The #BCTECH Strategy 2016

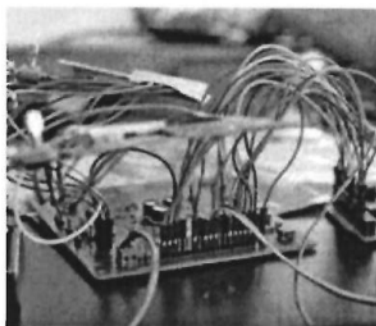CANADA STARTS HERE

BC JOBS PLAN
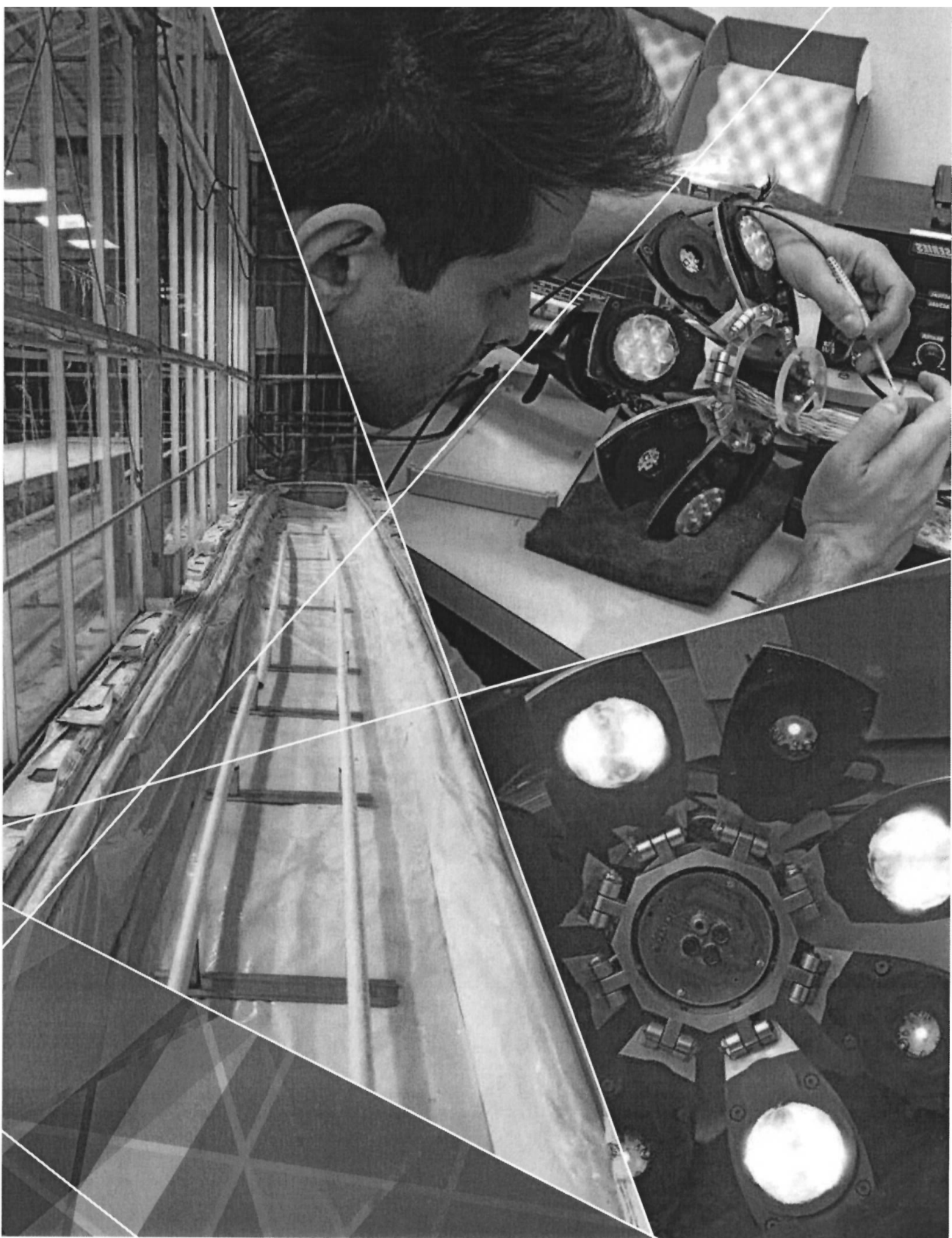
Contents

Message from the *Premier*

British Columbians can feel proud of the technology ecosystem we have built here over the past several years.

The technology sector has become a major engine of economic growth in British Columbia, and is one of the eight key sectors identified in the *BC Jobs Plan*. The sector is a crucial job creator, and supports innovation and productivity across all industries.

Fostering the growth of a flourishing technology sector and the commercialization of its products and services is a principal priority for the B.C. Government. The *#BCTech Strategy* supports British Columbians who are building profitable, competitive companies, and creating high-paying, skilled jobs.

Through our investment in venture capital, tax incentives, and low tax rates, we are creating an environment conducive to the creation of tech companies, and rich enough in capital and talent to give them the best opportunity to become large, anchor companies here in the province.

Through curriculum initiatives, streamlined immigration, and applied learning programs, we want to ensure that talent is available for B.C. tech companies to compete, and all British Columbians are prepared to thrive in an economy in which every sector is enhanced by technology.

All British Columbians stand to benefit from a technology sector that is fulfilling its potential, and the *#BCTech Strategy* is designed to help the sector do just that.

"The **TECHNOLOGY SECTOR** *has become a major engine of economic growth in British Columbia."*

Christy Clark

The Honourable Christy Clark
Premier of British Columbia

Message from the *Minister*

The *#BCTech Strategy* represents a vision for the province.

The *#BCTech Strategy* is future-proofing the province. It is an investment in the economy and our youth. The result will be high-paying jobs and students prepared to thrive.

British Columbia's tech sector is crucial in keeping B.C. competitive in the global market. A tech sector with the tools to grow is good business for everyone.

British Columbia is a tech-driven economy. The various technology subsectors – information and communications technology, cleantech, engineering, life sciences, and digital media – have a foothold in B.C., and have witnessed remarkable success stories. The symbiotic relationship between the tech sector and B.C.'s resources sector is resulting in technology adoption and productivity gains that will continue to reinforce and grow our already diverse and vibrant economy.

The *#BCTech Strategy* is a renewal of our commitment to the technology sector. We have previously invested in the B.C. Knowledge Development Fund, Genome BC, the Michael Smith Foundation, BC Innovation Council, Mitacs, and the B.C. Renaissance Capital Fund, to name just a few.

Those investments are working and contributing to the growth of our tech sector. We are going to keep investing and developing a premiere tech ecosystem, preparing our youth to prosper, and realize a greater number of large technology companies founded by skilled and motivated British Columbians.
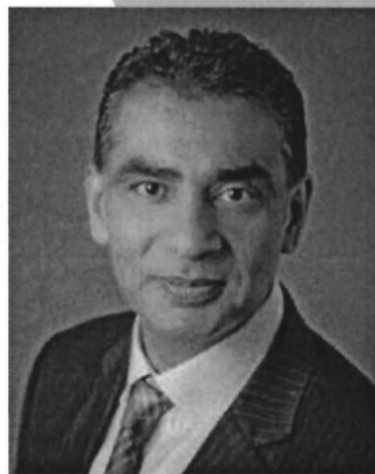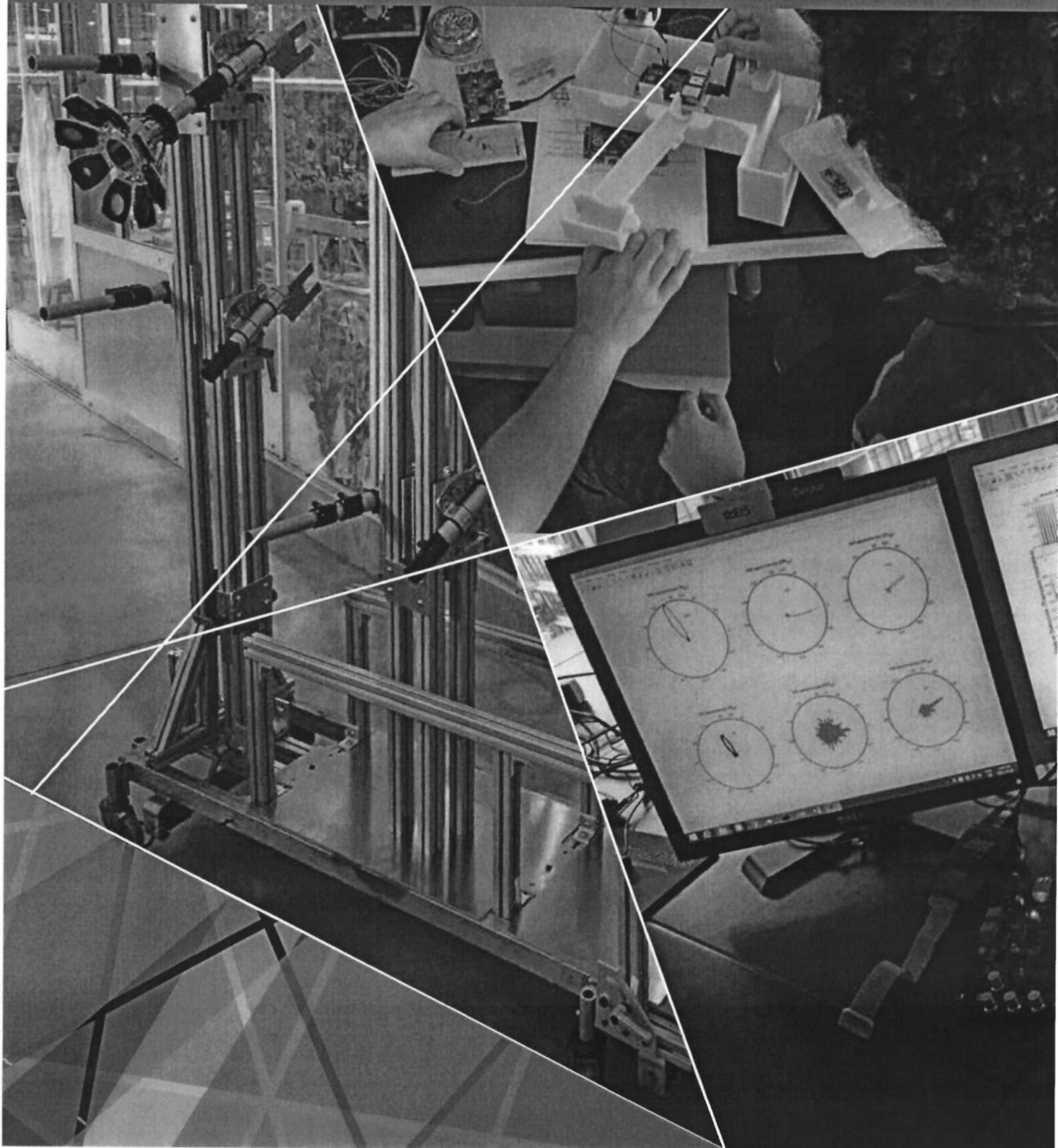
"The #BCTECH Strategy is a renewal of our commitment to the technology sector."

Honourable Amrik Virk
Minister of Technology, Innovation and Citizens' Services

#BCTECH Strategy

The #BCTECH Strategy

Hootsuite has a billion-dollar valuation. Sierra Wireless is at the leading edge of the Internet of Things. D-Wave is breaking ground in quantum computing, selling to Google and NASA. Kairos Therapeutics is tackling cancer by combining antibodies with drugs. General Fusion is researching the production of clean energy using fusion energy.

All of this is happening in British Columbia. It's a solid foundation. It's gaining momentum.

The B.C. tech sector has come into its own.

The entrepreneurial drive in B.C. has created tech companies with nine-figure revenues, a vibrant startup ecosystem, and world class technology used by the most prestigious companies in finance, information technology, aerospace, and retail.
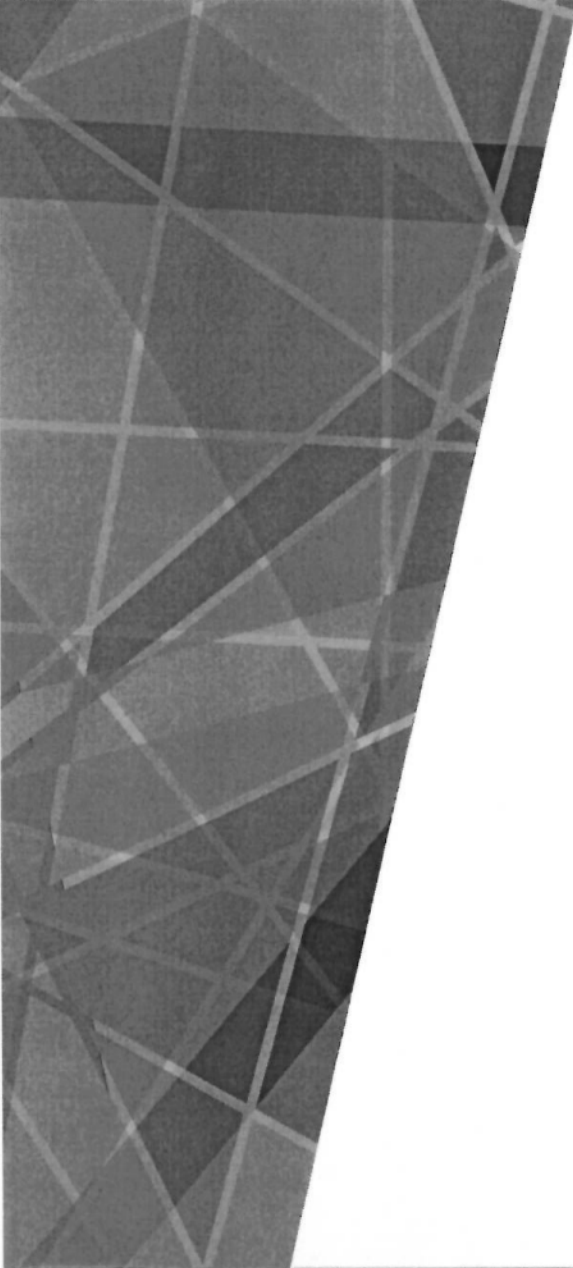
The tech sector is a key driver of growth for the provincial economy, expanding faster than the economy at large. Employing over 86,000 people, with an average wage that is 60% higher than B.C.'s industrial average, the sector has a principal role in the *BC Jobs Plan*.[1] The tech sector has outpaced the overall provincial economy for eight of the past ten years. The 9000 technology companies[2] in British Columbia in 2013 combined to generate over $23 billion in revenue[3], adding over $13 billion to B.C.'s GDP. That same year, over 700 new technology companies came into existence in the province.[4]

We have clear advantages over other jurisdictions. We have the '3 Ts': Talent, Taxes, and Time zone.

We have a 10% provincial and 25% combined provincial and federal corporate tax rate, and tax credits to support tech investment. We have esteemed, science-focused universities that produce a highly educated workforce. We have a location that guarantees smooth co-ordination with partners and customers on the West Coast.
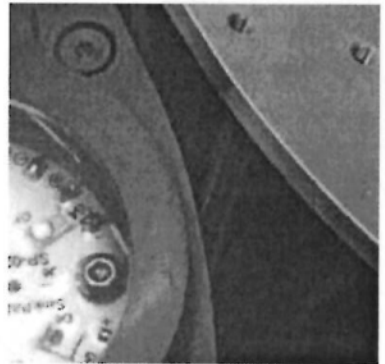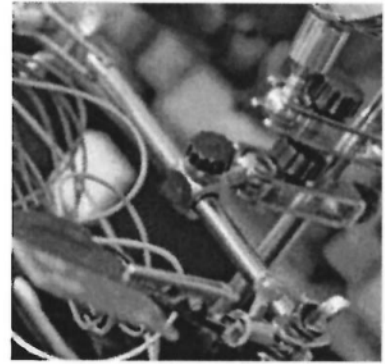
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1   BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition (June 2015), pg. 4

2   BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition (June 2015), pg. 58

3   BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition (June 2015), pg. 4

4   BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition (June 2015), pg. 4

These strengths, our promotion of tech-sector growth, and success stories are multiplying and attracting large multinational companies like Amazon, Sony, Microsoft, Electronic Arts, Disney, and Animal Logic to set up in the province.

We're committed to building on this progress. Government has a role to play in expediting growth, seeding success stories, and supporting entrepreneurs who have the vision, ambition, and passion to build technology, commercialize it, and reach every market in need of solutions.

Tech companies told us that B.C. needs more talent. We're creating avenues for abundance. Entrepreneurs said they need risk capital.

We're investing $100 million in a venture capital initiative.

Industry stated they need less friction to sell to Government. We've revamped the process.

As the tech sector continues to emerge, it keeps the province's economy diverse, strong, and growing. B.C. needs more homegrown tech companies to grow from small operations with viable products to growth stage companies exporting around the world, employing some of the province's most educated, creative, and skilled people, with British Columbians at the helm.

We're positioning the province for the future. We're building the venture capital needed for growth. We're preparing today's students for prosperity.

In the #BCTech Strategy, we're doing this through actions in three pillars: CAPITAL, TALENT, AND MARKET.

Outcomes

These investments in capital, in cultivating talent, and in accessing markets support the vision to grow the average size of tech companies, and raise overall employment and revenue in the technology sector.

The tech community in British Columbia has proven that our tech companies across all verticals can thrive on a global level. The *#BCTech Strategy* builds on our strengths and previous investments, and supports a vibrant and flourishing tech ecosystem with skilled, ambitious, and creative British Columbians leading the growth.

Capital

Access to capital is essential for technology companies to succeed in a competitive global marketplace.

We know that talent, research, customer discovery, and growth all depend on the availability of capital. We want to make sure that early-stage companies with viable products, services or research with great market prospects are not forced to fold or leave the province because of a lack of financing. This is a particular concern for companies in information and communications technology, life sciences, and cleantech.

We want companies to have sufficient access to **local venture capital** in order to realize their **growth potential** in the province.

We need to invest. We've surveyed venture capital best-practices in jurisdictions throughout the world, and we are putting $100 million toward expanding venture capital in British Columbia.

This is not a subsidy. This will be an investment. As an investor, we expect this venture capital to spur commercialization and to grow companies with the potential to provide a significant return to the province in the years ahead.

Early Stage Venture Capital Funding

We are continuing our long history of backing the province's technology sector through investment.

In 2007, we deepened the pool of venture capital in the province with the B.C. Renaissance Capital Fund (BCRCF), a fund of funds now invested in eight local private venture capital firms with a particular focus on information technology, digital media, life sciences and cleantech. The mandate of the BCRCF was straightforward: create economic development and generate superior financial returns.

Of the original funding ($90 million), $69 million has been invested in over 30 companies, contributing to the creation of over a thousand jobs. Beyond this, the fund's capital has been leveraged through co-investment with other funds to the tune of over $308 million, including investment money attracted from outside of the province.

We are investing $100 million to expand the availability of VENTURE CAPITAL in B.C. and address the early stage (A-round) FUNDING GAP

Since the fund's establishment in 2007, the landscape of investment and venture capital has changed, and so have the funding needs of technology companies. While there continues to be an active angel funding presence in the province and a significant rise in late-stage investment, Series A investment has not kept pace.

In the *#BCTech Strategy*, we envision having a suitable supply of local venture capital aimed at promising early-stage companies, drawing outside capital into the province for co-investment.

Following consultation with industry, we are investing $100 million in a new fund to address the Series A funding gap and revitalize early-stage venture capital in B.C. – we also recognize the need for access to capital at later stages for continued company growth. The capital will be available to make local investments, to leverage capital from other jurisdictions, and to enable technology companies to commercialize, grow, and prosper in the province.

The venture capital fund initiative will not only address the short term early stage funding gap in B.C., it will also build a stronger venture capital system in the longer-term by leveraging capital from other investors and promoting awareness of B.C. as a technology and venture capital hub.

Continue our Competitive Tax Rates and Credits

Over and above a low provincial corporate tax rate of 10%, and combined federal and provincial rate of 25%, we have tax incentives for business. We want more tech companies, investors, and entrepreneurs to make use of them.

Unique in Canada,

our *Small Business Venture Capital Act* provides provincial income tax credits of up to **$33 million** each year

to persons that invest in shares of a registered venture capital corporation or in an eligible business. These tax credits support investment of up to $110 million annually.

The *Small Business Venture Capital Act* tax credits include the Business Creation Tax Credit, introduced in 2012, which provides up to $3 million in tax credits every year.

This credit supports $10 million invested in businesses that are less than two years old.

We want to increase the number of tech companies utilizing tax credits such as the Digital Animation or Visual Effects (DAVE) credit, a 17.5% tax credit designed to encourage domestic and international productions to hire B.C. talent for digital animation and visual effects projects, and the Interactive Digital Media Tax Credit (IDMTC), which offers an extra 17.5% tax credit on eligible B.C. labour costs for companies that produce interactive products that educate, inform, or entertain.

Continue to *Build a Strong Research Environment in B.C.*

The Province recognizes the importance of government investment in a healthy research environment and the opportunities that can arise, and the broad benefits that can accrue, from cutting-edge research.

B.C. has a high-calibre health research environment. This infrastructure leads to breakthroughs in areas like cancer treatment. Through organizations like Genome BC and the Michael Smith

Foundation for Health Research, we will continue to attract and keep top research talent, train human capital, build new knowledge and then translate the results of this work into leading health practices.

We also want to encourage entrepreneurs to use federal financial assistance programs, such as the National Research Council's Industrial Research Assistance Program. The program is open to small- and medium-sized companies that plan to grow through the development and commercialization of innovative technology products, services, or processes.

Federal tax credits applicable to B.C. tech companies are also available. Meant to encourage scientific and technological innovation, the Scientific Research and Experimental Development Tax Incentive Program (SR&ED) gives Canadian-controlled private corporations an investment tax credit of 35% up to $3 million on qualified expenditures for basic research, applied research, and experimental development. Other corporations, individuals, trusts, and members of a partnership can also earn various credits through SR&ED.

Talent

DEEPEN THE B.C. TECHNOLOGY TALENT POOL

A crucial element for the success and competitiveness of any technology company is talent, expertise and experience in technical, business, and senior management roles.

B.C. tech companies need to have access to the **best people**.

We want abundant tech talent to emerge from the province, and we're going to give our youth the tools to succeed. There will be greater post-secondary emphasis on technology as well as wider availability of learning and development programs like Government-funded incubators and coding academies. K-12 curricular changes focusing on math, sciences, creativity and other curricula will develop the fundamental skills needed for careers in technology for 600,000 students over the next 10 years. High school students will also have greater access to Work Experience Electives.
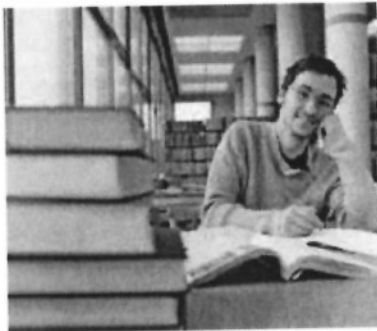
Through streamlined immigration and labour mobility, we'll give companies a better opportunity to attract and bring in highly skilled talent when local supply is tight.

New Curriculum

OVER THE NEXT 10 YEARS
600,000+
B.C. students from K–12

will experience curricular changes focusing on math, sciences and creativity — skills needed for **careers in TECHNOLOGY**

Post-Secondary Support: Raising the Sector's Profile

At the post-secondary level, we want to incent strong engagement in programming that supports tech careers. We're providing financial aid grants targeted toward post-secondary students in programs that align with the tech sector.

To provide experience, the BC Innovation Council (BCIC) created the B.C. Tech Co-op Grants Program through BCIC Tech Works to provide business and skills training to students and talent to small technology companies.

Employers receive a grant of up to $2700 covering 25%, or approximately one month, of a student's salary in a typical four month co-op.

Technology-related occupations are included in the 25% of post-secondary funding targeted at training for in-demand jobs in *B.C.'s Skills for Jobs Blueprint*. This realignment of funds has already been underway for two years, and in that time,

over **1,000 student spaces** have been secured in tech-related programming.

Funding for further student spaces will be targeted in 2016/17 and 2017/18 for this and other tech-sector related occupations in the Top 100, ensuring continued access to tech-related education and training by investing in British Columbians to build their talents.

Interested students need better access to labour market information for B.C's technology sector. The B.C. Labour Market Outlook, which includes a provincial 10-year forecast of job openings, now prominently features openings for anticipated technology sector occupations based on trends.

Through the Sector Labour Market Partnerships Program, we will support the technology sector to customize labour market information, strategies, and tools that address labour market priorities.

We also want our ambitious students to have the best opportunity to fit the research proficiencies of graduate students with the needs of business. Over the course of two years, the Ministry of Advanced Education will enhance support to Mitacs Accelerate, enabling graduate students and postdoctoral fellows to undertake applied research projects relating to their expertise within industry.

Applied Learning and Entrepreneur Development

We support opportunities for undergraduate and advanced students to gain skills and experience.

Since 2001, the provincial government has supported the implementation of advanced research laboratories in British Columbia through grants, support to researchers, funded research projects, and funding for research infrastructure through the B.C. Knowledge Development Fund.

These advanced research laboratories are important engines for the economic development of the province. Attached to B.C. Universities, they conduct internationally recognized leading edge research, train highly qualified personnel, collaborate with private partners, support local industrial development, generate marketable intellectual property and create spin off companies. The training offered to graduate students and postdoctoral fellows by these advanced research laboratories in areas such as genomics, nuclear physics, nano-materials, and manipulation of high-tech equipment is invaluable.

Examples of B.C.'s advanced research laboratories include TRIUMF's Advanced Rare IsotopE Laboratory (ARIEL), which produces and studies isotopes for physics and medicine; the Centre for Drug Research and Development, which translates commercially promising drug research conducted at B.C. universities into new therapies; Forest Products Innovation, which accelerates innovation in collaboration with the wood and forest industry; the Canada's Michael Smith Genome Science Centre, which develops and deploys genomics technologies in support of life sciences research; the 4D LAB, which offers training and hands-on tool use to industry partners interested in nano-materials; and the Vancouver Prostate Centre, which works to develop new services and products to improve cancer outcomes. These advanced research laboratories contribute to the international reputation of British Columbia as a global leader in developing innovative technologies and offer premium experience and training for advanced students.

We want to enable entrepreneurship wherever possible through partnerships with industry and business incubators. For instance, we will build on the Mechatronics Technology Entrepreneurship Incubator at SFU, in which bright mechatronics and entrepreneurship students combine skills to develop and pitch solutions for the market.

The BC Innovator Skills Initiative is training the next generation of leaders. Students can gain skills and access to a business environment with today's local technology leaders through a BCIC Innovator Skills Initiative Voucher valued up to $7,500, which is matched by a company.

The avenues into tech are not only available to students. We are creating paths for driven individuals to gain the skills to succeed in the tech sector.

The province will build on the success of the first round of coding academies, which provide a rapid education and a chance at employment in a tech company for those motivated to change careers.

Streamlined Immigration and Labour Mobility

We also want B.C. companies to be able to attract skilled workers from across Canada and around the world. We are working with the Federal government to remove barriers to tech talent labour mobility in order to meet today's demand for talent.

Our initiatives streamline immigration pathways to meet the talent requirements of technology companies at all growth stages. The B.C. Provincial Nominee Program and federal immigration pathways will help technology companies that need to recruit workers from outside the province when B.C.'s skilled labour pool has been fully tapped.

We will promote the Federal Government's Express Entry program for workers with in-demand technology skills, and we're also funding a foreign qualifications recognition project that will help new immigrants fit their skills into alternative, in-demand careers in B.C.'s technology sector.

Through these initiatives, companies can expect a pipeline of highly skilled local talent that can drive the growth of early- and growth-stage companies in B.C.

The Talent Pipeline: Education that Builds Technology Skills

Solutions for talent supply include a curriculum that emphasizes tech-related skills and alignment between our educators and our technology sector.

A stable, long-term supply of skilled talent for the technology sector starts with the creation of K-12 curricula building fundamental technical skills.

An area of study called *Applied Design, Skills, and Technologies* emphasizes familiarity with technology at early ages, and combines concepts from information technology, business, and technology education in later grades.

Additionally, we are supporting student opportunities to learn coding in and out of school through courses and special activities such as the Hour of Code.

We also intend to align our schools and the technology sector, so that students get the best guidance as they prepare to enter the knowledge economy.

In the **#BCTECH** *Strategy*, students and graduates who are planning their careers, academic and professional, will have informed guidance and full information about **career options in tech**.

Of course, nothing substitutes for experience. Work integrated learning programs, like co-op or dual credit programs, continue to give high school students the opportunity to get early exposure and experience in a career, while earning both high-school credits and credits toward post-secondary certificates and diplomas.

To incent students to get experience and prepare for the transition from the educational world to the professional one, we are also increasing the number of students earning elective graduation credit for participating in Work Experience Electives in the technology sector.

Market

MAKE IT EASIER TO ACCESS NEW MARKETS

We are continuing to make it easier to sell to the B.C. Government. If companies are building tech that can improve services delivered by provincial agencies and communities, we want to know about it, and we want these companies to have an opportunity to sell their tech to us.

The *#BCTech Strategy* includes activities that continue to streamline, simplify and automate government procurement processes, increase access to local and global markets, facilitate exports, invest in connectivity infrastructure, and improve collaboration and commercialization, all with the aim of growing B.C. tech companies.

Making it Easier to Sell to Government

Government procurement can expedite broader commercialization and export. Certain tech subsectors, cleantech in particular, deliberately use the local market as a trial for newly commercialized technology, making adjustments and developing use cases before expanding to other markets.

For instance, one program to increase the demand for cleantech solutions is the Province's legislated Carbon Neutral Government commitment. Making ministries, K-12 schools, health authorities, and public post-secondary institutions, provincial Crown corporations and agencies carbon neutral spurs the development of cleantech solutions.

We are also aligning the ramping up of procurement with our broader provincial goals in sustainability. As just one example, we're accelerating the government's adoption of LED technology through the LED Street Lights Across B.C. procurement program. Fifteen communities, including Prince George, Cranbrook and Burnaby, have already used the program to change over to LED lighting.

More broadly, there are a number of activities underway and planned that are designed to enhance the way that the Province of B.C. acquires billions of dollars of goods and services annually. This includes proactively providing information

and resources to vendors and introducing technology and tools to automate and streamline the entire procurement process. Modern tools and connecting with industry to discuss opportunities for innovation and partnership will make it easier for the tech sector to sell to government.

We have already begun to make selling to the government as straightforward as possible by introducing a short-form Request for Proposals (SRFP).

Contracts for services under $250,000 have RFPs that are just two pages. We're **eliminating** unneeded complexity.

Efforts to streamline and simplify procurement processes will continue.

Effective and meaningful engagement with all stakeholders is essential. As an example, the Ministry of Health has recently begun a process to explore with industry how more collaboration can occur in order to develop and scale up innovations that improve population outcomes, and/or increase the productivity and sustainability of the health-care system.

Through investment in the B.C. Developers' Exchange, B.C.'s public sector and the province's software entrepreneurs have a purpose-built channel to collaborate and do business. British Columbia's public sector code, Application Program Interfaces, and data are shared with technology entrepreneurs to bring about new business ideas, provide work through the building of better digital services for the public sector, and streamlined ways for the public sector to buy software innovations.

Sharing Ideas

Also conducive to collaboration is shared work space. The new Okanagan Centre for Innovation will provide this space. Provincial funding of up to $6 million will be provided upon completion of the building in exchange for ownership of a 40-year leasehold strata title for approximately 1,850 square metres (20,000 square feet) of space. The centre will provide low-cost, flexible space for start-ups who have graduated from the Accelerate Okanagan Venture Acceleration Program and are still at a venture stage. The convenience of being housed in one space to network, share ideas and pass on experience will give them an invaluable boost as they navigate the critical early-stage growth period of starting a tech company. Construction is underway and is scheduled for completion in early 2017.

Lastly, the B.C. government recognizes that unlocking the value of data requires innovation, collaboration and partnership among citizens, researchers, the private sector and government. Whether increasing the responsiveness of government services, improving outcomes for citizens or supporting tech companies towards a stronger bottom line, modern data access and advanced analytic capabilities is an imperative for the Province. B.C is a national leader in providing open and accessible data at *www.data.gov.bc.ca*. Looking ahead, the Province has started work to identify specific examples of where access to data across and within public sectors can be united in ways to improve public policy and programs, and inform next steps for increasing data available to B.C. companies to boost economic growth.

Make B.C. the Most Connected Province

The opportunity to create a successful company and reach local and international markets is open to ambitious people in any location in the province. Inspiring examples like Hy-Tech Drilling in Smithers with its innovative Tech 5000 drill and Cloudhead Games in Coombs with its work in virtual reality are indicators of what aspiring B.C. entrepreneurs can achieve from outside major cities.

Apart from the entrepreneurial spirit and a working business model, these entrepreneurs need excellent infrastructure to adopt technology and access markets. That's why this government has committed to providing high-speed Internet access to 100% of the province by 2021.

Facilitating Business Growth through Exports

Over 80% of B.C. tech companies are exporting products and services for an estimated value of over $4 billion[1],[2]. More than half of the technology companies created post-2008 generate revenues primarily from international markets.[3] This is particularly true for information and communications technology (ICT) companies.

To facilitate the technology sector's overall ability to export, we will make it easier to find and use services offered by government that equip businesses to expand and sell to new markets. We will also develop Sector Investment and Export Plans for life sciences, cleantech, ICT, and digital media, to improve competitiveness.

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1   *BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition* (June 2015), pg. 30

2   *BC Stats, Profile of the British Columbia High Technology Sector, 2014 Edition* (June 2015), pg. 40

3   Capasiti Consulting Inc., *BC Technology Exports* (July 2015), pg. 7

Encouraging Commercialization

Exciting developments in the commercialization of cleantech research are happening in the province. Vallis, a non-profit, Vancouver-based $250-million cleantech oil and gas fund and accelerator, has been created by Western Canadian oil and gas companies and the B.C. Cleantech CEO Alliance. The accelerator combines the oil, gas, and technical expertise that exist in British Columbia and Alberta to identify, finance, and accelerate new cleantech solutions.

For our part, with an aim to spur adoption of cleantech and achieve world-leading performance in greenhouse gas intensity, we are introducing a technology fund to incent investment in emissions reduction projects in the natural gas and other sectors in B.C. Money from the new technology fund will go toward the development of clean technologies with significant potential to reduce B.C.'s emissions over the long term.

We are also supporting programs that connect aspiring entrepreneurs with mentors, plug them into an active network, and educate them on commercialization. Through various programs and initiatives, the BC Innovation Council (BCIC) is accomplishing its mission of strengthening British Columbia by accelerating the growth of B.C. ventures through support for entrepreneurs and technology startups.

For instance, the BCIC hosts the Venture Acceleration Program in regions throughout B.C. The initiative assists small technology companies assess and develop revenue growth opportunities. They also sponsor Launch Academy, a program that supports entrepreneurs with access to mentorship, education, and networking opportunities as they search for repeatable and scalable business models. In another example, the BCIC has partnered with the entrepreneurship@ UBC Accelerator Program, a program for venture creation in UBC that uses the Lean Launch Pad process to quickly discover product-market fit for UBC-linked ventures.

Conclusion

The actions in the *#BCTech Strategy* support the goals of entrepreneurs, tech companies, and ambitious individuals in British Columbia who want to succeed in the technology sector.

$100 million in venture capital provides the resources companies need to thrive.

Actions in talent will create a pipeline of highly-skilled people prepared and capable of building exceptionally competitive tech companies.

Actions in procurement and facilitating exports, as well as greater collaboration between industry and government, will help industry to sell to markets they have not yet accessed.

We are building on our strengths, fostering the **growth of our vibrant and flourishing technology sector**, and reinforcing its role as a key driver of British Columbia's economy.

These initiatives, combined with the entrepreneurial spirit and business environment that exist in British Columbia, will result in a world-class technology ecosystem, high-paying jobs for driven British Columbians, and prosperity for the province as a whole.

List of **#BCTECH** Strategy Actions

IMPROVE ACCESS TO CAPITAL AND CONTINUE TO SUPPORT OUR COMPETITIVE TAX SYSTEM AND RESEARCH ENVIRONMENT

Investing in a New Venture Capital Fund

▸ $100 million investment to expand the availability of venture capital in B.C. and address the early stage (A-round) funding gap (though we also recognize the need for access to capital at later stages for continued company growth)

Continue our Competitive Tax Rates and Credits

▸ Increase the number of B.C. technology companies claiming the Digital Animation or Visual Effects (DAVE) credit or the Interactive Digital Media Tax Credit (IDMTC)

▸ Continue B.C.'s Small Business Venture Capital Act which provides $33M of tax credits annually

Continue to Build a Strong Research Environment in B.C.

▸ Genome BC will continue to facilitate turning important insights from genomics into new diagnostic and treatment services

▸ Attract and keep top research talent in B.C. to generate the development and application of new ideas in areas of key importance to the health system through funding to The Michael Smith Foundation for Health Research (MSFHR)

▸ Revised the B.C. Knowledge Development Fund criteria to focus on provincial government priorities

▸ Provide funding to post-secondary institutions to increase commercialization potential

List of **#BCTECH** Strategy Actions

DEEPEN THE B.C. TECHNOLOGY TALENT POOL

Industry-Focused Programs in the Post-Secondary System

▶ Target funding to programming that supports occupations in demand in the technology sector as part of government's initiative to re-engineer 25% of operating grants to support high-demand occupations

▶ Align student financial aid funding to expand eligibility for the B.C. Completion Grant for graduates to include students completing programs related to the technology sector

▶ Continue to promote the use of the B.C. Tech Co-op grants as part of the BCIC Tech Works program

▶ Recognize the importance of hands-on experience for students – proposals for new technology-related degree programs will need to include co-operative education or integrated work learning components

Timely and Relevant Labour-Market Information

▶ Provide better information to career educators and their students about a wider range of careers in B.C. Tech

▶ Support the technology sector to customize labour market information, strategies and tools that address labour market priorities as part of the Sector Labour Market Partnerships Program

▶ Include an annual provincial 10-year forecast of job openings by occupation, including technology sector occupations, in the B.C. Labour Market Outlook

B.C. Completion Grant

Full-time students *who successfully complete each year of their studies may have the B.C. portion of their Canada-B.C. integrated student loan* **debt reduced** *by the provincial government.*

https://studentaidbc.ca/repay/repayment-help/bc-completion-grant-graduates

List of #BCTECH Strategy Actions

Applied Learning and Entrepreneur Development

▸ Support technology sector employers to train/up-skill new and existing employees with supporting funding from the Canada Job Grant

▸ Build on the first round of Coding Academies hosted at five public post-secondary institutions

▸ Build on the Mechatronics Technology Entrepreneurship Incubator at SFU

▸ Encourage use of the BC Innovator Skills Initiative as part of the BCIC Tech Works program

▸ Over the course of two years, support Mitacs programs that enable graduate students and postdoctoral fellows to undertake applied research projects relating to their expertise within industry

▸ Ideas from Campus to Industry program – in partnership with the Okanagan campus of UBC, government has funded industry/post-secondary institutions (PSI) consultations targeted on identifying actions to increase partnerships between industry and PSIs in the Interior

▸ Enhance the B.C. Innovation Council Venture Acceleration Program to assist small technology firms assess and develop revenue opportunities

Streamlined In-migration Pathways after B.C. has Maximized our Local Talent

▸ Work with other provinces to improve labour mobility and increase our ability to attract workers to B.C.

▸ Help technology companies that need to recruit and access workers from outside Canada through the B.C. Provincial Nominee Program and work with the federal government to improve their permanent immigration pathways

▸ Provide funding for a foreign qualifications recognition project that will help new immigrants fit their skills into alternative, in-demand careers in B.C.'s technology sector

▸ Promote the federal government's Express Entry program for workers with in-demand technology skills

List of **#BCTECH** Strategy Actions

Dedicated Programs in the K-12 Education System

- ▶ Phase in new K-12 curriculum over three years beginning this school year, allowing the opportunity for over 600,000 students across the province to experience new learning standards in mathematics, sciences, and other curricula. These standards develop the foundational knowledge and skills for success in the B.C. technology sector and other technology-enabled sectors

- ▶ New *Applied Design, Skills, and Technologies* education: an experiential, hands-on learning through design and creation that includes skills and concepts from Information Technology and Technology Education

Grades K-5

- » Students will be given opportunities to develop foundational skills in *Applied Design, Skills, and Technologies* through exploratory and purposeful play

- » As students get older, they will have opportunities to develop foundational skills in activities that have a practical and real-life focus

Grades 6-9

- » Curriculum specific to *Applied Design, Skills, and Technologies* will be developed and available in 2016

- » Students will have opportunities to explore specific areas of *Applied Design, Skills, and Technologies*, including coding

Grades 10-12

- » Students will have the opportunities to specialize in Information Technology, Technology Education or emerging disciplines

- ▶ Promote creative thinking as a core competency across the entire curriculum, including technical and business education

- ▶ Increase the number of high school students earning elective graduation credit for participating in Work Experience Electives in the technology sector

- ▶ Give students increased access to work integrated leaning programs in the technology sector enabling them to earn credits toward high school graduation while also earning credits towards a post-secondary certificate or diploma

- ▶ Support student opportunities to learn coding in school and outside school through courses and special activities such as the Hour of Code

List of #BCTECH Strategy Actions

Making it Easier to Sell to Government

- Centralize a procurement program of green technologies to accelerate their adoption by local government and other public sector organizations (for example the LED Street Lights Across BC procurement program)

- Increase the demand for clean tech solutions through the Carbon Neutral Capital Program for K-12 schools, health authorities, and public post-secondary institutions

- Continue to streamline procurement processes analogous to the process used to create the Short-form Request for Proposals. A streamlined General Services Agreement is currently being piloted

- Continue to update plain language, online procurement resources for tech companies looking to do business with government, including guidance, videos and templates

- Introduce modern technology and tools to automate and streamline the entire procurement process

- Continue to explore the use of the Open Procurement Hub – a leading edge planning approach allowing us to collaborate with the vendor community in an open/live moderated forum to answer questions about the contractual needs of government

- Provide an opportunity for B.C. technology companies to participate in face-to-face networking discussions with key government decision makers as part of the B2B meetings at the #BCTech Summit on January 18th & 19th, 2016 in order to discuss opportunities for innovation and future partnership. This opportunity will signal the initial kick-off for ongoing discussions

- Continue the experiment at *http://bcdevexchange.org* to understand how new approaches to open data, open source code, open Application Program Interfaces (APIs) and open innovation can bring about both new business ideas and streamlined ways for the public sector to buy software innovations

- Establish a working group involving the Ministry of Health, industry and health sector partners to develop policy, strategies and tools that will enable uptake of innovations that improve outcomes, productivity and sustainability of the health care system

#BCTECH Summit

This is an opportunity for **B.C. Technology Companies** *to discuss opportunities for innovation and* **future partnerships.** *This opportunity will signal the initial* **kick-off** *for ongoing discussions.*

List of #BCTECH Strategy Actions

Making it Easier to Share Ideas

▶ Start work to identify specific examples of where access to data across and within public sectors can be united in ways to improve public policy and programs, and inform next steps for increasing data available to B.C. companies to boost economic growth

▶ Okanagan Centre for Innovation – with provincial funding of up to $6 million, it will provide low-cost, flexible space for startups who have graduated from the Accelerate Okanagan Venture Acceleration Program and are still at a venture stage. Construction is underway and is scheduled for completion in early 2017

▶ BC Agrifood Venture Acceleration Program – technology and agrifood entrepreneurs can now benefit from the program

Making B.C. the Most Connected Province

▶ Committed to providing high-speed Internet access to 100% of the province by 2021

▶ Improve the reliability of high-speed Internet access for northern and coastal communities

Facilitating Business Growth through Exports

▶ Make it easier to find and use services offered by government that equip businesses to expand and sell to new markets

▶ Improve our competitiveness by developing Sector Investment and Export Plans, one each for life sciences, cleantech, ICT, and digital media

▶ Realize a 10% increase in the number of tech companies connecting with buyers outside of B.C. by delivering targeted activities in our key markets, including international trade shows, government-led trade missions, and through international marketing

▶ BritishColumbia.ca – new features on the province's digital hub for promoting B.C.'s sectors, communities and opportunities to the world

Encouraging Commercialization

▶ Increase adoption of clean tech through government's LNG technology fund, as well as legislation stating that the entire B.C. public sector be carbon neutral by reducing its greenhouse gas emissions to net zero each year

Please visit

BritishColumbia.ca

The province's **DIGITAL HUB** for promoting **B.C.'s SECTORS**, communities and opportunities to the **WORLD**.
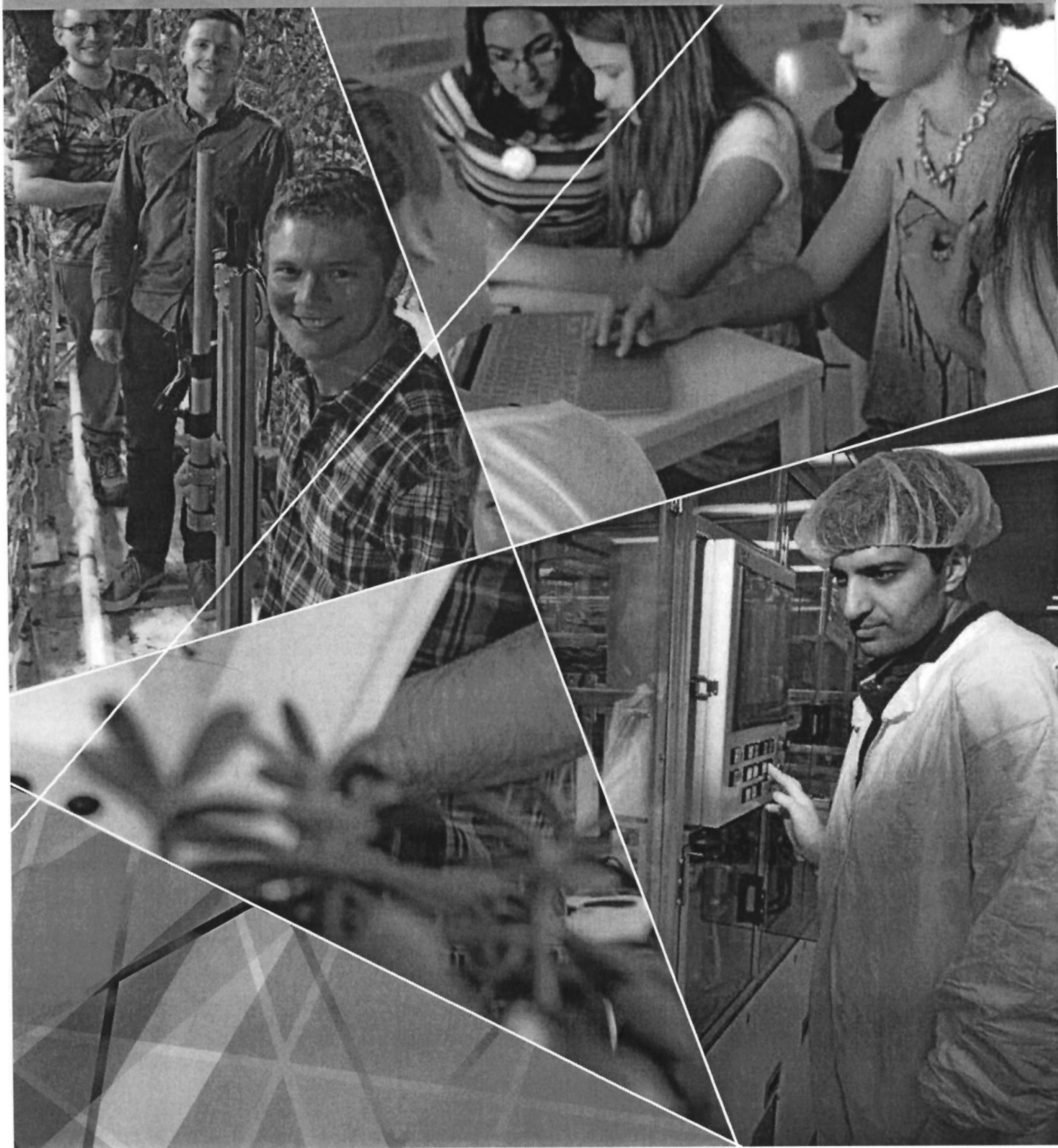
#BCTECH *Sector*

Capitalizing on our Cleantech Expertise: *Vallis and Foresight*

In B.C.s cleantech sector, approximately 200 firms employ over 6000 people, and generate revenue on the order of $1.7 billion.[1]

Developments in cleantech in British Columbia include the establishment of the unique cleantech accelerator Foresight and the oil and gas cleantech fund and accelerator Vallis, both of which have the aim of coalescing B.C.'s technical and business capabilities to create companies that profitably develop cleantech solutions that reduce the environmental footprint of key industries, and makes the world a better, cleaner place.

....

1   KPMG LLP, British Columbia Technology Report Card, 2014 Edition, 2014, pg. 9

FORESIGHT CLEANTECH ACCELERATOR CENTRE

While often associated with alternate forms of energy, cleantech encompasses a number of applications that span across many sectors, yielding benefits from increased energy efficiency to improved use of waste materials. These technologies, especially hardware-related or advanced materials development, tend to have long development cycles and high capital requirements.

Foresight was established in 2013 and joined the BC Innovation Council's BC Acceleration Network. Its Venture Acceleration Program, multiple executives-in-residence, and network of cleantech business mentors focus on helping companies perform customer discovery and business model development around a strong value proposition, without which a company's technology is unlikely to succeed in the marketplace.

To get companies to commercialization, Foresight has a program with the Business Development Bank of Canada that provides $250,000 in financing to promising early-stage companies provided it is matched by at least the same in private investment.

Two of the accelerator's companies, Dark Vision with its downhole imaging technology and Pyrowave with its waste management and recycling technology, have received this investment to take their projects to market.

On the Front Line of Biotech:
STEMCELL Technologies

STEMCELL Technologies produces standardized, high quality cell culture media for growing stem cells, selling to academic researchers and pharmaceutical companies across the world.

Stem cells are the "mother cells" of the body, having the ability to transform into other types of tissue. This has enormous implications for patient treatment across a large number of diseases and medical conditions, including leukemia, Alzheimer's disease, heart disease, and diabetes. The media that STEMCELL produces is optimized for the growth of stem cells.

Stem cell research has become common. Previously, research was done with embryonic stem cells. That's rarely the case these days. Now, researchers can make stem cells from almost any cell in the body by manipulating its gene expression to have the traits of a stem cell. These are called induced pluripotent stem cells. Researchers need a medium with particular nutrients in which to grow these cells.

STEMCELL Technologies produces these tissue culture media along with cell isolation products, giving researchers the tools needed for study.

"We provide the picks and shovels for the stem cell gold rush," says President and CEO Dr. Allen Eaves.

The company was spun out of the Terry Fox Laboratory at the British Columbia Cancer Agency in 1993 by Eaves, who was a Director at the unit and a research scientist working on bone marrow transplants. Since its inception, STEMCELL has earned over $550 million in revenue including approximately $100 million earned last year, the vast majority from export markets.

STEMCELL Technologies employs over 800 professionals, around 650 of whom are in BritishColumbia. Of these, Eaves estimates approximately 100 are PhDs, and around another 100 have a Master of Sciences.

The company has been a destination for the province's bright science students. "We have a wonderful education system, turning out all sorts of PhDs and post-docs," Eaves says. "These are people that love science, are motivated to do science, and are trained to do excellent science."

The growth of the company has been staggering, and over the next ten years, Eaves anticipates continued growth necessitating the hiring of around 2000 more people, the vast bulk of which will be in British Columbia.

"We need to have the companies in Canada to be the receptor for these smart young students," Eaves says. *"And I want STEMCELL to be one of those."*

The Innovation Boulevard, founded in 2012 by the City of Surrey, Simon Fraser University, and the Fraser Health Surrey Memorial Hospital, is an excellent demonstration of the ongoing integration of technology in asector that is touching and improving individual lives on a daily basis.

"The hopes are that Innovation Boulevard continues to demonstrate for British Columbia the huge potential when we work together in partnership and focus our energies on a global race," says Dr. D'Arcy.

The vision for this health technology cluster is to improve health outcomes, implement intelligent solutions for the health care system, attract talented clinicians and researchers, and grow companies in the health care technology sector to better serve the residents of B.C. ⚙
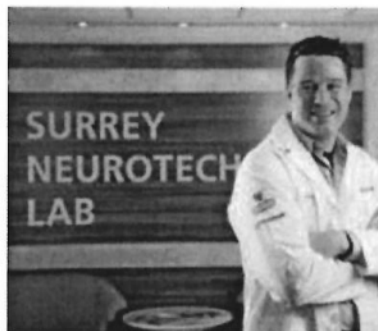
The Health Technology Cluster:
Innovation Boulevard

In 2006, while Captain Trevor Greene was in Afghanistan serving with the Canadian military, he sustained a severe brain injury in an axe attack. The attack nearly killed him, and the resulting damage made the likelihood of walking again next to zero.

This past September, though, at the Surrey campus of Simon Fraser University, Greene publicly took steps with the aid of a customized mechanical exoskeleton, the result of a several years-long collaborative project named Iron Soldier, spearheaded by neuroscientist, SFU professor, and Surrey Innovation Boulevard co-Chair Dr. Ryan D'Arcy, and supported by a number of medical and engineering professionals from the region and around the world. The public steps Greene took marked the opening of a new avenue in brain rehabilitation and technology.

The name of the location where the work, improvement, and breakthrough took place could not be more fitting: Innovation Boulevard.

Encompassing one square mile in Surrey's city center, the Innovation Boulevard is a medical sciences and technology cluster comprised of companies, health research institutions, health professionals, and universities focusing and collaborating on development in three main areas: medical technologies, independent health technologies, and digital health technologies.

"In terms of the expectations," says D'Arcy, "that's always been really clear and always will be: That's to continue to use tech innovations and the power of our cluster to make an impact on the individuals right in front of us and their health care."

Improving Quality of Life:
CanAssist

Housed in the University of Victoria, CanAssist is helping to improve the quality of life and independence of individuals with disabilities. In partnership with academic and disability communities, the organization works to expand inclusiveness in society through the creation of technology, programs, and services that increase the ability of those with disabilities to engage and contribute.

Individuals, families, and communities have been touched by this work. CanAssist has provided customized technology and software that cuts across demographics and locations. Infants, children, adults, and seniors have all been impacted by their technology and design, and they have extended this impact beyond British Columbia, as people from New Zealand, China, Scotland, and Kenya have experienced CanAssist's life-changing customized technology solutions.

One such client is Gordon. For Gordon, a spinal cord injury meant a tremendous curtailment of independence in performing day-to-day tasks. As an individual who loves reading and computers, not being able to turn pages or easily operate a computer created tremendous frustration.

CanAssist delivered technology-enabled solutions that improved Gordon's quality of life. Through an iPad, customized mount, and mouth stick, he has greater ability to use the computer. Through a customized zero gravity arm support which will keep his arm supported in a neutral state, he will again be able to independently feed himself. ⚙
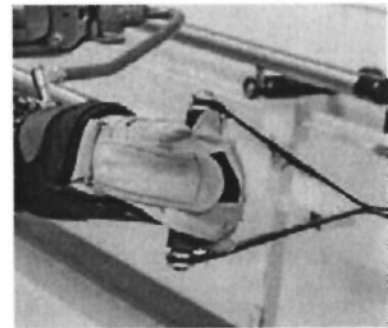
# *Tackling Cancer:*
Kairos Therapeutics

Kairos Therapeutics is a biopharmaceutical company that emerged from the Centre for Drug Research and Development (CDRD), an organization which bridges research with commercialization in Life Sciences. Kairos Therapeutics focuses on antibody-drug conjugates (ADC), a rapidly-growing segment of cancer treatment, and a hopeful one.

ADCs are agents comprised of antibodies that are armed with potent, cell-killing drugs to effectively target cancer cells and avoid healthy cells. The antibody can be thought of as having a cancer-cell homing capability and the drug as having a lethal payload that is released once the targeted cell has been reached. Kairos Therapeutics has licensed patents that are owned by CDRD, established partnerships with Canadian researchers and private partners, and is developing a number of ADC therapeutics.

In a recent development involving the University of British Columbia, BC Cancer Agency, University of Copenhagen and VAR2 Pharmaceuticals, it was discovered that a mosquito-borne parasite included a protein, called VAR2CSA, that binds with a molecule found in a high number of cancer cell types. The results of tests that include this protein combined with novel toxins have been extremely promising, with positive results across a large number of cancer types. In partnership with VAR2 Pharmaceuticals, a compound designed for clinical trials in humans is now being prepared. ⚙
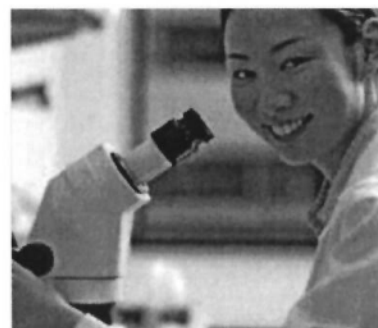
Patient-Centred Care:
Technology and Health

New technological capabilities in the province have been facilitating the steady shift toward a patient-centred model of health care, which arranges care as a service built around the individual, who is listened to, respected, and informed.

Health technology enables patient self-management, shared and informed decision-making, enhanced health care experiences, improved information and understanding, and the advancement of health promotion activities.

An excellent example of health technology that impacts quality of life and hospital productivity is home health monitoring, which allows individuals in urban and non-urban areas alike to receive monitoring and timely treatment without having to leave their homes. For those patients suffering from chronic conditions such as congestive heart failure, chronic obstructive pulmonary disease, diabetes, asthma, or hypertension, home health monitoring eliminates the need for frequent visits to health care facilities, and significantly increases convenience, comfort, and peace of mind.

Through home health monitoring platforms, patients can learn to effectively manage their health while being remotely monitored by health-care professionals. Each patient is empowered with knowledge and technology, and caregivers can deploy resources and attention effectively and efficiently, overseeing greater numbers of clients. As a patient, you benefit from the feeling of assurance that comes from being constantly in touch with your care providers.

Typically for these programs, patients are referred by health-care professionals, after which a monitoring plan is developed. The plan's execution is monitored and modified as needed by a health-care team. Using instruments such as a weight scale, blood pressure cuff, and pulse oximeter, clients can send their vital signs to a health-care professional from home through a well-designed mobile or PC interface. ⚙

One of the opportunities Shortreed sees for technology in the classroom is the personalization of learning. He says, "Instead of everyone having to do the same assignment that is more or less a recipe, it's asking a student what they want to learn about, and then facilitating that desire and also allowing them to share it with people beyond the classroom."

Classrooms in which learners are sharing with others around the world, getting feedback, building community, and showing leadership provide a personal empowerment for students that was not accessible in past decades.

"Our schools are moving away from information hubs and moving toward network hubs, and if we're not providing a network for our learners as they exit our schools, then we're not providing the infrastructure needed for them to be successful," says Shortreed.

Shortreed summarizes his position this way: "Learning has grown from memorizing answers and information, to asking questions and creating solutions. Technology is the vehicle for this end in mind for me."

To support this shift in education, the *#BCTech Strategy* includes the commitment to providing high-speed Internet access to 100% of the province by 2021, and introduces curricular changes that focus on STEM fundamentals. These changes, along with the *Applied Design, Skills, and Technologies* program, will impact 600,000 K-12 students over the next 10 years, preparing them to navigate through and capitalize in a world with tech at the fore. ⚙

Not limited to the education system, skills development in tech has also been promoted by tech companies, including the multi-national giant Microsoft in Vancouver.

Each year, Microsoft Canada holds YouthSpark Live, a full day conference for Canadian youth at which they can learn coding skills and explore future career options. They also hold conferences and support programs that encourage more women in tech. DigiGirlz Day is a one-day event, held to provide high school girls with greater insight into careers in technology through interactions with Microsoft employees and managers.

A recent investment in Ladies Learning Code has enabled the organization to extend its Girls Learning Code program, providing free beginner computer programming and technology workshops to girls aged 8-13.

Microsoft Canada Corporate Affairs Director Alexandra Clark said, *"Through programs like YouthSpark, DigiGirlz and Imagine Cup, we help youth envision a future in computer science and introduce them to coding, the building block of technology development. In the process, we want youth to be more than users of technology. We want to empower them to be creators of technology."* ⚙

Technology and Education
in British Columbia

David Shortreed is a District Vice-Principal who works across 42 K-12 schools in the Greater Victoria School District #61, mentoring and collaborating with educators, parents, and students to discover the best technology tools and to implement them in the best ways. In 2013, Shortreed was recognized by the Victoria Advanced Technology Council with the Education Champion Award for his efforts using technology and innovative learning techniques to guide education in an increasingly tech-enabled classroom.

"I get asked the question a lot," Shortreed says. *"'What does 21st Century learning look like? What does a 21st Century classroom look like?' What I'm talking to schools about is our classrooms and our learning are changing."*

Education is moving away from fact-searching to inquiry-based learning, in which learners explore questions related to their interests, and are driven and motivated to create meaningful learning experiences for themselves, often employing technology.

"At my core, and what brought me to being in education, is the valuable relationship and connection I build with students, the curiosity, and the sharing of learning. It is through this lens that I then evaluate all new tools, resources, and technology for learning," says Shortreed. "I clearly saw how technology could give students access to resources, experts, community, and answers needed for their own learning. I saw how technology could also help make their own learning more visible through blogging, digital portfolios, and documentation."
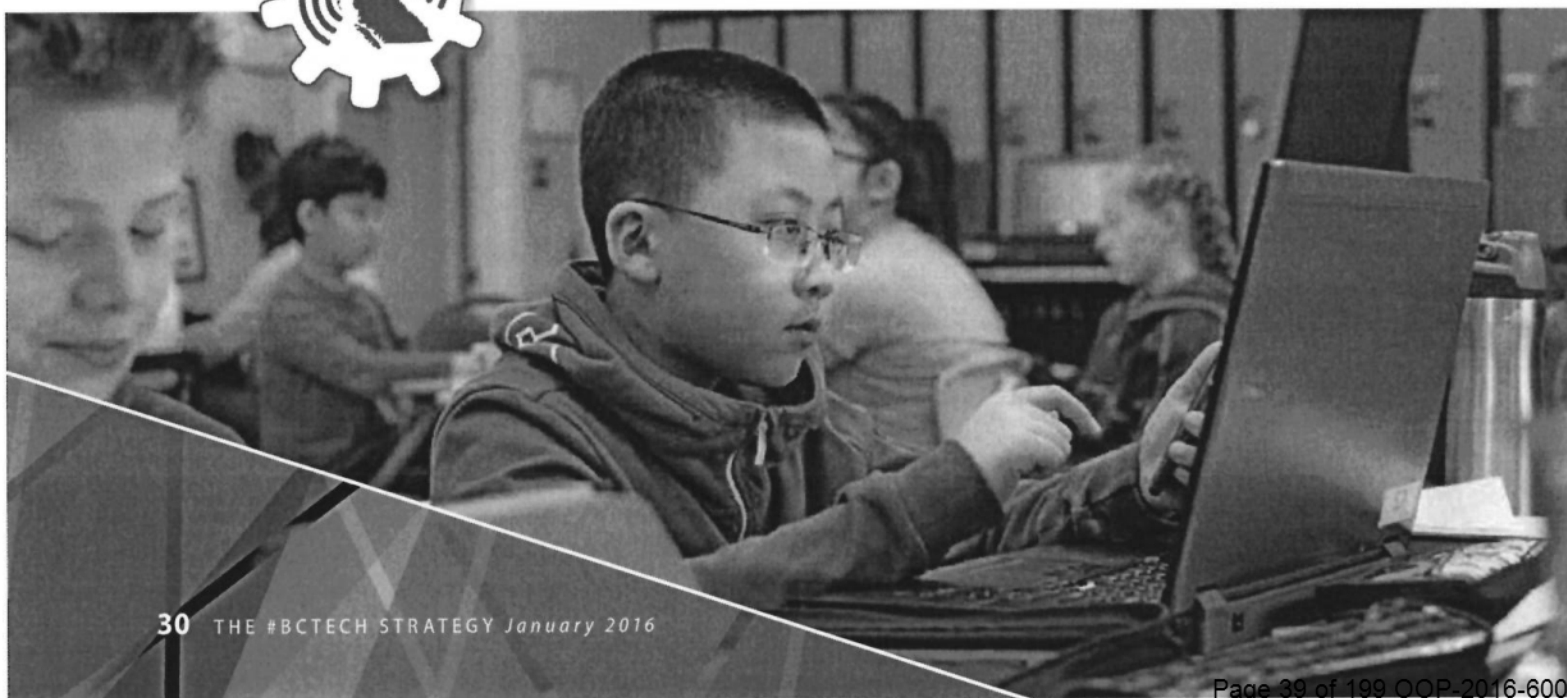
Success Stories:
A Vibrant and Diverse Technology Sector in B.C.

In 2008, BrightKit, a tool that enabled the management of multiple Twitter accounts through one platform, was created by Invoke Media, a Vancouver-based digital media company. Seven years later, after the acquisition of multiple millions of users throughout the world, the hiring of approximately a thousand employees, and a renaming to HootSuite, the company is valued at over a billion dollars.

A host of companies have increased the profile of British Columbia as a province from which top-tier technology companies can arise and succeed. BuildDirect, an e-commerce platform selling construction materials, Cymax, a company selling furniture and e-commerce retail software, and Vision Critical, a customer intelligence platform that allows big brands to interact with their customers and make good business decisions, are all becoming Information & Communication sector anchors.

A more established group of technology companies also exists in the province. Global Relay leads information archiving in the financial industry. Sierra Wireless provides machine-to-machine connectivity and cloud services, with the potential of being at the fore of a fully-connected world as the Internet of Things becomes commonplace. MDA produces space-based communications technology and surveillance solutions for governments and businesses from its headquarters in Richmond.

Companies in British Columbia are developing ambitious and fascinating technology. With its cameras on the International Space Station, Urthecast can stream live-Earth footage to anyone with an internet connection, for either personal or commercial use. The solution is also used for disaster relief, humanitarian efforts, education, scientific research, and environmental monitoring.

Opportunities to create, adopt, and benefit from technology in British Columbia are increasing, and we intend to enable British Columbians to participate and lead as much as possible by providing fundamental skills and avenues into the sector, while fostering an ecosystem from which future ideas can be realized, and a new generation of companies can emerge.

In this era, every company can make use of technology. Technology in data management, for instance, can help make sense of the enormous volumes of data available, coming at a fast rate from a variety sources, and can drive good business decision making.

More personally for some British Columbians, technology in B.C. is having a positive impact on lives at school and home.

The following pages illustrate some of the recent developments in technology in British Columbia, and how that technology is intersecting with the lives of British Columbians.

VALLIS CLEANTECH ACCELERATOR

Given the massive amount of oil, gas, and technical expertise that exist in British Columbia and Alberta, there is a great opportunity to create partnerships between the two provinces and combine capabilities to enhance the industry and create profitable businesses.

Cleantech innovations that address environmental challenges and reduce costs in the oil and gas value chain have tremendous potential.

To help realize this potential, Vallis, a non-profit Vancouver-based $250 million Cleantech oil and gas fund and accelerator, has been created. The leadership team and advisory group is drawn from some of the largest and most renowned organizations in B.C.'s cleantech industry. Through Vallis, there is an opportunity to build companies and a greater economic and environmental partnership between British Columbia and Alberta.

Vallis will finance and accelerate solutions in the industry by focusing on early-stage, innovative companies that address carbon, environment, and cost-competitiveness challenges. The fund supports innovation such as high-efficiency boilers, natural gas decarbonisation, and water and energy recovery, all gaps identified by Canada's Oil Sands Innovation Alliance.

The accelerator also represents a partnership among leading Western Canadian oil and gas companies and the B.C. Cleantech CEO Alliance, and strives to leverage the oil and gas resources and B.C.'s technology expertise to advance innovation and adoption that progresses the industry, the economy, and the environment, attracting the brightest innovators to focus on Western Canada's oil and gas challenges while creating new Cleantech companies and long-term technology jobs.

In addition to being a source of grant funding, Vallis' accelerator provides a global network of mentors, venture capital sources, and direct access to a customer base in Canada's oil and gas sector. Solutions created here can be exported to solve similar problems throughout the world.

By applying Vallis-funded cleantech solutions to current problems in the oil and gas industry, British Columbia can bolster its place as a world-class hub for clean technology innovation, and Alberta has the opportunity to build its oil and gas sector's competitiveness.

Enhanced
Food Production

B.C. companies' innovations in food production are also being exported throughout the world.

Ecoations, located in North Vancouver, has developed Crop Sense, a technology that detects minute pest and disease problems early on, enabling growers to address infestation concerns quickly and proactively. The technology is so precise that after thirty seconds of plant signal measurement, it indicates which specific plants have pest problems, how many insects comprise the infestation, their locations, and the duration of time they have been feeding on the plant. The company has received orders from early adopter customers who want to deploy Crop Sense inside their greenhouses.

Apart from business improvements derived from the technology, Crop Sense is helping to reduce pesticide applications involved in the food that goes on a family's table.

The technology developed in the province will have benefits elsewhere in the world. The Bill & Melinda Gates Foundation has provided funds to support a team of international experts, which Ecoation has joined, to create pest management tools for cowpea farmers in West Africa.
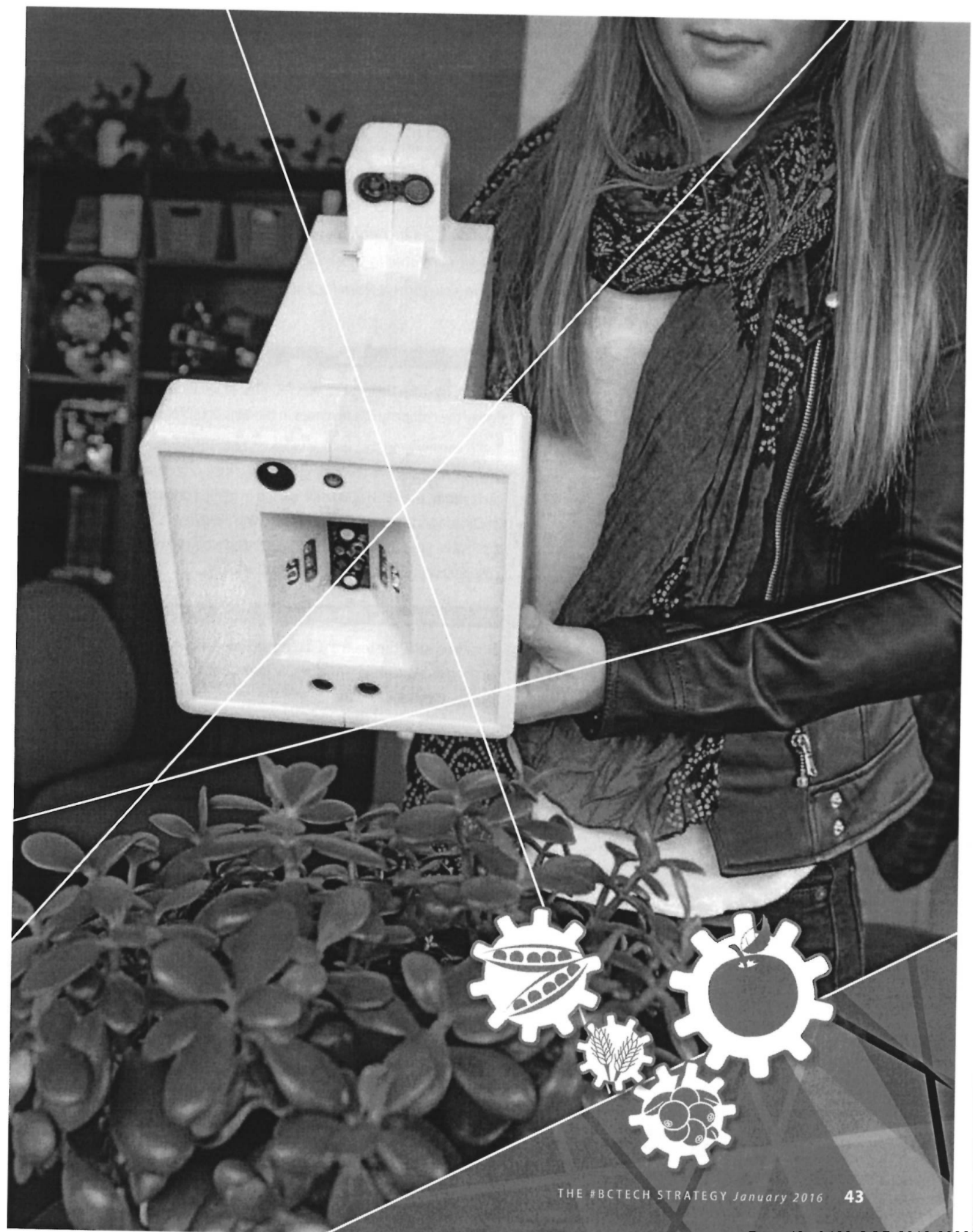
Tech Companies
Outside Major Cities

The opportunity to develop a technology solution and bring it to market is not only available to those living in major cities. Companies are serving customers from locations throughout the province.

Photo courtesy of: Cloudhead Games

HY-TECH DRILLING

In 1991, Hy-Tech Drilling Ltd. was founded in Smithers, B.C. Today the company has revenues in the tens of millions.

The company produces unique value on both the hardware and software sides of the drilling business. Their proprietary technology, the TECH 5000 drill, is used in mining operations in Canada and Western Europe, along with FieldView™, a software product that tracks metres drilled along with the cost per metre, refining the business of mining.

CLOUDHEAD GAMES

Since late 2012, the team at Cloudhead Games have been working as pioneers in virtual reality from Coombs, B.C. In 2013, they validated the idea for the immersive, exclusively virtual reality game, *The Gallery: Six Elements*, with a Kickstarter campaign.

The team intends to build on its early validation to remain one of the premiere virtual reality studios in existence, operating across all virtual reality platforms, including Oculus VR and Samsung Gear.

From outside a major urban area, this company in British Columbia is redefining the audio, locomotion, and player experience in gaming, moving the industry forward. ✿

Conclusion

The tech sector in B.C. is vibrant, diverse, and open to all British Columbians, delivering opportunities for participation, benefit, and profit in personal or professional spheres. The *#BCTech Strategy* aims to augment this vibrancy with improved infrastructure, procurement programs, education, and capital, so that as technology becomes increasingly prominent in our economy, British Columbians are in the best position to capitalize and benefit.
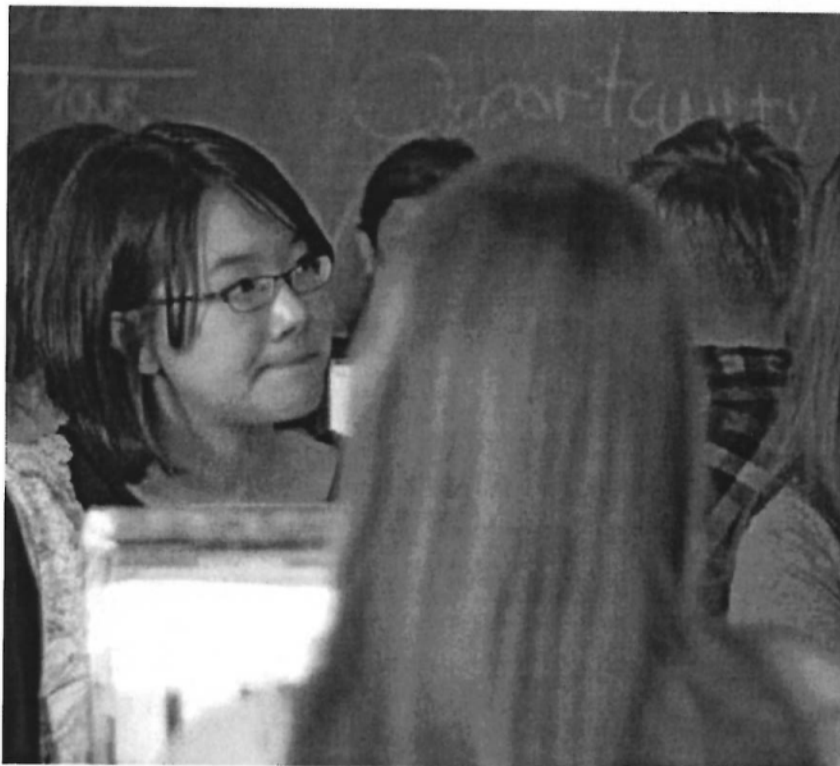
Page 047 to/à Page 059

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s.12

From:	Turner, Louise S MTIC:EX
Sent:	Monday, October 19, 2015 2:40 PM
To:	McPhee, Jordan PREM:EX
Cc:	Plecas, Bobbi PREM:EX; 'GREG PEET'; Brooke, Andrew MTIC:EX
Subject:	Capasiti Report - For the Premier's Attention
Attachments:	s.13,s.17

Follow Up Flag:	Follow up
Flag Status:	Completed

Hi Jordan

I hope you are well.

The PTC has been concerned for some time that the value of exports from BC's tech sector is being undercounted. In part this happens because many of the tech sector's revenues come from software and services, which can be difficult to track.

To address this issue, the PTC commissioned research from Capasiti Consulting. Capasiti received information from 266 BC companies, representing 3% of the 9,000 tech sector companies in BC, 37% of the tech sector's employees and 20% of the sector's revenues.

The research shows that:

- BC's tech sector revenues are largely service driven, with 71% of total revenues coming from software and software services;

- Data from BC Stats shows that export revenues of the tech sector amounted to $4.4 billion in 2013. However, the Capasiti research for the PTC indicates that tech sector export revenues range between $7 billion and $11.7 billion.

- Export revenues of $11.7 billion amount to 55.7% of tech sector revenues, suggesting that BC's tech sector export performance is comparable to the 53% of export revenues enjoyed by all of BC's manufacturing businesses.

I am pleased to attach a copy of the Capasiti report for the Premier's attention.

We will be sharing this research within government, with copies being circulated to MTICS, JTST, MIT, HQ Vancouver and BCIC this time next week (the 26th of October).

Please let me know if the Premier would like us to provide more information.

Best wishes,

Louise

Louise S. Turner
President | Premier's Technology Council
549-999 Canada Place, Vancouver BC V6C 3C1
604-787-7215 Louise.S.Turner@gov.bc.ca

BRITISH
COLUMBIA

1

Page 061 to/à Page 122

Withheld pursuant to/removed as

s.13;s.17

From:	McPhee, Jordan PREM:EX
Sent:	Tuesday, October 20, 2015 8:27 AM
To:	Bhullar, Barinder PREM:EX; Cadario, Michele PREM:EX
Subject:	FW: Capasiti Report - For the Premier's Attention
Attachments:	s.13,s.17

FYI, the report is also with Bobbi.

I will thank them for sharing it and let them know that we should follow up should a briefing be necessary.

From: Turner, Louise S MTIC:EX
Sent: Monday, October 19, 2015 2:40 PM
To: McPhee, Jordan PREM:EX
Cc: Plecas, Bobbi PREM:EX; 'GREG PEET'; Brooke, Andrew MTIC:EX
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BRITISH
COLUMBIA

2

Subject:	MEETING: Minister Virk, John Jacobson, Bobbi Plecas & Premier's Technology Council
Location:	s.15
Start:	Thu 2015-09-24 9:30 AM
End:	Thu 2015-09-24 10:30 AM
Recurrence:	(none)
Organizer:	Plecas, Bobbi PREM:EX
Categories:	Meetings

1

Subject:	MEETING: Minister Virk, John Jacobson, Bobbi Plecas & Premier's Technology Council
Location:	s.15
Start:	Wed 2015-10-07 12:00 PM
End:	Wed 2015-10-07 1:00 PM
Recurrence:	(none)
Organizer:	Plecas, Bobbi PREM:EX
Categories:	Minister meetings

1

Subject:	MEETING: Bobbi Plecas, Louise Turner & Andrew Brooke
Location:	s.15
Start:	Fri 2015-10-09 9:45 AM
End:	Fri 2015-10-09 11:15 AM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Plecas, Bobbi PREM:EX
Required Attendees:	Turner, Louise S MTIC:EX; Brooke, Andrew MTIC:EX
Categories:	Meetings

1

Subject:	CONFERENCE CALL: Bobbi Plecas, Louise Turner & Andrew Brooke
Location:	s.15 (Bobbi is moderator)
Start:	Wed 2015-10-28 1:00 PM
End:	Wed 2015-10-28 1:30 PM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Plecas, Bobbi PREM:EX
Required Attendees:	Turner, Louise S MTIC:EX; Brooke, Andrew MTIC:EX
Categories:	Meetings

1

Subject:	PHONE CALL: Bobbi Plecas & Louise Turner
Location:	Bobbi to call 604-787-7215
Start:	Thu 2015-10-29 12:30 PM
End:	Thu 2015-10-29 1:00 PM
Recurrence:	(none)
Organizer:	Plecas, Bobbi PREM:EX
Categories:	Meetings

1

Subject:	CONFERENCE CALL: Bobbi Plecas, John Jacobson, Susan Stanford, Greg Peet & Louise Turner
Location:	s.15 (Bobbi to moderate)
Start:	Fri 2015-12-04 10:30 AM
End:	Fri 2015-12-04 11:30 AM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Plecas, Bobbi PREM:EX
Required Attendees:	Jacobson, John MTIC:EX; Stanford, Susan MTIC:EX; Turner, Louise S MTIC:EX; 'Greg Peet'
Categories:	Meetings

1

Subject:	MEETING: Premier's Technology Council
Location:	s.15
	s.15 Moderator (John)
Start:	Mon 2015-12-07 9:30 AM
End:	Mon 2015-12-07 10:30 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Jacobson, John MTIC:EX
Required Attendees:	Plecas, Bobbi PREM:EX; Baskerville, Shannon MIT:EX; MacDonald, Scott D JTST:EX; Sawchuk, Bindi MIT:EX; Stanford, Susan MTIC:EX; XT:Bird, Reg MTIC:IN; 'jhess@copperleaf.com'; 'eric@codenameentertainment.com'; 'paul@vanedgecapital.com'; 'steve.munford@sophos.com'; 'muzyka@conferenceboard.ca'; s.22 Quan, Trevor MTIC:EX; 'jrhone@axinewater.com'; 'warren.roy@globalrelay.net'; 'don@corporate.bc.ca'; 'morgan@sunflowerpartners.ca'; 'ralph@turfus.com'; Turner, Louise S MTIC:EX; 'bwertz@versiononeventures.com'; s.22 Brooke, Andrew MTIC:EX
Optional Attendees:	s.22
Categories:	Meetings

1

Subject:	MEETING: Premier's Technology Council
Location:	s.15
Start:	Wed 2015-12-09 9:00 AM
End:	Wed 2015-12-09 11:00 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Jacobson, John MTIC:EX
Required Attendees:	Plecas, Bobbi PREM:EX; Stanford, Susan MTIC:EX; XT:Bird, Reg MTIC:IN; 'jhess@copperleaf.com'; 'eric@codenameentertainment.com'; 'paul@vanedgecapital.com'; 'steve.munford@sophos.com'; 'muzyka@conferenceboard.ca'; s.22 Quan, Trevor MTIC:EX; 'jrhone@axinewater.com'; 'warren.roy@globalrelay.net'; 'don@corporate.bc.ca'; 'morgan@sunflowerpartners.ca'; 'ralph@turfus.com'; Turner, Louise S MTIC:EX; 'bwertz@versiononeventures.com'; s.22
Optional Attendees:	Brooke, Andrew MTIC:EX; s.22 Schuckel, Victoria M HLTH:EX; Sawchuk, Bindi MIT:EX; Mihlar, Fazil AVED:EX; MacDonald, Scott D JTST:EX
Categories:	Meetings

1

From:	Brooke, Andrew MTIC:EX
Sent:	Wednesday, October 14, 2015 10:20 PM
To:	Plecas, Bobbi PREM:EX
Cc:	Turner, Louise S MTIC:EX
Subject:	Backgrounder
Attachments:	s.13,s.17

HI Bobbi,

I hope this finds you well. As discussed in our meeting last week we would like to pass on some PTC Secretariat working notes for your use.

I have attached s.13,s.17   to this e-mail and will send you a short note on procurement in the next day. Please let me know if you have any questions.

All the best,

Andrew

Andrew Brooke
Director of Operations | Premier's Technology Council
Ministry of Technology, Innovation and Citizens' Services
☎   250-508-7228 | 🖱   andrew.brooke@gov.bc.ca

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Withheld pursuant to/removed as

s.13;s.17

From:	Turner, Louise S MTIC:EX
Sent:	Monday, October 19, 2015 2:40 PM
To:	McPhee, Jordan PREM:EX
Cc:	Plecas, Bobbi PREM:EX; 'GREG PEET'; Brooke, Andrew MTIC:EX
Subject:	Capasiti Report - For the Premier's Attention
Attachments:	PTC Exports Report 2015 - FINAL - Aug 18 (2).pdf

Hi Jordan

I hope you are well.

The PTC has been concerned for some time that the value of exports from BC's tech sector is being undercounted. In part this happens because many of the tech sector's revenues come from software and services, which can be difficult to track.

To address this issue, the PTC commissioned research from Capasiti Consulting. Capasiti received information from 266 BC companies, representing 3% of the 9,000 tech sector companies in BC, 37% of the tech sector's employees and 20% of the sector's revenues.

The research shows that:

- BC's tech sector revenues are largely service driven, with 71% of total revenues coming from software and software services;

- Data from BC Stats shows that export revenues of the tech sector amounted to $4.4 billion in 2013. However, the Capasiti research for the PTC indicates that tech sector export revenues range between $7 billion and $11.7 billion.

- Export revenues of $11.7 billion amount to 55.7% of tech sector revenues, suggesting that BC's tech sector export performance is comparable to the 53% of export revenues enjoyed by all of BC's manufacturing businesses.

I am pleased to attach a copy of the Capasiti report for the Premier's attention.

We will be sharing this research within government, with copies being circulated to MTICS, JTST, MIT, HQ Vancouver and BCIC this time next week (the 26th of October).

Please let me know if the Premier would like us to provide more information.

Best wishes,

Louise

Louise S. Turner
President | Premier's Technology Council
549-999 Canada Place, Vancouver BC V6C 3C1
604-787-7215 Louise.S.Turner@gov.bc.ca

BRITISH
COLUMBIA

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Plecas, Bobbi PREM:EX

From:	Turner, Louise S MTIC:EX
Sent:	Monday, November 9, 2015 1:08 PM
To:	Jacobson, John MTIC:EX; Poutney, Richard G MTIC:EX; Butterworth, Kevin MTIC:EX; Stanford, Susan MTIC:EX; Coad, Jeremy A MTIC:EX; Carroll, Sandra AVED:EX; Baskerville, Shannon MIT:EX; Krieger, Brian MIT:EX; Mentzelopoulos, Athana JTST:EX; MacDonald, Scott D JTST:EX; Higgs, Jeremy JTST:EX
Cc:	Plecas, Bobbi PREM:EX; Facey, Nick MTIC:EX; Brooke, Andrew MTIC:EX; Sim, Deborah MTIC:EX; Quan, Trevor MTIC:EX
Subject:	Capasiti Report - Commissioned by the Premier's Technology Council
Attachments:	PTC Exports Report 2015 - FINAL - Aug 18.pdf

Hello Everyone,

I am pleased to attach a copy of the Capasiti report for your attention. We would appreciate keeping the report's contents internal within government.

The Premier's Technology Council (PTC) has been concerned for some time that the value of exports from BC's tech sector (cleantech, life sciences, software, hardware, telecoms, mobile devices, digital media and gaming) is being undercounted. In part this can happen because many of the tech sector's revenues come from software and services, which can be difficult to track.

To address this issue, the PTC commissioned research from Capasiti Consulting. Capasiti received information from 266 BC companies, representing 3% of the 9,000 tech sector companies in BC, 37% of the tech sector's employees and 20% of the sector's revenues.

The research shows that:

-      BC's tech sector revenues are largely service driven, with 71% of total revenues coming from software and software services;

-      Data from BC Stats shows that export revenues of the tech sector amounted to $4.4 billion in 2013. However, the Capasiti research for the PTC indicates that tech sector export revenues range between $7 billion and $11.7 billion.

-      Export revenues of $11.7 billion amount to 55.7% of tech sector revenues, suggesting that BC's tech sector export performance is comparable to the 53% of export revenues enjoyed by all of BC's manufacturing businesses.

Please let me know if you have any questions about this report and its conclusions.

Best wishes

Louise

Louise S. Turner
President | Premier's Technology Council
549-999 Canada Place, Vancouver BC V6C 3C1
604-787-7215 Louise.S.Turner@gov.bc.ca

BRITISH
COLUMBIA

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From:	Plecas, Bobbi PREM:EX
Sent:	Thursday, November 26, 2015 9:55 AM
To:	Stanford, Susan MTIC:EX
Cc:	Olson, Alisha PREM:EX
Subject:	Re: PTC pre-brief

Best to work with Alisha on my calendar - I was trying to avoid being in Vancouver every day next week. But can make Friday work if that's when Greg is available.

On Nov 26, 2015, at 9:50 AM, Stanford, Susan MTIC:EX <Susan.Stanford@gov.bc.ca> wrote:

> Hi Bobbi,
> The PTC meeting is currently scheduled for the morning of December 4th. Greg Peet is not available at all on the 3rd at all.
> If we move the meeting to 10am would you be better able to call in if you can't be in Vancouver?
> Susan
>
> **Susan Stanford** MBA MAL
> Executive Director
> Strategic Initiatives and Partnerships Division, OCIO
> Ministry of Technology, Innovation and Citizens' Services
> Victoria, BC | T 250.580.7459
> www.cio.gov.bc.ca

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From:	Turner, Louise S MTIC:EX
Sent:	Wednesday, December 9, 2015 10:42 AM
To:	Plecas, Bobbi PREM:EX
Subject:	Automatic reply: BCTECH Strategy - prep for Dec 9th meeting

I am away from the office and will be returning on Monday December 14. If you require assistance during this time please contact Andrew Brooke, Director of Operations, Premier's Technology Council Andrew.Brooke@gov.bc.ca or for scheduling please contact Deborah Sim via email Deborah.Sim@gov.bc.ca

Thank you.
Louise Turner

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Plecas, Bobbi PREM:EX

From:	Plecas, Bobbi PREM:EX
Sent:	Wednesday, December 9, 2015 10:41 AM
To:	Gleeson, Kelly T GCPE:EX
Cc:	Stanford, Susan MTIC:EX
Subject:	FW: BCTECH Strategy - prep for Dec 9th meeting

Kelly

Interesting and thoughtful commentary from the Premier's Tech Program on our draft document.

Bobbi

From: Greg Peet s.22
Sent: Tuesday, December 8, 2015 4:48 PM
To: Stanford, Susan MTIC:EX; Plecas, Bobbi PREM:EX
Cc: Jacobson, John MTIC:EX; Turner, Louise S MTIC:EX
Subject: RE: BCTECH Strategy - prep for Dec 9th meeting

My comments on the Tech Strategy Booklet.

Most important -- the first impression gives a very positive reaction to the articulation of the Tech Strategy. It is "on point", forward looking and should be well received by the tech community. I thought you did a nice job of framing it for the general public as well. I am hopeful that it will be as well received in that audience but my "crystal ball for public and press commentary" is broken...

These comments are primarily directed to facts and a items of note (not intended to be complete) – just "first read". Comments also directed to editing suggestions – not the many very good areas of content.

It requires an enormous amount of work to produce a document like this – nice job.

Please excuse typos and grammar ....

Page	Comment / Observation
s.13	
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11	

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Withheld pursuant to/removed as

s.13

From:	Plecas, Bobbi PREM:EX
Sent:	Wednesday, December 9, 2015 10:42 AM
To:	'Greg Peet'
Cc:	Jacobson, John MTIC:EX; Turner, Louise S MTIC:EX; Stanford, Susan MTIC:EX
Subject:	RE: BCTECH Strategy - prep for Dec 9th meeting

Greg

Thank you for your thoughtful comments and for today's discussion.

Look forward to continuing to work with you in the coming months.

Bobbi

———————— s.22

From: Greg Peet
Sent: Tuesday, December 8, 2015 4:48 PM
To: Stanford, Susan MTIC:EX; Plecas, Bobbi PREM:EX
Cc: Jacobson, John MTIC:EX; Turner, Louise S MTIC:EX
Subject: RE: BCTECH Strategy - prep for Dec 9th meeting

My comments on the Tech Strategy Booklet.

Most important -- the first impression gives a very positive reaction to the articulation of the Tech Strategy. It is "on point", forward looking and should be well received by the tech community. I thought you did a nice job of framing it for the general public as well. I am hopeful that it will be as well received in that audience but my "crystal ball for public and press commentary" is broken...

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It requires an enormous amount of work to produce a document like this – nice job.

Please excuse typos and grammar ....

s.13

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Withheld pursuant to/removed as

s.13

From:	Stanford, Susan MTIC:EX
Sent:	Wednesday, December 2, 2015 3:22 PM
To:	Greg Peet; Turner, Louise S MTIC:EX
Cc:	Plecas, Bobbi PREM:EX; Jacobson, John MTIC:EX
Subject:	BCTECH Strategy - prep for Dec 9th meeting
Attachments:	BC Tech Strategy 2016 Booklet.pdf; BCTECH Strategy - Implementation Plan Validation Release v1 - 27Nov15.pdf

Good afternoon Greg and Louise,

Per a series of conversations with Louise, I'm happy to provide you with the working draft of the BCTECH Strategy document (referred to as the 'booklet'), and a reference guide that matches internal government initiative descriptions with actions identified in the 'booklet' on pages 22 through 27. This material is covered under the NDA and constitutes the broader BCTECH Strategy content that will not be shared publicly until the launch of the full strategy on January 18th at the BCTECH Summit.

We would appreciate your preliminary review of the identified government actions that would be of most interest to the Council for discussion in the December 9th meeting. A conference call has been set for Friday morning at 10:30am to review and discuss the final approach and agenda for the December 9th meeting. We can determine how best to share this information with the Council members in advance of the meeting on our call this Friday.

If you have any questions or if we can provide any additional clarity on specific points please don't hesitate to reach out.
Cheers,
Susan

Susan Stanford MBA MAL
Executive Director
Strategic Initiatives and Partnerships Division, OCIO
Ministry of Technology, Innovation and Citizens' Services
Victoria, BC | T 250.580.7459
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