BC TECH association

BC Tech Submission to the Economic Recovery Task Force and the select Standing Committee on Finance and Government Services

JUNE 2020

11 Key Policy Recommendations

SCALE

OUTCOME:
ScaleUp BC's Tech Companies and increase Technology Adoption in every industry.

RECOMMENDATIONS

1. **Partner with the federal government to invest a total of $50M over 5 years in ScaleUp BC, a partnership to drive economic growth and competitiveness across BC.**

2. Create a BC Transformation Fund of $1B over ten years to accelerate BC's transition to the economy of the future.

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.

Provincial Recommendations Federal Recommendations

OUR OPPORTUNITY

Technology is more than an industry.

It is the key driver of productivity across the entire economy and a powerful tool empowering business and governments to tackle some of the most important problems we face as a society, such as the climate crisis.

We can build many more BC anchor companies that grow and scale and stay in BC. We can strengthen the resilience and adaptability of our traditional industries by working together in partnership across industries. This is the path that will maximize local value-add, good jobs across the province and future revenues to government.

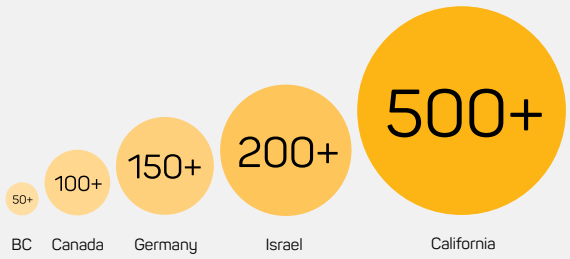
The KPMG BC Tech Report Card 2018 graded BC a 3rd straight A on economic output indicators. But our grade on input indicators did not progress from the B– we received in 2016. The 2018 report card delivered a clear call to action to address two key weaknesses: **Talent** and **Scale**. The vast majority 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*

> BC needs to improve its commercialization of technology so we can compete internationally. We also need to build a stronger ecosystem to expand the BC tech sector, and ensure there's capital available to fuel this long-term engine of growth."
>
> **David Climie**
> VP Corp Dev and IR, Sierra Wireless

Why does tech and innovation matter?

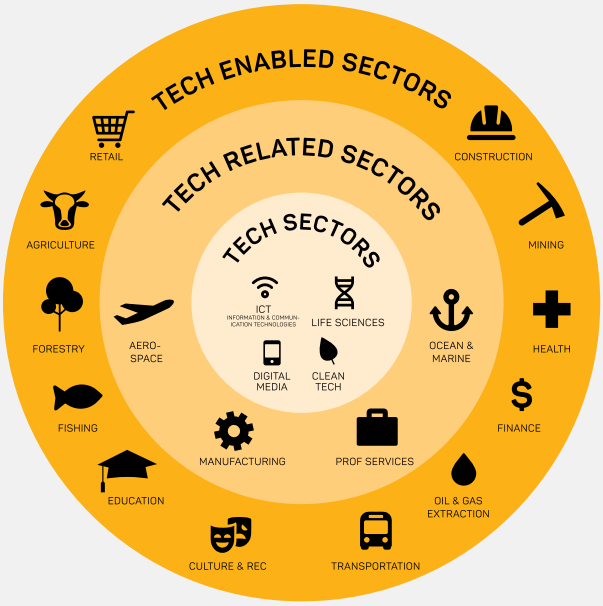
The health of its tech industry is widely recognized globally as the best leading indicator of the health and resilience of an economy as a whole and the major driver of non-speculative economic growth. This is why all forward looking governments invest heavily—most obviously the USA but many others:

France has been investing determinedly under President Macron to take the opportunity to replicate the success the USA and the UK have delivered through a focus on the tech sector.

South Korea and Sweden are recognized by Bloomberg as the most innovative countries in the world primarily based on the number, scale and concentration of their tech companies as well as the number of STEAM graduates.

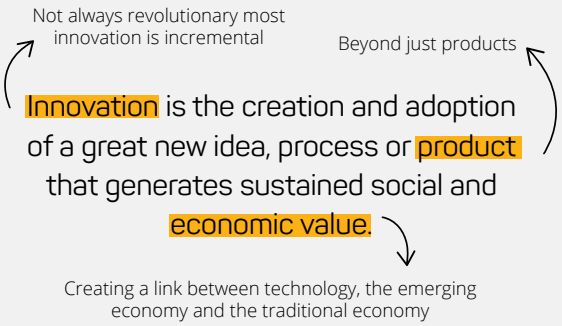
China's *Made in China 2025* plan aims to develop home grown tech giants that will replace imports with home grown purchases and build global champions to export to the world.

New Zealand wants to take its tech and innovation sector from being the 3rd largest segment of the economy to the number 2 spot by 2025.



Source: BC Innovation Commissioner Dr. Alan Winter

Canada's Federal Innovation Agenda is impressive in the scale of its ambition and many provinces across Canada have also seen the clear benefits and concrete returns that come from investment in technology and innovation.



Source: BC Innovation Commissioner Dr. Alan Winter

At a human level, technology workers thrive in and drive positive change with curious, creative, practical, and entrepreneurial mindsets.

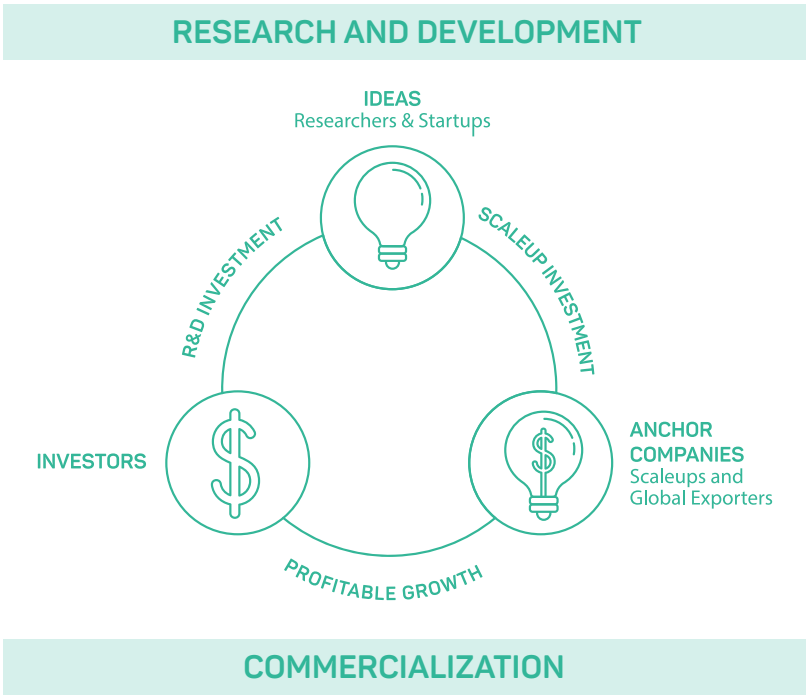
These approaches create amazing products, services, solutions and ideas in a culture of like minded people who also love their work: the tech industry creates human fulfillment and value as well as jobs and GDP. And when the local tech industry starts to deliver scaleups as well as startups, it means distinctive home grown solutions and contributions are having a positive impact on a global scale.

A thriving tech sector vaccinates the economy. Whatever economic challenges the future brings, society will have the talent, skills, and experience to rapidly innovate and scale solutions, adapting and thriving no matter the conditions.

The Virtuous Innovation Cycle

The cycle of money to ideas to money to ideas should be a continuous virtuous circle. Canada excels at the first half of the cycle: turning money into ideas, in the form of research and entrepreneurial startups. Our opportunity is to strengthen our performance in the second half of the cycle. Canada has been less excellent at turning ideas into money, in the form of profitable, scaled companies with global reach which can then in turn make further impactful investments in new ideas.

If we want different outcomes we will need to be willing to experiment with new and different incentives and mechanisms that enable the full virtuous cycle to be completed.



DEFINING A BC ANCHOR

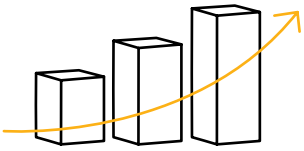
A BC-based anchor company:

- Has BC-based executives with strategic decision making and resource allocation authority
- Employs 200+ employees
- Generates $50M+ revenues
- Exports products, solutions, and services globally
- Makes significant investments - in facilities for research, manufacturing or distribution or through pursuing business acquisitions

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. ScaleUp BC: A province-wide collaborative platform
2. A Transformation Fund for BC
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. ScaleUp BC: A Province-Wide Collaborative Platform

Eleven organizations representing the tech ecosystems of Vancouver Island, the Lower Mainland, Interior BC and Northern BC– collectively the ScaleUp BC Partners - have come together with a plan to build BC's next generation of diverse technology-based, globally relevant businesses. This initiative will drive scale for our technology companies, improve productivity in the traditional economy and enable a new green economy in every region of BC. **ScaleUp BC has three pillars:**

1. **Scalingup Technology Companies Across BC – building on BC's thriving startup tech sector with a new approach that enables more scaleup success across the province and the well paying BC anchored jobs those scaleups create**
2. **Technology as the Enabler of the Traditional Economy – harnessing the power of technology to increase the productivity not only of BC's large companies but also BC's small and medium sized enterprises (SMEs) in every sector, and every region of BC**
3. **Technology as the Enabler of the Green Economy – increasing the capacity of SMEs in every corner of BC, to use technology to reduce the 30% of greenhouse gas emissions attributable to Canada's SMEs**

> Imagine if all 400,000 B.C. businesses raised their productivity by 10 per cent. The result would be $20 billion to $25 billion of additional economic output every year."
>
> **Jock Finlayson**
> Business Council of BC

The ScaleUp BC Partners have the capacity, experience and networks to span the province and deliver effective, locally-sourced programming in every corner of BC. Together there is a once-in-a-generation opportunity to transform British Columbia's economy and deliver economic, social, health and environmental benefits to Canadians. An investment of $50M in the ScaleUp BC Partner Network over five years will build a new scale-up platform for BC to support the growth of over 600 technology firms and create 10,000 jobs by 2025, leading to more a robust, sustainable and globally-competitive economy.

Northern BC
1 Innovation Central Society

BC Interior
2 Kamloops Innovation Centre Society
3 Accelerate Okanagan Technology Association
4 Kootenay Association for Science & Technology

Vancouver/lower mainland
5 Foresight
6 BC Technology Association
7 SFU Venture Labs
8 LifeSciences BC
9 Entrepreneurship @ UBC

Vancouver Island
10 Victoria Innovation, Advanced Technology & Entrepreneurship Council
11 Innovation Island Technology Association

RECOMMENDATION

Partner with the federal government to invest a total of $50M over 5 years in ScaleUp BC, a partnership to drive economic growth and competitiveness across BC..

2. 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 create a mechanism to invest in innovation projects and proposals.

- 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.

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 are 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.

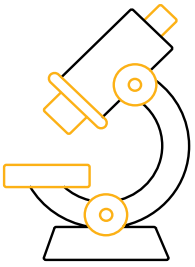
BC must act now to establish mechanisms to increase the ability of researchers, technologists, and government workers to access and leverage public data, getting away from silos and challenging preconceptions about how data security and privacy can best be achieved.

> 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 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

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.

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

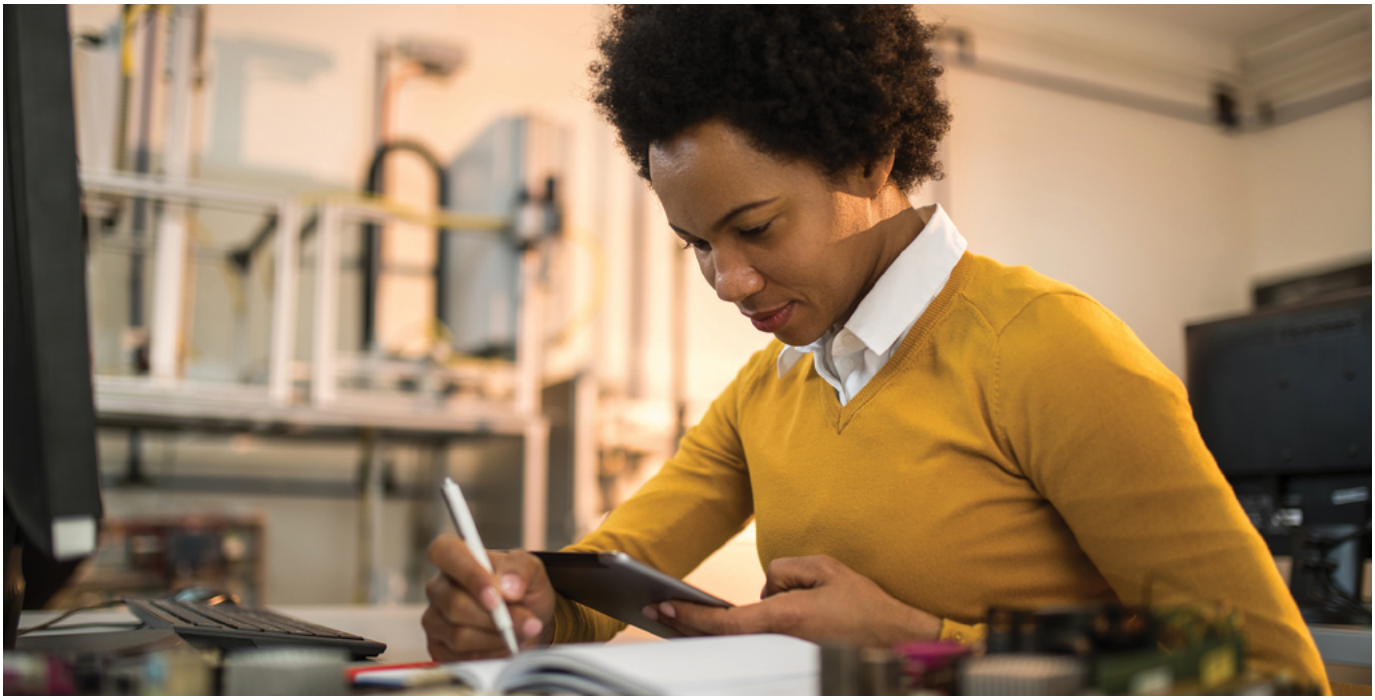
1. Create more tech-relevant degree places at the post-secondary level

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, Galvanize

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, Wiivv

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 $30B in Revenues and $17.2B 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 the mission of making BC the best place to grow and scale a tech company. We champion technology and innovation adoption by companies in every sector because we believe that one day soon every company will be a tech company. 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**

BC Tech's vision is a BC that values technology as a positive force for good – for the economy, for society, for our future.

wearebctech.com

To learn more, contact us at communications@wearebctech.com