BC TECH association

BC's $25 Billion Opportunity

A Transformation Agenda

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. Strengthen and extend DataBC's mandate to strategically manage BC's public data to accelerate platform growth and improve access to data.

3. Update refundable SR&ED and Industrial Research Assistance Program (IRAP) ceiling and employee limits to increase these programs' scaling power.

4. Increase the cap for the BC Small Business Venture Capital Corporation tax credit to $1M for individuals and the carry forward period to ten years for corporations, to spur local investment. Mirror BC's program federally.

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

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**

> In a world that's changing fast the biggest risk is standing still."
>
> **Jeff Booth**
> Vancouver tech entrepreneur

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.

Reviewing the state of BC's technology and innovation economy in 2019, we see many things to celebrate:

- BC is one of the fastest growing startup ecosystems – we do not lack entrepreneurial drive.
- BC's research community is well funded and our universities are world class.
- BC does particularly well at identifying relevant problems to solve and deploying technology products and solutions through startup companies.
- The BC ecosystem has impressive expertise in key tech growth areas such as software, cleantech, agtech, digital media, AR/VR/MR, blockchain, fintech, healthtech, AI and quantum computing.
- Our ecosystem has matured and flourished, building ever closer connections and meaningful partnerships through initiatives like the Digital Technology Supercluster and the Cascadia Innovation Corridor.

> One of the BC tech sector's key strengths is its flourishing and highly collaborative ecosystem, where individual players support and are invested in each other's success. This is a powerful way for tech companies both large and small to learn from each other and innovate at a faster pace."
>
> **Kirsten Sutton**
> VP & Managing Director, SAP Labs Canada

Today BC has over 10,600 tech companies employing over 106,000 people, and another 50,000 tech workers in non-tech companies. We've seen some breakout company successes (Hootsuite, Avigilon, Slack, D-Wave, Vision Critical, iQMetrix) with BC well represented in lists celebrating Canadian tech 'unicorn' companies valued at $1Billion or more. By some estimates up to 40% of the commercial real estate in downtown Vancouver is occupied by high-tech businesses and workers.

It might be the case that our industry's continued progress has created a sense that all is well, change is not needed, or is not urgent. But that would be to fundamentally misread the economic data.

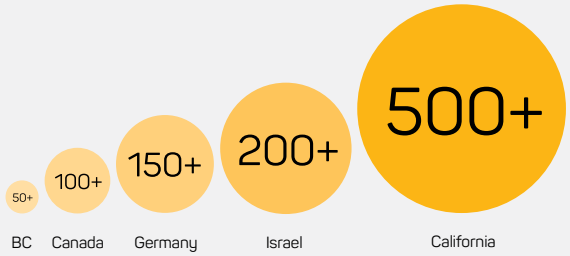
The KPMG BC Tech Report Card 2018 graded BC a 3rd straight A on economic output indicators. But our grade on input indicators did not progress from the B– we received in 2016. The 2018 report card delivered a clear call to action to address two key weaknesses: **Talent** and **Scale**. The vast majority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

> We seem to be able to develop interesting small and medium sized innovation companies but for whatever reason they don't scale up. Instead they get bought up by someone outside so the Intellectual Property that BC has invested in leaves the province."

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.

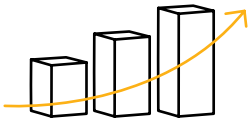
Talent

Access to talent continues to be the biggest constraint facing BC tech companies of all sizes.

Every year, technology businesses create many more job openings than they are able to fill. These jobs range from specialized technical skills to general business skills such as marketing, finance, legal, and sales. Concerningly, BC has a striking lack of experienced talent – those with a track record in growing companies from startups to scaleups.

And while BC's graduates are second to none, we are simply not keeping up with the quantity of people needed or the new skills and qualifications required by a fast-changing industry. We must invest more in people and grow BC's skilled workforce by funding more educational opportunities – starting with K-12 and right through to post-secondary and lifelong learning.

By choosing not to act we are sacrificing 30,000 jobs that could have been created by 2021.



Scale

As important as access to talent is, it will not be enough on its own.

Highlighted against BC's many clear strengths, our principal weakness stands out: BC's lack of anchor technology companies that have achieved scale. Without a thriving, vibrant core of anchor tech companies at the heart of our ecosystem, enriching the talent pool, creating spinoffs with new ideas, and providing proven pathways to scale, we'll be unable to make BC the best place to grow a tech company.

We are just starting to realize the potential of AI and data to transform decision-making, and the potential of the cloud and quantum computing to do so at a cost that is an order of magnitude lower than previous technology investments. BC's tech economy still has far to go to realize its potential, and we must significantly increase the pace of investment to catch up and then keep up with other world-leading tech ecosystems. Technology is a global business, and the world will not wait for BC.

By choosing not to act we are sacrificing billions of dollars in lost GDP.

> We must empower the trinity of industry, academia, and government to work together better. The industry needs to be more open with its ideas and accepting of non-linear returns, academia needs to be more ambitious with their brilliant minds and push to bring their research to the world, and the government needs to facilitate innovation by providing incentives and enabling industry to lead."

Ohad Arazi
Chief Strategy Officer and Vice President, TELUS Health

Why does tech and innovation matter?

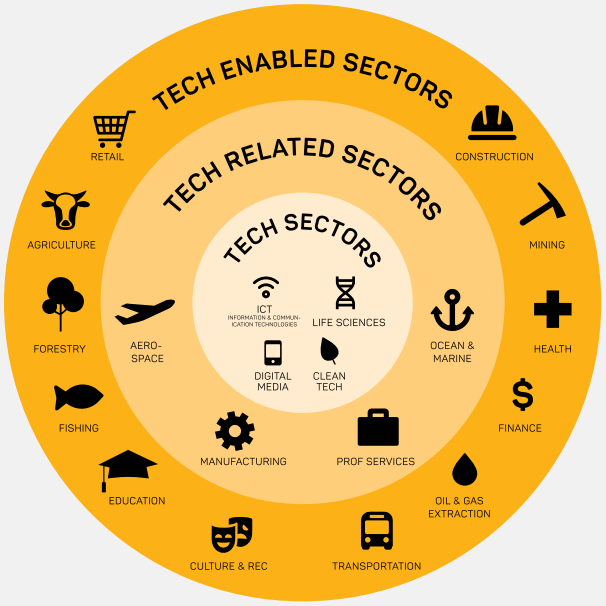
The health of its tech industry is widely recognized globally as the best leading indicator of the health and resilience of an economy as a whole and the major driver of non-speculative economic growth. This is why all forward looking governments invest heavily—most obviously the USA but many others:

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.

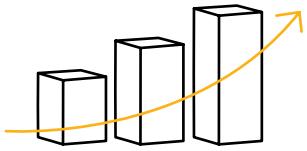
These approaches create amazing products, services, solutions and ideas in a culture of like minded people who also love their work: the tech industry creates human fulfillment and value as well as jobs and GDP. And when the local tech industry starts to deliver scaleups as well as startups, it means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

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

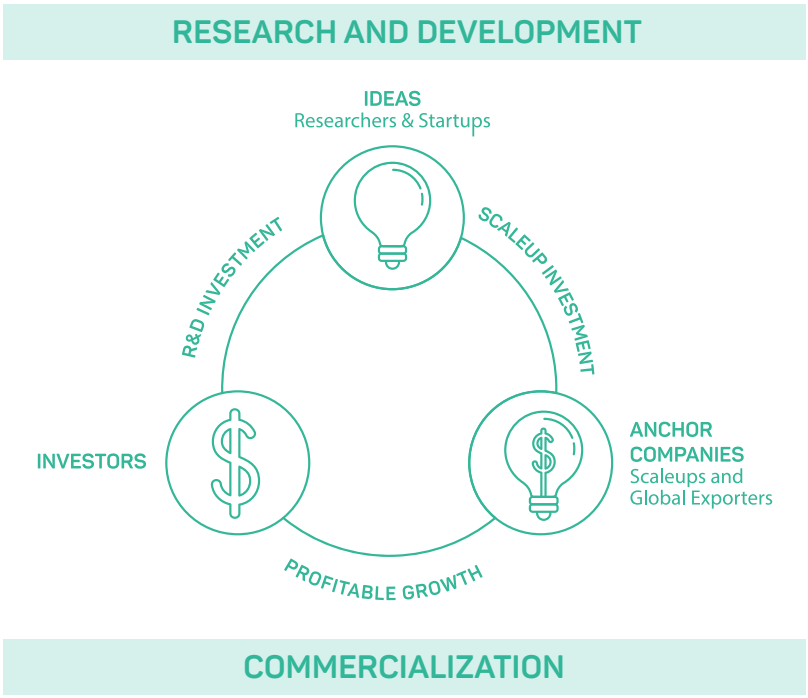
There is a significant opportunity to support and encourage the scale-up success of BC companies and create incentives for larger businesses to further invest and build their future in BC. Our scale recommendations are:

1. A Transformation Fund for BC
2. Secure and leverage data as an opportunity to scale
3. Extend and continue incentives for R&D
4. Support venture capital funding in BC
5. Incent BC-headquartered commercialization to drive scale success
6. Use Procurement as a lever

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.



LEARN FROM ELSEWHERE

ESTONIA

In Estonia, the government worked in concert with industry to develop X-Road, a data-exchange system powering integrated public and private services. It has led to streamlined public services, seamless identity verification, and driven digital government efficiencies that save money and improve service quality.

USA

Apple CEO Tim Cook recently laid out 4 key requirements governments should use to establish effective regulation:

- Personal data collection is minimized when non-essential
- Platform users must know what data is being collected about them
- Platform users (and citizens) must be able to access data held about them
- Personal data must be kept securely

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. 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.

> "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

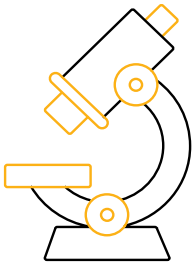
Top data science, machine learning, and AI talent is attracted as much to datasets are to companies or cities. This is because data is the key driver of progress. Unlocking BC's "dark datasets", an underutilized asset, will increase the appeal of BC as a place to work and allow our companies and workers 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.

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.

3. 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.

4. Support venture capital funding in BC

Capital is an essential ingredient for growth and scale success. When it is lacking growth and—even more critically—scale success are limited. Establishing conditions and incentives to access sufficient local capital is key.

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

RECOMMENDATION

Increase the cap for the BC Small Business Venture Capital Corporation tax credit program to qualifying investments of $1M for individual investors and increase the carry forward period for corporations to 10 years. Create a federal program based on the BC model.

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

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

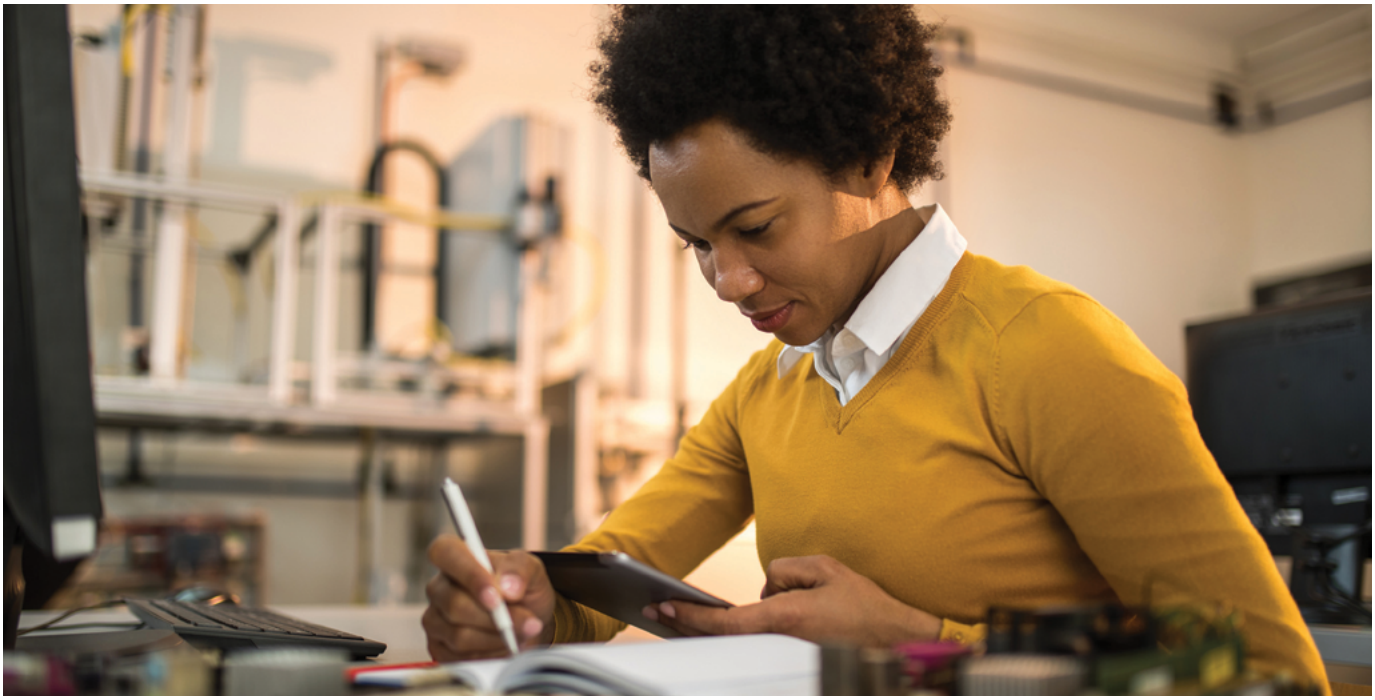
1. Create more tech-relevant degree places at the post-secondary level

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, 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, 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

A Career in Tech

A career in tech is quite different from the commonly understood stereotype. Here are the attributes demonstrated by the people the tech industry most values, promotes, develops and needs:

- **CURIOUS**
  Interested in exploring new ideas, finding new solutions & pathways, and unsatisfied with the status quo
- **CREATIVE**
  Enjoy generating ideas and deploying experiments to find out what works and what doesn't without hesitating through fear of failure
- **PRACTICAL**
  Focused on problems that matter, concrete defined improvements that build over time and impact people positively
- **INCLUSIVE**
  Interested in new perspectives, different ideas, quieter voices and novel frameworks
- **IMPATIENT**
  Quick to action, with a sense of urgency, excitement and interest in being first and fastest
- **ENTREPRENEURIAL**
  More interested in the path not taken than the well established highway
- **DETERMINED**
  Put in the hard work and hours needed with a whatever it takes attitude and a belief that if at first you don't succeed, try, try again

Growing the Talent Pipeline for the Future

Outside the scope of BC Tech's policy recommendations but a subject of strong interest and engagement for BC's tech community is ensuring we are also growing the talent pipeline, especially at K–12.

Concerted action to interest young people in STEAM (science, technology, engineering, arts, and math) topics will ensure they have the information, and more importantly inspiration and encouragement, to choose a career in tech after they complete their education.

Today's tech careers are very different than many imagine. BC's kids have the potential to lead the world in tech, but many are unaware of the wide variety of careers available, and what those careers actually consist of—especially girls and young people outside of larger urban centers. While coding is still important today, one of the first things that artificial intelligence will disrupt is the world of programming. Of more permanent relevance are foundational skills like:

- STEAM fluency in areas like Science and Math
- Critical thinking and problem-solving, including ethical design thinking that puts the needs of the user at the center
- Entrepreneurship, innovation, and creative thinking; including experimentation and scenario planning
- Social skills including working with and getting results from others; ease and confidence with new technology tools and continuous life long learning

> Rapid change and global influences in STEAM fields offer unique challenges and opportunities for K-12 educators. We are excited to work with BC Tech and its members to support educators with insights about today's careers in tech and the future of work. Together we can achieve our vision of student success by providing innovative, caring and responsive learning environments."
>
> **Aaron Davis**
> Director of Instruction, Vancouver School Board

A student interested in software development will want to consider if they are more interested in creating software, configuring software, or controlling software, each of which will take them down a very different qualification path to a very different career. Resources like myblueprint.ca are great innovations to help students, parents and educators navigate these pathways.

Emerging trends in technology and new thinking about the future of work are critically important, rapidly changing topics. Our support for STEAM educators can and must go much further to ensure they can confidently address these topics in the classroom. Government and school districts must provide support for students to learn computational thinking in the classroom and ensure educators are provided with the right professional development opportunities, as well as the necessary technology and the ability to use that technology (for instance by ensuring there are IT management resources available in schools).

> At the core of our investment in youth and education, especially at the K-12 level, is this: strong fundamentals are essential to building a generation with the knowledge, skills and attitudes needed to thrive—today and in the future."
>
> **Hana Doubrava**
> Corporate Affairs Director, Microsoft

What industry does itself

PROGRAMS THAT SUPPORT COMPANY GROWTH AND SCALE SUCCESS

BC Tech offers nationally-recognized accelerator programs with one-on-one services, mentoring, and networking that help companies move out of the startup stage and grow into emerging anchor companies operating at scale. BC Tech provides many short-form programs focused on such topics as revenue growth, raising capital and negotiation. Our flagship programs are:

- **BC Tech HyperGrowth**
  Turning startups into high-growth business success stories
- **BC Tech HyperGlobal**
  Growing BC tech companies' export capacity to create global leaders
- **BC Tech HyperScale**
  Customized programming to scale up growth tech companies and create the next generation of BC anchors
- **BC Tech HyperTech**
  Helping small and medium sized non-tech companies adopt technology to drive their profitability and growth

MARKET INTELLIGENCE AND DATA-DRIVEN SOLUTIONS

Good decision-making and good resource allocation begin with good data. BC Tech conducts regular surveys of members on the topics of most pressing importance to their companies. BC TechBase, our database of BC's tech companies, is an ever-improving source of information about the sector. In 2019, BC Tech will be establishing a Youth Advisory Committee to gather input and engage youth directly on emerging industry and company priorities.

SUPPORT FOR IMMIGRATION

BC Tech is proud to act as BC's Designated Referral Partner to Employment and Social Development Canada (ESDC) and Immigration, Refugees and Citizenship Canada (IRCC), and we work in coordination with BC Ministry of Jobs, Trade and Technology (JTT) to support the Federal Global Skills Strategy by referring BC-based technology companies that meet the criteria and qualifications for the Global Talent Stream into the program.

BC Tech also refers BC-based companies to the British Columbia Provincial Nominee Program Tech Pilot, a high-impact and well-used initiative to fast track highly skilled global tech talent into leading provincial companies.

THOUGHT LEADERSHIP ON DIVERSITY & INCLUSION

BC Tech has launched consultations to develop a voluntary code of conduct to encourage and enable tech companies of all sizes to adopt leading-edge policies that embrace what works in diversity & inclusion to strengthen corporate culture and deliver better business outcomes. What gets measured gets managed. The first step is to define success, and only then can you track and measure progress towards it.

COLLABORATION WITH ECOSYSTEM PARTNERS

BC Tech continuously reviews global best practices in program delivery and stays well connected to other ecosystem actors across the province. We take a partnership approach to improving and strengthening BC's technology and innovation ecosystem, we work cooperatively to advance issues and solutions that affect us all and to replicate best in class programs across the province.

SUPPORT AWARENESS OF CAREERS AT K-12

BC's kids have the potential to lead the world in tech, but many are unaware of the wide variety of careers available and what those careers actually consist of—especially girls and young people outside of larger urban centers. Through our BC Tech Aspire to Tech video series we create more awareness of the opportunities available and the paths to reach them. BC Tech also partners with leading tech businesses to offer hundreds of high school students a unique window into tech careers at Doors Open to Technology and is proud to be a founding member of Symbiosis.

SUPPORT FOR K-12 EDUCATORS

BC Tech, our Board and our members are committed to supporting professional development for educators. In 2019 we will be launching a pilot with the Vancouver School District to develop mentorship connections through innovations such as a 'Bring Your Teacher to Work' day.

> Tech people are first and foremost entrepreneurs—thinkers and builders who reject the status quo and set out to scale next-generation solutions to previously intractable problems. They are the pioneers of the future economy."
>
> **Andrew Reid**
> CEO, Rival Technologies

Our Shared Opportunity

Scaling up BC's technology and innovation economy will scale up BC.

It will bring new opportunities for growth, profitability and efficiency and economic sustainability to every industry. It will bring new opportunities for fulfilling, well paying jobs and employment security to every citizen.

For the future to look different than the past means adopting new tools, new tactics, new ideas and new voices at the table. It needs two key attributes which British Columbians have in abundance: hope and grit.

And above all else it requires that we all share the determination—and the confidence—that BC will be a global success in the economy of the future.

Here's what we need to do to help countries compete in the future economy:

1. Accelerate inclusive and sustainable growth, including building the foundations of the digital economy to help countries compete in the future.
2. Foster resilience to global shocks and threats—including strong safety nets and social protection programs that focus on helping the poor.
3. And invest more—and more effectively—in people to prepare them for the jobs of the future."

Jim Yong Kim
President, World Bank Group

ABOUT BC TECH

BC has 10,600 tech companies employing over 106,000 people with a further 50,000 people employed in tech jobs in non-tech companies. BC's tech sector contributes $29B 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.

Celebrating the work of others

Tremendously valuable work is being done to interest children in science and technology and to support teachers and program delivery to students. BC Tech applauds the work done by organizations such as:

- Vancouver Aquarium
- Let's Talk Science
- Kids Code Jeunesse
- Canada learning code
- Junior Achievement
- The Information and Communications Technology Council of Canada
- Doors Open to Technology
- Microsoft's Technology Education And Literacy in Schools (TEALS) program
- EA's Future of STEAM day
- ScienceWorld
- DigiBC's Play to Learn

BC Tech is proud to be a founding member of Symbiosis, the provincewide initiative led by Science World British Columbia and the first program of its kind in Canada which connects youth with qualified STEAM mentors, provides a digital library, social platform, and hands-on learning opportunities.

Many BC tech companies provide direct support for hands-on STEAM learning programs and activities: SAP partners with Let's Talk Science, Microsoft funds TEALs, TELUS supports Science World, EA hosts Future of STEAM Day, and more.

Acknowledgements

The BC Tech policy recommendations were developed by:

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Natalia Kozlowski
Evelyn Lee
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Greg Malpass Traction on Demand
Kristine Steuart Allocadia
Matt Switzer Northwest Capital Partners
Sandy Treagus MEC
Janet Wood SAP

BC Tech would like to thank the following groups and individuals who generously shared their time and insights in the development of our thinking:

Ragwha Gopal Accelerate Okanagan
Caroline Andrewes ACEC-BC
Mike Winterfield Active Impact Investments
Bethany Edmunds BCIT
Benjamin Bergen Canadian Council of Innovators
Robert Attwell and Dr Alexandra Greenhill Careteam
Wal van Lierop Chrysalix
Thomas Ligocki Clevest
Chris Plunkett Communitech
Prem Gill CreativeBC
Etienne Bruson Deloitte
Brenda Bailey DigiBC
Suzanne Gill Digital Supercluster
Lois Nahirney dnaPower Inc
Fiona Macfarlane EY
Keith Spencer Faskens
Nat Cartwright Finn.ai
Sasha Hobbs First Nations Technology Council
Tim Swanson Fortis BC
Jill Earthy FrontFundr
Michael Delage General Fusion
Kelvin Ng Global Relay
Lori Bryenton Halo Strategic Marketing
Heidi Rolston Hootsuite
Stephanie Hollingshead HR Tech Group
Patrick MacKenzie Immigrant Employment Council of BC
Sheila Biggers Junior Achievement BC
Gerri Sinclair Kensington Capital Partners
Kate Arthur and Mavis Dixon KidsCodeJeunesse
Joanna Buczkowska-McCumber League of Innovators
Lesley Esford LifeSciences BC
Rachelle Celebrezze Lyft
Cory Mulvihill MaRS
Ian Heine PwC
Mohamed Mansour Riipen
Scott Sampson ScienceWorld
Eugene Fiume and Andrew Harries SFU
Dick Vollet St Paul's Foundation
Henry Xie and Michael Lam Success
David Barnum Sunshine Coast School District
Karn Manhas Terramera
Kathreyn Hayashi Triumf
Gail Reynolds and James Olson UBC
Sean Elbe Vancouver Economic Commission
Aaron Davis Vancouver School Board
Paul Lee VanEdge Capital
Sheila Bouman Viasport
Dan Gunn VIATEC
Jacqueline Dupuis VIFF
Alison Goldie and Shamil Hargovan Wiivv
Caroline Lewko WIP Factory

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