominee Program (PNP) Tech Pilot and increase the allocation of PNP places for BC to unlock additional talent supply.
3.  Establish a labour credit of 10% of the starting salary of a returning Canadian worker (resident for 3 years) refundable against the payroll tax liabilities of BC-headquartered tech companies to bring Canadians working abroad home.
4.  Double the New Ventures BC Innovator Skills Initiative co-op places, increase the program employee cap from 100 to 300, and expand the program to include workers transitioning to tech to increase work-integrated learning opportunities.
5.  Establish pilot programs to deliver online learning to 1000 adult learners in part-time post-secondary and career education across the province to increase the tech talent pool and provide economic opportunity to more citizens.



# Policy Recommendations

## SCALE

BC has a thriving technology and innovation sector based on our greatest natural resource—our people. Together we have built an industry that is a key contributor to GDP and a leading driver of BC's economic growth.



Yet BC's economy structurally under-invests in R&D by global standards. At 1.4% of GDP we trail significantly behind the OECD average of 2.4% and also trail the Canadian average of 1.7%.

At the firm level, our companies experience difficulty scaling up to become anchors, we are much slower to commercialize than to develop products and services, and we see a productivity shortfall versus international competitor jurisdictions.

Shifting BC's technology sector composition towards more successful anchor firms will attract high-quality talent from BC and beyond, increase worker productivity, support smaller firms to grow, and bolster the tax base by creating rewarding jobs.



Healthy economies need local anchor companies because their presence helps all companies within the ecosystem to scale up. Talent is attracted to locations where career paths are possible, and gaining experience within different organizations, at different sizes and stages of growth, enables the whole talent ecosystem to become more robust and resilient."

**Andrew Booth**

Chief Commercial Officer, STEMCELL

**There is a significant opportunity to support and encourage the scale-up success of BC companies and create incentives for larger businesses to further invest and build their future in BC. Our scale recommendations are:**

1. A Transformation Fund for BC
2. Increase Innovate BC's annual budget
3. Secure and leverage data as an opportunity to scale
4. Extend and continue incentives for R&D
5. Incent BC-headquartered commercialization to drive scale success
6. Use Procurement as a lever

# Incent and support scale and anchor companies

## 1. A Transformation Fund for BC

Transforming the economy requires transformative investments and new investment decision mechanisms. We recommend the establishment of a BC Transformation Fund to invest in innovation projects and proposals to tackle BC's lack of scaling success:



- Incent and encourage the creation and retention of IP in BC and the establishment and growth of head offices with strategic decision-making and resource allocation authority.
- Enable BC companies to achieve rapid commercialization and export growth of their innovative products and solutions.
- Incent and encourage homegrown companies to make and retain large scale investment in BC such as new manufacturing and distribution facilities.
- Provide shared ecosystem capital assets and lab facilities for research to enable sectors where BC is a world leader to intensify their collaboration, scale faster and stay rooted in BC.
- Harness made-in-BC innovation to deliver climate action targets through consortiums of BC researchers, technology companies and energy-intensive emitters.
- Reskill workers in sectors in transition to enable them to participate in the innovation and technology economy.



### RECOMMENDATION

*Create a BC Transformation Fund of \$1B, with an investment of \$100M annually over ten years, to support commercialization, equipment investment, sustainable development, and collaborative R&D facilities.*



## 2. Increase Innovate BC's annual budget

BC is lucky to have many of the institutions to support innovation:

- World-class research universities like UBC and SFU, and top technical schools such as BCIT and Kwantlen Polytechnic University
- Accelerators like BC Tech, VIATEC, and Accelerate Okanagan
- A crown corporation, Innovate BC

But much more is needed to adequately support BC's innovation economy.

Innovate BC has a new Board, a refreshed mandate, and a new CEO. But it does not yet have the budget to deliver on its ambitious mandate. BC Tech recommends an immediate increase by \$20M, progressing incrementally by another \$20M over five years. This would bring BC close to comparable per capita innovation investments in other provinces.

### RECOMMENDATION

*Increase Innovate BC's annual budget by \$20M for 2020/2021, with a progressive incremental increase of a further \$20M over five years.*



### 3. Secure and leverage data as an opportunity to scale



The next digital revolution involves mining data for insights—and much of that data is still ‘dark’ today. Data from industrial, commercial, research, government, and other captive databases, as well as real-time streaming from sensors will transform how we understand our world and improve our decision making.

The major platforms have access to probably no more than 20% of today’s data yet have accrued huge benefits from that access. Gaining access to the remaining 80% and using powerful artificial intelligence computing to analyze it will unlock tremendous value. But we must also address questions of data privacy and security to ensure that it is not only the platforms who capture the value created, but that the providers of data also share in the wealth and that new entrants have access to markets.

There is no option to avoid or defer this data revolution—it is a global tide that cannot be turned back. But it can be channeled and influenced and managed. Common-sense rules for the digital age are fully compatible with innovation and supported by the technology industry.

Top data science, machine learning, and AI talent is attracted as much to datasets as to companies or cities. This is because data is the key driver of progress.

Unlocking BC’s “dark datasets”, an underutilized asset, will increase the appeal of BC as a place to work and allow our companies and workers to leverage the most possible data to advance their work and drive innovation.

BC must act now to establish mechanisms to increase the ability of researchers, technologists, and government workers to access and leverage public data, getting away from silos and challenging preconceptions about how data security and privacy can best be achieved.



To drive key ingredients required for a vibrant tech ecosystem, such as a strong access to capital and a healthy talent pool, BC needs to foster a home-grown ‘platform business model.’ Platform business models not only provide vital network effect benefits to multiple groups of stakeholders, but also serve as a highly valuable data pool, which can be collected, analyzed, and then monetized in our province.”

**Jeff Booth**

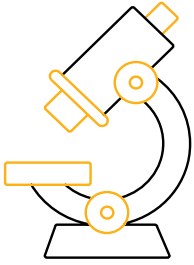
Vancouver tech entrepreneur

#### RECOMMENDATION

*Strengthen and extend DataBC’s mandate and resources to secure and manage BC’s diverse public data as a strategic asset under one roof and develop public-private data partnerships with BC companies.*



## 4. Extend and continue incentives for R&D



Canadian R&D leads the world in many areas, from life sciences to quantum computing to machine learning. BC firms value the support they receive from Scientific Research and Experimental Development tax credit programs and the contributions this support

makes to business success. But SR&ED and the NRC's Industrial Research Assistance Program for innovation and technology adoption have an opportunity to further encourage scale-up.

"Canada's SR&ED regime is an incredible competitive advantage, encouraging home grown companies and attracting major global multinationals who invest heavily in expert teams tackling the most interesting technical problems.



**Cameron Burke**

Managing Director, Technology Sector, PwC

### RECOMMENDATION

*Increase the ceiling on refundable SR&ED for Canadian-controlled private corporations from \$3M to \$5M and increase the National Research Council Industrial Research Assistance Program (IRAP) financial assistance cap on eligible company size from 500 to 1000 employees.*



## 5. Incent BC-headquartered commercialization to drive scale success

Head offices are a key source of regional prosperity, a magnet for talent, a large benefit to the tax base, and a generator of spinoff businesses and knowledge spillovers. BC must seize the opportunity to greatly increase its count of homegrown, locally-headquartered anchor companies and spur retention of IP created in BC.

Incenting commercialization activities will help BC tech companies compete in local and global markets, increase opportunities for people from diverse life and educational backgrounds to participate in the tech economy, and will directly help BC firms scale up.

"Having companies headquartered in BC isn't just 'a' success factor it is 'the' key success factor for scale and ecosystem strength.



**Matt Switzer**

Partner, Northwest Capital Partners

### RECOMMENDATION

*Incent and fund technology companies as they scale with a superdeduction for 150% of qualifying tech commercialization costs for BC-headquartered tech companies.*



## 6. Use Procurement as a lever

A key tool available to government to support its home team and strengthen the ecosystem is to use procurement as a lever. Success in local procurement is a strong confidence signal, improving a company's export prospects. Since exports are key to scaling up in a relatively small, open economy like British Columbia's, procurement can directly drive scale-up across multiple fronts.

There are already pockets of best practice adoption, but they have not spread fully across government. Paying due attention to what works (for instance at BC Hydro, which has done good work in this area) and replicating it across government will accelerate progress. The BC government's new *Startup in Residence* and *Sprint with Us* programs are excellent procurement experiments that are bringing value to government.

To fully utilize procurement as a lever and to accelerate progress in adoption of technology and innovation, BC should employ set-asides for BC companies. The adoption of Value-for-BC as a provincial procurement evaluation criterion is a key acceleration tool which would mirror the impactful adoption of Value-for-Canada in the federal government's evaluation criteria.



To better leverage Canadian procurement the federal government changed how companies bid on Canadian programs by including "value proposition to Canada" as an evaluated criteria in bids. This has resulted in a significant increase in economic benefits for Canada and Canadian companies."

**David Hargreaves**

Vice-president, Strategic Ventures, MDA

### RECOMMENDATION

*Ensure technology procurement strategy is optimizing on innovation potential as well as cost by engaging BC companies on flexible, problem-based projects, not only solution-prescribed RFPs, and increase set-asides for BC companies through a \$50M procurement fund and adoption of Value-for-BC as formal evaluation criteria.*



# TALENT



Tech companies contribute a great deal to BC's economic growth and to government revenues. Tech jobs pay well, which means the tax revenue from an average tech worker is 130% that of the average BC worker. This makes increasing tech employment a key way to increase government revenues that fund important investments and social programs. Yet BC's tech employers—tech and non-tech companies alike— are facing a constrained talent supply that limits job growth.

Every unfilled position, whether junior or senior, imposes a very significant set of opportunity costs from the local level to the provincial level: lost community spending and neighbourhood vitality, municipal and provincial tax revenue, and a missed opportunity to drive crucial cluster effects for the emerging future economy. BC must also do better to bring under-represented groups into the technology labour market.



Diversity and inclusion isn't an HR issue, it's an economic and shareholder value issue.

Diverse inclusive teams deliver better results, anticipate and resolve problems faster and see opportunities others miss, driving competitive advantage."

**Helen Sheridan**

Vice President, HR, STEMCELL



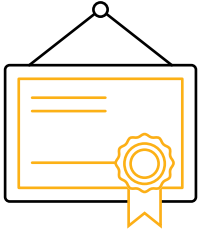
BC also lacks senior experienced talent, deep technical skills (such as data scientists) and commercial skills such as product/market fit and sales. Ideas and products do not exist in a vacuum, and for scale success a company needs senior talent that can design and execute a strategy that links the company's product to compelling customer needs in sufficiently large markets. This isn't a skill that can be taught in school; it must be learned through experience.

## Our recommendations to increase the talent supply are:

1. Create more degree places at the post-secondary level
2. Attract talent to BC and Canada
3. Encourage expatriate Canadians to return
4. Increase access to tech jobs and work-integrated learning
5. Increase access to online learning opportunities across BC

# Increase talent supply in the short term

## 1. Create more tech-relevant degree places at the post-secondary level



BC's post-secondary institutions are graduating fewer engineering and technology-related degrees on a per capita basis versus OECD countries and other Canadian provinces. The \$42M investment in an additional 1,000 tech-relevant grads at public post-secondary institutions announced in Budget 2018 was an impactful first step to enable labour supply to move beyond the 'Constrained Growth' scenario set out in BC Tech's 2016 Tech Talent BC Report, but our province needs more investment to fulfill its potential and achieve the "Expanded Growth" scenario.



It is so important to both invest in home-grown talent through quality education programs and maintain a flexible immigration policy to ensure a sustainable ecosystem and access to top talent for all players involved."

**Amanda Mallow**

Chief Human Resources Officer, Sophos

### RECOMMENDATION

*Fund an additional 2,000 tech-relevant public post-secondary graduates to address the labour supply needs of the 2016 BC TechTalent Report 'Expanded Growth' scenario.*



## 2. Attract talent to BC and Canada

The federal Global Skills Strategy is a popular, well-functioning program that increases firms' access to top global talent. The employees hired through this stream are often highly-skilled and contribute to Canada's economy while making their lives here.

In 2017, the BC Government introduced the BC Provincial Nominee Program (PNP) Tech Pilot, a program that is set to expire in June 2019. The program helps tech firms fill important vacancies with global talent in weeks, not months or years, and has been extremely popular, with high-demand job categories being refined in 2018 in response to labour market research.

Finally, as the BC Business Council has pointed out, while BC is one of Canada's fastest growing economies, it receives a lower per capita allocation of PNP places. This must change.

### RECOMMENDATION

*Make the Global Talent Stream permanent, extend the up-front BC foreign buyers' housing tax exemption currently available to PNP nominees to Global Talent Stream nominees, extend the BC PNP Tech Pilot, and increase the allocation of PNP places for BC.*



There needs to be a more conscious agenda around fostering experienced and executive talent to sustain growth in mid-size companies. More broadly, a multi-pronged and segmented approach is necessary to address the challenges faced by companies in different growth phases. This will allow BC's tech sector to allocate its resources in a way that makes the most difference."

**Laurie Schultz**  
CEO, ACL



### 3. Encourage expat Canadians to return



Canadians currently working abroad are a vital source of potential labour supply for BC's tech sector—some studies have estimated the number of Canadians living and working in Silicon Valley at up to 350,000.

Many scaling companies cite challenges in encouraging senior talent to return to Canada as a key barrier to success. We must address this challenge and attract these top Canadian workers to scale our BC-grown anchor companies.

"Some of the best tech talent in the world is Canadian. We need more of them to return to enrich BC with what they've learned, experienced and achieved elsewhere – and to build a tech powerhouse right here in BC.



**Shamil Hargovan**

Co-founder and CEO, Wiiw

## LEARN FROM ELSEWHERE

### ■ QUEBEC

Quebec offers a provincial income tax exemption for foreign experts doing R&D or commercialization work in tech sectors.

The tax exemption is 100% of provincial income tax in years 1 and 2, 75% in year 3, and 50% in year 4.



## RECOMMENDATION

*Create a BC-headquartered technology labour credit equal to 10% of the starting salary of a returning Canadian tech worker who remains resident in BC for at least 3 years, refundable against a company's payroll tax liabilities.*



## 4. Increase access to tech jobs and work-integrated learning



According to the 2016 BC Tech Talent report, only half of all small tech companies have hired a co-op student. These companies indicated cost as a barrier, particularly in terms of training and developing these co-ops, which often takes away from the productivity of their smaller workforce. Programs like the Integrated Skills Initiative (ISI) offered through InnovateBC have supported smaller tech companies in placing co-ops and interns and should be expanded further to include transitioning workers.

### RECOMMENDATION

*Double the funding for New Ventures BC ISI spots, increase the employee cap from 100 to 300, and expand the program to include workers transitioning from other industries.*



## 5. Increase access to online learning opportunities across BC

As BC transitions to the emerging economy, it is vital that workers across the province have the opportunity to adopt technology to improve their jobs, increase their productivity, and empower clean growth. Equally key will be the ability to re-train and learn new skills; workers should be able to choose to transition to tech jobs at any age and experience level.



### RECOMMENDATION

*Fund pilot programs to deliver online learning to 1,000 adult learners in part-time post-secondary studies across the province.*



"As BC's Premier Polytechnic Institute, BCIT actively partners with BC's tech industry to ensure employers' evolving needs and insights are reflected in our graduates' skill sets for a changing workplace. Innovation in BC's economy and career success for graduates are increasingly anchored in human skills such as collaboration, critical thinking, teamwork and communication, integrated with ongoing technical up-skilling.

**Kathy Kinloch**  
President, BCIT





## ABOUT BC TECH

BC has 10,600 tech companies employing over 114,000 people with a further 50,000 people employed in tech jobs in non-tech companies. BC's tech sector contributes \$31B in Revenues and \$15.7B in GDP to BC – 7% of the economy – and is the 3rd fastest growing industrial sector in the economy.

BC Tech is a non-profit dedicated to making BC the best place to grow and scale a tech company and to advancing technology as an engine for growth in every company. We believe that today every company is a tech company, and we see technology as a positive force for good – for the economy, for society, for BC's future. We pursue this mission through:

- **Places and events for the community to come together**
- **Impactful programs that help companies grow, scale, export and adopt technology**
- **Information about the tech sector and the solutions required to ensure continued growth**



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