

**Global Talent Mobility, Innovation and Growth**

**Global Talent Attraction and Retention  
Case Study British Columbia**

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Focusing on the empirical case of British Columbia, this profile examines the recruitment and retention of highly skilled professionals and international students in the case of Canada and one of its most important destination regions for high-skilled immigrants. The aim of this study is to foster a deeper understanding of the role that policy programs and industry strategies play in attracting and retaining migrant professionals in STEM (Science, Technology, Engineering and Mathematics).

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## Key messages

- **The STEM industry is a key component of continued innovation and growth in British Columbia (BC). However, BC's demand for qualified STEM talent outpaces local supply.**

The science, technology, engineering and mathematics (STEM) sector in BC has become a major driver of economic growth for the province and is projected to only gain in importance. There is strong need to create a better business ecosystem for STEM industries across all regions of the province, particularly to diversify businesses, maintain innovativeness and competitiveness, and foster continued economic growth. Already today, businesses in BC are constrained by talent shortages, with industry growth outpacing the local supply of qualified and experienced STEM professionals. In the interest of continued growth, innovativeness and competitiveness, BC is required to attract and retain more global talent with the help of well-tailored and targeted recruitment and retention programs.

- **Immigration presents a promising solution to BC's talent shortages, but recruitment efforts are hindered and constrained by overall annual federal levels for immigrants.**

The combined growing labour demand and insufficiency of local supply postures immigration as one of BC's key tools to ensure it can sustain mounting economic growth for BC business. However, the federal government maintains full jurisdiction over the total number of immigrants allotted under all categories, and consistently underdelivers on increases requested by BC's provincial government and industries. This is perceived by many stakeholders as hindering the province's ability to attract and retain the talent necessary to support BC's innovation economy.

- **Innovative solutions and alternative immigration governance models are needed to facilitate a faster and more responsive system to short- and long-term labour needs.**

The BC Provincial Nominee Program's (BC PNP) implementation of pilot programs that seek engagement of industry stakeholders presents an innovative approach to immigration management. These programs envision immigration authorities as mobility facilitators helping to ease the immigration process for employers and newcomers through information providing and case managing concierge service abilities. A responsive system that decreases wait times, relaxes requirements for indeterminate position offers and implements stakeholder feedback. These pilot programs show movement towards meeting the needs of businesses and communities by increasing the attractiveness of immigration as a feasible and sustainable solution to short- and long-term labour market demands.

- **STEM firms of all sizes in BC are growing. To scale-up and compete globally, these firms require strong recruitment and retention practices for highly skilled workers. Best practices require further research and implementing strategies from a variety of stakeholders, including the provincial government.**

BC needs to grow and attract larger businesses for continued expansion and diversification of its small business-dominated economy. This is essential for increased attraction, retention and rotation of highly skilled talent and capital. While all BC firms mutually benefit from membership in the BC and Cascadia Innovation Corridor technology clusters, the province has yet to institutionalize a culture of fostering highly skilled talent domestically and internationally. Businesses, government, educational institutions, and NGOs will have important roles in fostering this talent. This report suggests that further research is

required to solidify and implement best practices in the attraction, recruitment and retention of foreign highly skilled workers to BC's STEM sector.

➤ **Inadequate data access constrains evaluation and design of more effective policymaking.**

Continued innovation and longer-term policy strategies are required for BC's STEM sector development and the attraction and retention of global talent. Without a comprehensive, consistent, and systematic understanding of provincial labour market needs, policy responses will continue to be short-term, reactionary, and ineffective to fulfilling sector needs. There is currently not enough data available on the retention and long-term outcomes of foreign workers in STEM-related occupations. Similarly, there is a lack of understanding in the roles of professional bodies, regulatory occupations, international educational agents (IEAs) and post-secondary institutions, and their impacts on immigration. Moreover, regular and continued evaluations and updates for BC's PNP program are of key importance. In addition, BC is in need of better understanding of how foreign workers in STEM-related occupations are contributing to BC's economy and are facilitating growth, as well as how relevant stakeholders in BC can best support them in doing so.

➤ **The inevitable impacts of the COVID-19 pandemic on the STEM industries and related immigration needs in BC and globally must be anticipated.**

The COVID-19 outbreak has a profound and detrimental impact on BC's economy and the global flow of STEM professionals. Though an economic downturn is projected, ultimately the insufficient supply of local highly skilled professionals and subsequent need for recruitment of foreign professionals will prevail. It is essential that BC maintains a long-term perspective to attracting and retaining talent in a post-COVID-19 world, where an even fiercer global competition for highly skilled talent is highly likely. This period of limbo and standstill gives a unique opportunity to reflect on existing programs and strategies, as well as to prepare the accommodations necessary for changes in labour demand once travel and immigration restrictions are lifted.

## I. Economic situation and talent shortages

The innovation and technology sector in British Columbia (BC) is a major driver of growth for the provincial economy. The sector accounted for 6.5% of BC's total gross domestic product (GDP) in 2018, a growth of 3.1% from 2017. Though on the rise, BC's GDP growth in high technology fell short of the national average growth rate of 3.6% for the sector in 2018. BC ranks third in Canada (behind Ontario and Quebec), representing 12% of the Canadian total high technology GDP at \$17.4 billion.<sup>1</sup> BC's high technology revenue growth continues to rise significantly faster than any other province, in 2018 it rose 9.2% to the new provincial record of \$34.7 billion.<sup>2</sup> As of 2018, there were over 10,941 technology companies in BC, employing 123,170 workers across a variety of STEM-related and non-STEM<sup>3</sup>-related occupations.<sup>4</sup> Key industries in BC's STEM sector include Clean Tech, Information & Communication Technology (ICT), Interactive & Digital Media, Information technology (IT)/Engineering Services and Life Sciences.<sup>5</sup> Vancouver has become known worldwide as a clean technology hub, hosting one-fifth of all Canadian Clean Tech companies. From 2011 to 2017, BC Clean Tech saw a 35% increase in the number of firms, with a majority in the Lower Mainland, outside the Greater Vancouver Area.<sup>6</sup> Over the past decade, BC has established a strong ICT sector. In 2018, the federal government designated BC as a 'Digital Technology Supercluster,' one of five funded innovation areas under the 'Innovation Supercluster Initiative', showcasing the strength of BC's existing commercial strength and ecosystem in digital technology. As a result of subsector growth, technology and manufacturing surpassed traditional top-earning industries such as pipeline construction, mining and liquefied natural gas as the fastest growing sectors in BC (as of February 2017).<sup>7</sup> The life sciences sector in BC consists of more than 300 companies at the forefront of biotechnology, pharmaceuticals, medical devices and medical technology contributing an estimated \$805

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<sup>1</sup> This compares to \$60.2 billion of high technology GDP generated in Ontario and 32.8 billion generated in Quebec. BC narrowly surpasses Alberta which generated \$17.3 billion in 2018: BC (Government of British Columbia) (2020), *Profile of the B.C. High Technology Sector: 2019 Edition*, Victoria: BC, 8: [https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech\\_profile\\_report.pdf](https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech_profile_report.pdf)

<sup>2</sup> BC (2020), 9.

<sup>3</sup> Science, Technology, Engineering and Mathematics.

<sup>4</sup> BC (2020), 11.

<sup>5</sup> KPMG (2018), *British Columbia Technology Report Card: From Growth to Scale*, Vancouver: KPMG, 11-15:

<https://assets.kpmg/content/dam/kpmg/ca/pdf/2018/11/2018-british-columbia-technology-report-card-from-growth-to-scale.pdf>

<sup>6</sup> VEC (Vancouver Economic Commission) (2016), *Final Engagement Report*, Vancouver: VEC, 16:

[https://www.workbc.ca/getmedia/8ec1670b-ba96-4ceb-bf3c-f55c3bdf362e/Technology\\_Vancouver-Economic-Development-Society\\_Engagement-Report\\_Jan16.pdf.askpx](https://www.workbc.ca/getmedia/8ec1670b-ba96-4ceb-bf3c-f55c3bdf362e/Technology_Vancouver-Economic-Development-Society_Engagement-Report_Jan16.pdf.askpx)

<sup>7</sup> BC (2017b), *#BCTech Strategy: One-Year Renewal and Update*, Victoria: BC:

[https://bctechstrategy.gov.bc.ca/app/uploads/sites/10/2017/03/Renewed\\_BCTechStrategy.pdf](https://bctechstrategy.gov.bc.ca/app/uploads/sites/10/2017/03/Renewed_BCTechStrategy.pdf)

million in revenue. Prior to the COVID-19 pandemic, Digital Entertainment & Interactive Media (DE& I) experienced strong growth.<sup>8</sup>

While BC's technology sector has been outperforming most other Canadian provinces, BC Tech reported that in 2018 the province was comparatively underperforming in terms of its business diversification, particularly regarding business sizes.<sup>9</sup> As BC's economy is comprised of 98% small businesses, more medium and large firms ('anchor companies') across a wider variety of STEM sub-sectors would be required.<sup>10</sup> More and more smaller firms seeing their businesses mature have decided to scale-up their operations in BC. They seek to expand their product bases from research to production and distribution as both a response and contribution to growing demands for STEM-related occupations.<sup>11</sup> Further developing a strong technology ecosystem in BC would be essential for allowing a higher absorption capacity for highly skilled labour, facilitating much-needed knowledge transfers to BC, and fostering human capital development in STEM.

Increasing access to capital also plays a significant role in bolstering STEM industries, however BC saw a decline in the number of venture capital deals in 2017.<sup>12</sup> Acknowledging the growing importance of STEM, both the federal and BC provincial governments have made and continue to make considerable investments into research and development (R&D) initiatives. Since 2008, annual R&D investments in BC have remained consistently high at \$3 billion per year.<sup>13</sup> The 2017 'BC Tech Strategy', a key component of the 2017 'BC Jobs Plan', details a set of long-term goals to keep BC's economy "*diverse, strong and growing*."<sup>14</sup> A major pillar of this plan included large investments, such as the 'BC Tech Fund' valued at \$100 million, designed to support growth of innovation and technology clusters through targeted investments in companies at the so-called 'series A stage'.<sup>15</sup> However, despite increasing attention and funding, BC continues to lag behind national and OECD averages for R&D expenditure (as a percentage of GDP).<sup>16</sup>

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<sup>8</sup> BC (2019), *Small Business Profile 2019*, Victoria: Government of British Columbia, 3: [https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/business-management/small-business/sb\\_profile.pdf](https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/business-management/small-business/sb_profile.pdf)

<sup>9</sup> KPMG (2018), 13.

<sup>10</sup> Small business here is defined as any business with less than 49 employees. Large firms comprise 2% of BC businesses and are defined as any business with over 50 employees: BC (2019), 2 and 7; KPMG (2018), 5.

<sup>11</sup> VEC (2016), 4.

<sup>12</sup> KPMG (2018), 38.

<sup>13</sup> BC (2017b).

<sup>14</sup> BC (2017a), *BC Jobs Plan 5 Year Update*, Victoria: Government of British Columbia: [https://bcjobsplan.gov.bc.ca/app/uploads/sites/21/2017/03/3797\\_JobsPlan2016\\_Booklet\\_0303.pdf](https://bcjobsplan.gov.bc.ca/app/uploads/sites/21/2017/03/3797_JobsPlan2016_Booklet_0303.pdf); BC (2017b).

<sup>15</sup> Defined as companies that have "*a completed product that is being sold to paying customers, generating annual revenues in the range of \$1 million to \$3 million, with capital required to accelerate rapid growth*": Kensington (2017), *BC Tech Fund*, <http://www.kcpl.ca/bc-tech-fund/>

<sup>16</sup> BC Tech Association (2016), *TechTalent BC Report*, Vancouver: BC Tech Association, 7: [https://www.workbc.ca/getmedia/8d38ac6f-82d4-4db1-b0bf-ac0f77d78af5/2016\\_TechTalentBC\\_Report.pdf.aspx](https://www.workbc.ca/getmedia/8d38ac6f-82d4-4db1-b0bf-ac0f77d78af5/2016_TechTalentBC_Report.pdf.aspx)

The Canadian federal government is making similar investments through its ‘Strategic Innovation Fund’, a \$1.26-billion investment in Canadian innovation industries, whereby \$800 million of this fund has been earmarked to develop BC’s technology clusters by providing funding for large-scale projects.<sup>17</sup> The federal government is also supporting innovation through the aforementioned ‘Innovation Supercluster Initiative’ (ISI). Launched in 2017, the ISI seeks to strengthen industrial clusters in different provinces and focus areas to generate greater innovation and sustainable economic growth across Canada.<sup>18</sup> The federal government has contributed a total of \$950 million to the ISI which are being matched by private sector investments in a co-funding effort believed to maximize impact and “*build deep, ecosystem-level advantages.*”<sup>19</sup> In 2018, BC was designated as a ‘Digital Technology Supercluster’ and awarded \$153 million as one of five superclusters funded by the ISI. The ‘Digital Technology Supercluster’ provides federal support to fostering BC’s existing technology-industry ecosystem and leveraging its linkages to other key technology and innovation clusters including Silicon Valley and the ‘Cascadia Innovation Corridor’.<sup>20</sup>

### ***Overview: BC’s main technology and innovation clusters***

BC’s STEM industries are concentrated primarily around Vancouver (Mainland/Southwest), Victoria and Nanaimo (Vancouver Island/Coast). Employment demand for STEM-related occupations has been rising in both regions. However, the current COVID-19 pandemic makes it difficult to estimate the nature and scale of future demands, and to update previous projections (*tables 1 and 2*).<sup>21</sup>

#### *Mainland/Southwest*

The Mainland/Southwest region is the smallest yet most populated region in BC, holding 62.7% of the entire provincial population. By employment size, the major industries in the area are wholesale and retail trade, health care and social assistance, and professional, scientific and technical services. Vancouver and its surrounding cities are among the best-known in BC, attractive to national and global businesses and talent alike. With one of the lowest unemployment rates of any major Canadian city at only 4.3% many employers are reporting difficulties filling labour shortages. Some attribute this shortage is attributed to a massive wave of retirees from the baby-boomer generation (two-thirds of the existing work force will need to be replaced

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<sup>17</sup> BC (2017b).

<sup>18</sup> GoC (Government of Canada) (2018), *Funding for Superclusters*, Ottawa: GoC: <http://www.ic.gc.ca/eic/site/093.nsf/eng/00016.html>

<sup>19</sup> GoC (2018).

<sup>20</sup> Emerging global innovation ecosystem and economic zone comprised of BC (Canada), Seattle & Portland (US): <https://connectcascadia.com/>; Digital Supercluster (2019), *Canada’s Digital Technology Supercluster: Unlocking The Power of Data-Driven Innovation*, Vancouver: Digital Supercluster, 10: <https://www.digitalsupercluster.ca/wp-content/uploads/2019/09/DigitalTechnologySupercluster.pdf>

<sup>21</sup> VEC (2016), 28.

by 2029) as well as non-affordability of the exceptionally high housing prices found in Vancouver.<sup>22</sup> Workers are moving to more affordable areas moreover not as many young people able to join the Vancouver workforce.<sup>23</sup> 69% of BCs high technology businesses are in the Mainland/Southwest.<sup>24</sup> In 2017, there were a recorded 6,889 high technology businesses, an increase of 3.5% from 2016. The region has developed clusters in the alternative energy, digital media and videogame development, biotechnology and wireless sectors.<sup>25</sup>

### Vancouver Island/Coast

Economic opportunities in the Vancouver Island/Coast region are dominated by service-based industries. The Vancouver Island Economic Alliance (VIEA) in its 2018 ‘State of the Island’ report identified that the key industries on the Island, by employment size, included healthcare and social assistance, wholesale and retail trade, and construction. Between 2016 and 2017 the population growth rate was approximately 1.3%.<sup>26</sup> The island’s unemployment rate decreased from 5.1% in 2017 to 4.7% in 2018 (on par with the BC average of 4.6%<sup>27</sup>). Migration patterns suggest that fewer people are moving to Vancouver Island from other regions of Canada and that tight labour market conditions are expected to continue.

16% of BC tech companies can be found in the Vancouver Island/Coast Region.<sup>28</sup> The Victoria Innovation, Advanced Technology and Entrepreneurship Council’s (VIATEC) report on the economic impact of the technology sector in Greater Victoria describes significant growth in the industry over the past 10 years. The total economic impact of the tech sector was \$5.22 billion in 2017, an increase from the \$4.03 billion estimated in 2013.<sup>29</sup> There are a total of 955 tech companies in the Greater Victoria Area as of 2016, 77% of which indicated they were expecting to recruit STEM talent between 2018 and 2020.<sup>30</sup> As of 2018, Nanaimo had the second highest concentration of high technology firms outside the capital region with 50 businesses in the sub-region.<sup>31</sup>

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<sup>22</sup> Work BC (2019), *British Columbia Labour Market Outlook. 2019 Edition*, Victoria: Work BC, 54: <https://www.workbc.ca/Labour-Market-Industry/Labour-Market-Outlook.aspx>

<sup>23</sup> Humphrey, Matt (2018), *45 per cent of B.C. businesses report difficulty finding workers, survey says*, Vancouver: CBC News: <https://www.cbc.ca/news/canada/british-columbia/labour-shortage-b-c-1.4812042>

<sup>24</sup> BC (2020), 19.

<sup>25</sup> BC Stats (2017), *Profile of the British Columbia Technology Sector: 2017 Edition*, Victoria: BC Stats, 27: [https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech\\_profile\\_report.pdf](https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech_profile_report.pdf)

<sup>26</sup> VIEA (Vancouver Island Economic Alliance) (2018), *State of the Island Economic Report 2018*, Victoria: Vancouver Island Economic Alliance, 9, 22-25: <http://viea.ca/wp-content/uploads/2018/10/2018-SOTI-Report-SM.pdf>

<sup>27</sup> Work BC (2019), 51.

<sup>28</sup> BC Stats (2017), 26.

<sup>29</sup> Combined direct and indirect economic impact: VIATEC (Victoria Innovation, Advanced Technology and Entrepreneurship Council) (2018), *Economic Impact of the Technology Sector in Greater Victoria*, Victoria: VIATEC, 4: <https://www.viatec.ca/articles/economic-impact-of-the-technology-sector-in-greater-victoria>

<sup>30</sup> VIATEC (2018), 20.

<sup>31</sup> VIEA (2018), 44.

Table 1: In-demand STEM-related occupations and projected annual average employment-demand growth (2025 projections)<sup>32</sup>

Region	Sector	Top projected annual average employment-demand growth
<b>Vancouver Island/Coast</b>	Computer systems design and related services	3.1%
	Engineer officers, water transport	2.7%
	Computer programmers and interactive media developers	2.4%
	Software engineers and designers	2.4%
	Web designers and developers	2.4%
	Information systems analysts and consultants	2.2%
<b>Mainland/Southwest</b>	Computer systems design and related services	3.8%
	Telecommunications related services	3.1%
	Technical and coordinating occupations in motion pictures, broadcasting and performing arts	3.6%
	Audio and video recording technicians	3.1%
	Web designers and developers	3.0%
	Telecommunications carrier managers	2.9%
	Computer programmers and interactive media developers	2.8%
	Information systems testing technicians	2.8%

### The Okanagan

While Vancouver and Vancouver Island/Victoria are BC’s most important and productive STEM clusters, other regions and their industry clusters have become increasingly important. The Central Okanagan Economic Development Commission’s (COEDC) 2018 ‘Central Okanagan Economic Profile’ provides an overview of the region’s strengths, innovations and economic opportunities: Since 2006, the Okanagan has seen consistent population growth, most recently reported in 2016 the population raised 8.4% which is above the BC average of 5.6% for the same year. The unemployment rate has been an average of 6.4% for the period of 2007-2017 with a 2018 unemployment rate of 7.1%. By employment, major industries include health care and social assistance, retail trade, construction and accommodation and food services. The Okanagan shows strong growth with an entrepreneurial culture having supported over 11,000 new businesses since 2010 as well as attracting high growth industries such as film and digital animation as well as technology.<sup>33</sup>

<sup>32</sup> Own representation. The regions ‘North’ (Cariboo, Northeast, North Coast and Nechako) and ‘South East’ (Thompson-Okanagan and Kootenay) reported no particular demand in STEM occupations: Work BC (2019).

<sup>33</sup> COEDC (Central Okanagan Economic Development Commission) (2018), *2018 Central Okanagan Economic Profile*, Kelowna: Central Okanagan Economic Development Commission, 1-14: [https://www.investkelowna.com/application/files/7715/3815/6564/2018\\_Central\\_Okanagan\\_Economic\\_Profile\\_-\\_RSPDF.pdf](https://www.investkelowna.com/application/files/7715/3815/6564/2018_Central_Okanagan_Economic_Profile_-_RSPDF.pdf)

Table 2: Regional Outlook of In-Demand STEM-related Occupations by Region (2019)<sup>34</sup>

Region	STEM occupations In-demand	2019-2029 Total projected job openings	NOC code/skill level <sup>35</sup>
Vancouver Island/Coast	Computer systems design and related services	5,920	
	Information systems analysts and consultants	1,650	2171/A
	Computer Programmers and interactive media developers	1,180	2174/A
Mainland/Southwest	Computer systems design and related services	22,040	
	Information systems analysts and consultants	5,370	2171/A
	Computer Programmers and interactive media developers	4,750	2174/A

The COEDC 2018 Report calls the Okanagan technology sector a driving force behind the Okanagan economy.<sup>36</sup> The Thompson-Okanagan region is home to 8% of BC’s tech businesses.<sup>37</sup> Accelerate Okanagan’s 2017 Economic Impact of the Okanagan Tech Sector calculates the overall economic impact of its tech companies at \$1.67 billion. There are 693 tech businesses reported in the Okanagan. Top tech sectors include ICT (52%), Tech Enabled (14%), Med Tech (9%), and Cleantech, Fintech, Gaming and Animation (all at 5%). Tech companies reported a 55% increase in workers under the age of 35 and a 64% increase of workers in tech since 2015. The gender gap in Okanagan Tech showed a drop in male predominance from 72% in 2015 to 61% in 2017 and rising female participation in this particular labour market. The results indicate a changing role in Okanagan tech companies for women from less technical to more managerial roles (women in technical roles dropped from 48% to 33% between 2015 and 2017 and increased in managerial roles from 42% to 61%). 51% of tech companies identified ‘lack of talent’ as their number one constraint.<sup>38</sup>

### ***Skills and talent shortages in BC***

In 2018, the Business Development Bank of Canada (BDC) released a report titled ‘Labour Shortage: Here to Stay’. They found that nationally, 39% of small and medium-sized businesses are having difficulties

<sup>34</sup> Own representation based on Work BC 2019. No data and projections available for Thompson-Okanagan, Kootenay, Cariboo, North Coast and Nechako, and Northeast: Work BC (2019), 51.

<sup>35</sup> Information based on the National Occupational Classification (NOC) database: GoC (2020), *Find your NOC*, Ottawa: GoC: <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/express-entry/eligibility/find-national-occupation-code.html>

<sup>36</sup> COEDC (2018), 22.

<sup>37</sup> BC (2020), 19.

<sup>38</sup> Combined direct and indirect impact: Accelerate Okanagan (2017), *Economic Impact of the Okanagan Tech Sector: 2017 Edition*, Kelowna: Accelerate Okanagan, 3-5, 27, 34-35: <https://www.accelerateokanagan.com/files/2015/3750/7583/EconomicImpactStudy2018-FinalWEB.pdf>

finding new workers. For British Columbia, this figure was 45% and projected to intensify further.<sup>39</sup> As the population ages and the baby boomer generation retires, Canada's labour force growth is projected to fall near zero. The demographic challenges and low unemployment rates are making it more difficult to find new hires.<sup>40</sup> A particularly troubling reality considering that firms affected by labour shortages are 65% more likely to be a low-growth company.<sup>41</sup>

The latest projections from the British Columbia's 'Labour Market Outlook: 2019 Edition' estimate that in professional, scientific and technical occupations there will be a growing labour demand of 98,800 occupations over the next ten years, 11.5% of total job openings in BC (2019-2029, with 53,400 accounting for replacement of the existing workforce and 45,400 due to sector-wide growth). It has also been estimated that 77% of job openings within that 10-year projection will require, at least, a post-secondary education or training.<sup>42</sup> The same goes for BC's technology sector, assuming "*the demand for jobs has remained robust based on the continued growth of the sector, supply and demand would point to insufficient supply as a reason wages are increasing while the number of jobs has not grown at the same rate. This indicates that talent remains one of BC tech sector's top issues.*"<sup>43</sup>

The BC Tech Association's 2016 'Tech Talent BC Report' gives a detailed overview of the talent situation in BC's tech sector with projections that continue to align with today's trends. It estimated that by 2021 BC will have 47,000 tech-related jobs, of which the current projections for incoming labour (new entrants, immigrants and other local supply) predict only 16,500 positions will be filled by current BC labour force projections.<sup>44</sup> The reality of BC's labour shortage is recognized by the provincial government, stating that employers will need to attract approximately 39% of future employees from outside BC.<sup>45</sup> This leaves an unmet demand in the BC tech sector which would be 30,500, of which 23,400 (76.7%) are for skilled STEM professionals.<sup>46</sup> To meet this demand by 2021, BC will require an additional 12,500 graduates from its postsecondary institutions, and an additional 8,500 immigrants (including international students) than are currently projected to arrive in the next two years. It is important to note that these estimates were made before the COVID-19 pandemic and even before BC was selected as the development location for Canada's emerging 'Digital Technology Supercluster'. Both aspects make it difficult to estimate how labour demand will develop in the coming years. However, in the case of continued employment growth and increasing

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<sup>39</sup> BDC (Business Development Bank of Canada) (2018), *Labour Shortage: Here to Stay*, Toronto: BDC, 3-7: [https://www.bdc.ca/en/documents/analysis\\_research/labour-shortage.pdf](https://www.bdc.ca/en/documents/analysis_research/labour-shortage.pdf)

<sup>40</sup> Humphrey (2018).

<sup>41</sup> BDC (2018), 4.

<sup>42</sup> Work BC (2019), 12-14.

<sup>43</sup> KPMG (2018), 27.

<sup>44</sup> BC Tech Association (2016).

<sup>45</sup> Work BC (2019), 49.

<sup>46</sup> BC Tech Association (2016), 44.

replacement demand, it is still likely that British Columbia will need to fill positions for the following occupations (*tables 3 and 4*):<sup>47</sup>

Table 3: Employment gaps by occupations and associated NOC codes and skill levels (I)<sup>48</sup>

Projected employment supply required by occupations (2019 to 2029)	NOC code/ Skill level
1,330 Engineering Managers	0211/A
4,720 Computer and Information Systems Managers	0213/A
130 Physicists and Astronomers	2111/A
460 Chemists	2112/A
1,020 Biologists and related scientists	2121/A
4,190 Civil Engineers	2131/A
2,020 Electrical and Electronics Engineers	2133/A
410 Chemical Engineers	2134/A
470 Industrial and Manufacturing Engineers	2141/A
120 Metallurgical and Materials Engineers	2142/A
210 Mining Engineers	2143/A
400 Geological Engineers	2144/A
90 Petroleum Engineers	2145/A
100 Aerospace Engineers <sup>49</sup>	2146/A
1,020 Computer Engineers (except software engineers and designers)	2147/A
340 Other Professional Engineers	2148/A

<sup>47</sup> Due to skills mismatch, retirements, and other exits from the labour market.

<sup>48</sup> Own representation, based on Work BC (2019).

<sup>49</sup> Industry-level data regarding talent requirements for BC's aerospace industry is limited: AIAC (Aerospace Industries Association of Canada) (2016), *British Columbia Aerospace Industry Sector Labour Market Partnership Final Engagement Report*, Vancouver: AIAC: [https://www.workbc.ca/getmedia/983846ac-2ed9-4203-a6bc-604cd2e80659/Aerospace\\_Industries\\_Assoc\\_Canada\\_Pacific\\_Sector\\_Engagement\\_Rpt\\_-Nov-2016.pdf.aspx](https://www.workbc.ca/getmedia/983846ac-2ed9-4203-a6bc-604cd2e80659/Aerospace_Industries_Assoc_Canada_Pacific_Sector_Engagement_Rpt_-Nov-2016.pdf.aspx)

Table 4: Employment gaps by occupations and associated NOC codes and skill levels (II)<sup>50</sup>

Projected employment supply required by occupations (2019 to 2029)	NOC code/ Skill level
2,700 Computer and Network Operators and Web Technicians	2281-0213/0- B <sup>51</sup>
4,720 Computer and Information Systems Managers	0213/0
7,600 Information Systems Analysts and Consultants	2171/A
1,030 Database Analysts and Data Administrators	2172/A
4,480 Software Engineers and Designers	2173/A
6,290 Computer Programmers and Interactive Media Developers	2174/A
1,960 Web Designers and Developers	2175/A
1,780 Electrical and Electronics Engineering Technologists and Technicians	2241/B
2,040 User Support Technicians	2282/B
4,720 Graphic Designers and Illustrators	5241/B

<sup>50</sup> Own representation, based on Work BC (2019).

<sup>51</sup> Occupations do not confine to NOC Codes. Possible matches: Computer Network Technicians, 2281/Skill B, or Computer and information systems managers, 0213/Skill 0.

## II. Global talent recruitment and retention

Prior to the COVID-19 pandemic, BC's STEM industry was growing rapidly. Concerns for business stunting were prevalent as the industry increases were also met with fears of an inability to meet increased demands due to an inadequate qualified labour supply. The local talent pool alone was incapable of responding to the urgent needs of the STEM industry both in the quantity of workers available as well as a lack in the specialized education, skills and experiences needed. The 2017 'BC Jobs Plan 5 Year Update' from the BC government proposed to bridge the gap with improved post-secondary degree programs and the attraction of more global talent.<sup>52</sup> The province was balancing immigration with investment in home-grown solutions such as innovation in Canadian post-secondary education, attraction of youth to STEM careers, as well as training and retraining initiatives to address skill mismatches in the existing labour supply. In the current economic instability caused by the pandemic, labour shortages will continue to be a significant challenge to the recovery and long-term success of businesses. Now more than ever we see that home-grown investments are insufficient in addressing the short- and medium-term needs of the STEM industry. To build the STEM ecosystem and business diversity discussed in the previous section, BC's STEM actors require seasoned professionals with specialized knowledge sets and experiences who can support BC's small and medium businesses scale-up to compete in the global STEM market.

Given this reality, the continued attraction of foreign talent is crucially important to filling skills gaps and ensuring the recovery and long-term success of BC's STEM industry. Yet despite urgent need, immigration to BC has remained relatively low. In 2016, BC became home to 14.5 % of recently settled immigrants matching a steady decline since the high of 20.8 % in 2001. This puts BC only fourth behind Ontario (39%), Quebec (17.8 %) and Alberta (17.1%) for ability to attract talent immigrating to Canada.<sup>53</sup> Facing additional challenges to mobility posed by the COVID-19 pandemic, it is imperative for BC to adapt to this situation and mitigate it effectively. To improve its post-COVID-19 growth prospects and recovery, the province must utilize the watershed moment of the pandemic to update its previous talent attraction and retention system and effect a fast and responsive immigration regime capable of accommodating both short- and long-term labour market needs.<sup>54</sup>

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<sup>52</sup> BC (2017a).

<sup>53</sup> Dyck, Darryl (2017), *Percentage of immigrants settling in B.C. still falling, census says*: <https://www.theglobeandmail.com/news/british-columbia/percentage-of-immigrants-settling-in-bc-still-falling-census-says/article36722586/>

<sup>54</sup> BC Tech Association (2016), 32.

### ***Demographic profile of immigrants coming to BC***

Total economic immigration to BC through both federal and provincial pathways (including dependents) has fluctuated between 2011 and 2018, but consistently presents an upward trend most recently seeing 26,698 new permanent residents admitted to BC in 2018 (*table 5*). Data from Statistics Canada's 'Census of Population, 2016' show that 28.3% of BC's population was born outside of Canada.<sup>55</sup> Between 2011 and 2016 the top sources of recent immigrants to BC were China (21.7%), India (15.6%), the Philippines (15.2%), Iran (4.9 %) and South Korea (4.6%). 67.6% of all immigrants to BC are between the ages of 25 and 64.<sup>56</sup> NewToBC reports that "81.2% of B.C.'s recent immigrants lived in the Metro Vancouver area. Of which 80% resided in the cities of Vancouver (26.2%), Surrey (25.5%), Burnaby (11.3%), Richmond (10.7%) and Coquitlam (6.7%)."<sup>57</sup> Immigrants represent an important group among STEM-educated workers. As of 2016, 54% of all university-educated STEM graduates in Canada were immigrants.<sup>58</sup> Prior to the COVID-19 pandemic, immigrants are forecasted to fill 31% of BC's job openings over the next 10 years (2019-2029).<sup>59</sup>

### ***BC vs. Federal Migration Governance***

Canada's federal government provides an overarching framework for immigration, responsible for setting levels of overall immigration and designating total numbers of immigrants to each province. Additionally, the federal government level is also responsible and manages the National Occupation Classification (NOC) system defining existing occupations. The NOC system designates a four-digit code (NOC code) to systematically organize and describe occupations, including job descriptions, employment requirements (education level and years of experience), required skills and related occupations. Canadian immigration refers to this system to define in-demand occupations. The NOC codes for skilled workers fall predominately under skill type 0<sup>60</sup> as well as skill levels A<sup>61</sup> and B<sup>62</sup>. In the STEM sector, innovation creates new jobs and changes job descriptions rapidly, making it difficult to use the outdated NOC system to classify

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<sup>55</sup> Statistics Canada (2017), *Focus on Geography Series, 2016 Census*, Ottawa: Statistics Canada: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Index-eng.cfm>

<sup>56</sup> Statistics Canada (2017).

<sup>57</sup> NewToBC is an NGO that partners with libraries and immigrant service providers to support newcomers. They facilitate the development, delivery, and promotion of services and resources that support immigrant settlement and integration in communities across BC: NewToBC (2018), *Immigrant Demographics Vancouver, B.C.*, Vancouver: NewtoBC, 5: <https://newtobc.ca/wp-content/uploads/2013/07/Vancouver-Immigrant-Demographic-Profile-2018.pdf>

<sup>58</sup> Including international students, temporary foreign workers, or (recent) permanent residents: Picot, Garnett & Hou, Feng, (2016), *Skill Utilization and Earnings of STEM-educated Immigrants in Canada: Differences by Degree Level and Field of Study*, Ottawa: Statistics Canada, 10:

<https://www150.statcan.gc.ca/n1/en/pub/11f0019m/11f0019m2019023-eng.pdf?st=E9s9GqCT>

<sup>59</sup> Work BC (2019), 7.

<sup>60</sup> Management-related occupations: GoC (2020).

<sup>61</sup> Occupations generally requiring a university or advanced college education: GoC (2020).

<sup>62</sup> Occupations usually requiring college, vocational or apprenticeship training: GoC (2020).

positions. Moreover, the NOC system poses a barrier to using and accessing the Canadian immigration system when filling job positions in innovative or newly developing fields.<sup>63</sup>

Table 5: Permanent Residents Admitted to BC (2011-2018)<sup>64</sup>

Immigration Category	2011	2012	2013	2014	2015	2016	2017	2018
<b>Federal Economic-Skilled<sup>65</sup></b>	11,398	11,552	8,495	8,487	9,392	9,517	9,997	12,088
<b>Federal Economic- Caregivers<sup>66</sup></b>	2,458	1,807	1,698	3,728	5,620	3,736	4,463	3,257
<b>Federal Economic-Business<sup>67</sup></b>	4,088	2,813	2,387	2,352	346	295	228	325
<b>Provincial Nominee Program</b>	4,306	5,943	7,155	7,042	6,785	6,759	7,565	11,028
<b>Other</b>	0	0	0	0	11	0	0	0
<b>Total Economic<sup>68</sup></b>	<b>21,904</b>	<b>22,115</b>	<b>19,735</b>	<b>21,625</b>	<b>22,154</b>	<b>20,307</b>	<b>22,253</b>	<b>26,698</b>

The relationship between the BC provincial and the Canadian federal levels for migration governance is stipulated in the ‘Canada-British Columbia Immigration Agreement’ (CBCIA) (valid from April 7, 2015 to April 6, 2020).<sup>69</sup> The relationship between BC provincial and federal immigration authorities is generally characterized by close levels of cooperation. BC must operate within and obey to the overarching federal immigration framework. However, BC has also been vocal in voicing feedback which the federal

<sup>63</sup> The NOC system is only updated once every five years. It was last updated in 2016.

<sup>64</sup> Numbers include dependents. Own representation based on the Annual Report to Parliament on Immigration 2012-2019: CIC (Citizenship and Immigration Canada) (2012), *Annual Report to Parliament on Immigration 2012*, Ottawa: CIC: <https://www.canada.ca/content/dam/ircc/migration/ircc/english/pdf/pub/annual-report-2012.pdf>; CIC (2013), *Annual Report to Parliament on Immigration 2013*, Ottawa: CIC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2013/section-3-federal-provincial-territorial-partnerships.html>; CIC (2014), *Annual Report to Parliament on Immigration 2014*, Ottawa: CIC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2014.html#sec-3>; IRCC (Immigration, Refugees and Citizenship Canada) (2015), *Annual Report to Parliament on Immigration 2015*, Ottawa: IRCC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2015.html#3>; IRCC (2016), *2016 Annual Report to Parliament on Immigration*, Ottawa: IRCC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2016.html#s3>; IRCC (2017a), *2017 Annual Report to Parliament on Immigration*, Ottawa: IRCC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2017.html>; IRCC (2018), *2018 Annual Report to Parliament on Immigration*, Ottawa: IRCC: <https://www.canada.ca/content/dam/ircc/migration/ircc/english/pdf/pub/annual-report-2018.pdf>; IRCC (2019), *2019 Annual Report to Parliament on Immigration*, Ottawa: IRCC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2019.html#s113>

<sup>65</sup> Includes admissions in the Federal Skilled Worker class, Federal Skilled Trades class and Canadian Experience Class.

<sup>66</sup> Includes admissions in all three streams of the Caregiver Program: the Live-in Caregiver Program, the High Medical Needs Class and the Caring for Children Class.

<sup>67</sup> Includes admissions in the Self-Employed Persons Program, Start-up Visa Program and Immigrant Investor Venture Capital Program.

<sup>68</sup> Includes dependents.

<sup>69</sup> As of the publication of this report, no further details on the status of the CBCIA have been released: IRCC (2017a).

government was obliged to take into consideration. One area of feedback that can be documented as early as 2012 is on the overall yearly level of immigrants allowed into BC.<sup>70</sup> Despite pressing immigrant labour needs, federal limits are consistently lower than provincial immigration needs and have been characterized as too low to fill impending labour gaps in BC. BC's Chamber of Commerce reports that the province's proposals for increased allocations through the Provincial Nominee Program (PNP) (discussed below) have been increased to some extent upon request; being set at 3,800 for 2013, increased to 4,150 for 2014, further to 5,800 for 2015 and to 6,000 in 2016. However, in 2017, when the province requested an allocation of 9,000 nominations, it was in the end only approved for 6,000.<sup>71</sup> The provincial government and BC business stakeholders consistently advocate for more nominees. However, federal response seems to be tempered by annually set national immigration levels as well as the needs of other provinces and territories.

### ***The BC Provincial Nominee Program (BC PNP)***

The aforementioned 'Canada-British Columbia Immigration Agreement' allows BC to manage its own 'Provincial Nominee Program' (PNP).<sup>72</sup> The program's provincial administration is governed by the 'Provincial Immigration Programs Act' (2015) and the 'Provincial Immigration Programs Regulation' of 2017.<sup>73</sup> The BC PNP has been recognized as the most effective means of selecting immigrants that would match the economic needs of the province.<sup>74</sup> It facilitates programs for immigrants to become permanent residents on an annual allotment basis that is designated by the federal government which can, based on provincial needs, re-allocate spots left-over from other provinces or territories who do not use their complete allotment (*table 6*). The BC provincial government establishes program requirements; recruits and nominates the immigrants who will come to the province; and monitors, evaluates and reports on its programming. It operates on a points-based system, with a variety of immigration pathways to bring in-demand labour into the permanent workforce.

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<sup>70</sup> BC Multiculturalism (British Columbia Minister of State for Multiculturalism) (2012), *British Columbia immigration task force*, Victoria: Government of British Columbia, 2: [https://www2.gov.bc.ca/assets/gov/tourism-and-immigration/immigratingtobc/immigration\\_task\\_force\\_web.pdf](https://www2.gov.bc.ca/assets/gov/tourism-and-immigration/immigratingtobc/immigration_task_force_web.pdf)

<sup>71</sup> BCCC (BC Chamber of Commerce) (2017), *Supporting the Labour Needs of Today and Tomorrow. B.C. Provincial Nominee Program (2017)*, Vancouver: BCCC, 2:

<http://www.bcchamber.org/sites/default/files/Jobs%2C%20Trade%20and%20Technology%20-%20Supporting%20the%20Labour%20Needs%20of%20Today%20and%20Tomorrow%20-%20BC%20Provincial%20Nominee%20Program.pdf>

<sup>72</sup> Introduced in 1996, the PNP is a jointly administered program providing provinces and territories the opportunity to use immigration to address their specific economic development needs: IRCC (2017b), *Evaluation of the Provincial Nominee Program*, Ottawa: IRCC, 1-2: <https://www.canada.ca/content/dam/ircc/documents/pdf/english/evaluation/e1-2015-pnp-en.pdf>

<sup>73</sup> BC PNP (BC Provincial Nominee Program) (2020a), *British Columbia Provincial Nominee Program Skills Immigration and Express Entry BC Program Guide*. Vancouver: BC PNP, 6: <https://www.welcomebc.ca/getmedia/14a55c84-1301-4959-8a5d-888785a2ac2a/BC-PNP-Skills-Immigration-and-Express-Entry-BC-Program-Guide.pdf.aspx>

<sup>74</sup> BC (Government of BC) (2012), *British Columbia Immigration Task Force*.

[https://www2.gov.bc.ca/assets/gov/tourism-and-immigration/immigrating-to-bc/immigration\\_task\\_force\\_web.pdf](https://www2.gov.bc.ca/assets/gov/tourism-and-immigration/immigrating-to-bc/immigration_task_force_web.pdf)

Table 6: BC PNP Annual Nomination Figures (2009-2018)<sup>75</sup>

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Annual Nomination Limits</b>	3,000	3,500	3,500	3,500	3,800	4,150	5,500	5,800	6,000	6,250	6,500
<b>Year-End Nomination Re-allocation</b>	-	-	-	-	-	-	+302	+204	0	+250	-

Immigrants obtaining permanent residency through the PNP fare better in comparison to immigrants through the Federal Skilled Worker Program (FSWs). PNP immigrants showed higher labour market participation, lower incidences of reliance on social assistance, higher earnings profiles and high rates of retention, the vast majority remaining in their nominating province or territory.<sup>76</sup> According to survey results of provincial nominees from 2002 to 2014 published by Immigration, Refugees and Citizenship Canada (IRCC) in their 2017 ‘Evaluation of the Provincial Nominee Program’, BC has high levels across the evaluative categories of migrant performance compared to most other provinces. Results showed that 94% of immigrants to BC were employed within one year of their admission. BC had the second highest earnings average per year for immigrants starting at \$64,000 after one year increasing to \$87,000 after five years. Overall, BC had the third highest migrant retention rate at 91%.<sup>77</sup>

Studies of wage earnings in the BC PNP and those FSWs residing in British Columbia show that the mean employment earnings of B.C. provincial nominees are three times higher than FSWs after one year from their initial entry into the provincial skilled labour market.<sup>78</sup> BC was tied with the Yukon and Northwest Territories at 89% for the highest percentage of provincial nominees reporting that they held a job that matched with the skill level of their intended occupation.<sup>79</sup> The BC PNP is often used subsequently to federal

<sup>75</sup> Excluding dependents. Own representation based on: Seidle, Leslie (2013), *Canada’s Provincial Nominee Immigration Programs*, Montreal: Institute for Research on Public Policy, 8: <https://irpp.org/wp-content/uploads/assets/research/diversity-immigration-and-integration/canadas-immigration-programs/Seidle-No43.pdf>; BC Government News (2018). *B.C. Provincial Nominee Program (B.C. PNP)*. Victoria: BC Government News: <https://news.gov.bc.ca/factsheets/immigration>; BC PNP (2016), *BC PNP Statistical Report 2016*, Vancouver: BC PNP, 5: <https://www.welcomebc.ca/getmedia/49d01db1-c841-45db-a4c0-a5ba9a37da0b/BC-PNP-Statistical-Report-2016.pdf.aspx>; BC PNP (2018a), *BC PNP Statistical Report 2018*. Vancouver: BC PNP, 5: <https://www.welcomebc.ca/getmedia/c750fb86-d721-49e1-a9d0-460a9d06a451/BC-PNP-Statistical-Report-2018.pdf.aspx>

<sup>76</sup> IRCC (2017b), 21-26.

<sup>77</sup> Second to Alberta (\$71,000 after one year and \$107,000 after five years). For comparison, below BC is Ontario (\$61,000 after one year and \$50,000 after five years) or Newfoundland Labrador (\$57,000 after one year and \$75,000 after five years). IRCC (2017b), 26.

<sup>78</sup> Zhang, Haimin (2012), *Centralized vs. Decentralized Immigrant Selection*, 5-59: <http://mbc.metropolis.net/assets/uploads/files/wp/2012/WP12-04.pdf>

<sup>79</sup> IRCC (2017b), 28.

temporary foreign worker (TFW) programs, 96% of BC's provincial nominees between 2010 and 2015 had prior temporary resident status.<sup>80</sup>

### ***Spotlight: Labour Market Impact Assessments (LMIAs)***

Canadian employers who hire Temporary Foreign Workers (TFWs) must receive government permission in the form of a Labour Market Impact Assessment (LMIA).<sup>81</sup> It requires companies to provide in-depth details regarding their prior attempts to recruit a skilled Canadian citizen or already landed immigrant (permanent resident) in Canada before recruiting a foreign worker (not holding Canadian citizenship or permanent residency in Canada). To do this, Canadian employers must run a separate recruitment process to evidence that there is a domestic labour shortage for that position which they were unable to meet by recruiting a Canadian citizen or permanent resident. Recruitment details that must be submitted include a listing of the number of Canadians or permanent residents who applied for the job, the number of Canadians or permanent residents who were interviewed for the job, and including detailed descriptions of why each interviewed Canadian/permanent resident was not accepted for the position.<sup>82</sup> As part of the LMIA application, companies are required to submit detailed transition plans regarding how the company will hire more Canadian-based employees over time, and detail how their foreign workers will become Canadian permanent residents.<sup>83</sup> For approved LMIAs, an estimated wage is issued for the TFW based on the employer's description of the occupation generally based on a NOC code designation. This becomes the legally required minimum the TFW must be paid, even when moving into permanent residency.<sup>84</sup>

The LMIA process can be arduous and has received some criticism for being unduly difficult for employers.<sup>85</sup> Time is a considerable barrier as hiring TFWs requires an LMIA to be submitted to and

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<sup>80</sup> IRCC (2017b), 20.

<sup>81</sup> A Labour Market Impact Assessment (LMIA) is a document that an employer in Canada may need before hiring a foreign worker. According to Citizenship and Immigration Canada (CIC) a positive LMIA will show that there is need for a foreign worker to fill the job being applied for. It will also show that no Canadian worker is available to do the job. A positive LMIA is also sometimes referred to a conformation letter. It is an evolution of the Labour Market Opinion (LMO), a document required by Human Resources and Skills Development Canada (HRSDC) (now Employment and Social Development Canada (ESDC) from employers stating that hiring the foreign worker will have a positive or neutral effect on the Canadian labour market. In 2014, the LMO was replaced with the LMIA:

CIC (Citizenship and Immigration Canada) (2017), *What is a Labour Market Impact Assessment?*, Ottawa: CIC:

<http://www.cic.gc.ca/english/helpcentre/answer.asp?qnum=163&top=17>; CIC News (2013), *4 Common Mistakes Applying a Labour Market Opinion*, Ottawa: CIC News: <https://www.cicnews.com/2013/08/4-common-mistakes-applying-labour-market-opinion-082807.html#gs.PTt4qFs>

<sup>82</sup> CIC (2017).

<sup>83</sup> CIC (2017).

<sup>84</sup> IRCC (2015); BC PNP (2017a), *Skills Immigration and Express Entry BC Program Guide*, Vancouver: BC PNP:

<https://www.welcomebc.ca/getmedia/14a55c84-1301-4959-8a5d-888785a2ac2a/BC-PNP-Skills-Immigration-and-Express-Entry-BC-Program-Guide.aspx>

<sup>85</sup> The LMIA was implemented during Stephen Harper's conservative governments last year in office and is often regarded as a blatant attempt by the conservatives to limit the flow of international migration to Canada: Omidvar, Ratna (2016), "The Harper influence on immigration," in: Ditchburn, Jennifer & Fox, Graham (eds.), *The Harper Factor: Assessing a Prime Minister's Policy Legacy*, Kingston: McGill-Queen's University Press, 179-195.

approved by ESDC before a work permit is issued.<sup>86</sup> The length and complication of the process has resulted in an aversion to the LMIA process from employers and immigration consultants. The aversion is reinforced statistically as can be see that from 2013 to 2014 (when the LMIA was introduced) there was a 40% drop in higher-skilled work permit holders and a 45% drop in positive LMIA's which are required for the issuance of both short- and long-term work permits.<sup>87</sup> Furthermore, the LMIA determination of wage does not account for the candidates' experience, leading to the same rate of pay for new entrants and experienced professionals.<sup>88</sup> This can have a lasting effect on the employee if the future sponsoring employer is unwilling to pay what many employers see as an inflated wage.<sup>89</sup>

### ***BC PNP: Focus on Highly Skilled Immigrants***

The BC PNP gives the province the flexibility to respond to its economy by adapting and creating entry requirements and programs as the need arises. For example, given that 77% of job openings projected in the coming decade will require some level of post-secondary education<sup>90</sup>, high human capital characteristics of migrants are increasingly important in decisions regarding their suitability for the BC labour market. This trend is visible in the current category focus of the BC PNP with most of their immigration categories aimed at bringing skilled and educated workers to BC (*figure 1*).

The preference towards skilled workers has trended upwards across BC PNP nominations in the past three years. In 2018, the Skilled Worker category composed 55% of all BC PNP nominations, this is up from 40% in 2017 and again from 34% in 2016 (*table 7*). These increases have come from the general downward trend across all other categories particularly the International Graduates category decreasing from 38% and 40% of total BC PNP nominations in 2016 and 2017 respectively, to only 24% in 2018. Nonetheless in 2018, the Skilled Worker and International Graduate categories taken together accounted for almost 80% of all BC

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<sup>86</sup> However, there are some employment situations that are considered LMIA-exempt under the International Mobility Program (IMP). These include, for example, those employment situations subject to international agreements, like specific workers under North American Free Trade Agreement (NAFTA), now known as the United States-Mexico-Canada Agreement (USMCA) (GoC, 2017e). This coding for exemption, while laudable, is still problematic as this process of exemption is complicated and hard for most companies to navigate: CIC 2016b, *Hire a temporary worked through the International Mobility Program*, Ottawa: CIC: <http://www.cic.gc.ca/english/work/employers/hire-how.asp>; GoC 2014, *Temporary Foreign Worker Program: Overview of Labour Market Impact Assessments*. Ottawa: GoC: <http://www.cic.gc.ca/english/resources/tools/temp/work/opinion/overview.asp>; GoC (2017e), *International Mobility Program: Labour Market Impact Assessment exemption codes*, Ottawa: GoC: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/operational-bulletins-manuals/temporary-residents/foreign-workers/labour-market-impact-assessments/exemption-codes.html>

<sup>87</sup> Canadian Chamber of Commerce (CCC) (2016), *Immigration for a Competitive Canada: Why Highly Skilled International Talent is at Risk*, Ottawa: CCC, 6: <http://www.chamber.ca/download.aspx?t=0&pid=f6479846-2dba-e511-bb93-005056a00b05>

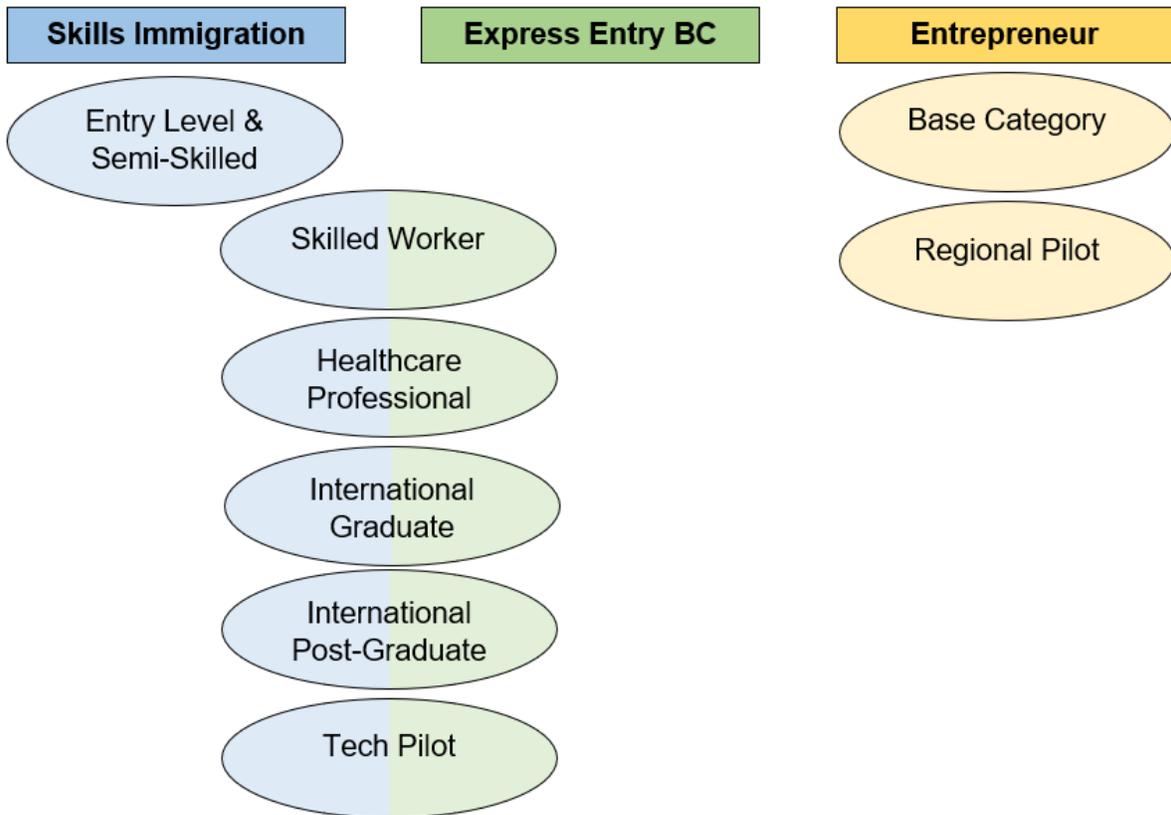
<sup>88</sup> CCC (2016), 12.

<sup>89</sup> CCC (2016), 17.

<sup>90</sup> Work BC (2019), 12.

PNP nominations. The focus on skilled workers continues in the top occupations with eight out of the top ten occupations filled through the BC PNP in 2018 being the skilled NOCs 0, A, and B.<sup>91</sup>

Figure 1: BC PNP Highly Skilled Immigration Categories (as of April 2020)<sup>92</sup>



Recruiting tech talent and retaining international graduates and post-graduates are key components of the labour replacement strategy for the acute STEM labour shortage. The proportion of nominations in technology-related jobs is significant with 19.7% of all 2018 nominations in tech occupations.<sup>93</sup>

<sup>91</sup> BC PNP (2018a), 8.

<sup>92</sup> Own design based on data provided in BC PNP (2020a), 6. Both the Skills Immigration and Express Entry pathways focus on bringing qualified skilled workers or international graduates to fill high-demand occupations in BC as defined by the annual BC Labour Market Outlook. The Entrepreneur Immigration pathway is designed for experienced entrepreneurs who seek to invest and manage businesses in BC.

<sup>93</sup> BC PNP (2018a), 9.

Table 7: Total BC PNP Nominations by Program (2015-2018)<sup>94</sup>

	2015	2016	2017	2018
<b>Skills Immigration/Express Entry BC</b>				
<b>Skilled Worker</b>	2,585	2,031	2,399	3,594
<b>International Graduate</b>	1,512	2,274	2,372	1,572
<b>International Post-Graduate</b>	290	722	463	536
<b>Healthcare Professional</b>	144	138	97	104
<b>Entry Level and Semi-Skilled</b>	1,180	756	600	633
<b>Entrepreneur Immigration</b>				
<b>Entrepreneur</b>	78	73	65	58
<b>Key Staff</b>	13	10	4	3
<b>BC PNP Nominations Total</b>				
	5,802	6,004	6,000	6,500

### ***Recruiting and Retaining Top Tech Talent: BC’s PNP Tech Pilot***

The introduction of the BC PNP Tech Pilot in 2017 was a marked shift toward stronger STEM and tech-related immigration prioritization. It reflects the increased importance the BC tech sector has played in provincial economic growth, the labour shortage threatening its continued success, and also the tech sector’s relative strengths in lobbying for policy reforms. The BC Tech Pilot is designed to respond to the needs of employers in the technology sector, saving them time in the application process and minimizing the time they spend waiting for their employee to be able to work. The program features a dedicated ‘concierge service’ providing employers with better support, assistance and information, weekly invitations issued to qualified foreign workers, prioritization of tech-related applications and continued support to employers through engagement activities and the presence of BC officials at key industry events.<sup>95</sup> Labour market research from the BC Tech Association and the Vancouver Economic Commission identified 32 in-demand tech occupations. These positions were used in 2017 for the first eligible occupations as the first year of the category was launched. In 2018, upon review, the list of eligible occupations was reduced to 29 (*table 8*).

<sup>94</sup> Combined figures from the Skills Immigration and Express Entry BC pathways: BC PNP (2018a), 8.

<sup>95</sup> BC PNP (2020b), *BC PNP Tech Pilot*, Vancouver: BC PNP: <https://www.welcomebc.ca/Immigrate-to-B-C/B-C-Provincial-Nominee-Program/BC-PNP-Tech-Pilot>

Table 8: List of 29 Eligible Occupations for the BC PNP Tech Pilot (2018)<sup>96</sup>

<b>Job Title</b>	<b>NOC</b>
Telecommunication carriers managers	0131/0
Computer and information systems managers	0213/0
Managers – publishing, motion pictures, broadcasting and performing arts	0512/0
Civil engineers	2131/A
Mechanical engineers	2132/A
Electrical and electronics engineers	2133/A
Chemical engineers	2134/A
Computer engineers (except software engineers and designers)	2147/A
Information systems analysts and consultants	2171/A
Database analysts and data administrators	2172/A
Software engineers and designers	2173/A
Computer programmers and interactive media developers	2174/A
Web designers and developers	2175/A
Biological technologists and technicians	2221/B
Electrical and electronics engineering technologists and technicians	2241/B
Electronic service technicians (household and business equipment)	2242/B
Industrial instrument technicians and mechanics	2243/B
Computer network technicians	2281/B
User support technicians	2282/B
Information systems testing technicians	2283/B
Authors and writers	5121/A
Editors	5122/A
Translators, terminologists and interpreters	5125/B
Broadcast technicians	5224/B
Audio and visual recording technicians	5225/B
Other technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts	5226/B
Support occupations in motion pictures, broadcasting, photography and the performing arts	5227/B
Graphic designers and illustrators	5241/B
Technical sales specialists – wholesale trade	6221/A

Feedback from the tech industry has been applied quickly to the Tech Pilot’s requirements. Stakeholders voiced issue with the requirement of offering indeterminate positions to access and use the Tech Pilot, due

<sup>96</sup> BC PNP (2018b), *List of 29 Eligible Occupations for the BC PNP Tech Pilot*, Vancouver: BC PNP, 1: [https://www.welcomebc.ca/getmedia/0c9acee2-06ea-471b-bc9e-c7547d60d092/BC-PNP-Tech-Pilot\\_Key-Technology-Occupations.pdf.aspx](https://www.welcomebc.ca/getmedia/0c9acee2-06ea-471b-bc9e-c7547d60d092/BC-PNP-Tech-Pilot_Key-Technology-Occupations.pdf.aspx)

to the project-based business model prevalent in the tech sector. The BC PNP recognized that companies in the technology and innovation sector “*have ongoing high volume needs but have to rely on temporary immigration solutions, which makes it difficult to plan for their long-term workforce needs.*”<sup>97</sup> To ensure these companies and their foreign applicants are able to access the program, the indeterminate requirement was decreased to a minimum 1-year job offer.

Further statistics will be valuable to determining the Tech Pilot’s success in overall tech talent recruitment and retention. In 2016, nominations in tech occupations represented close to 17.9% of all nominations across the Skilled Worker and International Graduate categories. With the release of the Tech Pilot in May of 2017, it is interesting to note that this proportion decreased by 0.5% to 17.4%. However, perhaps reflecting on the implementation of employer feedback and increased popularity of the program, 2018 saw an upward increase in nominations for tech occupations of 2.5%, bringing its share to 19.7%.<sup>98</sup> Reports have yet to be released for 2019. The Tech Pilot was first extended until June 2020. In the midst of the COVID-19 pandemic on June 4<sup>th</sup> 2020, it was announced that the program would be extended for at least one more year until June of 2021.<sup>99</sup>

### ***Retaining International Graduates & Post-Graduates***

As early as 2012 with the publication of BC’s International Education Strategy, the retention of international students has been an objective and instrument of the provincial government for addressing labour market challenges.<sup>100</sup> The 2018 report ‘International Students in BC’s Education Systems’<sup>101</sup> reports that in BC’s public post-secondary system – during the 2016/2017 academic year – there were 58,591 international students making up 13.7% of BC’s total post-secondary headcount.<sup>102</sup> The report states that “*nearly half of these students (43%) were enrolled in research-intensive universities, with approximately 12,500 enrolled at UBC [the University of British Columbia] and more than 7,000 enrolled at SFU [Simon Fraser University].*”<sup>103</sup> The report finds that the international student headcount has grown 2% in the past 10 years

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<sup>97</sup> BC PNP (2019), *Tech Pilot. FAQs*, Vancouver: BC PNP, 2: <https://www.welcomebc.ca/getmedia/31cf38c0-12da-4713-bba1-6dc105f2f908/BC-PNP-Tech-Pilot-FAQs-June-2018.pdf.aspx>

<sup>98</sup> BC PNP (2018a), 9.

<sup>99</sup> CIC News (Citizen and Immigration Canada), 2020, *BC extends PNP tech pilot*, Ottawa, CIC: <https://www.cicnews.com/2020/06/bc-extends-pnp-tech-pilot-0614578.html#gs.8teppm>

<sup>100</sup> BC (2012), *BC International Education Strategy*, Victoria: BC, 10: [https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/international-education/internationaleducationstrategy\\_web.pdf](https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/international-education/internationaleducationstrategy_web.pdf)

<sup>101</sup> The results of the Student Transitions Project (STP), a collaborative research partnership with BC’s education ministries and post-secondary institutions titled ‘International Students in BC’s Education Systems’: Heslop, Joanne (2018), *International Students in BC’s Education Systems*, Victoria: Government of BC, 4: <https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/data-research/stp/stp-international-research-results.pdf>

<sup>102</sup> International and domestic students: Heslop (2018), 10.

<sup>103</sup> Heslop (2018), 10.

while the domestic headcount declined by 6.8% during the same period.<sup>104</sup> The greatest proportion of students come from China (35%), India (21%), the United States (4%), Japan (4%) and South Korea (4%).<sup>105</sup> In the 2016/2017 academic year, the majority of international post-secondary students (80%) were enrolled in undergraduate programs.<sup>106</sup> 12% were enrolled at graduate levels with 8% in a Master’s and 4% in a doctoral degree program.<sup>107</sup> International public post-secondary students at the undergraduate and graduate levels are primarily enrolled in three program areas; Arts and Sciences, Business and Management, and Engineering and Applied Sciences (*table 9*). At the undergraduate level 84% of international students are enrolled in these three programs, while just over half (55%) of domestic students enrolled in the three same program areas.<sup>108</sup>

Table 9: International Students by Program, Undergraduate & Graduate<sup>109</sup>

Programs	Undergraduate Level	Graduate Level
<b>Arts and Sciences</b>	18,624 (37%)	2,209 (30%)
<b>Business and Management</b>	16,799 (34%)	1,342 (19%)
<b>Engineering and Applied Sciences</b>	7,851 (16%)	2,458 (34%)
<b>Other<sup>110</sup></b>	6,720 (13%)	1,248 (17%)
<b>Total</b>	<b>49,994 (100%)</b>	<b>7,257 (100%)</b>

The high proportion of international students in STEM-related fields implied by enrollment in Arts and Sciences, and Engineering and Applied Sciences highlights the importance of retaining these students after their graduation. BC has been lagging behind other provinces in the number of STEM related degrees granted per capita and the proportion of student choosing to pursue technical degrees.<sup>111</sup> In a 2018 survey of international students in Canada’s post-secondary institutions conducted by the Canadian Bureau for International Education (CBIE), 60% of all respondents indicated their intention to apply for permanent

<sup>104</sup> The increases in international students overtakes the decreases in domestic such that the overall system still saw an increase of 10,000 students (2.5% growth) in the last decade (2008-2018): Heslop (2018), 17.

<sup>105</sup> Heslop (2018), 18.

<sup>106</sup> Undergraduate programs included: Post-Degree Diploma; Post-Degree Certificate; First Professional Degree; Bachelor’s Degree; Advanced Diploma; Advanced Certificate; Associate Degree; Diploma; Certificate; Apprenticeship; Short Certificate; Other; and None: Heslop (2018), 22.

<sup>107</sup> The remaining 8% were found in so-called ‘developmental programs’ including a “variety of developmental certificates, short certificates.” The developmental study level is commonly used at B.C. colleges, institutes and teaching intensive universities: Heslop (2018), 22.

<sup>108</sup> Heslop (2018), 25-26.

<sup>109</sup> Heslop (2018), 26.

<sup>110</sup> Human and Social Services, Health, Visual and Performing Arts, Trades, Other, Education, Personal Improvement and Leisure: Heslop (2018), 25.

<sup>111</sup> BC Tech Association (2016), 28.

residency in Canada. This is a notable increase from the 51% indicating this intention in the 2015 survey.<sup>112</sup> As previously mentioned, to fill the STEM labour shortage demands by 2021 it is estimated that the province will require an additional 12,500 graduates from BC's post-secondary institutions.<sup>113</sup> Moreover, it is essential that BC retains its international post-secondary graduates and attracts international graduates from other Canadian post-secondary institutions.

In BC's immigration strategy, this is facilitated by leveraging an 'integrated offer' system referring to the immigration system's linkages with Canadian post-secondary education. The integrated offer system creates an easier pathway for international students to become permanent residents and eventually Canadian citizens.<sup>114</sup> The BC PNP's 'International Graduate' and 'International Post-Graduate' categories are designed to provide an avenue for transitions from study-permits to permanent residency. Both categories provide more attainable requirements to students compared to if they were relegated to other skilled labour programs in the BC PNP. The International Graduate category is for international students who successfully graduated from a Canadian university or college in the past three years (at any level of study), who prove they have a full-time indeterminate job offer in NOC 0, A or B.<sup>115</sup> The Post-Graduate category extends to graduates from BC's post-secondary institutions who successfully obtained a Master's or Doctorate degree in natural, applied or health sciences during the past three years whereas the Graduate program is open to students of any field and program of studies.<sup>116</sup> It does not require applicants to have any existing job offers, instead it is simply asking candidates to submit evidence of their ability and intent to live and work in BC.<sup>117</sup>

Combined, the BC PNP International Graduate and Post-Graduate category nominations comprised 32% of all nominations in 2018. Statistics detailing BC's share of total student immigration and its effectiveness in retaining these individuals to the Canadian labour market are limited. However, available indications signal that retention efforts need improvement. Despite the targeted international student immigration programs from the federal and provincial government, a 2018 study found that 25% of recent graduates in STEM-

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<sup>112</sup> CBIE (Canadian Bureau for International Education) (2018), *The Student's Voice: National Results of the 2018 CBIE International Student Survey*, Ottawa: CBIE, 6: [https://cbie.ca/wp-content/uploads/2018/08/Student\\_Voice\\_Report-ENG.pdf](https://cbie.ca/wp-content/uploads/2018/08/Student_Voice_Report-ENG.pdf)

<sup>113</sup> BC Tech Association (2016), 44.

<sup>114</sup> Wylie, Peter & Campbell, Shaun (2017), *BC's international education strategy: implications for public post-secondary education*. Paper to be presented at the BCCAT Economics Articulation Committee Annual Meeting, 1: <https://viurrspace.ca/bitstream/handle/10613/4950/BCInternationalStrategyPaperWylieCampbell.pdf?sequence=1&isAllowed=y>

<sup>115</sup> Except positions belonging to the 29 eligible occupations under the Tech Pilot- then minimum job offer is one year.

<sup>116</sup> The Master's or Doctorate degree "must be in one of the following programs of study: agriculture, agriculture operations and related sciences; biological and biomedical sciences; computer and information sciences and support services; engineering; engineering technology and engineering-related fields; health professions and related programs; mathematics and statistics; natural resources conservation; physical sciences": BC PNP (2020a), 25.

<sup>117</sup> This can include "the length of any previous and/or current period of residence in B.C.; your connections to B.C. through work, study or family; a description of any actions you've taken to permanently settle in B.C., such as finding a job or place to live current employment in B.C.; employment search details (prospective employers, applications, networking efforts, business development, etc.); community involvement; ability to financially support yourself in B.C.; your plan to obtain or maintain legal authorization to work in B.C.": BC PNP (2020a), 25-26.

related disciplines from Canada’s top universities join the labour market outside of Canada. The strong global demand for STEM graduates makes it difficult for Canadian companies to attract talent, due to their inability to offer internationally competitive salaries. Moreover, improving retention of international students, and remaining globally competitive to attract future students will require further immigration incentives and business development in the STEM industries.

***Regional Labour Shortages and Immigration Considerations***

BC’s regions experience and perceive migration quite differently. A vast majority of immigrants to BC settle in the Mainland/Southwest region. This is a trend which is evident across federal immigration programs as well as provincially in the regional distribution of BC PNP nominations. Greater Vancouver was the intended city of residence for 73% of all nominees in both 2017 and 2018, up from 69% in 2016 and 66% in 2015 (table 10). 81% of BC provincial nominees are found in districts in the Mainland/Southwest region.<sup>118</sup> However, other regions of BC experiencing challenges filling jobs find it difficult to attract talent. This is often due to their geographical remoteness, smaller populations and the fact that they lack popularity among immigrant populations. Those migrating to regions outside BC’s Mainland/Southwest region usually migrate from another BC region (intra-provincial), or another Canadian province (inter-provincial), with international migration as a distant third.

Table 10: Regional District of Skilled Immigration BC PNP Nominees (2015-2018)<sup>119</sup>

Regional District	2015	2016	2017	2018
Greater Vancouver	66%	69%	73%	73%
Capital	4%	4%	4%	4%
Fraser Valley	4%	4%	3%	4%
Squamish-Lillooet	3%	3%	4%	4%
Central Okanagan	-	3%	2%	2%
Other Regions	18%	17%	14%	13%

Regions outside of the Mainland/Southwest have smaller migrant communities and receive significantly less immigration. Despite their current, quite limited participation and share of BC’s total immigration, international migration has been identified as a potential solution for these regions to mitigate low and

<sup>118</sup> Greater Vancouver, Squamish/Lillooet, Fraser Valley.

<sup>119</sup> BC PNP (2016), 8.; BC PNP (2018a), 8.

negative population growth, lower levels of innovation and economic growth, and higher levels of unemployment. Both provincial and federal governments are experimenting with offering generous social housing and welfare subsidies to new immigrants and refugees who are willing to move to smaller, more northern and rural localities. Policymakers hope to create with the help of targeted immigration and settlement better economic opportunities in remote areas outside of BC's urban, economic and immigration hotspots.<sup>120</sup>

Two policy pilots have been launched to motivate immigrants and refugees to settle outside BC's Mainland/Southwest region: the federal government's 'Rural and Northern Immigration Pilot' and BC's provincial 'Entrepreneur Immigration-Regional Pilot'. The federal program was launched in January of 2019. It works in partnership with designated municipalities to support community-driven settlement efforts. The program intends to help fill local labour market gaps by creating immigration spots to be filled by community supported nominations.<sup>121</sup> In BC, participating communities include Vernon (Okanagan) and the West Kootenays (Trail, Castlegar, Rossland and Nelson). Evaluations of the first year of the program have yet to be released. Meanwhile, BC's provincial 'Entrepreneur Immigration-Regional Pilot' was launched in November of 2018.<sup>122</sup> It also aims at fostering regional development by incentivizing immigrant entrepreneurs to start their businesses in smaller and more remote BC communities.<sup>123</sup> It works as a 'matchmaking' system whereby communities in the province are active participants in attracting and determining foreign entrepreneurs and business activities that they would welcome and support in their area.<sup>124</sup> By maintaining a repository of potential communities and foreign entrepreneur applicants, the BC program offers a concierge service to help communities and entrepreneurs come to a mutual agreement and to facilitate economic development.<sup>125</sup>

The increasing creativity and flexibility in the BC PNP pilot programs provide an alternative governance model for managing migration for innovation and growth. This model is not only concerned with provincial-wide aggregated statistics but also the differing and locality-specific development needs of regions across the province. Taking the alternative governance model further, in 2019 the Liberal government under Prime Minister Justin Trudeau proposed a new 'Municipal Nominee' immigration program to compliment the

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<sup>120</sup> O'Neil, Peter (2010), *Mix reaction as B.C. prepares to open doors under ambitious federal immigration plan*:

<http://vancouver.sun.com/news/local-news/mixed-reaction-as-b-c-prepares-to-open-doors-under-10-year-federal-immigration-plan>  
<sup>121</sup> GoC (2019b), *Rural and Northern Immigration Pilot: About the pilot*. Ottawa: GoC: <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/rural-northern-immigration-pilot/about.html>

<sup>122</sup> BC PNP (2019), *BC PNP Archived News Items 2018*. Vancouver: BC PNP: [https://www.welcomebc.ca/getmedia/794e434f-49c6-46f4-be54-b39c7e7db868/BC-PNP-Archived-News\\_2018.pdf.aspx](https://www.welcomebc.ca/getmedia/794e434f-49c6-46f4-be54-b39c7e7db868/BC-PNP-Archived-News_2018.pdf.aspx)

<sup>123</sup> Less than 75,000 people and located more than 30 kilometers from a larger city: GoC (2019b).

<sup>124</sup> Full list of participating municipalities can be found at: <https://www.welcomebc.ca/Immigrate-to-B-C/BC-PNP-Entrepreneur-Immigration/EI-Regional-Pilot-Community-Profiles>

<sup>125</sup> BC PNP (2018c), *Entrepreneur Immigration – Regional Pilot*, Vancouver: BC PNP: <https://www.welcomebc.ca/Immigrate-to-B-C/BC-PNP-Entrepreneur-Immigration/Entrepreneur-Immigration-Regional-Pilot>

PNPs.<sup>126</sup> The program would build on the model and experiences made with the federal ‘Rural and Northern Pilot’ and provincial pilots similar to BC’s pilot for remote communities. Details of the new ‘Municipal Nominee Program’ have yet to be released, but in theory it would give designated immigrant spots to small municipalities. In effect, it could extend immigration to more remote municipalities and provide their employers with an additional option to fill labour shortages by attracting and sponsoring permanent immigrants.<sup>127</sup> This would also allow BC’s STEM sector to foster new businesses outside of the Mainland/Southwest region.<sup>128</sup>

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<sup>126</sup> CCIRC (Canadian Citizenship & Immigration Resource Center) (2019), *The Trudeau Liberals Propose a New Municipal Nominee Immigration Program*, Montreal: CCIRC: <https://www.immigration.ca/the-trudeau-liberals-propose-a-new-municipal-nominee-immigration-program>

<sup>127</sup> CCIRC (2019).

<sup>128</sup> Porter, Michael (1998), “Clusters and the Economics of Competition”, *Harvard Business Review* 76(6): 77-90, 80.

### III. Stakeholder Viewpoints

Semi-structured interviews were conducted with a wide variety of relevant BC stakeholders with insights related to skilled immigration to BC. The stakeholders which were consulted included companies in the technology and innovation sector, provincial and federal government entities, immigration law firms, immigrant settlement services and community organizations. While the viewpoints and insights of the individuals representing these stakeholders cannot be aggregated statistically and are not representative of the situation of all other stakeholders in BC, many recurring and cross-cutting themes emerged across these interviews. Most interviews were conducted before the COVID-19 pandemic, key observations will remain important to BC's economic recovery and future growth.

#### ***1. Talent shortages are limiting the global competitiveness of BC-based companies***

The most recent BC Tech Report Card (2018) issued a grade of 'B' for British Columbia, citing the "*erosion of performance on economic inputs*" as a major area of concern.<sup>129</sup> In this, the BC Tech Association suggests placing a stronger emphasis on "*1) scaling up the growth of companies and 2) educating, attracting and retaining the best talent.*"<sup>130</sup> This is particularly relevant considering 98% of businesses in BC are small businesses with fewer than 50 employees, and of this percentage, 84% are micro businesses with fewer than five employees.<sup>131</sup>

#### ***1.1 Business capacity: Recruiting senior talent, HR constraints and the task of diversifying business sizes***

Stakeholders expressed the difficulty for many businesses to scale up and their challenges in finding and attracting experienced and senior talent from Canada and abroad.<sup>132</sup> Many mentioned a significant barrier-point for most small businesses whereby the existing team grows the business to a point where after they require more specialized, experienced and senior talent to scale-up and be able to compete globally. VIATEC, a major technology accelerator in Victoria BC, reported that many of its member companies have a persisting need for more talent, particularly with managerial experience.<sup>133</sup> For companies to grow and scale up, they typically require professionals with three to five or more years of job experience. They seek professionals with experience facilitating advanced business growth, familiar with working with large

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<sup>129</sup> KPMG (2018), 5.

<sup>130</sup> KPMG (2018), 5.

<sup>131</sup> BC (2019), 2.

<sup>132</sup> Stakeholder interviews *Victoria Innovation Advanced Technology and Entrepreneurship Council (VIATEC) and Accelerate Okanagan.*

<sup>133</sup> Stakeholder interview *VIATEC.*

budgets, and a prior understanding of how to operate at medium and large business levels. Stakeholders noted that this talent is immensely difficult to find locally in BC. To scale up and become bigger and more competitive, companies therefore inevitably need to tap into the talent pools of other Canadian provinces and other countries. However, attracting talent from out of province or globally proves to be very difficult for most small businesses in BC. In most cases, these businesses have a very limited capacity to provide competitive salaries for these experienced professionals.

The Immigrant Employment Council of British Columbia (IEC-BC) shared the insight that most employers typically perceive a higher risk when hiring from abroad, particularly if they are seeking to fill senior positions. There are more ‘unknowns’ regarding a foreign applicant, such as recognizing their job experience and credentials which are often unfamiliar and difficult to compare to Canadian levels of experience and credentials. There are persistent uncertainties as to whether foreign skills and experiences will be transferable to the Canadian and BC workplace and business context. ‘Canadian Experience’ is therefore added to the list of requirements for job applicants. IEC-BC says this becomes a major criteria in hiring decisions concerning senior level managers and professionals. Companies tend to take extra precaution making hiring decisions at this level, which can have a positive or negative cascading effect on their company and their businesses’ success.<sup>134</sup>

Similarly, brand popularity and global recognition might play a role in explaining some company’s difficulties in scaling up and attracting talent, according to the owner of a BC-based technology company. Talent gaps preventing Canadian companies from expanding and scaling up their business could be attributed to their lack of marketing talent and moreover their inability to brand their company globally.<sup>135</sup> Representatives from Western Economic Diversification Canada (WD) shared the same insight. They also observed that BC Clean Tech and other growing sectors are trying to increase their marketing and company branding efforts. In other words, having a global reputation and brand has almost become a prerequisite for finding global talent and attracting them to apply from abroad for in-demand occupations in BC.<sup>136</sup>

Finding and recruiting new talent for small businesses poses financial as well as HR-related challenges. Small businesses often struggle to hire qualified talent as they generally do not have the means to hire individuals dedicated to managing the HR or the immigration-related needs of the company. The recruitment, and later the on-boarding of global talent, typically becomes an added responsibility for several or all company employees in addition to their existing tasks. Stakeholders highlighted that small business recruitment often relies on the existing immediate networks of their own employees. As this pool is very

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<sup>134</sup> Stakeholder interview *Immigrant-Employment Council of British Columbia (IEC-BC)*.

<sup>135</sup> Stakeholder interview *Next Decentrum*.

<sup>136</sup> Stakeholder interview *Western Economic Diversification Canada (WD)*.

limited, it is generally inadequate for finding new qualified highly skilled talent, particularly at the senior level. This in many cases, combined with financial constraints, makes the idea of small businesses hiring global talent both an insurmountable logistical as well as significant economic burden.

These challenges contribute to the widely reported talent shortage across BC's small business-dominated economy. WD representatives attested to the importance of business clustering and suggested that BC requires a larger variety of business sizes to attract talent and be globally competitive. More well-established and larger companies are essential to the success, reputation and competitiveness of the province's innovation and business ecosystem. WD identified Value-Added Agriculture, Clean Tech and the Life Sciences as new pivotal players in BC, including in more rural and remote parts of the province.<sup>137</sup> Clean Tech can be seen as a 'nascent' supercluster with significant potential for businesses to scale-up. BC is renowned for its start-up culture, but more established businesses are necessary for new and promising industries to flourish. The importance of scaling-up aligns with and echoes the BC Tech Association's warning that BC lacks a sufficient amount of 'anchor companies.' BC needs these large industry players to attract top talent and global professionals, who are drawn to anchor companies' significant brand weight and global reputation.

STEMCELL Technologies, a Vancouver-based biotechnology company, is one of the few examples of successful 'anchor companies' that currently exist in BC. The company is one of the top recruiters of STEM graduates, mainly from UBC (the University of British Columbia) but also from other post-secondary institutions in BC and other parts of Canada.<sup>138</sup> The company employs over 1,000 individuals, with more than one third of its employees holding a Master's or doctoral degree.<sup>139</sup> Due to the limited pool of Canadian graduates, STEMCELL Technologies is regularly recruiting and training international students, as well as assisting them in their path to permanent residency. However, even for this large company, global talent recruitment and providing internationally competitive salaries, particularly at senior levels, has been challenging for STEMCELL Technologies.<sup>140</sup>

### 1.2 BC's transnational STEM business and immigration considerations

Stakeholders consulted in this study emphasized how BC's STEM sector could benefit from increased and stronger transnational linkages in business relationships with other countries and innovation clusters. For example, a representative from the BC Tech Association highlighted BC's membership in the 'Cascadia

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<sup>137</sup> Stakeholder Interview *WD*.

<sup>138</sup> STEMCELL is the second largest employer of UBC alumni trailing only the Vancouver branch of Google. Stakeholder Interview *STEMCELL Technologies*.

<sup>139</sup> STEMCELL Technologies (2017), *About Us*, Vancouver: STEMCELL: <https://www.stemcell.com/about-us#history-tab>

<sup>140</sup> Stakeholder Interview *STEMCELL Technologies*.

Innovation Corridor': linking Portland, Seattle, and Vancouver in a system of transnational knowledge transfer and talent exchange.<sup>141</sup> The vision for this emerging economic zone is to allow firms to gain access to shared talent pools and services creating a mutually beneficial transnational ecosystem between the United States (US) and Canada. It is particularly promising for advances in technology-related services and promoting innovation. The transnational cooperative arrangement is still in its nascence, as industry organizations such as the Business Council of BC and Challenge Seattle advocate for enhanced connectivity of the region.<sup>142</sup> Canada's reciprocal immigration scheme with the US through NAFTA (North American Free Trade Agreement, now known as the CUSMA (Canada-United States-Mexico Agreement)<sup>143</sup> and the US' E-Verify system ease international business cooperation. For example, STEMCELL Technologies noted their registration in and use of the E-Verify system. This allowed them to become a registered employer with US Citizenship and Immigration Services (USCIS) and Immigration and Customs Enforcement (ICE) which facilitates expedited verification and employment of new staff members coming from the US. This registration allows STEMCELL Technologies to access a wider talent pool in the US and to recruit recent post-secondary graduates more readily from top-tier universities and institutions.<sup>144</sup>

Canada currently seems to benefit from the US' relatively restrictive immigration system in the global and U.S.-Canada competition for attracting highly skilled professionals. Since 2019, media sources report that an increasing number of U.S. companies have decided to open branches in Canada, particularly in the technology and innovation sector. Canada's open immigration system, compared to the US, is cited as a key draw in addition to relatively lower costs of living and operation, as well as Canada's often much lower salary costs.<sup>145</sup> Since President Donald Trump came to power and started to overhaul the American visa and immigration system, the U.S. has been issuing fewer visas to highly skilled workers.<sup>146</sup> One lawyer

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<sup>141</sup> Vancouver is noted as a hub for Digital Design, while Seattle was noted for its Software Development and Portland for its growing Financial technology sector.

<sup>142</sup> Cascadia Innovation Corridor (2018), *Cascadia Innovation Corridor: Cross-Border Initiative*, Vancouver: Cascadia Innovation Corridor: <https://connectcascadia.com/>.

<sup>143</sup> As referenced in Section II, this is an LMIA-exempt avenue for labour recruitment internationally when labour is coming to Canada from the US or Mexico.

<sup>144</sup> Stakeholder Interview, *STEMCELL Technologies*.

<sup>145</sup> Semuels, Alana (2019), *Tech Companies say it's too hard to hire high skilled immigrants in the U.S.- so they're growing in Canada instead*, New York City: TIME News: <https://time.com/5634351/canada-high-skilled-labor-immigrants/>?; Borzykowski, Bryan (2019), *Nixing Silicon Valley, US companies are now tapping Canada for tech talent*. Englewood Cliffs: CNBC: <https://www.cnbc.com/2019/08/17/nixing-silicon-valley-us-companies-now-tapping-canada-for-tech-talent.html>; Molla, Rani (2019), *Canada is becoming a tech hub. Thanks, Donald Trump!* New York: Vox Media: <https://www.vox.com/2019/3/19/18264391/us-tech-jobs-canada-immigration-policies-trump>; Anderson, Stuart (2019), *Why Immigrants, Students and U.S. Companies Are Going To Canada*. Jersey City: Forbes: <https://www.forbes.com/sites/stuartanderson/2019/04/22/why-immigrants-students-and-u-s-companies-are-going-to-canada/#2b3a249c478e>; Smith, Noah (2019), *U.S. Hands Canada an Opening in Tech*. New York: Bloomberg L.P.: <https://www.bloomberg.com/opinion/articles/2019-07-25/u-s-immigration-policy-gives-canadian-tech-a-great-opportunity>

<sup>146</sup> Borzykowski (2019); Anderson (2019).

specializing in immigration pointed to the possibility for Canada to potentially welcome, attract and retain highly skilled immigrant professionals who are unsuccessful in obtaining US visas and work permits.<sup>147</sup>

The increasingly popular Canadian immigration program, the ‘Global Talent Stream’ (*discussed below*), also incentivizes large non-Canadian companies to open branches in Canadian provinces. Though the program provides relatively easy mobility of global talent, IEC-BC projects that these large companies will still struggle to hire adequate staff. They fear that as the existing talent pool does not meet the labour demands of large companies, this will bring a ‘cannibalization’ of the already limited talent pools in Canada. Smaller firms unable to provide competitive benefits or pay may find their limited talent actively recruited by larger competitors and their Canadian subsidiaries, further damaging their ability to compete.<sup>148</sup> It is unknown whether or not it is the Canadian government’s intention to leverage an open immigration system to attract US businesses. Nevertheless, in the backdrop of continued US restrictions on immigration and the country’s intensifying racially charged political reality, business stakeholders and media sources view this phenomenon as an opening for growth in Canada’s technology sector.<sup>149</sup>

Having global talent among their employees was mentioned by many stakeholders as extremely positive for gaining international market knowledge and access. A representative from technology consultancy Traction on Demand reported how their values-based and people-centered hiring approach has already helped to leverage the networks of its international hires. These immigrating employees have helped in bringing additional global talent to the firm and BC, gaining insights about international competitors and helping the company explore international markets.<sup>150</sup> Another stakeholder recounted how a Kelowna transportation company expanded successfully into European markets by using the help and contacts of a recently hired HR representative who was an immigrant from Europe. The new employee helped the company’s expansion with linguistic capabilities, knowledge of European immigration systems and connections to relevant European companies.<sup>151</sup>

Exemplifying the business benefits of easy transnational talent movement is the engineering firm Ausenco, an Australian company with a BC subsidiary. Their expansion into Canada and BC has proved very profitable for the company, with five of their nine Canadian offices now located in BC. An Ausenco representative estimated the company’s BC workforce is composed of 80% Canadian workers and 20% employees that are born-abroad. Ausenco’s experience is that moving employees transnationally is essential

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<sup>147</sup> Between half to two thirds of US visa applicants are not selected per lottery: Stakeholder Interview *EY Law LLP*.

<sup>148</sup> Stakeholder Interview, *IEC-BC*.

<sup>149</sup> Smith (2019).

<sup>150</sup> Stakeholder Interview, *Traction on Demand*.

<sup>151</sup> Stakeholder Interview, *City of Kelowna*.

to their success in Canada, as fulfilling contract needs often requires specialized talent not easily recruited from the Canadian talent pool. Ausenco uses intra-company transfers to temporarily relocate specialized employees transnationally from Australia and globally to fill temporary talent gaps in BC and their other Canadian locations. Ausenco's representative considered Canada as one of the easiest and fastest countries to recruit and relocate foreign workers to.<sup>152</sup> In effect, Ausenco's transnational employees are essential to their businesses success, the company's ability to hire Canadians locally and their ability to contribute to BC's and Canada's economy.

## ***2. Governmental priorities in immigration governance often conflict with business needs***

Among BC businesses, there is a generally negative opinion and aversion of the Canadian and BC immigration system. A 2016 BC Tech Association employer survey revealed that 48.8% of companies reported not using any of the available immigration channels for their talent recruitment. Despite a persistent talent shortage in BC, almost half of businesses do not view provincial and federal immigration systems and programs as viable options for their hiring. Those who have been using the immigration pathway reported having experience with the BC PNP (19.3%), the Federal Skilled Worker Program (21.1%), the Temporary Foreign Worker Program (14.5%), NAFTA and other free trade agreements (13.3%), Post-Graduate Work Permits (12.7%), Intra-company transfers (7.8%), International Experience Canada (6.6%) or were unsure (18.7%).<sup>153</sup> While the various federal programs constituted the most important pathways for BC employers, feedback from stakeholders suggested a strong need for a more economically responsive and forward thinking immigration strategy on each level, this means both the federal and provincial level. The STEM market is constantly evolving, talent shortages are being experienced across all industries, and yet the changes to the immigration system are slow, limited, and insufficient to relieve increasing pressure on firms. Stakeholders therefore expressed the need for an enhanced or new immigration strategy that fully remedies the lack of Canadian talent and eases the ability of companies to bring global talent into emerging and developing sectors of the BC economy.

### ***2.1 The disconnect between business needs and immigration policy and processes***

Many stakeholders express that although the BC and federal governments intend to use immigration to increase labour supply, their system is not sufficient to cater to the real needs of the BC economy and its employers. Employers struggle with the required length of contracts for foreign applicants and the long processing times of relevant authorities. Canada's immigration system prioritizes long-term transition plans for applicants. Moreover, the goal is to ultimately transition applicants into permanent residency and

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<sup>152</sup> Stakeholder Interview, *Ausenco Ltd.*

<sup>153</sup> BC Tech Association (2016), 75.

eventually citizenship, obligating companies to offer long-term and full-time permanent positions to foreign workers. Businesses expressed that while this is a logical priority from a governance standpoint, it is often utterly at odds with economic and labour market-related dynamics, business cycles and the real-life circumstances of BC's predominately small and medium-sized employers. Typically, Canadian applicants would be hired on a probationary basis and be offered a short-term contract initially. In contrast, for global talent there is the expectancy and immigration program requirement of direct long-term and/or permanent employment without any probationary period.<sup>154</sup> Long processing and wait times pose serious issues as well, as businesses seeking talent generally need to address urgent demands and skill gaps or meet immediate contract needs. With an immigration system that takes a minimum of two months to process requests, a representative from VIATEC highlighted timelines as a main reason why some employers do not view immigration as a viable option for filling talent shortages. As a result, many BC companies struggle to grow due to their inability to adequately staff their businesses in the timeframes required.<sup>155</sup>

Businesses seeking to hire global talent also find it exceedingly difficult to navigate the Canadian and BC provincial immigration system. There is an overwhelming number of programs and pathways that at first sight look similar but are in practice quite different from each other. There is also varying and conflicting information which poses significant challenges for BC's mostly smaller and medium-size companies. Many stakeholders have expressed frustrations that an easily accessible overview of the system is not available. One stakeholder suggested that an explanation on a dedicated website which summarizes all programs and pathways that exist in plain language would be useful. Such a tool would provide employers with simpler navigation of, and access to, the most appropriate programs and streams. Often websites are down, their links are broken or not systematically and regularly updated, for example, following policy and program changes, closures, or the introduction of new streams.

According to the President of the Vancouver Island Economic Alliance (VIEA), employers simply want to know and deserve to find out easily up front: 1) What is the program about?; 2) How can I access it?; 3) How long does it take?; and 4) How much does it cost my business? In searching for this information, stakeholders have reported immense difficulty or complete inability to contact and ask questions to immigration officials themselves.<sup>156</sup> Most stakeholders remain dependent on external consultancy firms or specialized immigration lawyers. For small and even medium-size businesses, these services are often too expensive, eliminating immigration as an option for filling their labour shortages and expanding their businesses.

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<sup>154</sup> Stakeholder Interview, *McCrea Immigration Law*.

<sup>155</sup> Stakeholder Interview, *VIATEC*.

<sup>156</sup> With the exception of those using the BC PNP Tech Pilot or Global Talent Stream services: Stakeholder Interview, *Vancouver Island Economic Alliance (VIEA)*.

As a result, immigration requirements and the administrative processing of immigration applications remain in many cases completely at odds with business needs. This is exemplified by the nearly unanimous opinion of many employers to completely avoid the LMIA-process, which is deemed to be too costly, too confusing and time-consuming to undertake. As a result, many companies favour LMIA-exempt streams or even hiring less qualified individuals than they actually would like to hire.<sup>157</sup> In roundtable discussions in 2015, one stakeholder reported that major technology companies expressed they would rather keep a position vacant than apply for an LMIA.<sup>158</sup> Furthermore, the negative perceptions and experiences of other firms influence employers opinions. Even with pathways that avoid the LMIA, companies are still reluctant to engage with the immigration system.<sup>159</sup>

## 2.2 Issues with the National Occupation Codification (NOC) system

The NOC system is a well-established struggle for employers and immigrants. Historically, NOC codes have been added, tweaked, and removed on a 5-year cycle. As technology and other innovative sectors rapidly develop, their labour needs often outpace the government's ability to adjust or introduce new occupations in the NOC code system. Moreover, when employers in BC seek to hire internationally, the NOC codes provided by the government are often not applicable to the new position. In a Canadian Chamber of Commerce meeting the President of Skills International explained "*It's like a seek-and-search mission, [...] employers cannot figure out a NOC code that an employee fits in, and that is the cause of a lot of mistakes.*"<sup>160</sup> The NOC system's specific criteria and the requirements of the immigration system based on outdated definitions ultimately fail to support the needs of businesses and immigrants. An additional challenge is the difference in employer versus government official interpretation of NOC definitions on applications. Stakeholders shared that they had previously lost foreign candidates due to a difference of interpretation of the NOC code by the federal government during the LMIA process, despite lengthy conversations, documentation, and explanations.<sup>161</sup>

It is unclear what the exact sources are that inform changes and updates to the NOC system changes, e.g. concerning occupational definitions, or which occupations are added or removed. There is little transparency from the government on what forms of consultation are done, if at all, and the overall methodology behind the NOC process. One BC-based technology business consultant expressed this as a significant problem in the constantly progressing environment of technology and innovation. For example, in emerging fields such

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<sup>157</sup> Examples include inter-company transfers or LMIA-exempt avenues such as regional agreements like USMCA and the Comprehensive Pacific Partnership.

<sup>158</sup> Stakeholder Interview, *EY Law LLP*.

<sup>159</sup> Stakeholder Interview, *VIEA*.

<sup>160</sup> CCC (2016).

<sup>161</sup> VEC (2016), 18.

as Augmented Reality/Virtual Reality and Artificial Intelligence, occupational definitions and needs tend to be complex, difficult to generalize and subject to frequent changes. The NOC's overly rigid definitions are effectively restricting Canada's ability to keep pace with emerging and developing international markets and are hindering Canadian companies from becoming innovation leaders.<sup>162</sup>

NOC code misclassifications can also significantly impact the career chances and futures of Canadian-educated international STEM talents. As one representative from the Vancouver Economic Commission rightly noted, "*Current non-Canadian graduates require a work permit sponsorship (requiring an LMIA) either as soon as they graduate or the end of their post study work permit period, and where this duration is 12 months or less they are unable to match their current minimum qualifying salary for their occupations. Graduates would require at least an additional 2 years of post-graduate experience to reach minimum required salaries for work permits [in certain areas of British Columbia].*"<sup>163</sup> Meaning that employers would have to agree to pay an international post-graduate student at entry level the same NOC-defined salary that they would pay for a worker with several years of experience.

However, despite several years of continued negative feedback, the NOC system is still used by the government as an underlying framework to much of the existing statistics collection and policy planning on immigration and the labour market. Its continued use creates self-perpetuating problems and prevents maximally effective policy making.<sup>164</sup>

### 2.3 Positive feedback for immigration programs adopting a client-service mindset

Stakeholders gave positive feedback for recent changes made by IRCC (Immigration, Refugees and Citizenship Canada), and held high opinions of the BC PNP's system improvements. Many stakeholders noted increased BC PNP responsiveness to applicants and lawyers, and the program's willingness to incorporate stakeholder feedback into certain immigration streams. A representative from a Vancouver-based consultancy company cited several projects where the province was able to provide helpful discretion. In these cases, the BC PNP officers were willing to be more flexible in situations where the jobs offered to the applicant were not covered by the NOC code occupational definitions.<sup>165</sup> Rather than taking an uncompromising stance on the rigid, inflexible definitions set in the NOC system, stakeholders reported some cases where the BC PNP officers acknowledged and amended these limitations to approve the application. Many stakeholders reported positive experiences when they were able to speak with BC PNP

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<sup>162</sup> Stakeholder Interview, *Catchy Consulting Inc.*; Project Manager & Senior Consultant, *HR Tech Group's Diversity and Inclusion Tech Project & Advisory Board Member*.

<sup>163</sup> VEC (2016), 19.

<sup>164</sup> VEC (2016), 18.

<sup>165</sup> Stakeholder Interview, *Ignite Management*.

immigration officers directly about their applications. These officers were described as providing good customer service and being highly supportive of applications and employers interested in using the BC PNP rather than looking for reasons to deny their applications.<sup>166</sup>

#### 2.4 Spotlight: The success of the Global Talent Stream (GTS)

A major innovation in federal migration governance is the new tech-focused temporary foreign worker immigration program ‘Global Talent Stream’ (GTS). Launched in 2016, in the framework of Canada’s new ‘Global Skills Strategy’, the GTS accepts not only permanent but also temporary employment offers/contracts to global talent, and drastically decreases processing times down to 10-business days. The GTS also offers applicants direct IRCC officer support and allows employers to apply annually for temporary work permits, both for individuals and in bulk. Although the GTS has retained a labour market reporting requirement similar to the LMIA, the Labour Market Benefits Plan (LMBP), it does not require businesses to post a job for 30-days to prove there are no eligible applicants existing in Canada. Companies are exempted from this requirement if they belong to one of two categories: Category A, which is for companies referred by pre-identified partners who confirm the employer’s need to hire unique and specialized talent; or Category B, which is for companies seeking to fill positions found in the pre-established Global Talent Occupations List.<sup>167</sup> Though the application is quite costly, around \$1000 in fees for each position requested, stakeholders report the GTS is an attractive recruitment option for technology and other companies in BC.

Stakeholder feedback has been very positive, many of them also reporting a relief of now having a direct line of communication thanks to the GTS and reaching specialized immigration officers to help them with their applications. Prior to official submission, stakeholders said officers can be consulted and asked to review applications to confirm information and added details where necessary. Businesses feel the mindset of GTS immigration officers is highly supportive and seeks to approve the businesses’ application rather than to find a reason to reject it.<sup>168</sup> The expedited 10-day processing speed eliminates much of the uncertainty companies experience in hiring from abroad and navigating the visa and work permit process. The application is online and simplified, saving businesses considerable time compared to the past paper-based approach.<sup>169</sup> The program has been used extensively by VanHack, a Vancouver-based international talent recruitment company. They use the GTS in almost all cases of their recent recruitment. VanHack has

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<sup>166</sup> Stakeholder Interview, *Ignite Management*.

<sup>167</sup> For list of up-to-date eligible occupations and their respective mandatory wage floors please visit: GoC (2019a), *Program Requirements of the Global Talent Stream*. Ottawa: GoC: <https://www.canada.ca/en/employment-social-development/services/foreign-workers/global-talent/requirements.html#h15>.

<sup>168</sup> Stakeholder Interview, *Traction on Demand*; Stakeholder Interview, *Freshworks*.

<sup>169</sup> Stakeholder Interview, *Traction on Demand*.

supported 400 businesses to fill talent shortages over the past three to four years, drawing from their candidate pool of 66,000 from over 100 countries.<sup>170</sup> They have been a proponent and promotor of the pathway, helping to facilitate over 10% of the total GTS use in Canada.<sup>171</sup> The success of the program presents a replicable or expandable solution to filling talent gaps in other sectors. It improves or eliminates employer barriers to immigration system use such as lengthy processing times, requirements for indeterminate positions, and the inability to speak directly with immigration officers regarding applications. One lawyer added that between the GTS and the BC Tech Pilot, hiring internationally as a tech company has never been easier.<sup>172</sup>

### 2.5 The political and administrative realities of BC-Federal immigration strategy coordination

Interviews with provincial government officials allow for an understanding of the complexities involved when responding to and implementing stakeholder feedback. Regarding calls for increased immigration, one BC government stakeholder reports that BC always uses the PNP levels to their fullest extent and has always been active in asking the federal government for more allocations. Typically, BC is always denied the full requested allocation but then afterwards offered a small increase, along with the rest of the Canadian provinces. The federal government's strategy has consistently been to increase immigration levels slowly, but then across all provinces and territories to spread immigration evenly across the country.<sup>173</sup>

The BC government is aware of feedback from stakeholders regarding common areas of concerns and critique such as lengthy processing times and confusion around NOC codes. One representative from the provincial government reports being open to tweaking the immigration system, but significant system reform is unfortunately not on the horizon. While the feedback of stakeholders is valued and appreciated, stakeholder consultation is only one out of many sources considered when making changes, and not the only decider. The same BC representative indicated that there has been no direction from the central government as of yet that would suggest the BC immigration system is out of line with provincial priorities.<sup>174</sup> From this, it is inferred that the likelihood of significant program changes in the short-term are low.

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<sup>170</sup> Stakeholder Interview, *VanHack*.

<sup>171</sup> Stakeholder Interview, *Catchy Consulting Inc.; Project Manager & Senior Consultant, HR Tech Group's Diversity and Inclusion Tech Project & Advisory Board Member*.

<sup>172</sup> Stakeholder Interview, *EY Law LLP*

<sup>173</sup> Stakeholder Interview, *Government of BC*.

<sup>174</sup> Stakeholder Interview, *Government of BC*.

### ***3. Businesses thrive by fostering and supporting international workplaces***

Calls for change are often targeted at the government, however there is also significant room for improvement in the business world. To increase demand for foreign skilled workers, global talents, and to ensure the retention of immigrant employees, shifts and changes in many Canadian workplaces are necessary. Settlement services report that their highly skilled clients tend to struggle with employer perceptions and persistent biases that prevent them from gaining employment or advancing their careers further in their fields. Generally, an improvement of hiring and on-boarding practices is deemed necessary to support the social and economic integration as well as the retention of global talents in BC.

#### ***3.1 Increased valuing of international teams***

Stakeholders reported that many businesses in BC are hesitant to hire immigrants. Whether their motivations are fear of uncertainty or racism, assumptions and misperceptions are damaging to the prospects and success of global professionals.<sup>175</sup> The shift that many stakeholders propose is that all businesses need to see hiring immigrants and global talent as a strength rather than a risk. As previously noted, many stakeholders reported benefiting from the knowledge, experience, and skillsets of their foreign-trained and educated employees as they expanded into international markets and increased their global competitiveness. In addition, many employers felt that the impact of global talents typically goes far beyond only commercial gains. Stakeholders reported how their international hires contribute positively to their workplace culture and business practices. They describe an increased richness in having a stronger diversity of cultural understandings and experiences within their companies, finding that these differences also promoted and innovated new perspectives, ideas, and ways of thinking in their firms.

A Vancouver tech company, Virtro Entertainment, describes their international team as making them a more vibrant company.<sup>176</sup> Victoria-based software development firm FreshWorks find their international hiring practices bring the best ideas from all over the world, and that they are always learning from each other's life experiences and work ethics.<sup>177</sup> Traction on Demand reports an added benefit is their ability to hire more highly skilled global talent through the international networks of already-immigrated employees. They estimate that 55% of their existing employee base are referrals from existing employees.<sup>178</sup>

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<sup>175</sup> Stakeholder interview, *Traction on Demand*.

<sup>176</sup> Stakeholder Interview, *Virtro Entertainment*.

<sup>177</sup> Stakeholder Interview, *FreshWorks Studio*.

<sup>178</sup> Stakeholder Interview, *Traction on Demand*.

### 3.2 Highly skilled immigrants struggle with deskilling, skills mismatch and employment retention

Despite generally positive viewpoints from many stakeholders in the BC business world, representatives from the non-profit settlement organization MOSAIC felt the need to also highlight a different reality. They report that many highly skilled immigrant applicants who utilize their services often express frustration or confusion when they try to advance their careers further and are, systematically or not, overlooked for job opportunities in their field.<sup>179</sup> A diversity and inclusion firm highlighted deskilling and skills mismatches as significant challenges for migrants, whereby newcomers are often forced to take jobs below their experience and salary levels when coming to the Canadian context. Immigrants face the massive challenge of adapting to a completely new culture, styles of communication, leadership and expectations at work. Positions are often filled through referrals from personal and professional networks, which many newcomers have yet to build. Despite these challenges, highly skilled immigrants are thought to be one of the most capable and adaptive demographics. One stakeholder observes that once they have adjusted, highly skilled immigrants are likely to be found at similar levels of employment that they left in their country of origin.<sup>180</sup> The Immigrant Services Society of BC (ISSofBC), a settlement service providing organization, reported that in addition to barriers faced by their clients in finding employment, foreign-trained and educated employees often struggle in job retention.<sup>181</sup> ISSofBC expressed that in some cases, employers face challenges to support newcomer integration. Businesses can lose their new staff because they fail to sensitively navigate cultural nuances and do not work with newcomer employees to overcome differences in expectations or communication styles.<sup>182</sup>

### 3.3 Unconscious bias in Canadian workplaces: effects and prevention

Many stakeholders highlight the need for employers to implement hiring practices that are more supportive of prospective and landed immigrants. The presence of covert discrimination affecting immigrants entering the Canadian job market is well-established and commonly referred to as ‘unconscious bias.’ It is the process whereby all individuals unconsciously favour people and environments that are familiar to their upbringing, and are critical or negative towards those that are different.<sup>183</sup> In the BC job market, this emerges as unconscious discrimination disadvantaging many groups including immigrants, women, the LGBTQ+ community, racial and ethnic minorities, and people with special needs among others. These unconscious

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<sup>179</sup> Stakeholder Interview, *MOSAIC*.

<sup>180</sup> Stakeholder Interview, *HRx Technology Inc.*

<sup>181</sup> Stakeholder Interview, *Immigrant Services Society of British Columbia (ISSofBC)*.

<sup>182</sup> Stakeholder Interview, *ISSofBC*.

<sup>183</sup> Pragma, Agarwal (2018), *Unconscious Bias: How it Affects Us More Than We Know*, Jersey City: Forbes Media LLC: <https://www.forbes.com/sites/pragyaagarwaleurope/2018/12/03/unconscious-bias-how-it-affects-us-more-than-we-know/#7c71b22c6e13>; Banks, Ralph R. & Thompson, Ford R. (2008), "(How) Does Unconscious Bias Matter: Law, Politics, and Racial Inequality," *Emory LJ* 58: 1053.

prejudgements made by HR professionals, hiring managers and decision makers directly influence decisions about individual cases of hiring, accommodating, promoting and firing.<sup>184</sup>

ISSofBC provides inter-cultural competency training to employers to prevent unconscious bias in the recruitment and retention of foreign-trained and educated employees. They observe that even companies that have adopted strong diversity and inclusion policies can still struggle in their policy implementation because of unconscious bias.<sup>185</sup> Often this happens when the policies are not translated into the day-to-day operations of the employer and at all levels of the organization, including leadership. One diversity and inclusion professional observes a difference between working with HR representatives and working with hiring managers. In general, HR professionals are aware of the benefits of international workers and are trained to recognize and dispel their own unconscious bias against them. However, even when HR advances qualified immigrant candidates to hiring committees, these candidates are often not selected. Hiring managers, decision makers and their biases have the last word on hiring decisions. As hiring managers generally play an operational role in the company, they are less likely to be trained about unconscious bias than HR staff.<sup>186</sup> If the hiring committee does not have effective inter-cultural competency training or pre-existing diversity, they are more likely to seek ‘sameness’ or ‘similarity’ over diversity/difference when making hiring decisions. The influence of their unmitigated unconscious bias resultingly disadvantages candidates who are different, such as qualified immigrants.<sup>187</sup>

### 3.4 Necessity-driven change and proactive retention policies

Industry and community-based stakeholders observe that the more BC businesses suffer from the lack of Canadian-born talent, the more willing they are to hire newcomers or immigrating professionals. When the talent shortage is noticeably costing a company or effectively undercutting its innovativeness and competitiveness, there can be a shift in hiring policies and recruitment techniques to encourage more foreign applicants. ISSofBC reported an increase of employers across manufacturing, construction, tech and retail seeking to use ISSofBC’s hiring services to find prospective immigrant employees.<sup>188</sup> One diversity and inclusion stakeholder observed that the more immigrant employees are hired, the more likely the firm is to continue hiring foreign-born individuals. Working alongside global professionals can lead to a breakdown of conscious and unconscious bias as individuals and firms experience the benefits of a more international/global workplace. Moreover, newcomer and global professionals who successfully transition

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<sup>184</sup> Stakeholder Interview, *ISSofBC*.

<sup>185</sup> Stakeholder Interview, *ISSofBC*.

<sup>186</sup> Stakeholder Interview, *HRx Technology Inc.*

<sup>187</sup> Stakeholder Interview, *ISSofBC*; Stakeholder Interview, *HRx Technology Inc.*

<sup>188</sup> Stakeholder Interview, *ISSofBC*.

into less-diverse companies can further influence the diversity, hiring, and on-boarding policies by giving feedback and advancing to decision making positions.<sup>189</sup>

ISSofBC cautions that companies hiring immigrant employees must be prepared to support the specific challenges that immigrants indeed face in daily (work) life. Urgent hiring needs can mean employers are unprepared to support a newly immigrating employee's integration. ISSofBC suggests that working closely with new foreign employees and providing the accommodations required are strategies employers can use to retain employees effectively, and also to avoid vacancies that are turning in circles.<sup>190</sup> Companies and settlement services increasingly implement policies aimed to facilitate faster integration and the retention of new employees. ISSofBC reports 'buddy-systems' have proven effective for the initial integration of foreign employees into the company: Newcomers are paired with team members who act as peers, providing support at but also beyond the workplace during their first months on the job. This gives new employees a designated person who can introduce them to the company and to whom they can ask questions about the organization, workflow and for support when needed. Additionally, intentional on-boarding processes can be employed to build closer relationships with new employees from abroad. ISSofBC suggests that managers collaborate directly with their new employees to clarify expectations and monitor integration goals during regular meetings.<sup>191</sup>

Business stakeholders highlighted that facilitating a strong community at workplaces is key to their employee retention. Virtro Entertainment reported retaining all their past co-op students, transitioning them into fulltime positions after graduation. They stated "*We're not the highest paid in town, but we do pretty interesting work, we hope that we create a pretty great environment and have great teams that enjoy themselves.*"<sup>192</sup> Fostering an environment conducive to a sense of belonging and security has been essential for many stakeholders. They encourage asking questions and seeking support alongside employing a number of community building techniques. For example, they organize team building activities, lunch and learns, birthday celebrations and annual events bringing together employees and their families.

#### ***4. Innovation is needed in credential recognition practices and accreditation systems***

Accreditation and credential recognition processes pose another significant barrier in the recruitment and retention of skilled migrants. Studies indicate that new migrants typically face a devaluation of their past job experience and foreign credentials which negatively affects their ability to find employment that is

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<sup>189</sup> Stakeholder Interview, HRx Technology Inc.

<sup>190</sup> Stakeholder Interview, ISSofBC.

<sup>191</sup> Stakeholder Interview, ISSofBC.

<sup>192</sup> Stakeholder Interview, Virtro Entertainment.

equivalent with their qualifications and past work experience.<sup>193</sup> Deskilling is particularly prevalent among skilled professionals who are qualified to work in highly regulated professions, such as physicians, engineers, teachers and social workers, as well as those in unregulated professions.<sup>194</sup> Before starting to work in Canada, immigrant professionals generally do not receive full and consistently reliable and updated information about Canada's foreign credential recognition process.<sup>195</sup> This has the effect that upon arrival, most immigrants are required to undertake time-consuming and financially costly processes navigating the unorganized and confusing system of credential recognition. They may need to interact with actors across provincial and territorial assessment services, regulatory or professional bodies, educational institutions, employers, or any combination of the five.<sup>196</sup> In Canada, this results in persistent high rates of deskilling, underemployment and added barriers to immigrants' economic and broader integration.<sup>197</sup> MOSAIC representatives suggest that fostering a more robust global network for accreditation and credential recognition would help to expedite a very difficult part of the integration process for immigrants and make it possible for immigrants to start navigating this process prior their arrival to Canada. It would also reduce the cost of educational equivalency assessments and the time new immigrants have to spent on the process and are not available to work in their profession.<sup>198</sup>

#### 4.1 Changes in business-level credential recognition practices

In non-regulated professions, employers have differing perspectives about their role in the assessment and recognition of the foreign credentials and skills of international STEM talent. Some argue that credential appraisal assures their businesses that an individual has the skills they claim to possess. Others feel the appraisal can be a barrier to applicants and tells their company little about what an individual is capable of. MOSAIC representatives suspect qualified/skilled immigrants are often overlooked in the application screening process because of the perceptions of inexperienced front-line or lower-level recruiters. These people may screen out eligible international applicants because they are not familiar with international credential recognition, international occupational terms, or global business applications.<sup>199</sup> Some stakeholders suggest this is indicative of a lack of trust in an individual's experience when it was acquired abroad. If an employer cannot confirm an immigrant's skills level and level of experience, for example resulting from difficulties contacting their listed references or previous employers, the perceived risk of

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<sup>193</sup> Kaushik, Vibha & Drolet, Julie (2018), *Settlement and integration needs of skilled immigrants in Canada*. Social Sciences, 7(5), 76: 5.

<sup>194</sup> Kaushik & Drolet, (2018), 5.

<sup>195</sup> Guo, Shibao (2009), *Difference, deficiency, and devaluation: Tracing the roots of non-recognition of foreign credentials for immigrant professionals in Canada*. Canadian Journal for the Study of Adult Education, 37-52: 40-41.

<sup>196</sup> Guo (2009), 41.

<sup>197</sup> Kaushik & Drolet (2018), 5.

<sup>198</sup> Stakeholder Interview, *MOSAIC*.

<sup>199</sup> Stakeholder Interview, *MOSAIC*.

hiring this person becomes high. Moreover, to minimize effort expended on hiring by small businesses, lacking Canadian experience or credentials can become a method to narrow hiring criteria or be used as a screening technique. Moreover, this mistrust can prevent some companies from even considering an applicant because they have foreign credentials or experience.<sup>200</sup>

Some companies have started to avoid relying on referrals and degree accreditation as hiring tools altogether. Stakeholders report hiring more people based on attitude and team fit, as well as implementing competency-based testing for key skills in interviews. For example, the interview process can include assigning applicants a business case to develop and present to the hiring committee. These practices directly test competency, while also showing employers each applicant's process and values. Simultaneously, it does not necessitate immigrants to undertake the painstaking accreditation process. As IEC-BC reports, competency-based interviewing is no longer the main practice among most small- and medium-sized businesses in BC. IEC-BC also expects additional changes in credential recognition. The introduction of 'badges' and other online designations could potentially eliminate some of Canadian employer's perceived risk assigned to foreign experience and credentials. Online designations (badges) allow applicants to certify their skills and competencies by proving their knowledge with an online verifying actor such as LinkedIn and their affiliated organizations. Having these certifications on a resumé could help the applicant prove they possess the skills they declare. If robust and widely accepted, this system could significantly reduce employers' perceived risk, allowing international applicants to demonstrate their skills in a universally recognized and competency-based way.

#### 4.2 Reimagining the role of professional and regulatory bodies

Professional and regulatory bodies often have very rigid structures and requirements that can bar or disadvantage immigrants without Canadian credentials and experience. However, one stakeholder observed that there is currently very little aggregated data gathered available to describe the entry, short-term or longer-term outcomes of immigrants with skills in regulated occupations.<sup>201</sup> Government officials and regulatory bodies in Canada have attempted to work together in the past to aggregate such quantitative and qualitative data. However, these initiatives have never resulted in sustainable solutions. Due to the closed nature of professional and regulatory bodies, it is even difficult to pinpoint the source of data collection issues. Regulatory bodies tend to be reluctant to collect survey data from their members, others lack the resources to carry out such a survey. In effect, difficulties to gather this information continues to be a barrier to effective policy making.<sup>202</sup>

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<sup>200</sup> Stakeholder Interview, *HRx Technologies Inc*; Stakeholder Interview, *IEC-BC*.

<sup>201</sup> Stakeholder Interview, *IEC-BC*

<sup>202</sup> Stakeholder Interview, *Ignite Management*.

BC PNP representatives noted that credential assessment and skills upgrading service programs provided by the government are largely only open to those admitted through humanitarian categories.<sup>203</sup> Meaning that those admitted through economic, human capital or employer-driven immigration streams do not benefit from these services and programs.<sup>204</sup> This area requires more research according to the BC Government, particularly in the areas of foreign qualification recognition and ensuring regulatory processes are fair and reasonable in the assessment of credentials (notwithstanding the safety of the public). Stakeholders suggested regulatory bodies could play a more proactive role in the labour market matchup between foreign STEM talent and employers. They voiced that if professional associations and regulatory bodies could expand their mission, they could play an integral role in creating a system of global credential recognition. In BC, STEM-related regulated occupations include architects, engineers and geoscientists. The BC regulatory bodies include the Architectural Institute of BC (AIBC) and the Association of Professional Engineers and Geoscientists of the Province of British Columbia (EGBC). More research is needed on AIBC's and EGBC's regulatory processes to understand how they are accessed, and the barriers experienced, by foreign STEM professionals.

#### 4.3 Proposed regulation of international education agents (IEAs)

A representative from the BC Council for International Education noted that BC now has active programs which export the Kindergarten to Grade 12 (K-12)<sup>205</sup> provincial curriculum to educational institutions in other countries. Children receiving the BC K-12 curriculum abroad can more easily attend Canadian educational institutions, e.g. universities, in the following.<sup>206</sup> China, the United Arab Emirates and Egypt are some countries with active K-12 BC curriculum programming offered to students.<sup>207</sup>

The BCCIE representative noted a greater proportion of people internationally are exploring or seeking the possibility to live and work in BC later. As a result, a growing number of intermediaries aim to position themselves as facilitators of their future relocation. For example, there have been increased numbers of International Education Agents (IEAs). These are actors who act as conduits between aspiring international students and the BC educational system.<sup>208</sup> It is becoming increasingly important to ensure international students have accurate information from credible sources and protect them from misinformation, fraud and exploitation. To assure quality of information and the trustworthiness of IEAs, BCCIE advocates for regulating and overseeing these intermediaries for the safety of prospective students.

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<sup>203</sup> Refugee or family reunification.

<sup>204</sup> Stakeholder Interview, *British Columbia Provincial Nominee Program (BC PNP)*.

<sup>205</sup> Kindergarten to Grade 12 curriculum encompassing BC's full course content at elementary to secondary school levels.

<sup>206</sup> Stakeholder Interview, *BC Council for International Education (BCCIE)*.

<sup>207</sup> Stakeholder Interview, *BCCIE*.

<sup>208</sup> Stakeholder Interview, *BCCIE*.

## ***5. One-size-fits-all policies are harmful to BC’s sub-regional STEM industry development***

As previously discussed, both provincial and federal immigration programs have been created to actively encourage applicants to establish themselves in sub-regions of BC other than the Mainland/Southwest. BC stakeholders located in remote, rural and Northern municipalities voiced their concerns for STEM labour shortages and sub-regional immigration governance.

### ***5.1 Incorporating sub-regional differences into provincial immigration and funding planning***

Immigration policies in BC have been traditionally tailored mainly to the Mainland/Southwest context, but implemented exactly the same across all other sub-regions. Some regional stakeholders note this results in policy which is ill-fit for the realities of more remote, rural and Northern sub-regions in BC, with little or no room for adaptation to their different contexts and circumstances. For example, one representative from the city of Kelowna described a complicated situation for businesses seeking to recruit internationally. The provincial policy states that it is impossible to receive a positive LMIA for skill level “D” occupations or Accommodations and Food Service or Retail Sales occupations if the region’s annual unemployment rate is at 6% or higher. However, unlike much of the Mainland/Southwest, BC’s other sub-regional unemployment rates can vary drastically depending on the locality. For example, Kelowna’s unemployment rate is 4.3% but the Thompson-Okanagan regional unemployment rate is 8.6%. So although the region has a relatively high unemployment, the city of Kelowna still requires immigration to fulfill employment needs and address specific talent gaps that are insufficiently met by the current talent pool in Kelowna and within the region of Thompson-Okanagan.<sup>209</sup>

The Kootenay Association for Science and Technology (KAST) describes many government solutions to remote, rural and Northern sub-regional problems as attempts aimed to filling gaps with new, one-size-fits-all initiatives. KAST suggests that the regions do not necessarily need more funding or different programs. They instead believe that what is more needed is the reallocation, coordination and streamlining of access to existing programs and available funding more evenly across all sub-regions. KAST highlights that rural companies are less likely to know about government supports—or even have the capacity to apply to them—when compared to companies in the Mainland/Southwest sub-region. As a result, more remote, rural and Northern sub-regional actors are disadvantaged in applying for these opportunities. To compensate for governmental shortcomings, regional industry associations play a critical role in connecting people and businesses to the supports they need for accessing employment or growing their company.<sup>210</sup>

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<sup>209</sup> Stakeholder Interview, *City of Kelowna*.

<sup>210</sup> Stakeholder Interview, *Kootenay Association for Science and Technology (KAST)*; Stakeholder Interview, *Accelerate Okanagan*.

### 5.2 Municipality-based responses: Prince George, Northern BC

The BC PNP Regional Entrepreneur Pilot (as discussed in Section II: Global talent recruitment and retention) seeks to work in association with the local municipalities of BC and act as a ‘matchmaker’, allowing entrepreneurs to establish businesses in more remote, rural and Northern communities. Since Prince George’s involvement as of February of 2019, they were receiving significantly more interest in investment opportunities in Prince George. The city reported an average of 30 foreign investors reaching out for information per month as of the first three months into the Pilot, a significant raise from the estimated 75-person total per year prior to their involvement.<sup>211</sup>

The municipality of Prince George has also taken their own action to encourage intra-provincial, interprovincial, and international migration. They recognized one of the hurdles to encouraging people to move to Northern areas is a lack of knowledge or negative prejudgments about living there. Their response is ‘Move Up Prince George’, a city initiative that is dedicated to promoting and advertising what Prince George has to offer and dispel negative misconceptions. They offer information about Prince George, its amenities, a jobs portal for direct access to Prince George based job postings, as well as building relationships with, and answering questions from, prospective newcomers.<sup>212</sup> Some cities in Northern BC and the Okanagan leverage high housing costs in Vancouver and Victoria to advertise and attract newcomers through the affordability of remote, rural and Northern cities.<sup>213</sup>

### 5.3 Sub-regional post-secondary institutions: international student attraction and labour retention

Post-secondary institutions play a role in international student recruitment and their potential labour retention across BC’s sub-regions. A representative from BCCIE noted that post-secondary institutions of Northern and Eastern BC are taking advantage of international marketing initiatives to promote their university programs in hopes of attracting more students.<sup>214</sup> Accelerate Okanagan reported that Okanagan College (OC) has been active in adapting their programs to the needs of the Thompson-Okanagan sub-region. For example, OC’s Aircraft Maintenance Engineer program strives to meet the requirements of the top aerospace employer in the Okanagan.<sup>215</sup>

Moreover, the revenues from international tuition rates are increasingly part of the growth and development plans of educational institutions across BC. The colleges and universities of Northern and Eastern BC are active in factoring international students as a critical component of their academic and extra-curricular

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<sup>211</sup> Stakeholder Interview, *City of Prince George*.

<sup>212</sup> Stakeholder Interview, *City of Prince George*.

<sup>213</sup> Stakeholder Interview, *City of Prince George*.; Stakeholder Interview, *City of Kelowna*.

<sup>214</sup> Stakeholder Interview, *BCCIE*.

<sup>215</sup> Stakeholder Interview, *Accelerate Okanagan*.

growth. These educational institutions play a role in attracting new talent to the sub-regions and fostering greater regional economic diversity. The universities and colleges maintain close ties with industry through co-op placements and job opportunities, supporting the effort to retain recent graduates to the sub-regional labour force.<sup>216</sup>

### **6. Data and information gaps are limiting effective policy making**

Consistent, up-to-date and accessible data, including statistics and qualitative information is needed to formulate coherent and effective policies for the recruitment and retention of foreign STEM talent. However, in BC gaps and issues with the data that exists, its collection, disaggregation and sharing are a persistent problem and effective barrier to the planning of BC's industry actors. It also hinders the provincial government's ability to adequately promote and support the interests of STEM industries and newcomers to BC.

Stakeholders noted persistent gaps and a lack of comprehensive comparative information which is available and accessible to them regarding BC's future labour market projections. WorkBC's annual Labour Market Outlook (LMO) is seen as the only resource. Some stakeholders viewed themselves as overly reliant on the LMO for planning purposes. They suggested that the unverifiable nature of the LMO causes some issues including uncertainties regarding the accuracy, goals and intentions of the document that may affect longer-term projections. Similarly, stakeholders and recent publications note a lack of transparency surrounding post-secondary and other educational institutions, where decision-making was often seen as 'private and overly secretive'. This lack of transparency may hinder collaborative and information-sharing abilities and prevent effective multi-tier governance at the regional, provincial and federal levels.<sup>217</sup>

The issue of outdated NOC codes is making it both systematically ineffective and is also demonstrative of a broader lack of data and transparency concerning governmental planning and information sources. The lack of knowledge on the prevalence or magnitude of STEM occupations in non-STEM sectors, and the greater integration of technology occupations in health and other sectors, remain vastly under-researched. BC's small business-dominated economy poses a collection issue to the existing challenges in quantifying the larger discussions of the STEM industry in BC. Quality disaggregated data is difficult to find on the sub-regional basis as noted by KAST, which expressed frustration with the quality and availability of statistics that affect their operations and ability to apply for funding.<sup>218</sup> The information is especially critical for sub-regional development. In response to provincial shortcomings, regional associations have had to generate

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<sup>216</sup> Stakeholder Interview, *BCCIE*.

<sup>217</sup> Stakeholder Interview, *BCCIE*.

<sup>218</sup> Stakeholder Interview, *KAST*.

labour force and economic reports themselves for their respective sub-regions.<sup>219</sup> They express the need for greater inclusion of sub-regional STEM development in the larger provincial economic and immigration strategies.

The #BCTECH Strategy stated that the work of data collection and dissemination of BC statistics has remained foundational to industry-wide understanding of “*the growth and needs of the technology industry as a whole*” and that “*sector data could be better used for the benefit of British Columbia.*”<sup>220</sup> “*Today, the vision is to create a single, safe and trusted platform to make new discoveries with government data to create jobs.*”<sup>221</sup> Similarly, the results from the stakeholders’ briefing held by the Canadian Chamber of Commerce resulted in the formation of a 5<sup>th</sup> committee exclusively for Data Collection & Analysis and Labour Market Impact, allowing for collaboration with pre-established subcommittees on what data needs to be collected and shared.<sup>222</sup>

However, despite these stated intentions, there is little evidence of systematic coordination between various stakeholder groups, the provincial government, and the federal government.<sup>223</sup> Quality statistics and data sharing to support evidence-based policy are essential to the effectiveness and adaptability of the immigration system and to the success of BC’s STEM industry. It is essential to improve BC’s provincial statistics capacities in order to make disaggregated and up-to-date data available, to share among all stakeholders, and to enhance evidence-based policymaking.

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<sup>219</sup> Such as Northern Development Trust, VIEA and VIATEC.

<sup>220</sup> BC (2017a).

<sup>221</sup> BC (2017b).

<sup>222</sup> CCC (2016).

<sup>223</sup> Stakeholder Interview, *BCCIE*; Stakeholder Interview, *WD*.

## Conclusions. Recommendations and outlook

British Columbia's STEM sector has demonstrated its ability and promise to contribute to economic growth, and its potential to be a leading STEM cluster globally. However, the current and intensifying labour shortages of highly skilled and specialized talent are detrimental to fostering the innovative economy necessary for the attraction and retention of both highly skilled workers and STEM businesses. The repercussions of COVID-19 will only intensify the need for global talent in the future of Canada's and BC's economic recovery. In early May of 2020, Federal Immigration Minister, Marco Mendicino, made a statement reaffirming Canada's continued need for foreign professionals.<sup>224</sup> The Federal government will continue admitting applicants to this year's stated immigration levels, as it recognizes that COVID-19 will not impact Canada's pre-existing need for immigrants to meet labour demand. Minister Mendicino stated "*Immigration will absolutely be key to our success and our economic recovery.*"<sup>225</sup>

The successful relaunch and further growth and success of BC's STEM economy will largely depend on the province's ability to foster a culture of attracting and retaining sufficient numbers of highly skilled professionals. BC must become both a local generator of, as well as an international magnet for, a highly skilled workforce. Achieving this will require a heightened level of integration, coordination and cooperation between industry, government, educational institutions, regulatory bodies and professional associations and settlement services among other key actors. Immigration is essential to the recovery of BC's economy, and both its short- and long-term needs. All stakeholders play important roles in fostering BC's global reputation and maximizing its ability to tap into, as well as effectively utilize global talent. Key recommendations from the findings of this report include:

**1. Support the HR capacities of BC's small and medium sized businesses.** To support businesses in addressing talent shortages, the BC government may consider providing HR tax credits or labour subsidies for smaller firms so they may boost their capacity to invest in their HR functions, such as recruiting and retaining global talent and international students. Similarly, to reduce the barriers smaller businesses face in accessing the immigration system, the federal and provincial governments could discount application fees for small and medium sized businesses. To support smaller business recruiting efforts, educational institutions and professional and regulatory bodies have the potential to play a liaison or matchmaking

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<sup>224</sup> El-Assal, Kareem & Thevenot, Shelby (2020), *Canada's immigration minister shares coronavirus updates*. Ottawa: CIC News: <https://www.cicnews.com/2020/05/canadas-immigration-minister-shares-coronavirus-updates-0514283.html#gs.60qj2p>

<sup>225</sup> El-Assal & Thevenot (2020).

function between talent and industry. Having direct links to highly skilled labour, these organizations could support businesses seeking talent by connecting them with existing members, or immigrants seeking Canadian experience in their relevant fields.

**2. *Embrace international workplaces and address unconscious bias.*** Education on and recognition of conscious and unconscious bias at all levels of an organization are important steps employers can take to enact equality in recruitment and improve retention. Reshaping hiring practices to favour competency- and value-based models enable a wider pool of international applicants who struggle with employer-posed barriers such as required Canadian experience or Canadian-equivalent foreign credentials. Intentional onboarding practices including peer-mentorship programs and monitoring integration goals with managers could help newcomers adapt and create an organizational culture where immigrating employees feel valued, supported and foster a sense of belonging.

**3. *Increase government alignment with industry needs.*** Immigration authorities at the provincial and federal levels should strive for higher levels of adaptability and responsiveness to business needs and changing labour market conditions. Faster adoption of stakeholder feedback into the immigration process relating to clarity, requirements and user-friendliness of the applications could increase businesses usage of the system. Creating an ‘open’ NOC category could enable developing and emerging industries to hire specialized talent more easily from abroad by permitting the flexibility necessary for their constantly innovated, added and redefined occupational roles. Improving sub-regional STEM-industry development and immigration access does not necessarily require new programs, but rather adjustments to embed more flexibility into previously one-size-fits-all approaches which would streamline access for firms in remote, rural and Northern contexts.

**4. *Improve robustness of more systematic and regular data feedback mechanisms.*** High quality and disaggregated statistics are incredibly important for planning purposes and evidence-based policy making in the immigration and settlement service systems. Improved statistics collection regarding labour market outcomes for immigrants in BC are necessary, particularly from the historically closed professional and regulatory bodies. The systematic collection, disaggregation and improved sharing of more transparent data from government to industries would be extremely helpful for business planning and applications for government funding programs, particularly for firms across BC’s more remote, rural and Northern sub-regions.

According to IEC-BC, the actions taken by the government in response to the COVID-19 pandemic over the next two years will be critical. Canada's 2020 immigration targets will certainly be impacted by the pause in international mobility and could significantly impact future immigration projections. Canada and BC must consider how they will relaunch their global talent recruitment and retention, and how to support future migrants. Safeguards are required to ensure immigrants with no other choice than to fill positions lower than their experience levels at this time are not permanently trapped operating below their capacities.

The public attitude and support or opposition for immigrants must also be managed, IEC-BC stated "*We need to be very careful to address legitimate concerns around immigration and around the labour market, but we don't need to tolerate racism, we need to combat it every step of the way.*" While it is clear that immigration will be a factor in BC's recovery, it is unclear if the public will accept that reality. A rise in anti-immigration, xenophobia and racism has already surfaced in BC and other provinces with increased racially motivated vandalism and assault particularly against people of Asian heritage.<sup>226</sup> IEC-BC and other stakeholders consulted are concerned about a backlash against immigrants during the COVID-19 recovery. Highlighting the importance of immigration to future growth and recovery in public and business communications will be essential.

Regardless of the pandemic and current economic circumstances, the talent shortages for skilled labour will continue to disadvantage BC businesses. Companies are still required to find talent that does not exist in BC or Canada. Moreover, the federal and provincial governments must show innovation and creativity in implementing immigration solutions, potentially considering further easing of labour force integration for Canada's remaining in-country international students and existing temporary foreign workers. Uniting a positive public sentiment will take concerted effort from government and other stakeholders to ensure immigrants experience successful integration, continued growth and positive advancement in their careers following Canada's COVID-19 recovery. The immigration system is a powerful tool at BC's disposal for STEM industry growth. Improving its usability and industry cohesion will be key to the future recovery and success in BC's mission to become a top global innovation cluster.

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<sup>226</sup> Bowden, Olivia (2020), *These Asian Canadians are concerned as hate crimes spike in the coronavirus pandemic*. Toronto: Global News: <https://globalnews.ca/news/6858850/these-asian-canadians-are-concerned-as-hate-crimes-spike-in-the-coronavirus-pandemic/>