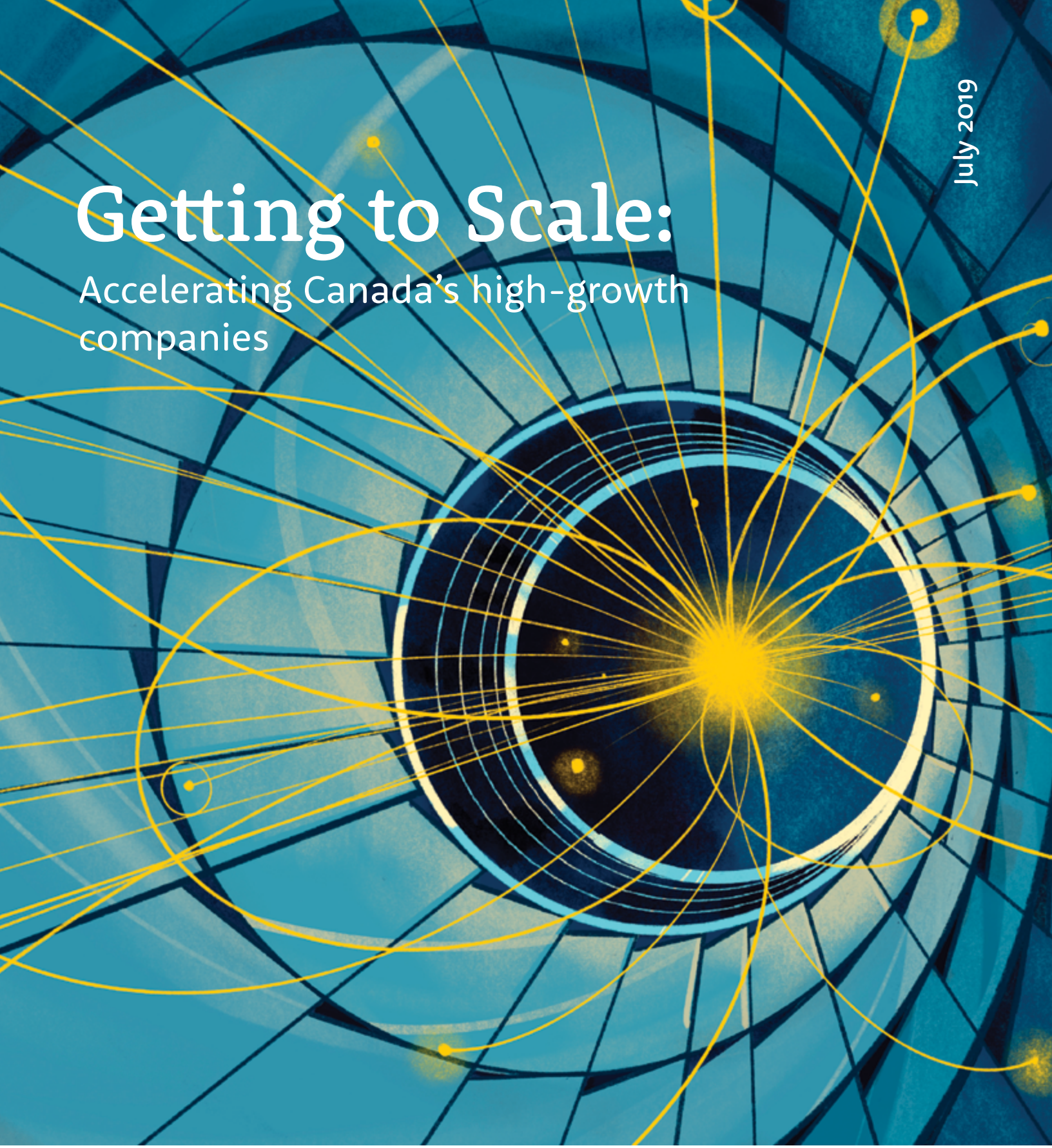

July 2019

Getting to Scale:

Accelerating Canada's high-growth companies

Report of the Special Advisor to the Minister of Small Business & Export Promotion

This report was supported by Innovation, Science, and Economic Development Canada.

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The Honourable Mary F. Y. Ng
MP, Markham–Thornhill
Minister of Small Business and Export Promotion
C.D. Howe Building
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Ottawa, ON K1A 0H5

Dear Minister Ng,

Some six months ago, you assigned me a task: to identify Canadian firms that were scaling their operations, to go meet them and speak with them, and to find out how the government can best help them reach their potential. More than 100 interviews later, that task is complete and I am pleased to provide you with this report on how to help Canada's most promising businesses scale their operations and give them their best chance at becoming global leaders.

In the last decade, Canada's governments, along with the private sector, have made tremendous progress building a robust startup ecosystem in Canada. In all parts of the country, there are now incubators to help startups get off the ground; mentorship programs to provide them with strategic, legal, and financial advice; and venture capital to fund their early stages.

This work represents a tremendous collective effort, and it is bearing fruit in the form of promising firms ready to take their innovations and their operations into a new stage of growth. If they are successful, they can become the kind of companies that will contribute to Canada's success in the global digital economy and ensure Canada's prosperity for decades to come.

But it is important to emphasize that this is not a linear progression. Of the thousands of startups launched in Canada each year, only a fraction will demonstrate the ability to scale into global players and the potential to become 'unicorns' that dominate their sector. And when they reach this stage in their evolution, their needs change substantially. They need to secure their intellectual property, learn to do business in countries around the world, and cope with global competition—and they need a significant financial investment to fund it all.

Most importantly, they need to hire lots of talent to help them reach their potential and manage their growth—**scaling firms are the employment engine of the innovation economy and a key contributor to middle class growth.** Our objective should be to help these firms scale to the point where they become large, globally significant going concerns. To do so, the government needs to turn its policy focus towards the unique needs of scale-up firms to ensure that they have the specific kinds of supports they require.

This report is the result of more than 100 interviews with companies and experts within and outside government, and as such reflects the voice and perspective of Canada's dynamic entrepreneurs. Its purpose is to help the government by providing a more thorough understanding of the challenges faced by scaling firms and outlining the kinds of policy solutions that can be put in place to assist them. The government's objective should be for Canada to reap the return on its investments in startups, by providing a different suite of supports for those that are ready to scale.

To reach that objective, the federal government will need to **foster and lead a 'Team Canada' approach** to helping its scale-up firms succeed. Everyone—**provincial, territorial, and municipal governments, as well as** public and private sector institutions, from banks to universities and colleges to hospitals and telecommunications firms—needs to understand the role they have to play and the responsibility they hold for making sure these promising homegrown firms have the best possible opportunity to scale up, here in Canada. Our institutions need to be 'pulling' these firms into their support networks, rather than the firms having to 'push' their way in, a common theme among those I met. And both governments and institutions also need to support these firms by being their customers: large procurers should be constantly on the lookout for new technology and become early adopters of innovation.

The effort to help scaling companies reach their potential ought to be a national endeavour, intended to bolster Canada's competitiveness and prosperity in a changing global economy. **The task is akin to a trade mission, but one whose most important work will be done here at home. And success** will require that governments consider the unique circumstances of each scaling firm and provide targeted support. While startups number in the thousands every year, only a small fraction get the chance to scale at a global level. They are larger and more complex, often working within a specific sector, each facing a vastly different array of challenges. As a result, support for scaling firms will require more targeted interventions designed to help them meet their unique situations.

It is important to acknowledge that many of the challenges that scaling firms confront are not challenges that could be—or even should be—solved via public policy. These are private sector entrepreneurs growing businesses; much of their success is out of the hands of policymakers. This report's analysis and recommendations are mindful of this, and attempt to avoid any policy 'overreach.'

But where government can play a positive role, it should. The issue of how best to scale the country's most promising scale-up firms is not unique to Canada: other countries around the world are attempting to solve the very same problem. The entrepreneurs I spoke with were proud of being Canadian. They want to grow here and contribute to the lasting prosperity of their country and their communities. And they are eager for a government partner who can offer them the kind of support they need. It is my hope that this report will lay the groundwork to continue to build that partnership.

Sincerely,

Sheldon Levy
Special Advisor to the Minister of Small Business & Export Promotion

EXECUTIVE SUMMARY

The foundations of today's global economy are rapidly shifting. Traditional components of economic growth are being supplanted by the rise of new markets and new business models based primarily on intangible assets. For today's startup founders and leaders, this shifting economic landscape has critically important implications for how to scale new business and compete globally. These new market dynamics mean that scaling companies has never been more challenging, but also that the potential benefits have never been greater.

In recent years, we have seen a shifting focus from supporting startups to scale-ups. Around the world, economists and policymakers have recognized that scale-ups—or rapidly growing companies—contribute disproportionately to key metrics such as economic growth, job creation, wealth generation, productivity growth, and national competitiveness.

Canada, wisely, has been part of this wider trend. Previous investments in developing and supporting Canada's startup ecosystem have now put the country in a position to tackle the next challenge: building a vibrant ecosystem for supporting and fostering the success of our scale-ups.

However, with this shift has come a growing recognition that the policy needs of scale-ups are unique: **Many of the barriers and challenges our scale-ups face are different than those faced by startups and large Canadian corporations.**

In response, targeted support for scale-ups has emerged as a key part of the Government of Canada's Innovation and Skills Plan. Other levels of government and innovation-enabling organizations have also increasingly focused their attention on supporting Canada's scale-ups. Collectively, this represents a strong foundation for tackling the next set of challenges facing our high-growth firms. However, while significant work has been done, there is more to do to help Canadian scale-ups.

Over the past six months, the Special Advisor and his team engaged and consulted founders, business leaders, service providers, ecosystem experts, and policy experts across Canada, gathering insights into the barriers that scale-ups face along their growth journey and the experience of companies in accessing business services, supports, and financing.

FINDINGS AND INSIGHTS

The key barriers and challenges facings scale ups in Canada can be collected and summarized under four broad categories:

Talent: The supply of talented employees, managers and leaders emerged as the top issue across our interactions with companies and ecosystem experts. We heard that there are widespread challenges in hiring and retaining experienced executive talent, senior technical and creative talent, as well as senior marketing and sales talent. Scaling firms are in competition with large multinationals and domestic firms to secure the best and brightest, and talent shortages for key roles and skills are driving up salaries and resulting in poaching by competitors. Despite recent improvements, a number of companies expressed frustration with processes for hiring international talent, which may reflect a lack of usage or awareness of the programs available.

Access to Capital: Access to capital is a critical component of the success of high-growth firms. One area where Canada risks falling behind is the supply and availability of growth capital. Large ($100 million or more) late-stage venture capital (VC) rounds can often be crucial to achieving scale. Although the VC market has shown strong growth in recent years, Canadian scale-ups are struggling to access greater amounts of capital. This also extends to instruments such as debt financing. We heard clear concerns surrounding debt financing for intangible assets from the financial experts interviewed. Companies spoke to frustrations around the valuation of their intellectual property by Canadian banks and financial institutions. In addition, we uncovered a collection of issues that are potentially limiting firm growth and creating conditions where Canadian founders are opting for early exits. This is partially driven by a lack of access to financial instruments of maturity, complexity, and variety that could offer incentives to keep a scaling company from exiting.

Market Access: A core priority of high-growth firms is finding new ways to sell their goods and services, attracting new customers while retaining existing ones. Companies interviewed reported that they *wanted* to sell to the government, but that they perceived the procurement and reporting process as too complicated, onerous, and lengthy. Despite improvements, the procurement environment still feels siloed and overly transactional, rather than providing strategic opportunities for Canadian scaling companies. Companies also highlighted the need to reduce regulatory barriers for bringing new products to market. Finally, while many scale-ups have already begun selling internationally, we uncover a number of small issues that could help boost international sales.

Government Incentives and Supports: Finally, government support—either through grants, incentives, or non-financial means—can be an important contributor to firm growth. Generally, companies expressed a perception that the government does not always understand the needs of entrepreneurs. This is especially true for entrepreneurs working in emerging sectors, and with new and innovative business models. Companies expressed concern regarding the complexity and the compliance burden of accessing government programs. In addition, to maximize success, support for scale-ups should be more concentrated to a small number of high potential firms, with levels of support increasing.

RECOMMENDATIONS

To address these barriers, we have outlined four overarching recommendations for consideration by the federal government.

Recommendation 1: **Build out a Comprehensive 'Own the Podium' Strategy for Supporting Canada's Scale-ups.**

The Canadian government should prioritize support for select high-potential sectors and companies, who could be boosted to become future anchor firms.

Recommendation 2: **Expand the Supply of Talent for Canadian Scale-ups.**

This should include supporting the development of senior experienced talent, increasing international talent attraction, and ensuring training programs supply scale-ups effectively.

Recommendation 3: **Expand the Supply of Later Stage Growth Capital and Financing of Intangible Assets.**

This could take the form of incentivising the creation of larger late-stage venture firms and positioning BDC as a leader in addressing the market failure in financing intangible assets.

Recommendation 4: **Support Access to and Development of Markets that Enable Scale.**

This includes supporting the creation of consolidated domestic markets, increasing the agility of the regulatory process, and facilitating access to international markets.

Canada is home to a collection of promising high-growth firms that are on the verge of becoming global players. These scaleups are committed to succeeding and creating home-grown success stories right here in Canada. Nevertheless, these firms require the support of federal, provincial/territorial, and municipal levels of government, as well as other ecosystem players including postsecondary and financial institutions in order to fully unlock their full potential.

Canada's economic prosperity and future depends on these leading firms; they are our hedge against a disruptive and changing economy, and vital sources of current and future employment and economic growth. It is imperative for Canada to forge a path that supports and enables scale-ups to reach their full potential.

We are confident that Canada has what it takes to get there.

1.0 INTRODUCTION

1.1 A RAPIDLY CHANGING GLOBAL ECONOMY

The foundations of today's global economy are rapidly shifting. Traditional components of economic growth—investing in machinery and equipment, building manufacturing and production facilities, optimizing physical supply chains, and shipping products to markets—are being supplanted by the rise of new markets and business models.

The principal components of this new economy are intangible assets that generate value but do not take physical form: ideas that are not bound by physical borders; digital products or services that have zero or near-zero marginal costs; software that automates processes or entire business operations; world-recognized brands; as well as arresting and intuitive designs that attract and retain customers (Wolf, 2017; Haskel and Westlake, 2017).

In this new world, ideas, ingenuity, and talent are paramount. The companies—and countries—that understand how to create, protect, and commercialize these assets stand to reap tremendous gains. Conversely, in an increasingly competitive global economy, companies and countries that fail to recognize and respond to this shift risk stagnating and falling behind.

Nowhere is this change more pronounced than on the balance sheets of the world's most successful companies. On the most widely representative index for the US stock market, the S&P 500, intangible assets have grown from only 17% of company assets to 85% over the last 40 years (Asselin and Speer, 2019).

For today's startup founders and leaders, this shifting economic landscape has critically important implications for how to scale new businesses and compete successfully on a global stage:

+ It means that many new markets are inherently global in nature; the absence of physical goods or services means that geographic borders matter less and companies can sell globally from the outset.

+ It contributes to the rise of winner-take-all markets where scale, network effects, and first-mover advantages can mean the difference between emerging as a global powerhouse, or being rendered irrelevant and obsolete (Barwise, 2018).

+ It means that technology—and, more specifically, the set of digital technologies that include software, low-cost computation, networking, and artificial intelligence (AI)—is increasingly becoming a competitive edge across *all* industries, not just tech industries (Andreessen, 2011).

+ Finally, it means that the gains for winning in this world are so great, a new focus on hyper-growth—or 'blitzscaling'—has emerged, where size and scale are prioritized at all cost (Sullivan, 2016).

Together, these new market dynamics mean that scaling companies has never been more challenging, but also that the potential benefits – to founders, to employees, and to nations – have never been greater.

Figure 1: **Growth of the Intangible Economy**

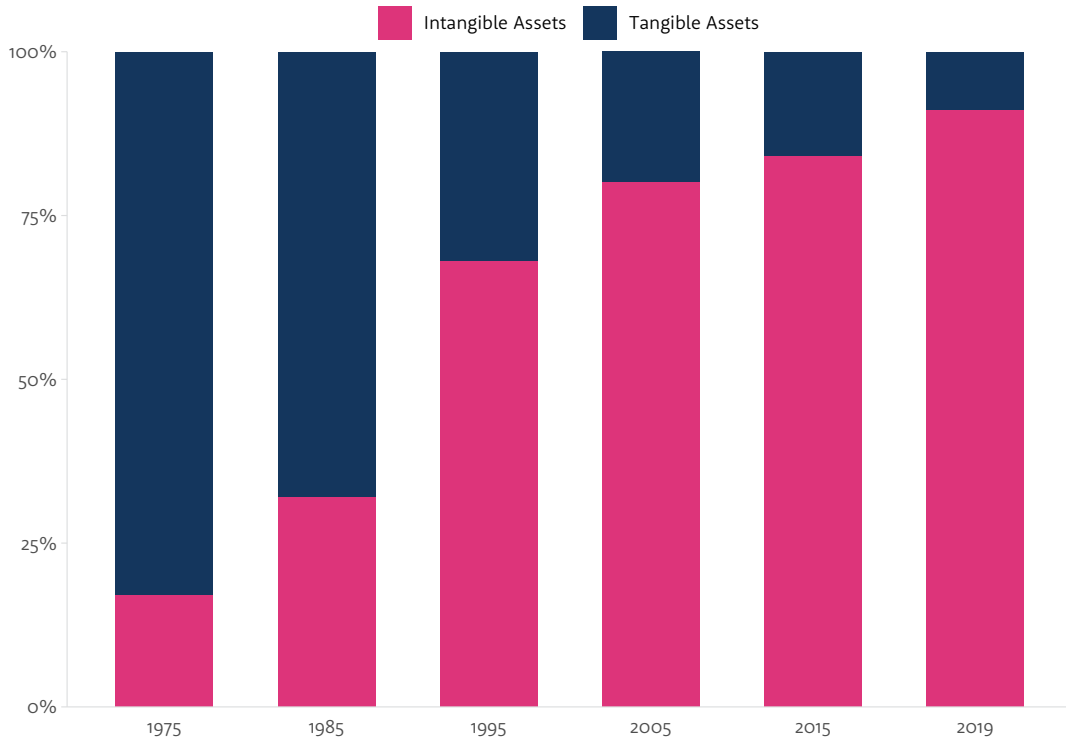


Chart reproduced from Public Policy Forum: "A new North Star: Canadian Competitiveness in an Intangibles Economy" (Public Policy Forum, 2019)

1.2 A SHIFTING FOCUS: FROM STARTUPS TO SCALE-UPS

Over the past two decades, supporting startups (and entrepreneurs in general) has emerged as an important trend globally. Nations have seen the benefits of supporting the creation and growth of new firms as they contribute to economic growth, innovation, competitiveness, and job creation (Archambault and Song, 2018). Enabling homegrown firms also hedges against disruption of national economies by large multinational firms. As a result, significant effort and resources have gone into supporting startups and building startup ecosystems around the world. Correspondingly, there has been significant attention devoted to developing the underlying set of policies for supporting startups and entrepreneurs.

In recent years, there has been a shift towards focusing on a new category of firms—high-growth firms or 'scale-ups. Evidence has shown that these firms contribute disproportionately to job creation and economic growth, while supporting productivity growth, technology adoption, and innovation (OECD, 2018d). In effect, the benefits or spillover effects from investing in a robust startup ecosystem are beginning to emerge in the form of a small number of promising firms who make it to the scale-up stage (Plant, et al, 2018).

Canada, wisely, has been part of this wider trend. Key investments in developing and supporting Canada's startup ecosystem at the federal, provincial/territorial, and municipal levels, and across the public, private, and non-profit sectors have been crucial in building out a startup

ecosystem that boasts significant advantages. These investments have enabled Canada to reach a critical inflection point: a strong, thriving startup ecosystem that is producing new firms every year. Most importantly, these investments made years ago helped create a flow of startups that are now breaking through, creating the scale-ups of today.

Canada's advantage in building a strong startup ecosystem has put the country in a position to tackle the next challenge: building a vibrant ecosystem for supporting and fostering the success of our scale-ups. And, while significant work has been done, there is more to do to help Canadian scale-ups. **Many of the barriers and challenges our scale-ups face are different than those faced by startups and large Canadian corporations.** Understanding and identifying the needs of this country's scale-ups will be critical to unlocking the economic potential of our most promising high-growth firms.

It is important to note that this does not mean startups are no longer relevant or that Canada should reduce its support for startups. Rather, it means that successful existing policies should remain in place, while policy development should continue to increasingly shift toward understanding new ways to support scale-ups. Canada's economy faces a new set of challenges and opportunities, requiring a new set of solutions; it makes sense for policymakers to focus on how best to support scale-ups.

As such, this report will focus on trying to uncover the nature of these challenges and, where possible, provide recommendations. To generate insights into the barriers scale-ups face, we based our inquiry on the lived experiences of Canadian founders, CEOs, and senior leadership. This approach enables us to diagnose the specific set of challenges scale-ups in Canada face while striving to reach their full potential. Conversely, this report does not seek to address broader issues such as supporting startups or overall economic policy.

We recognize that this report will not be the final word on how to support Canada's scale-ups. Rather, we hope our findings will contribute to better outcomes and evolve our collective understanding of how to best support scale-ups in Canada. We also acknowledge—and are in tremendous debt to—the great work of those who have previously studied how to support startups and scale-ups. Our work would not have been possible without this strong foundation.

Finally, it is important to recognize the somewhat limited role of public policy and government in supporting scale-ups. First, as with startups, the vast majority of the factors that affect the health of scale-up firms are not in the hands of governments. Canada's tireless entrepreneurs—and their talented teams—are the key drivers of success for our startups and scale-ups. But public policy, crafted carefully and informed by the experiences of entrepreneurs, is essential in creating the underlying conditions necessary for these companies to thrive. Understanding this balance will be key to Canada's success in this area going forward.

1.3 CANADA'S INNOVATION AGENDA AND 'OWN THE PODIUM'

Canada has made significant strides in prioritizing scale-ups, putting policies and programs in place to support their growth. This prioritization has been a key part of the Government of Canada's Innovation and Skills Plan and was included as a core pillar in the recently released "Building a Nation of Innovators". The 2017 federal budget committed to "double the number of high-growth companies in Canada [...] from 14,000 to 28,000 by 2025" (Government of Canada, 2017b).

In recent years, numerous federal initiatives have added components that focus on helping scaling firms, including the Strategic Innovation Fund (SIF), the National Research Council-Industrial Research Assistance (NRC-IRAP), Regional Development Agencies (RDAs), the Business Development Bank of Canada (BDC), the Venture Capital Catalyst Initiative (VCCI), and the Scientific Research and Experimental Development Tax Credit (SR&ED). Furthermore, the Government of Canada has been proactive in helping Canadian firms access

new markets through Innovative Solutions Canada, alongside enhanced support from the Trade Commissioner Services (TCS) and Export Development Canada (EDC).

NEW GROWTH AND INNOVATION NETWORK FOR SUPPORTING SCALE-UPS IN ONTARIO

On April 16th, 2019, Minister of Innovation, Science & Economic Development Navdeep Bains announced a partnership between three of Ontario's top innovation hubs: MaRS, Communitech, and Invest Ottawa. The new partnership, supported by $52.4 million in funding from the federal government, will pool its resources to help 30 of Ontario's most promising scale-ups achieve revenues of $100 million or more by 2024 (Prime Minister's Office, 2019).

A focus on scale-ups also emerged as a key finding from the six Economic Strategy Tables recently convened by the federal government. The 2018 report called for adopting an 'Own the Podium'-type strategy, arguing that focusing on supporting a small number of high-potential firms was critical for Canada's prosperity (Government of Canada, 2018c).

Finally, beyond the federal government, other levels of government and innovation-enabling organizations have also increasingly focused their attention on supporting Canada's scale-ups. Collectively, this represents a strong foundation for tackling the next set of challenges facing our high-growth firms.

1.4 METHODOLOGY

This project sought to understand the challenges and barriers facing Canadian scale-ups, and where possible, develop recommendations to address them.

To achieve these objectives, we undertook an approach that heavily emphasized the knowledge and experiences of Canadian scale-up entrepreneurs, conducting numerous interviews with founders, senior management and ecosystem experts. We then supplemented this information with reviews of existing literature, data analysis and briefings from government and agency staff.

Overall, the project involved four phases:

+ **Phase 1:** Stakeholder outreach and expert interviews, plus literature reviews
+ **Phase 2:** In-depth interviews with select scale-up companies
+ **Phase 3:** Synthesis and analysis
+ **Phase 4:** Developing recommendations

Note: Although these phases were largely chronological in nature, in many cases they overlapped in time. For example, stakeholder outreach and interviews continued throughout the entire work period.

The scale-up ecosystem in Canada is complex and judgement was often required to assess what to include and highlight. Balancing the voices and perspectives of companies with appropriate context, fact-checking, and background information was important throughout this process. The findings in this report reflect a combination of insights from companies and ecosystem experts, and the judgement and assessments of the Special Advisor.

Outreach and Information Gathering

To generate key findings and insights into the barriers scale-ups face along their growth journey, the Special Advisor to Minister Ng, Sheldon Levy, and his team engaged and consulted founders, business leaders, service providers, ecosystem experts, and policy experts across Canada. This included:

+ Visiting and learning from business communities in Vancouver, Saskatoon, Waterloo, Toronto, Ottawa, Montreal, and Halifax;
+ Consulting 50+ company executives, including those from small startups, companies that have already grown to scale (500+ employees), and long-established Canadian anchor companies;
+ Engaging approximately 60+ senior ecosystem experts from business support organizations (e.g., incubators, boards of trade), and across the finance and legal sectors;
+ Receiving briefings on policies, programs, and research coordinated by Innovation, Science and Economic Development with input provided across a range of federal departments; and
+ Convening four roundtables across different sectors in Vancouver, Waterloo, Toronto, and Halifax.

The Special Advisor and his team interviewed companies with headquarters in seven provinces, representing diverse industries including: advanced manufacturing, agriculture-tech, cleantech, consumer goods, cybersecurity data analytics, education-tech, entertainment, and health-tech. The companies selected covered a broad range of business strategies and growth stages, from pre-commercialization to exporting in multiple international markets. Interviewed CEOs included first-time founders, as well as those with experience scaling and selling multiple successful companies.

In-depth Interviews with Scale-up Companies

Stakeholder consultations and roundtables were supported by additional in-depth semi-structured interviews with 13 scale-up companies, led by the Brookfield Institute for Innovation + Entrepreneurship (BII+E). The interviews were designed to explore and better understand the growth journey of Canada's scaling companies.

For each company included in the study, BII+E conducted interviews with multiple members of their senior team, usually the CEO or founder plus a combination of the senior executives of finance, talent, operations, and/or strategy departments. Depending on company structure and findings from initial interviews, some interviews were held with VPs of Intellectual Property, VPs of specific international export markets, VPs of Product, CTOs, and others. (See Appendix A for a full list of participating companies and summary statistics.)

SELECTING SCALE-UPS

In the absence of publicly available company growth data, BII+E based company selection on available static data including employee counts, revenue, and external funding. For the purposes of selecting companies for interviews, BII+E defined 'scale-up' as a company with approximately 50-500 employees and revenue of $10 million or more, with consideration given to representing a range of growth stages and firm ages, geographic and sectoral representation, and ensuring the list included companies with females and visible minorities as founders and/or members of the executive team.

(See page 14 for a more detailed discussion of defining scale-ups.)

Interviewee Definitions

Throughout this project, BII+E spoke to a wide range of individuals and organizations. To encourage participants to speak openly, supporting quotes have been anonymized throughout the report: removing company names, making job titles generic, and editing out any identifiable information. For clarity, we have used the following terms when referencing these quotes:

+ **Scale-up [job title]:** These quotes have been sourced from interviews with the cohort of 13 scaling companies that took part in multiple in-depth interviews as part of this project, as well as other companies that fit this criteria who were engaged through other forums, including one-off interviews and sectoral and regional roundtables.

+ **Startup [job title]:** Quotes from CEOs or senior executives from startup companies (<50 employees, <$10 million revenue) who were interviewed or engaged through roundtables.

+ **Large company [job title]:** Quotes from CEOs or senior executives from large firms (500+ employees) who were interviewed or engaged through roundtables.

+ **Finance Industry Expert:** Quotes from current and former senior banking executives, partners of venture capital funds, and representatives of other financial institutions.

+ **Ecosystem Expert:** Quotes from individuals from startup incubators, chambers of commerce, the federal public service, and other institutions.

Limitations and Omissions

In order to avoid duplicating previous research on how to support Canada's scale-ups, this report is focused on capturing the experiences and perspectives of scaling firms. It includes stakeholder and expert interviews, literature reviews, and landscape scans. This provides unique insights into firm perspectives but does limit the ability to make broad claims about all scale-ups and sectors. Wherever possible, we have sought to supplement and inform findings with existing analyses and available data. Any errors in transcription or analysis are the fault of the authors and not the participants, who generously lent their time and expertise to this project.

Although companies from nearly all provinces are represented in this study, we would have liked to explore particular lenses and experiences in more detail including: scale-ups led by female, Indigenous, visible minority, and immigrant individuals, as well as more detailed regional and sectoral analysis. Although we ensured that these perspectives were reflected in the C-suites of selected companies and through our literature review, additional analysis of the challenges, advantages, and successes of Canada's diverse entrepreneurs is both welcome and necessary.

2.0 SCALE-UPS AND CANADA

2.1 DRIVERS OF ECONOMIC GROWTH: WHY SCALE-UPS MATTER

In recent years, economists and policymakers have focused on better understanding the contributions of scale-ups to key economic metrics such as job creation, wealth generation, productivity, national competitiveness, and economic growth.

Recent empirical studies have shown that a small number of high-growth firms contribute disproportionately to net job growth across national economies. This has been demonstrated in a variety of countries, including: the United Kingdom, where just 6% of high-growth companies generated half of the UK's job growth between 2002 and 2008 (Nesta, 2014); the United States, where 2% of firms generated 35% of all net new jobs between 2009 and 2012 (Clayton and Sadeghi, 2013); and in Canada, where 1.24% of firms contributed 63% of net employment growth between 2009 and 2012 (Rivard, 2017).

The Organization for Economic Cooperation and Development (OECD) has compiled a database to track firm growth dynamics across 18 countries between 2001 and 2011. Studies based on this database have demonstrated similar results across countries, with young small and medium-sized firms contributing disproportionately to job creation (OECD, 2018d, Criscuolo et. al., 2014).

This consistent pattern across countries and time periods has led economists to conclude that, in general, a small number of high-growth firms tend to create a disproportionately high share of new jobs (Coad et. al., 2014).

In addition to job creation, evidence suggests that high-growth firms are significant contributors to productivity growth. A 2015 UK study found that high-growth firms tended to invest more in innovation and human capital and demonstrate higher total factor productivity (TFP) growth (Du and Temouri, 2015). Also, a 2018 OECD review found that high-growth firms can contribute indirectly to productivity growth by "sparking new demand for advanced products and services, generating knowledge spillovers [...], and strengthening the local entrepreneurial culture" (OECD, 2018d).

Finally, that same review concluded that medium-sized enterprises are key drivers of firm-level competitiveness and innovation (OECD, 2018d). Based on data from France, Germany, and Italy, scaling medium-sized enterprises were seen as early adopters of technology and frequently played key roles in supply chains, leading in areas like continuous improvement and product differentiation.

2.2 CANADA'S SCALE-UPS: HOW DOES CANADA MEASURE UP?

General findings related to the importance of scale-ups to job growth, wealth creation, and economic prosperity raises the question: how do Canada's high-growth firms compare?

A recent paper published by Innovation, Science, and Economic Development Canada (ISED) shows that the pattern of a concentrated number of fast-growing scale-ups contributing significantly to employment growth holds true for Canada. Between 2009 and 2012, high-growth firms in Canada comprised only 1.24% of all firms, but accounted for approximately 63% of all net new employment (Rivard, 2017). This was the equivalent of 372,377 net new jobs over the three-year period.

This is consistent with previous evidence, including a 2008 Industry Canada report that found that over a 15-year period, one million net new jobs (55% of net new jobs over the period) were created by firms growing their employment by 50% or more over a four-year period (Parsley and Halabisky, 2008, see also Picot and Dupuy, 1998).

The 2017 ISED study also concluded that high-growth firms are predominantly small and medium-sized enterprises (SMEs), with more than 98% of high-growth firms having fewer than 100 employees. These firms also tended to be younger and broadly distributed across industry sectors (Rivard, 2017). The Brookfield Institute's 2019 report on Ontario scale-ups found that 56% of employment-based scale-ups come from accommodations and food services; retail trade; administrative support; and professional, scientific, and technical services sectors. The same report found that 63% of revenue-based scale-ups come from the finance, insurance, real estate; construction; wholesale trade; and professional, scientific, and technical services sectors (Vu and Huynh, 2019).

A recent BDC study sought to understand how Canadian scale-ups were performing. This research found that the number of medium-sized businesses in Canada grew between 2001 and 2010, but fell as a proportion of all businesses (BDC, 2016). Nevertheless, the report emphasized the economic impact of this category of firms:

> *"Although they represent less than 1% of the total number of businesses in Canada (as of 2013), mid-sized businesses generate 12% of GDP, in good years and bad, while generating 12% of Canada's export value, 17% of private sector R&D spending and 16% of jobs in Canada"* (BDC, 2016).

The study also found that the majority of medium-sized businesses are found in two provinces (Ontario and Quebec), while medium-sized businesses headquartered in Ontario and Alberta were most likely to become large businesses (BDC, 2016).

ONTARIO SCALE-UP INDEX

Scale-up Activity in Ontario (Vu and Huynh, 2019) sheds new light on the growing impact of Ontario's scale-ups on job creation and GDP growth. This new research has, for the first time, benchmarked and mapped the performance of scale-ups within a province with the aim of shedding light on how Ontario can more fully realize the growth potential of its firms.

Between 2011 and 2015, Ontario added 3,000 revenue-based scale-ups; an increase of over one-third. Scale-ups make up a tiny proportion of Ontario's companies, but they contribute enormously to its jobs and growth. Together, Ontario's employment-based scale-ups (1,619) and revenue-based scale-ups (10,915) generated revenue of $282 billion. While scale-ups are concentrated in urban centres, they are driving growth in all corners of the province. London, Toronto, and Thunder Bay, for example, are all producing scale-ups at levels proportional to their size. Some regions have experienced particularly strong growth —Muskoka Kawarthas (59%), Kingston Pembroke (54%), Windsor Sarnia (48%), Kitchener-Waterloo-Barrie (43%), and the Hamilton-Niagara Peninsula (43%).

DEFINING AND MEASURING SCALE-UPS

This is an excerpt from the Brookfield Institute for Innovation + Entrepreneurship *Scale-Up Activity In Ontario* Report (Vu And Huynh, 2019).

There is limited international consensus on how to define scale-ups. Existing definitions tend to focus on two dimensions: growth in employee count and growth in revenue, while some definitions include additional metrics such as firm age or initial size. In Canada, the most recent academic effort to measure scale-up activity (focusing on the period between 1985 and 1999) identifies any firm with at least 50 percent employee growth in a four-year period as a "strong growth firm."

To ensure that the national statistics of member countries follow a consistent definition, the Organization for Economic Cooperation and Development (OECD) published the following definition in 2007:

> *"All enterprises with average annualized growth greater than 20% per annum, over a three-year period should be considered a high-growth enterprise. Growth can be measured by the number of employees or by turnover."*

Two other scale-up definitions that are widely used are those developed by the Kauffman Foundation. The Kauffman Foundation's first definition focuses on the absolute measure of employment growth. Specifically, it describes employment scale-up companies as:

- *Being 10 years or younger;*
- *Having started with less than 50 employees; and*
- *Having grown to 50 or more employees by the year of measurement.*

The second definition is a revenue-based definition to identify scale-up firms that:

- *Meet the OECD's threshold of 20 percent annualized revenue growth over three years; and*
- *Have a minimum revenue threshold of $2 million at the end of the growth period.*

Even if a consistent definition of scale-ups can be agreed to, measuring the impact of scale-up activities is far from straightforward. For instance, net jobs created through mergers and acquisitions. In addition, geographical factors are also important, as firms may register in one jurisdiction and generate growth in others.

Throughout this report, we have relied on data and analysis from a variety of sources, many of which utilize slightly different definitions for scale-ups. We recognize this challenge and have tried to utilize data that is as comparable as possible for the purposes of our analysis.

3.0 FINDINGS AND INSIGHTS

Supporting the growth of Canada's scale-ups first involves understanding the unique set of challenges they face. Our work aims to identify and understand these challenges, with a particular focus on the experiences of scale-up leaders and entrepreneurs.

To facilitate this understanding, we interviewed over 50 senior executives of scale-up firms at various stages of growth and met with over 60 ecosystem experts and stakeholders. We also conducted reviews of existing policy, examined literature on supporting scale-ups and, where applicable, accessed relevant data.

This process led to the identification of four key themes in supporting scale-ups:

+ Talent;
+ Access to Capital;
+ Market Access; and
+ Government Incentives and Supports.

We recognize that these broad themes are not necessarily new, but we believe that many of the nuances we uncover and explain over the next section are relevant and represent the next set of policy challenges for Canada's scale-ups.

Throughout our work, we maintained a relentless focus on issues that we felt were either uniquely or explicitly relevant to scaling companies. While many additional topics were raised through interviews or our own research, when preparing this report, we consistently filtered out topics or insights that were not directly related to the experiences of scale-ups.

Finally, we also recognise that while we have structured our findings around these four key areas, they do not sit in isolation. In many cases they are interdependent, and for some companies they may work to create a compounded set of issues limiting scalability. In order to tackle them effectively, a holistic approach will be required.

3.1 TALENT

Canada's talent gap and skills shortage has been well documented as one of the most significant barriers for high-growth companies (Cocolakis-Wormstall, 2018; Business Council of Canada, 2018; Government of Canada, 2018d; Denney, Southin, and Wolfe, 2019; Tibando and Do, 2018; Herman and Marion, 2016). For example, a forecast completed by Information and Communications Technology Council (ICTC) showed that 216,000 new ICT jobs will be needed across sectors by 2021 (ICTC, 2017). A BDC study found that 39% of surveyed SMEs reported that they were having difficulty hiring new employees (BDC, 2018a).

Other research has shown that recruitment of executive and specialized talent is limiting the size and speed of growth among scaling companies (Tibando and Do, 2018; Herman and Marion, 2016; Government of Canada, 2018d). Recent consultations on Canada's Digital Charter concluded that businesses are "seeing a shortage of skilled workers necessary to succeed in a digitally-driven economy" and that these shortages were particularly pronounced outside major urban centres (Government of Canada, 2019g).

Talent is particularly important for rapidly scaling businesses in enabling them to develop new products and services, navigate new markets, and develop their business structures. Complicating the problem is that, as they grow, companies need to pivot talent strategies from a focus on R&D to commercialization, growing sales, and navigating their expansion into new markets. This needs to happen while continuing to add new product and service lines, as well as building the organizational infrastructure needed to operate a larger firm and potentially multiple offices.

As a result, scaling companies face challenges building a robust talent pipeline at all stages of growth and levels of seniority. Interviewed companies generally welcomed hiring international workers to fill much needed talent gaps across a range of roles but expressed challenges with identifying and attracting international talent, including difficulties obtaining necessary approvals.

Overall, it is worth recognizing that talent shortages for scale-ups are partially a product of our own collective success. A strong growing economy with more Canadian firms—large and small—competing for talented workers has resulted in demand outstripping supply. However, this also points to the magnitude of the challenge: as our scale-up ecosystem becomes stronger, the talent problems will likely become more, not less, acute.

Limited Experienced Executive Talent

In previous research, high-growth companies across Canada have indicated that finding and recruiting experienced C-suite talent is a major challenge to expanding their operations (Government of Canada, 2018c; Business Council of Canada, 2018; Herman and Marion, 2016). This management gap is a result of the limited number of repeat entrepreneurs and experienced executives who have led companies to scale, managed growth on an international level, and can provide much needed management depth by putting that experience to work (Tibando and Do, 2018; Herman and Marion, 2016). Indeed, a 2016 report by the Lazaridis Institute found that 60% of firm founders and executives considered management capabilities the number one driver of underperformance of medium-sized firms (Herman and Marion, 2016).

Findings from company and expert interviews are consistent with the literature. Companies reported that the shortage of executive talent in Canada with experience scaling and growing a company limits the pool of suitable and available candidates. This included reported challenges in finding VPs of Sales and Marketing, CFOs, and staff in other senior-level strategy and operational roles. Furthermore, companies identified a lack of C-suite talent with first-hand experience scaling a company as a major barrier to creating an ecosystem that supports the next generation of high-growth businesses.

Experts also highlighted the lack of experienced board talent as another barrier for high-growth companies. They viewed board members as critical strategic advisors able to push founders and senior leadership to take companies in unparalleled directions and open doors to access new markets and sources of funding.

Company interviewees noted that in-demand highly-skilled workers are not just looking for salary and benefits, but also a work culture that supports their professional goals and personal values. Several companies highlighted that finding senior leaders who can not only create a culture that supports growth, but also "scale it across a fast-growing company"[1] is challenging. As companies grow, they must continually adapt their internal processes and culture to support their growing workforce, from onboarding new employees to adding in new layers of management and organizational structures. Finally, there are acute challenges with recruiting executive talent in economies outside of major urban areas, which may lack the ecosystem of peer and larger firms.

> ***"The core issue is management talent.*** *There are not a lot of folks who have done this before. A lot of people have started a company,* ***not a lot who have scaled a company to 1,000 people."*** —Scale-up VP of Strategy

> *"It is what you got to do to get to the next level.... In order to do that we are running a senior job search right now. We have got to find someone with that experience who knows how to do that.* ***We have lots of challenges around people, especially being [where we are].*** *We are not having too much fun with the job search.* ***We want someone who wants to move here, and it is not always easy."*** —Scale-up CEO

> *"The challenge of any company that is growing and scaling is all related to people and process.* ***It's one thing to run and manage a company with 15 people, it is a lot different when you get to 50 or 150 or 300. Things change pretty dramatically related to management.*** *Ensuring everyone knows what their job is, that you have good communication, and can scale your culture to attract and keep people. These are all major challenges for companies in a growth phase."* —Scale-up CEO

In terms of government programs looking to tackle some of these issues, it was highlighted that BDC has expanded into advisory services for high-growth firms with its Growth Driver Program, which offers leadership development skills and advice from experienced executives (BDC, 2018b).

Limited Specialized Talent Gaps: Technical and Creative Skills

Scale-ups need talent who possess not only deep technical and engineering skills but who can also lead creative teams involved in front-end development, user experience, and design. All of these are critical to developing software, and digital products and services. The limited supply of technical talent not only impacts the ability to develop new product and service lines, but also has long-term impacts on developing a robust pipeline of experienced talent that can eventually move into senior level positions (Tibando and Do, 2018; Herman and Marion, 2016). Here the gap is not just in finding workers with sufficient experience and skills, but in finding those who have the ability to manage increasingly large teams and complex operations.

> ***"Because we're a technology company [...] we're a human capital business,*** *so getting really good people in a competitive market has been a challenge historically, and continues to be a challenge today."* —Scale-Up VP

The challenge of finding technical and creative talent was a consistent theme in company interviews. At the entry level, a number of companies reported maintaining strong relationships with postsecondary institutions, in order to facilitate early career recruitment. Generally, we heard of a willingness from companies to hire and develop early career talent in-house, including running in-house internship,

1 Scale-up VP of People, interviewed for this project.

co-op, and professional development programs. We also heard concerns that taking on in-house training was a risk given the competitiveness of the market, with a worry that talent would move and take the personal development investment with them.

> ***To find entry-level "software developers, [...] we did a lot of internships with universities [...]*** *Initially an internship was back to school for a year, then back to [us.]* ***Took a longer approach to hiring, but this has paid off for us."*** —Scale-up VP

> ***"We are building capabilities for the future of our company.*** *Using our staff expertise, understanding what the core knowledge is in this space from successful people working for us, what's that uncommon knowledge. There isn't really a programme for this; SR&ED looks at some of this, but that long-term dynamic capability is something that needs to be worked on. We are working with universities, comp sci [programs] for example."* —Scale-up Executive Advisor

> *The number one issue is "finding people with experience who can help you grow.* ***It's finding people who can help build software products."*** —Scale-Up VP

The talent supply problem becomes more apparent when trying to recruit and retain middle-to-senior professionals. A number of companies reported challenges in hiring senior technical expertise, such as senior developers and product managers. Companies indicated that there is a major gap in talent who can manage a large development team. This gap is challenging to fill, although there are some promising private sector efforts collaborate on training middle-management pipeline for technical roles, such as the Toronto Associate Product Management (APM) program (APMToronto, 2019). However, these remain relatively isolated cases.

Many companies indicated that they also face the problem of large firms poaching top talent with the promise of professional development, training, and hands-on experience leading bigger, more complex projects, sometimes creating a strained relationship between SMEs and large firms. This challenge will be explored further in the *Competition for Talent* section.

TORONTO APM PROGRAM:

A six month Associate Product Management training program created in 2017. The program takes cohorts of candidates through a vocational training model, "providing mentorship, training and valuable connections". It has been modeled on similar schemes started in Silicon Valley, aiming to create a new stream of management talent within the tech workforce. The program is supported by a wide range of Toronto-based technology companies including ecobee, League, Shopify and FreshBooks (APMToronto, 2019).

Limited Specialized Talent Gaps: Marketing and Sales

Founders and entrepreneurs are passionate about delivering new products and services, but their success largely rests on understanding how to sell a value proposition to a particular client or market. Despite this need, the Canadian scale-up talent pool lacks a sufficient supply of sales and marketing expertise (Tibando and Do, 2018; Herman and Marion, 2016), particularly for senior roles, and with sectoral expertise (e.g., B2B enterprise tech sales). As with technical talent, the gap is not just in experience or skills, but also in finding workers who can lead teams and develop robust sales pipelines and processes.

> ***"Senior enterprise software service salespeople, people who have experience with early-stage technology and know how to sell back to the enterprise, finding those people is my unicorn.*** *There are lots of people but they just don't have that kind of profile."* —Scale-up CEO

The difficulty in finding sales talent was a common theme throughout company interviews. Across the companies, sales and growth strategies varied. Some were organic and opportunistic, such as opening international offices when senior staff needed to relocate alongside a spouse. Others were strategic and coordinated, such as attending international trade shows or opening an office in specific markets to respond to growing demand. Many interviewees highlighted the difficulty in finding senior sales talent: candidates who understand the characteristics of a product, how to market it, and how to develop a compelling pitch, are in short supply. There was also an identified gap in mid-level sales talent, people who could manage and coach sales teams, as well as put processes in place to scale sales pipelines successfully and functionally.

> ***"Sales and marketing are what we have heard; businesses are not getting what they are looking for.*** *They need higher skilled experienced people that they can put into work right away, facing barriers to international talent access.* ***There is a total lack of sales talent."***
> —Ecosystem Expert

Hiring International Talent

In order to fill the domestic talent gap, Canadian companies have sought international talent and skills. They nonetheless face challenges; existing research indicates there are barriers to hiring internationally (Government of Canada, 2018d).

To help employers attract top talent for their organizations and establish a fast, predictable processing system, the Government of Canada implemented the Global Talent Stream (GTS) in June 2017, launched as a two-year pilot under the Global Skills Strategy. The pilot was designed to make it easier and faster for highly skilled foreign workers and accompanying family members to obtain a visa and work permit. In the 2019 Budget, the government announced it was making the Global Talent Stream a permanent program (Government of Canada, 2019d).

As of January 31, 2019, 3,940 applicants were approved under the GTS for 1,017 employers. They represent a wide range of industries, including information and communications technology; visual effects and animation; video-gaming and entertainment; advanced manufacturing; financial services; and cleantech. Associated employers have also made commitments in their Labour Market Benefits Plans to create 44,686 jobs for Canadians or permanent residents and to invest over $101 million in skills and training, including investments in 11,649 paid co-op positions (Government of Canada, 2019h).

However, despite these developments, some companies interviewed expressed frustration with ongoing challenges to hire and relocate international talent, which may reflect a lack of usage or awareness of the program. Several referenced the lengthy time period needed to process a work visa and the lack of transparency and communication by government agencies throughout the application period. One company noted that the use of National Occupation Classification (NOC) codes for economic class immigrants was not sufficiently targeted for their recruitment needs, targeting engineers instead of software developers, for example. And finally, companies also highlighted the additional cost of recruiting international talent including commissions for recruiters and international recruitment missions, premium salaries to match global market prices, relocation costs, and legal and professional application processing fees.

> *"The biggest problem is attracting talent from outside Canada. [...]* ***The process was too long and [when] we want people to start working, the uncertainty was hard."*** —Scale-up VP of Talent

Looking beyond the programs and opportunities to bring in talent from outside Canada, there is the potential that firms are overlooking recent immigrants to Canada who may have the skills and experience to fill specialized or senior roles. Research by Statistics Canada shows that immigrated workers consistently earn less than their Canadian-born counterparts (Statscan,

2016) and it has been argued that the majority of economic class immigrants are underemployed (CBC, 2017), working in roles that do not match their education, credentials or level of experience. The issue here is often linked to a lack of recognition of education or experience gained outside Canada, often termed the "Canadian Experience" issue (CBC, 2018).

This echoes findings from the consultations on Canada's Digital Charter, which called for "quick and cost effective" immigration processes, as well as for providing more career advancement opportunities once workers have arrived, including exploring more flexibility for spousal visa holders. The consultations also called for an exploration of potential supports and pathways to encourage high-potential international students to stay in Canada after graduation (Government of Canada, 2019g).

Finally, it is important to recognise that, while immigration is an important tool to help narrow the talent gap, it cannot be a replacement for a strong domestic training ecosystem. In order to ensure that we create a sustainable talent pipeline, we must continue to ensure that our post-secondary institutions are graduating students with the skills and experience that respond to the demands of today's economy.

Competition for Talent

Scaling firms are in competition with large multinationals and domestic firms to secure the best and brightest talent. As a result, interviewees told us that talent shortages for key roles and skills are driving up salaries and resulting in poaching from competitors. In the case of large Canadian domestic firms, this is not necessarily a negative outcome—particularly if they are supporting the ecosystem and buying up smaller Canadian firms while keeping IP and talent in the country.

> ***"People are poaching my employees. I'm losing a lot of engineers and it's a big concern.*** *There is a big push to bring international companies. These companies come here and hire our employees, get government subsidies, and we have to increase salaries to stay competitive with international companies."* —Scale-up CEO

Almost all companies interviewed reported that they were dealing with talent poaching both from larger Canadian companies and international companies. This includes international companies operating in Canada, those hiring through organizations such as Terminal and MobSquad[2], as well as talent migrating directly to the US. Interviewed companies were struggling to match salaries and retain talent in this tight labour market. This issue is particularly pronounced for more experienced technical talent, such as senior developers, product managers, and engineers and in larger cities and tech centres.

From interviews with VPs of Talent, People, Culture and HR, we heard that scale-ups in tight labour markets are using company culture and perks, professional development and opportunities, and health and dental benefits to attract and retain talent alongside salaries. As such, there is a potential role for government to play in offering universal pharmacare, dental care, and childcare.

> *"The increasing cost of benefits is really skyrocketing for employers regardless of your size and stage. Is there continuing talk on universal pharmacare plan? That could be considered to help in terms of the costs we have.* **Retaining talent, we all know benefits is a table stake but you have to offer a certain level that is comparable to competing companies."**
> —Scale-up VP of People

In addition to talent poaching, there is a perception among interviewed companies that foreign companies are benefiting more from government

2 Terminal partners with VC-backed technology companies in Silicon Valley to launch and scale technical teams in Canada. They offer concierge services to help companies gain access to a global talent pool and source, recruit, and secure the right candidate and teams. Mobsquad, first launched in Calgary in 2018, offers a similar service, setting up teams of Canadian-based software engineers that work for US client companies, effectively creating Canadian satellite offices.

support than domestic companies. In Canada, economic development and foreign investment requires a coordinated approach between municipal, provincial, and federal governments. Nevertheless, many companies expressed frustration with provincial policies that created government-funded competition for wages and, in the process, inflated salaries within the market, such as Digital and Multimedia Tax Credits that can be claimed against staff salaries.

Despite the perceived negative impacts, some of the interviewed companies noted the value of having larger firms in the ecosystem, as anchors, buyers, and sources of expertise. The presence of both Canadian and international firms operating in Canada is perceived as providing a source of talent for future Canadian scale-ups. Working for these firms offers management and scaling experience to future executives that they could later apply to support the growth of new firms as senior management, members of boards of directors, and in other advisory roles. Furthermore, larger Canadian firms can buy smaller firms, ensuring that if they do exit, their talent, IP, human capital, and economic potential remains in Canada.

> ***The recruitment company "has set up shop in four cities in Canada. It is a consortium of investors who have invested in companies largely in California who can't find talent, and they set up centres here and steal away employees but work out of these shops.*** *They pay way more than here but less than California. Here you can hire a senior developer for $170,000, almost half of what they are paying in Silicon Valley, and they can actually find them here."* —Scale-Up CEO

> ***"If it were not for [large tech companies] and others here, then we would not have people to pull from. We can't grow all of our knowledge internally.*** *I do not think we should discourage these companies; they bring great processes and talent. When we have great management, we get an inflow from these companies. I have seen people leave, but also come back, having learned great processes."* —Large company CEO

It is important to note that the goal is not to close off Canada to global companies and international opportunities, but to be careful and deliberate about the ones we are bringing to Canada. International firms entering an already tight labour market may be increasing poaching and movement between firms, more than they are adding net new jobs to the ecosystem, which poses trade-offs for policymakers at all levels of government seeking to bring these opportunities to Canada.

3.2 ACCESS TO CAPITAL

Access to growth capital in all forms—equity, debt, or more sophisticated instruments—is a critical component of the success of high-growth firms. Capital enables a business to invest in its people, technology, infrastructure, and other operational needs that are essential to supporting the growth of a company.

Not surprisingly, capital was one of the most widely discussed topics by stakeholders and ecosystem experts. Throughout these conversations and interviews with scaling companies, demand and supply of growth capital, financing for intangible assets, and incentives for growth emerged as a core challenge for scaling companies.

> ***"One would be capital, two would be capital, three would be capital.*** *At the end of the day [...] if you're a growing business that's got the energy you need to grow. And the amount of time that management teams take to raise money is astronomical."* —Scale-up CEO

> *"The first few years challenges were cash-related.* ***You're a small company, you have fast growth, money's always a challenge, especially short-term cash*** *[...] but now the growth is more related to expertise and to resources."* —Scale-Up CFO

When it comes to scaling companies, VC is often raised as one of the primary ways of accessing capital for rapid growth (Wallmeroth et al, 2018; BERR, 2008). Overall, the Canadian venture capital industry has made significant strides over the past

ten years. Between 2008 and 2018, the overall amount of VC investments in Canada has grown from $1.3 billion to $3.7 billion and the number of active Canadian-based VC firms has increased significantly over the same time period (CVCA, 2018; Government of Canada, 2008; BDC, 2017).

Over the last decade, the federal government has played a significant role in supporting the growth of the Canadian VC market, primarily through the 2014 Venture Capital Action Plan (VCAP) and 2018 Venture Capital Catalyst Initiative (VCCI) programs. Together, these initiatives have injected $840 million of capital into Canada's VC funds, generating significant multiples of investment from other public and private investors and anchoring the fundraising of a significant number of domestic VC funds (BDC, 2018). The VCCI program has also been used to leverage greater diversity within the VC market with funding set aside for those that have female owners or invest in women-led businesses (Government of Canada, 2018a).

In addition, the size of the Canadian VC market compares favourably to international peers. In 2015, VC investment in Canada was, in absolute terms, second highest among G7 countries (following the US). As a share of the economy, measured by GDP, Canada's VC market also ranks second in the G7 (OECD, 2018e).

Finally, recent activity in the VC sector has shown an encouraging trend towards both raising larger-sized funds and the entry of new investors, including institutional investors like the Canadian Pension Plan Investment Board (CPPIB) and the Ontario Teachers Pension Plan (OTPP). In recent months, iNovia, CPPIB, BDC, and Georgian Partners have all announced new funds in excess of $250 million, with Georgian Partners aiming to be the first private Canadian VC to raise a $1 billion venture fund (Silcoff, 2019, BDC, 2019c).

Demand and Supply of Growth Capital

> ***The $100 million round, "that's the one that's the most difficult, because you're really scaling your business, your strategy, the values, you're getting diluted [...] and you're being pulled into other places to find that capital.*** *And then as soon as you get pulled US [...] all the conversations are "[we need] a CEO [who] is ready for the public markets, and we know this great person here out of San Francisco" and bada boom, bada bing, a Canadian story becomes a Silicon Valley story."* —Scale-up CEO

> *"There* ***needs to be funds for every stage that are Canadian,*** *or it will end up being private equity from the US"* —Scale-up CEO

Growth Capital (Equity)

However, despite the overall positive momentum of the Canadian venture capital industry, one area where Canada risks lagging behind its peers is the supply and availability of growth capital. Large ($100 million or more), late-stage[3] venture capital rounds are crucial to achieving scale (Impact Centre, 2017). Research by BDC into Canada's VC market similarly concluded that a lack of late-stage capital was contributing to early exits in the country (BDC, 2017).

Some of Canada's most recent success stories, including Hopper, Shopify, and Lightspeed POS (the latter have since held successful IPOs[4]) all saw late-stage VC funding in excess of $100 million (Crunchbase, 2019a). However, funding rounds of this size remain the exception in Canada. This

3 "Late-stage investing supports companies that have moved beyond the startup phase of development and have rapidly growing sales—or have fast growth potential. Late-stage investment is less risky for investors than early-stage investment because the companies being funded are established in the marketplace and their investments can be converted more quickly into cash" (BDC, 2019b).

4 Lightspeed POS share price surge after TSX IPO (Betakit, 2019); Shopify raises $131-million, pricing IPO above increased range (Picker and Deveau, 2015).

THE CANADIAN BUSINESS GROWTH FUND

First proposed by the Advisory Council on Economic Growth, the Canadian Business Growth Fund (CBGF) is a recently created independent private sector fund, which was capitalized by Canada's leading banks and insurance companies. With $545 million in committed capital, the CBGF's mandate is "making long-term capital available to high-growth companies". Importantly, the fund also "provides recipient companies with guidance, mentorship and access to investors' networks" (CBGF, 2019).

challenge was highlighted during our interviews with ecosystem experts and CEOs, who echoed the view that, while trends are positive, there is insufficient growth capital in Canada to support scaling companies and that we are falling behind our international competitors in this regard.

When comparing Canada to the global market, there appears to be a notable difference in the growth of late-stage capital. Internationally, there has been a rapid increase in the amounts of late stage or growth capital investments in recent years. In 2018, later stage VC investment totalled $192.2 billion (USD), up 83% from the previous year. Moreover, the amount of money invested in later stage deals last year exceeded the value of total global VC investment from just two years ago (Rowley, 2018). By comparison, later stage deals in Canada, while continuing to grow at a healthy rate ($1.4 billion in 2016, $1.5 billion in 2017, and a jump to $1.8 billion in 2018), are not showing the kinds of year-on-year increases present in the global market (Pinto and Kornacki 2018).

This trend is also evident when looking at the growth of 'mega deals'. The fifteen $50 million or more mega-deals in Canada accounted for a smaller percentage of the total share of investment compared to the previous year (30% down from 39% in 2017). Again, this contrasts with the global picture where 'supergiant' deals in excess of $100 million (USD) comprised 57% of total investment, up from 45% in 2017 and just 11% in 2012 (Pinto and Kornacki 2018; Rowley, 2018).

> *"I find VC [in Canada] is more risk-averse. I have my own money in venture capital, but* ***the money here is small. In the Valley, the money is 500 times more than Canada.*** *If you have the same plan here and in the Valley, the chance of funding is much greater there"* —Scale-up CEO

For companies looking to scale outside of Canada's major cities, there is also a significant disparity between VC investment across the country. The majority of the money invested and deals made remain geographically concentrated in Canada's largest cities. In 2018, Toronto-based companies received 41% of total dollars disbursed ($1.5 billion over 197 deals), Montreal-based companies received 24% ($901 million over 119 deals), and Vancouver-based companies raised 11% ($400 million over 71 deals) (Pinto and Kornacki, 2018).

> ***"Raising funds is not easy where we are, we haven't grown as fast as others.*** *Even in Vancouver or Toronto it would have been easier. We were told people needed to come and see us, but it was three [plane] hops away [...] In particular, all* ***VCs like to be close to the community; they understand there's less here.*** *We're just building our community here. The more connected a tech hub has, the easier it is."* —Scale-up CEO

Growth Capital (Debt)

Beyond venture capital, as companies seek to finance growth and achieve scale, debt becomes an increasingly important financial instrument. For companies that want to scale without further dilution, debt or self-financing through revenue growth represent the only options available. For many, revenues do not allow for the rapid growth many of these firms are seeking, and as such debt is the most viable option. However, for scaling companies this can present its own challenges.

*Startup "tech companies are not built off debt, **there are reasons you do it through equity**, [but now that we are scaling] we have debt now"* —Scale-up CEO

*"One of the things people forget is the first quality for a tech company is its ability to raise capital, not its technology. Most programs are focused on developing technology, but **one of the things we're missing in Canada is a diverse ecosystem to raise capital that can compete** with our neighbours to the south."* —Scale-up CEO

However, high-growth scaling companies often lack the financial maturity compared to well-developed businesses that have an existing track record, fixed assets, or relationships with financial institutions. As such, this may impact their ability to obtain debt with financiers on amenable terms.

*"We do have debt instruments (in Canada), but **they're the equivalent of payday loans"***
—Ecosystem Expert

Understanding debt financing trends is more difficult than VC trends, in part due to a lack of available data. From existing sources and surveys such as the Survey on Financing and Growth of Small and Medium Enterprises, we know almost half of SMEs requested financing, and among those who did, the overwhelming majority requested external financing (Government of Canada, 2018g). However, it is difficult to discern the particular challenges faced by high-growth firms and their capital needs as the vast majority of firms in the existing financing survey do not meet the scale-up criteria (only 8% of firms surveyed grew by more than 20% over one year).

Nevertheless, recent trends on the expansion of debt financing are encouraging. Examples include: CIBC's acquisition of Wellington Financial and subsequent launch of its Innovation Banking platform (Bloomberg, 2018), the expansion of the Silicon Valley Bank into Canada (Bradshaw, 2019), and BDC's Growth & Transition Capital program, which provides flexible specialized financing to high-growth mid-market companies. Its portfolio reached a major milestone this year, surpassing $1 billion (BDC, 2019b).

BDC also provides access to debt financing for high-growth Canadian companies. A number of the companies we spoke to had received venture capital, debt capital, or both from BDC, and while some spoke positively of their experience, we also heard some negative views. For some interviewees, BDC was still perceived as being too risk averse, hesitant to support innovation, and offering interest rates that were considered very high and seen at odds with their mandate to create and develop businesses.

"We had a relationship with BDC—they were an early investor. They were there in the early stages, which was good." —Scale-up CEO

*"We have debt funding from BDC, **it's at 16%, which is a terrible rate,** but it's patient."*
—Scale-up CEO

It is important to note that BDC is mandated to complement gaps in the commercial banking sector, and, as such, it is not unexpected that loan interest would be higher if they are indeed lending to companies with higher risk profiles. However, we heard from companies that there is no clear shared understanding of what 'complement' means in this context.

Beyond the financing opportunities provided both directly and indirectly by BDC, the government also provides access to financing through EDC. In 2017, EDC delivered $28 billion in direct loans and loan guarantees (EDC, 2017) for companies participating in export market sales. We heard positive views from our cohort of scaling companies regarding their experiences with EDC.

Financing and Intangible Assets

Access to capital is further complicated for scale-ups with balance sheets dominated by intangible assets. For these firms, it can be harder to obtain a loan from commercial or government-backed lenders at all or at a competitive lending rate.

SURVEY ON FINANCING AND GROWTH OF SMALL AND MEDIUM ENTERPRISES

The 2017 Survey on Financing and Growth of Small and Medium Enterprises shows strong numbers in terms of approval rates for debt financing (94.5% for 20-99 employee businesses and 98.8% for 100-499 employee businesses), as well as a high percentage of requested financing that was approved (94.6% and 97.7%, respectively). Similarly, approval rates were very high, as request rates stood at 35.4% and 36.7% for 20-99 and 100-499 employee businesses respectively. (Government of Canada, 2018g).

However, without further data, it is not possible to discern whether there are differences with lending to scale-ups specifically. In interviews, many scale-up leaders expressed the need for debt financing that exceeded what was available.

This is not an issue that is exclusive to Canada. A 2019 OECD report found that accessing debt financing against IP was difficult for small and medium-sized businesses in many countries worldwide (OECD, 2019b). The report concluded that this stems from a range of issues including a lack of consistency in how financial institutions and lenders evaluate IP, as well as companies' ability to effectively provide evidence of and articulate their value to prospective lenders. In addition, the report highlighted concerns about the transferability of intangible assets and their increased value volatility over time compared to fixed assets.

Research undertaken in the US found that, while overall intangible assets support debt financing as much as tangible assets, "high valuation risk and poor collateralizability can discourage debt financing" (Lin, Macias and Moeller, 2017). There is also evidence that a lack of debt financing for intangible assets is fueling a trend of firms increasing their cash holdings in order to preserve their financial flexibility (Falato, Kadyrzhanova and Sim, 2014).

In interviews carried out as part of this project, some former and current senior C-suite leaders of Canadian banks agreed that the Canadian commercial banking system is biased against companies with primarily intangible assets. This would be consistent with international data, as a recent International Monetary Fund (IMF) report found that "as firms shift toward intangible assets that have lower collateral values, banks reallocate their portfolios away from commercial loans toward other assets, primarily residential real estate loans" (Dell'Ariccia et al, 2017).

In addition, the comparatively advanced state of US banks in evaluating and lending against intangible assets presents both a threat and an opportunity for Canadian scale-ups. Many of the top financial institutions in the US have experience lending against IP that most other nations lack (Brassell and Boschmans, 2019). Given the proximity of the US and the ease at which scale-ups told us they could access US finance, this should be a concern for policymakers looking to ensure that companies are not incentivised to move their businesses south of the border.

> *"The reality of our geography, the fact we're under-financing our company, would not be such a big deal if we had other countries around us, but we have the US south of the border —it makes everything harder. All of this stuff,* ***access to capital, competition, markets, it's exacerbated by the fact that the biggest country in our trading block is the most dynamic in the world"*** —Scale-up CEO

We clearly heard concerns surrounding debt financing for intangible assets from the financial experts interviewed for this project. However, this was not equally matched in our interviews with our cohort of companies, where experiences were more varied. Those who had experienced issues spoke to frustrations on the pricing of their intellectual property by Canadian banks and the fact that a lack of tangible assets to borrow against had slowed their progress to market.

"We raised a lot of debt [with] a US bank. ***Canadian financial institutions are terrible at IP; they don't understand it, they don't price it properly."*** —Large company CEO

"If we'd built [physical assets] then we could have used that [for collateral ... ***if we had been able to borrow against IP] we would have got to market quicker"*** —Scale-up CEO

Importantly for Canadian governments and financial institutions, early research from abroad indicates that bias against intangible assets (stemming from lower risk appetite or a misunderstanding of the digital economy) is potentially misplaced. Analysis from the UK undertaken by the British Business Bank (BBB) showed that companies with Intellectual Property Registrations (IPR) are less likely to default and the resulting losses to the banks from these defaults are also lower (British Business Bank, 2018). A further study of US loans secured between 1996 and 2005 found that those secured by intangibles perform no worse than other secured loans (Loumioti, 2011). What is clear is that there needs to be a coordinated response to this shift from all private and public financial institutions to better recognise the value and importance of intangible assets.

Internationally, other countries have taken differing approaches to the issues of financing for intangible assets. For example, the Korean Development Bank (KBD) created a "techno banking" initiative which specifically provides loans for buying, collateralising, and commercialising IP. Similarly, the French public investment bank (Bpifrance) supports companies with IP investment through uncollateralized loans and bank loan guarantees. Bpifrance also has an internal department for technology evaluation to aide risk assessment and to determine whether companies can qualify for their services. In Singapore, rather than provide direct funds through an investment bank, the 'IP ValueLab' (part of their Intellectual Property Office) recruits private banks by providing a guarantee for 80% of the IP value. Valuation is conducted by approved members of an impartial 'evaluation panel' (Brassell and Boschmans, 2018).

Incentives for Growth: Scaling versus Early Exits?

In addition to the general availability of growth capital and the financing of intangible assets, there were other issues reported that are potentially limiting firm growth and creating conditions where Canadian founders are opting for early exits—acquisitions or mergers that occur before a company reaches its full potential.

It is important to highlight that early exits are not inherently problematic. Both the literature and interviewees for this research stress the importance of exits in order to support a healthy entrepreneurial innovation ecosystem (Hwang and Horowitt, 2013; DeTienne, 2010). Among other benefits, exits inject fresh capital back into the ecosystem and free up talent to take on new projects and found new companies.

However, there are cases where companies that have the potential to become large anchor firms in Canada may be exiting prematurely. Research by BDC found that while Canada has lower levels of exits than the US, they occur at an earlier stage of growth (BDC, 2017). The report pointed to the fact that Canadian VC funds are currently too small to raise later stage rounds and need the funds to re-invest, leading them to push for exits.

"We would have been forced to exit [with] the conditions that came with foreign investment. *We felt that there was more upside to the price at which you sell or partner is when you want to scale the product."* —Scale-up VP

"One of the things I've noticed is when you're small you struggle for funding [...] ***a number of other companies that were doing well sold out as they didn't get that further funding*** *[...] They don't have the opportunity to go and be a solid anchor tenant [... that] will build an ecosystem around them [...] We need to have winners around us."* —Scale-up CEO

From our research, there was a sense that this was about the maturity, complexity, and variety of financial instruments that could offer incentives

to keep a scaling company from exiting, but also a broader awareness among Canadian entrepreneurs and C-suite talent regarding their options.

We heard that providing liquidity for founders and early investors can be key to avoiding exits. Allowing these individuals to access some of the tangible value their company has generated, while retaining ownership and building longer-term commitment, is an important factor in deciding not to exit early. There are financial instruments that can facilitate this, however awareness in Canada appears to be relatively low.

> *"The US is doing this all the time and **we're just behind here** [with secondary markets], I wish we had better networks with the US, I wish we hired more Americans, they know this stuff."* —Scale-up CEO

One example raised in our interviews was the use of secondary markets[5], an instrument being increasingly used in the US that "provides partial liquidity to participating early investors, founders and employees without stopping the company in the way that an acquisition would." (Seetzen, 2018). Current use is very limited in Canada; in 2018 there were no recorded funding raises through secondary markets (Crunchbase, 2019b). These kinds of tools, which can reduce the attractiveness of exiting and keep companies scaling under Canadian ownership, will become an increasingly important part of solving the scale-up challenge.

> *"The problem is that we have a growth capital gap [and] that we have this standard fund structure, pensions are investing in this etc., these are finite —and **world class companies aren't built in five years."*** —Ecosystem Expert

Many interviewees spoke of the importance of having strategic alignment between investors and the company's growth goals, often defined as the 'Principal-Agent problem' (Kaplan and Stromberg, 2001). This alignment is seen as vital to preventing an early exit. Companies reported benefiting from investors who understood their core business as well as broad industry trends, and those willing to connect founders, CEOs, and senior leadership to helpful networks. Conversely, when investors sought to realize returns over shorter time frames than founders, it resulted in tensions and early exit consideration.

Quebec-based interviewees in particular spoke about the importance of the many pension and investment funds in the province that have a specific mandate to support businesses in growing and bringing benefits to the province (CDPQ, 2017; Desjardins, 2018).

> *"We decided to go for the most patient capital possible. I went with [investment fund] because **they see the value long-term in Canada**, compared to Valley funds"* —Scale-up CEO

At a national level, the recently created Canadian Business Growth Fund (CBGF) may become an important mechanism for injecting patient capital into the market for scaling firms. By providing an additional supply of patient capital, the CBGF seeks to reduce the number of firms that are forced to exit to international buyers or take a majority stake in a firm.

> ***"We're waiting in the red zone,** saying whoever makes it here —we want to make you big, and we don't need an exit."* —Ecosystem Expert

Fundamentally, in order to create a thriving scale-up ecosystem, Canada needs to have programs and funding available to ensure that companies that have the potential to scale are not being forced to sell or exit their companies earlier than necessary.

5 "A "secondary" financing refers to an investment in which new investors purchase shares from existing shareholders rather than providing capital to the company itself (a "primary" financing). The new investors gain a significant stake in a more mature company. At the same time, this provides partial liquidity to participating early investors, founders and employees without stopping the company in the way that an acquisition would. This allows the company to bring in more patient investors and align the team on the long term by resolving their immediate financial worries." (Seetzen, 2018)

3.3 MARKET ACCESS

A core priority of high-growth firms is finding new ways to sell their goods and services, attracting new customers while retaining existing ones. The ability to break into new markets to sell goods and services is critical to reaching scale. However, Canadian companies still face barriers to bringing their products and services to market in Canada and abroad.

Government as an Anchor Customer

Procurement is a vital tool that governments can use to strategically support the growth of the most innovative and rapidly growing companies. Serving as an anchor customer, governments enable scaling companies to demonstrate proof of their ability to sell at the enterprise level and can help unlock further sales. Government contracts can also position companies as reliable and able to deliver at scale.

> *"There are things government can do that actually don't cost a lot of money.* ***Up until last year, we couldn't even say that government agencies buy our product."*** —Scale-up CEO

> ***"I know we talk equity and debt, but actually Purchase Order [PO] trumps all of those things.*** *I can go to a bank and finance a PO, and I get a validation to sell a PO. We should talk about POs as a financing mechanism."* —Scale-up CEO

Research from the OECD showed that governments are increasingly using their purchasing power to pursue strategic objectives in different policy areas such as sustainability, innovation, or providing support to SMEs (OECD, 2018c). In some countries, this includes specific targets around the percentage of procurement contracts awarded to small businesses or other characteristics such as 'diverse supplier' eligibility.

The UK, for example, has committed to 33% of central government procurement spending going to SMEs by 2022 (UK Home Office, 2019), building upon a target of 25% achieved in 2015. The US also sets goals for federal procurement spending on small business contracts, currently standing at 23%. In recent years, they have regularly exceeded this goal and 2017 saw a record $105 billion (USD) awarded in contracts (US Small Business Administration, 2018).

In Canada, the federal government is the single largest purchaser of Canadian goods and services. Government procurement at all levels represents a significant portion of both total government expenditure and Canada's GDP (Liao, Orser and Riding, 2017). Many companies interviewed reported that they *want* to sell to government, but that they perceived the procurement process and reporting burden as too complicated, onerous, and lengthy; that they did not fit into existing Requests for Proposal (RFP); that the government did not know they needed what they were selling; and that there was an unequal playing field between established vendors, particularly large firms with legacy contracts, and new applicants. Large firms in particular were seen as having an unfair advantage, able to hire government relations leads and allocate staff devoted to applications.

Due to the targeted nature of this research, we did not carry out interviews or consultations across the entire breadth of industries in Canada. However, in our work we found that three sectors in particular raised the issue of government procurement more readily or prioritized it as a barrier to a greater extent than others: the health-tech, cybersecurity, and cleantech sectors. Not surprisingly, all three have strong connections to areas of the economy that are heavily regulated and/or closely connected to the public sector.

> *We "started in the healthcare space [but] we realized we were going to war with a butter knife. That's why we moved [sectors. You are] competing against billion dollar companies with a $2 million slush fund for innovation [...]* ***There is a disastrous onboard ramp to get innovation into the health-care market in this country."***
> —Scale-up CEO

"We can do good for a company and improve public service. We need the data to show this works, and ***we want to work with the feds to get this data."*** —Scale-up CEO

Research by MaRS has noted the high requirements set when looking to sell health technologies in Canada: "it is not enough to validate the technology in the clinical setting; the innovator must also have a road map that allows assessment of the potential impact on the quality of care and ease of implementation." (MaRS, 2012).

In the cleantech sector, there is a particularly strong perception that the government is crucial to stimulating the industry and driving growth. A 2017 report by Clean Energy Canada laid out the importance of the government in the success of the sector:

*"With the Government of Canada playing the role of first customer through public procurement, Canada's small and medium clean technology businesses would get first-time access to electricity grids, commercial building systems, federal vehicle fleets, and other environments that are difficult for smaller companies to access. This would open doors for the clean technology sector, increasing demand and expanding the potential customer base both at home and abroad—simulating economic activity, job creation and growth in the sector" (*Clean Energy Canada, 2017*).*

"We, as a business, are valued on our sales growth. It is great to get $1 million in grants but it is better for us to get a $1 million in sales. *That is what is going to drive the businesses valuation and raise that big next private equity financing and let us hire the next 100 people [...] The government generally is not the most flexible and open to a little bit of potential risk with a company of our size...For us, it would just be such a slog to go through the RFP and all the uncertainty, it just is not worth our time."* —Scale-up CFO

INNOVATIVE SOLUTIONS CANADA PROGRAM

In 2017, the Government of Canada launched a new program dedicated to supporting the scale-up and growth of Canadian businesses by having the federal government act as a first customer. The result is over $100 million in dedicated funding allocated across twenty participating federal departments and agencies. Participating departments and agencies will set aside a portion of funding to support the creation of innovative solutions by Canadian businesses (Government of Canada, 2019f).

With programs such as Innovative Solutions Canada (ISC), the government is making encouraging progress in providing more flexible ways of procuring from Canada's most innovative companies. However, it is clear there are further opportunities for improvement: throughout this research we developed a clear sense of a procurement environment that felt siloed and overly transactional, with programs that are currently not effectively targeting and supporting SMEs.

Companies were particularly concerned about a lack of direct links between innovation-funding procurement programs like ISC and commercial procurement centres within the government of Canada, and, more broadly, other provincial, territorial and municipal governments. Scaling companies require more sizeable contracts to finance growth and, thus, governments need to fully integrate procurement opportunities from small to large contract sizes.

Additionally, companies expressed challenges in making government departments *aware* of new products or services they are creating. In many cases, this needs to occur before procurement processes have begun, as new products or services are often not top of mind when designing RFPs, potentially putting innovative companies at a disadvantage. Further, awareness efforts might spur new procurements, as departments may become aware of technologies or services from scale-ups that would help governments deliver public services more effectively.

Without a shift in this perspective, there will be a continued sense of frustration for scale-ups looking to secure governments as customers, as well as missed opportunities for the government to be a crucial customer that could propel Canada's brightest firms to new levels of growth.

Regulatory Barriers to Entering the Canadian Market

A core priority for entrepreneurs is to get their products or services into the market. However, companies reported that regulatory burdens are limiting the speed and ease with which they can enter the Canadian market. While some companies were already selling in multiple international markets, they reported difficulty getting approval to sell in Canada for some or all of their product lines. While regulations impact businesses of all types, our focus is on regulatory challenges that are particularly relevant to scale-ups, which we found to be primarily on getting their products or services to market in Canada.

Regulation is a crucial instrument to protect Canadians, the environment, and society from the potential harm caused by commercial activity. However, complex and long regulatory approval processes can inhibit business innovation. One OECD working paper examining 23 industries in 18 countries concluded that variances in regulation across these nations had an impact on innovation activity and productivity performance—both of these factors have been recognised as impacting economic growth and competitiveness (Scarpetti and Tressel, 2002).

Despite concerns from interviewees, Canada was ranked 5th in the Forbes 2018 'Best Countries to do Business In' rankings, after the UK, New Zealand, the Netherlands, and Sweden (the US trailed at 12th) (Badenhausen, 2017). According to the World Bank, Canada does a little worse: our 'Ease of Doing Business' ranking in 2019 was 22nd globally out of 190 countries analyzed in the report. Canada's score was 79.62 out of a possible 100. Its score increased marginally since last year (+0.38); by way of comparison, the top-performing country (New Zealand) had a score of 86.59. The United States was 8th on the list with a score of 82.75, and the UK came 9th with a score of 82.65 (World Bank, 2019).

From the perspective of scale-ups, regulatory approvals related to getting access to markets and approval of new products were raised as particularly important, although these burdens may be felt more in some sectors than others. In consultations with the cleantech and health tech industries in particular, companies and experts called for the Canadian government to adopt the more "business-friendly" approach seen in the US, including expediency of regulatory approvals, more transparency on processes and approval times, and a collaborative approach in which regulatory bodies worked directly with companies to develop and implement regulations that make sense for their sector, rather than operating at arm's length.

This sentiment is echoed in the 2018 Clean Technology Economic Strategy report, which noted that "a lack of stringent domestic environmental regulations hinders the adoption of new technologies (Government of Canada, 2018f)."

We heard from a number of companies that they are already selling their products outside of Canada but were currently not able to sell nationally. This was often linked to difficulties with the regulatory process, or the comparative ease with which they had been able to gain access to a number of international markets.

*"We've been selling [our products] for years in the US, and **we can't sell in Canada because we're still going through the regulatory process."*** —Scale-up CEO

*"One thing we'd like to do is a pilot for regulatory exemption for our product. **We have our technology in [international markets], can we get an exemption to bring it here?** It's possible to apply for one, but we've been told that no one has done it before."* —Scale-up CEO

Encouragingly, the federal government has committed to making regulatory processes smoother and less burdensome for companies. The 2018 Budget announced a new initiative on regulatory modernization, with a particular focus on unlocking the potential of high-growth sectors (Government of Canada, 2018k).

While the work has only just begun, these targeted reviews appear to align well with the needs of Canadian scale-ups.

Progress has also been made through the creation of 'regulatory sandboxes' in industries such as finance. The Canadian Securities Administrator sandbox was created in order to provide exemption from certain regulations for companies to test new innovative products and services (CSA, 2019). Research by Deloitte into the UK's fintech sandbox, launched in 2016, found that "the unequivocal message is that the sandbox has delivered real value to firms," allowing companies to effectively test their business models. It also revealed that acceptance into the sandbox improved company credibility with customers and investors (Deloitte, 2018).

The regulatory landscape in Canada also has implications for companies with global reach. In emerging and rapidly evolving industries such as cybersecurity, companies expressed that there is huge value in leading on or collaborating in the creation of international standards for technologies, products, and services.

There is robust evidence that international standards support global trade and provide a range of economic benefits (Fransen and Kolk, 2007; WTO, 2005). Beyond this, firms (or consortia of businesses) that set standards adopted internationally have a competitive advantage (WTO, 2005). In less well-regulated and emerging areas such as AI, being part of international standards-setting can allow Canada's business and social values to play a positive part in the future of industries. There have already been wider calls for this in other sectors, with the Clean Tech EST report calling for the establishment of a Canadian Clean Tech Standards Strategy (Government of Canada, 2018f)

*"Deliberation of unilateralism is embedded in the software, in cyber, **whoever is the originating country of the software, sets the public policy for all of the buyers,** and ours is different to other countries, and were using other countries software it's difficult to execute our policy within these technologies."* —Scale-up CEO

International Sales

The need to secure international customers and clients in order to reach scale is a theme reflected in company interviews. Canada is a relatively small market, ranking 13th in population size amongst 35 OECD nations (OECD, 2018b), significantly smaller than many EU countries who themselves have access to a unified market of over 500 million people. Most of the scale-up companies we interviewed were actively operating in one or more markets, whether through opportunistic or strategic sales strategies. Some were extensively international in their sales with customers in over 90+ markets. This is particularly interesting because it implies that, at least among our cohort of scale-up interviews, expanding internationally is a necessary step to reaching the scale-up stage.

None of the companies we interviewed reported barriers to international sales beyond the natural complexities of breaking into a new market. Many had accessed EDC support for major international deals and operations. It should also be noted that

TARGETED REGULATORY REVIEWS IN HIGH-GROWTH SECTORS

"The Government has launched the first round of targeted regulatory reviews, looking for ways to reduce barriers and bottlenecks to innovation, economic development, and investment. This first round of reviews is taking place across the following sectors: agri-food and aquaculture, health/biosciences, and transportation and infrastructure (including emerging technologies such as autonomous vehicles). These reviews, and future rounds focused on other sectors, will ensure that the regulatory system keeps pace with emerging technologies and new business models" (Government of Canada, 2018h).

nearly all of companies that made up our core 13 had used government programs for exporting. The majority were clients of the Trade Commissioner Service (TCS) and a smaller number had received CanExport SME funding or were alumni of the Canadian Technology Accelerator.

However, for a few companies, barriers to entering the Canadian market (including regulatory barriers) had led them into an 'international first' strategy, rather than a domestic growth strategy.

As discussed in earlier sections of this report, international sales as a growth strategy has repercussions for companies' capital and talent needs, as well as their operational approach. This can include opening international offices, participating in international trade shows, and accessing growth capital for market expansion and new product lines.

These insights have important implications when government is thinking about how to stimulate more export growth among firms. Based on the cohort of firms we interviewed, focusing 'Export 101' efforts at scale-ups would be misguided—these are successful and smart companies that have already passed the stage of deciding whether to export or not, and are often already actively exporting abroad. If this cohort of firms needs export support, it would likely be more sophisticated in nature, such as expanding to new countries, accessing more specialized export financing instruments, or navigating complicated trade or intellectual property regimes.

> *"We are several hundred people, and half our clients are in the US, but we have to.* ***The market just is not big enough here. You cannot get to a $500 million company only servicing Canadian clients."*** —Medium-sized Company VP

> ***"We had to export due to the nature of the business*** *[...] We have a team of seven international salespeople across the world, based from their homes. Eventually, we need to get bigger than that."* —Scale-up CEO

Notwithstanding these general conclusions, a few sector-specific challenges were raised in interviews. Some markets and sectors create specific challenges for selling into international markets. For example, clean-tech products can frequently need to be sold as part of large engineering projects, which could benefit from an approach that facilitates the formation of consortia among firms with complementary or connected offerings for foreign markets. In this regard, government could potentially play a convening and connecting role, bringing together companies and supporting connections to foreign buyers.

It should be noted that the Canadian Commercial Corporation is taking steps to address specific sectoral issues when it comes to exporting, with a focus on clean-tech and cybersecurity among others and provides a co-ordination service for companies (Canadian Commercial Corporation, 2019).

Other models could include collective/coordinated approaches to international sales in the delivery of important 'demonstration projects'. Localised technology implementation is often a necessary part of large international government contracts, so that foreign buyers can see innovative new technology operating on the ground in real-world local conditions, before they consider large-scale

procurement (de Coninck et al, 2009). Highlighted as being of particular value in sectors such as cleantech:

> *"You need to bring together supply, distribution, the technology, everything to the table because none of the infrastructure exists.* ***We need to bring everyone to the table. Here is where the government can step in, we want to be able to do demonstrations, partnering with bigger companies.*** *If we had the money, we could package together the whole system."*
> —Scale-up CEO

Finally, we heard that while the majority of interviewees had a positive experience with EDC, there was a perception that EDC focuses on larger deals and, as a result, was limiting opportunities for scaling companies to finance smaller sales. This was echoed by the Clean Technology EST in their September 2018 Report (Government of Canada 2018f).

> ***[But EDC] specializes in big deals, it was built to finance airplanes and multi-million dollar deals. And we are not there. Doing a deal of $300-400,000 is not [...] on the top of the list for them to do that.*** *So, at one point to get a division specialized in small deals would help, because the process is quite lengthy and hard."*
> —Scale-up CFO

However, it should be noted that EDC served approximately 3,600 SMEs in 2018 and has devoted 80% of its account managers to service SMEs.

3.4 GOVERNMENT INCENTIVES AND SUPPORTS

Although talent, capital, and access to markets are prominent determinants of the success of scaling firms, government support—either through grants, incentives, or non-financial means—can be an important contributor to firm growth. Determining when and how these types of interventions are necessary is critically important. When developing economic policy, governments should not try to replace market-driven solutions, nor should they subsidize profit-driven activities that would happen without government intervention. Nonetheless, government programs can play a critical role in areas where collective action is required, market failures exist, and where it is helpful to level the playing field against other jurisdictions that have generous government supports for high-growth firms.

A full review of the efficacy of government business innovation support programs and their applicability to scale-ups is beyond the scope of this report. Instead, this section seeks to provide insight into the government incentives and supports that high-growth companies and ecosystem experts consider most useful to support companies in reaching scale, and to highlight where there are gaps and opportunities to redesign existing programs.

Usage and Design of Government Supports

Uptake of government supports among scale-ups we interviewed was high. Almost all companies interviewed reported using, and finding helpful, at least a few of the broad range of government and government-funded support and financing programs available to Canadian companies. These supports were particularly valuable in their early stages of growth, but remained relevant as the companies scaled:

+ **Federal programs** such as the Scientific Research and Experimental Development Tax Credit (SR&ED), the Industrial Research Assistance Program (IRAP), FedDev, Ideas to Innovation Grants, Innovative Solutions Canada (ISC), the Western Economic Diversification Fund, Trade Commissioner Service programs such as CanExport, the Western Innovation Initiative (WINN), Canada-Provincial Jobs Grants, the Business Development Bank of Canada (BDC), Export Development Canada (EDC), the Atlantic Canada Opportunities Agency (ACOA), and the Tri-Council Granting Agencies.

+ **Programs from other levels of government and other institutions** such as Ontario Scale-Up Vouchers, Provincial Multimedia and Digital Media Tax Credits, Alberta Innovates, university technology transfer offices, investment bodies and capital organizations such as the *Caisse de dépôt et placement du Québec* and *Le Fonds de solidarité FTQ*.

Through company interviews, we heard that maintaining access to government support programs and funding opportunities were some of the benefits of remaining a Canadian company, alongside deep pride for being Canadian-owned and operated, and entrepreneurs' ties to their local communities. However, company interviewees and experts identified some challenges in how the programs are designed and delivered.

> ***SR&ED "allows us to take gambles, to take risks with our customers, not just to build the same system we have built before.*** *It enables us to have a conversation with them about how we can innovate, to change the program to take a little bit of a risk."* —Scale-up CEO

> ***"Both the federal and provincial governments have been incredibly helpful throughout our journey.*** *Even before I started, the first process was applying for a few provincial loans, which gave the seed funding to kick the business off before it had a product or defined customer base. We received two of them and are still paying them back, we are incredibly grateful. We have also tapped into IRAP for some of the more resource-intensive products, to helps us stay at the leading edge of innovation, which is a key success factor for us."* —Scale-up VP of Product

> *"That is one of the great things about being a Canadian company. There is a fair amount of capital and support available [...] We have had numerous [provincial] grants for engineering, marketing, commercialization that sort of thing.* ***We have been very successful with IRAP. In 2018 we were granted an IRAP grant for some product development."*** —Scale-up CEO

There is a perception among companies that governments do not always understand the needs of entrepreneurs, in particular the needs of those working in emerging sectors and companies with new and innovative business models, and that they had not 'walked in their shoes'. Scale-ups bring expertise and real-world experience to the table, and can be useful policy-making partners for government, not just users to consult.

On the other hand, many entrepreneurs recognize they may not always have accurate or up-to-date information on policies and programs and are not experts in policy design. (It should be noted that quotes included in this report reflect companies' program and service experiences at the time they accessed the programs, and their perception of current offerings, and may not apply to revised or new programs.)

The Government of Canada is making progress on shifting and expanding program access for scale-ups. Two notable examples include the expansion of the cap on IRAP funding from $1 million to $10 million in 2018 and the recent change in the phase-out range for SR&ED credits for scaling firms (Government of Canada, 2019d).

Nevertheless, one cannot assume that simply expanding programs that work at the startup level will appropriately transfer to the needs of scale-ups. Government policies and programs that are not designed specifically for, and with, scale-ups risk missing the mark.

Navigation of Programs and Compliance Burdens

A clear theme emerged through company interviews: government supports and programs could be made more user-friendly and the system as a whole could be easier to navigate. Some companies expressed reluctance to use certain government programs and supports due to complexity and time required to apply. Many companies reported that the application and approval processes for government funding are too long, and the level of due diligence and reporting

is a burden on core operations and revenue-generating activities. This included a perception that the final funding amount did not always justify the company resources that are required to apply, monitor, and report back to government. Companies stated that there is too much focus on process versus the overall results of the government supports and incentives.

Good progress is being made to take a client-focused approach in several flagship programs, such as the Accelerated Growth Service, Innovation Canada, and IRAP. Nevertheless, the needs of scale-ups are unique and require a more customized client service.

> ***"Success for us is maintaining ourselves as a Canadian company. We have had to pull teeth to get access to a lot of these government programs because there has not been an understanding among officials about how the innovation sector has changed.*** *They are looking for revenue and what are you selling. They have not understood that AI for the last six years has been largely an R&D industry and the only other people who have survived and are still there are Google, Facebook, and others who have had massive resources to maintain their R&D capacity"* —Scale-up VP of Strategy

> *"If you are going to pledge money then just do it. I guess government things are a bit slower. I think everything fits into a particular slot, and if you do not fit into a slot, then it feels that you are out of luck.* ***When there is a company doing something very disruptive, we think that Canada should try and keep it in Canada, I think [the government] need[s] to do more. We are going to open an office [internationally] for example, look beyond the classic funds, and try to find something that can work, rather than the company having to fit themselves within the programs."*** —Scale-up VP

Companies also identified a need for additional navigational support to help them identify which programs they qualify for, with a few calls for more proactive government outreach to companies that qualify for existing programs, and rationalization or streamlining program offerings across jurisdictions and levels of government in order to make it easier to find the right program or service. This is available for some eligible companies and programs (e.g., AGS, Global Talent Stream) and through Innovation Canada's single point of contact. Efforts have been made to consolidate programs through the recent horizontal review, but there remains more that could be done.

> ***"Some of the programs that exist, you need to search them out. You have to make sure that you have someone that knows your account at these development agencies, and someone who knows your company.*** *You are really busy, so you do not have time to fill out an application, cross your fingers, and hope this works."* —Scale-up VP of Sales

> ***"There needs to be some rationalization to what the different levels of government are actually doing.*** *There is so much out there, there is a lot of overlap between what the provinces, feds, and different municipalities are doing at this time. There are a lot of dollars spent on infrastructure to support all this. And I think government could do a lot better at being more organized [...] and being more creative in actually understanding the different needs of companies at different stages and ensuring they actually have what they need."* —Scale-up CEO

Targeting Support and Championing Canadian Scale-Ups

We heard from a number of companies and experts that the Canadian government lacks a 'Team Canada' mentality, which encompasses prioritizing Canadian companies for government procurement contracts; allocating government financial support and export assistance; championing Canadian firms at home and abroad, and working collaboratively with companies and sectors to address regulatory barriers and other blockages to bringing products to market. Some interviewees reported that the Canadian government is too focused on providing support to a broad swath of companies, rather than selecting and prioritizing sectors or individual

companies, who could be boosted past their peers and become future anchor firms and international successes. This approach was seen as diluting the impact of government support and funding by spreading it too thinly among too many recipients.

Some companies reported that this lack of a 'Team Canada' mentality put Canadian companies at a disadvantage compared to their international competitors in more business-friendly countries. In this area, comparisons are often made to European countries such as Germany, who have overarching economic strategies that protect and champion their businesses internationally (Hanke, 2019; Fabre, 2012).

> *"There is nothing fair about this game. My British counterparts are working with their governments to benefit themselves.* ***Our government just wants to play nice with everyone; they will not give us an advantage, whereas every other government is ensuring their company has an advantage."*** —Scale-up VP

Beyond requesting targeted support for Canadian companies, multiple interviewees expressed concerns that larger companies (both domestic firms and international companies with subsidiaries or acquisitions in Canada) were lauded by the Canadian government and allowed to access government support and financing.

There is a perception among interviewees that large firms are able to allocate more internal resources to securing funding, providing them with an edge to beat out smaller firms. This included SR&ED, IRAP, Digital and Multimedia Media Tax Credits, Innovation Superclusters, and other programs, which have varying eligibility requirements to demonstrate Canadian status, generally tied to the percentage of workers and senior executives operating in Canada, not company ownership or financing. These comments echo the Economic Strategy Tables Fall 2018 report, which noted that "many Table members whose companies have scaled-up have stories about seeing a foreign competitor celebrated in Canada when their own firm was not" (Government of Canada, 2018c).

> ***"Canada needs to recognize it is a smaller country and 'pick a lane' when it comes to industries and technologies.*** *Focus on small set of key industries to support, fund, and develop; do not try to do everything"* —Ecosystem Expert

4.0 RECOMMENDATIONS

We hope that the findings and insights from this report will serve as a helpful roadmap for Canadian governments and policymakers as they seek ways to better support the growth of Canada's most promising scaling firms. Although Canada has made tremendous gains in shifting attention and resources to supporting Canadian scale-ups, we believe the challenges we have identified represent the next frontiers for policy attention, development, and solutions design.

In addition to findings and insights, through the course of our work we have developed a number of specific recommendations for addressing many of these scale-up challenges. These recommendations vary from identifying areas for further examination to specific interventions that we believe will address a particular challenge facing Canadian scale-ups. We offer them for consideration, with the hope that they will help further improve Canada's scale-up support ecosystem.

Before moving to specific recommendations, however, it is worth pausing to consider what we believe are a few crucial underlying conditions for continued success:

+ Governments across the country need to continue to embrace the shift to a new economy; one where ideas, data, IP, and other intangible assets and digital technologies are changing the rules of competition, creating new market opportunities and disrupting older, more traditional sectors.
+ Canadian governments, financial institutions, business leaders, postsecondary institutions, and entrepreneurs need to adopt a 'Team Canada' approach to supporting Canadian scale-ups. This collective challenge cannot be solved by one level of government or via public policy alone. To succeed, we have to make this a shared goal, embraced by all Canadians.
+ Recognizing that the scale-up challenge is one that will continue to evolve, even as we invest time, energy, and resources into addressing current challenges. Just as the evolution from supporting startups to scale-ups has produced a new set of challenges, continuing to address the current needs of scale-ups will uncover the next set of challenges.

Without these core enabling conditions, we do not believe that specific efforts to support Canadian scale-ups will achieve their full potential. Nonetheless, we are confident that Canadian leaders understand these realities and we are optimistic considering the significant progress that has been made to date.

Finally, we would like to acknowledge that many of our recommendations build upon previous work in this area. In particular, the ongoing work of Canada's Economic Strategy Tables provides a strong foundation for how to support Canada's high-growth firms and we feel reassured that many of our recommendations build upon or complement their findings.

RECOMMENDATION 1: BUILD OUT A COMPREHENSIVE 'OWN THE PODIUM' STRATEGY FOR SUPPORTING CANADA'S SCALE-UPS

The Fall 2018 report from the Economic Strategy Tables outlined a strong vision for supporting Canada's scale-ups through an 'Own the Podium'-type program modelled on how Canada's Olympic teams have achieved considerable success in recent years.

In short: For Canada to be competitive on the global stage, all levels of government should prioritize support for select high-potential sectors and individual companies, who could be boosted past their peers and become future anchor firms and international successes.

Building upon the vision of the Economic Strategy Tables, the components of an 'Own the Podium' strategy for Canada's scale-ups should include:

A. Identification and Tracking

+ Develop a standard definition of a scale-up, for both program design and measuring the progress of Canada's scale-ups at an aggregate level.

+ Determine a method for identifying high-potential scale-ups and use these criteria for program access and determining how to target support to a small number of high-potential firms. (See insert below for more considerations.)

+ Establish measures for tracking the progress of Canada's scale-ups, reporting publicly on at least an annual basis.

+ The federal government should establish and report annually on a well understood dashboard of performance metrics demonstrating scale-up progress. This should be included in the government's Results and Delivery Framework.

B. Create a New 'Platinum'-tier Concierge Service for Canada's Scale-ups

+ The federal government should create a new elite tier within the existing Accelerated Growth Service concierge program, which would be specifically targeted to high-potential scaling firms.

+ This new tier should build off the promising work of programs such as the Accelerated Growth Service, the one-stop portal of Innovation Canada, the Trade Commissioner Services' Key Accounts program, and the well-recognized IRAP / Innovation Advisors service delivery model.

+ It should include a strong client management focus, where a single lead account manager should be responsible for helping scale-ups navigate the government system, moving things forward for them, communicating internal opportunities, and removing internal friction and barriers.

+ This service could also help serve as a broker, ensuring that companies are connected to different departments and areas of government that might benefit from procuring their product or service. (See recommendation #4 for more details.)

C. Target Support to a Small Number of High-Potential Firms

+ Programs and policies that support scale-ups should be targeted towards a smaller number of high-potential firms, with the levels of support for these firms increasing significantly.

IDENTIFYING AND TRACKING SCALE-UPS

Recommendation #1 highlights the need to have a common method of identifying and tracking high-potential scale-ups so that government programming and services can be cohesively coordinated around them. The challenge of this approach will be combining objective, verifiable data with enough flexibility to handle inevitable exceptions.

For example, a well-funded scaling company may focus on customer acquisition to achieve network effects, while downplaying revenue in the short term. In this case, the company may not meet a 20% year over year growth rate in revenue, but could easily still be considered a high potential scale-up.

The final criteria will likely involve combining a number of different metrics to meet these objectives. Potential metrics could include:

+ Revenue growth rates;
+ Employee growth rates;
+ Capital raised to date;
+ Other non-financial metrics: customers acquired, market share, active users;
+ Team/management experience; and
+ Number of active markets

The government should also leverage the firm evaluation capabilities of BDC, EDC, the RDAs, TCS, NRC-IRAP and Innovation Canada to devise a common funnel for identifying and evaluating the potential of high growth scale-ups.

Finally, the government should develop a formal referral process for identifying from various innovation-supporting organizations (eg: MaRS, Communitech, Innovate BC, Volta Labs, etc.) and from private venture capital and innovation financing platforms. In addition to identifying firms, third party validation of a growing company by one or more of these organizations could be an additional criteria for determining whether they meet the high-potential scale up threshold.

D. Develop Flexible and User-focused Policy Design

Governments need to design flexible and innovative programs that can evolve in an ever changing economy, designed for outcomes and processes, with rules that are able to adapt to changing needs and conditions for success.

+ Wherever possible, programs, regulations, etc. should be designed *with* scale-up business leaders, to ensure that they fit their needs and are informed by experience.

+ A thriving Canadian economy needs strong and well-supported regional ecosystems. To encourage this, the federal government should ensure that scale-up programs are calibrated to regional needs, economies, and sectoral differences.

E. Take a 'Team Canada' Approach

+ Supporting Canadians scale-ups should be embraced as a shared challenge across industry and the federal, provincial/territorial, and municipal levels of government.

+ This should include the federal government, within its areas of responsibility, taking a whole-of-government approach to supporting the needs of Canadian scale-ups.

+ This should also include a range of other important ecosystem players including postsecondary institutions, banks, pension funds, financial institutions, industry leaders, and innovation support organizations.

RECOMMENDATION 2: EXPAND THE SUPPLY OF TALENT FOR CANADIAN SCALE-UPS

In many ways, the talent shortages facing Canadian scale-ups are a product of our own collective success as country: increased demand for senior executive talent and experienced technical, creative, marketing, and sales talent is a result of a strong and growing economy with more Canadian firms competing for employees out of our existing talent pools.

However, this success does not reduce the magnitude of the talent challenge facing scale-ups. In fact, the challenge of attracting and retaining the right talent mix was heard almost universally across our interactions with scale-ups and industry leaders.

A. Support Industry-led Training Models for Early and Mid-level Talent

Many scale-ups have already recognized the need to invest in training programs for developing early and middle-stage talent. As scaling firms become larger and more complex, their talent needs increase significantly. In response, many of these firms have developed innovative models for training high-potential new employees.

In order to continue this growth, governments should ensure that existing talent and training programs are adaptable to the needs of scale-ups, building upon models that scale-up companies are already implementing. This means:

+ Programs designed to support work-integrated learning should be flexible enough for scale-ups to access and leverage for their own training needs.

+ Governments should support the creation of industry-led consortia training models (e.g., Toronto APM) and innovative platforms seeking to train/upskill workers into areas of high demand (e.g., Palette Skills).

In addition, Canada's postsecondary institutions need to adapt to the changing demands of today's economy. More focus should be given to working with industry to craft programs that will address areas of excess labour demand, including areas of particular importance to scale-ups such as the need for technical, creative, marketing, and sales professionals.

B. Support the Development of Senior Experienced Talent

The government should investigate programs that will increase the supply of experienced, senior scale-up talent in Canada. We recognize there is no easy fix to the challenge, nor is there an obvious role for government intervention, yet it is a crucial component of solving the scale-up talent challenge.

Ultimately, this will require tapping into the 'Team Canada' mentality, where we leverage the success and experience of current Canadian business leaders and networks of expertise to develop the next generation of Canadian scale-up leaders.

Strategies could include:

+ Supporting networks that could identify board and senior mentor candidates for Canada's scale-up leaders.
+ In the 'Team Canada' spirit, tapping into the experience of Canada's current corporate leaders and matching executives with emerging scale-up leaders.
+ Looking to other jurisdictions for successful training and development models for senior scale-up leadership.
+ Engaging Canadians who have successfully scaled companies in other jurisdictions, with the aim of attracting them back to Canada and/or linking their expertise to Canadian scale-ups.

C. Attracting International Talent

The government should also raise awareness of the Global Talent Stream program and investigate whether other supports are necessary to help scale-ups attract highly experienced talent to Canada.

The Government of Canada has made significant progress to make it easier for businesses to attract and bring highly skilled talent to Canada, most notably through the creation of the Global Talent Stream. Despite this support, there is a lack of awareness among hiring businesses, not only of the Global Talent Stream, but also of its unique features and offerings.

To increase uptake and awareness of the Global Talent Stream, the Government of Canada should design, develop, and execute a campaign targeted to the startup and scale-up community.

RECOMMENDATION 3: EXPAND THE SUPPLY OF LATER STAGE GROWTH CAPITAL AND FINANCING OF INTANGIBLE ASSETS

Access to growth capital in all forms is a critical component of the success of high-growth firms. Capital enables a business to invest in its people, technology, infrastructure, and other operational needs that are essential to supporting the growth of a company.

A. Expand Supply of Later Stage Growth Capital

Governments and industry should focus on helping expand the supply of later stage growth capital in Canada. This could take the form of:

+ An initiative that builds upon the success of VCAP and VCCI programs, but is specifically targeted at helping Canada's VC firms raise larger, later stage venture funds (i.e., funds of $300 million-$400 million or more).

+ The private sector should build upon the momentum of CBGF with an aim of increasing its size from $500 million to at least $2 billion.

+ Large institutional pools of capital (pension funds and asset managers) should also continue to expand their presence in providing growth capital to Canadian scale-ups.

+ BDC should build on its early success in providing growth capital, with an aim to increase the overall capital available to firms at the growth stage and increasing the average size of funding at this stage.

B. Financing of Intangible Assets

Governments, industry, and the financial sector should seek to better understand the treatment of intangible assets, specifically with respect to accessing growth capital. This should include a detailed examination of the availability of credit for growth companies whose businesses are primarily based in intangible assets.

BDC could potentially take a leadership role in addressing market failures with respect to the availability of financing for intangibles-based scale-ups.

RECOMMENDATION 4: SUPPORT ACCESS TO AND DEVELOPMENT OF MARKETS THAT ENABLE SCALE

A crucial requirement for scaling companies is access to a customer base that is large enough to enable significant growth. With the Canadian market being relatively small in global terms, the federal government and all governments have a critical role to play in enabling access to a wide spectrum of customers and markets.

A. Elevate Procurement to a Strategic Lever for Scale-ups

Procurement is a vital tool that governments can use to strategically support the growth of their most innovative and rapidly-growing companies. Serving as an anchor customer, governments enable scaling companies to demonstrative proof of their ability to sell at the enterprise level and help unlock further sales. Government contracts can also position companies as reliable and able to deliver at scale.

The federal government should build upon its work in innovation-enabling procurement (e.g., Innovative Solutions Canada and related programming) and expand it to provide opportunities for scaling firms to strategically partner around procurement opportunities.

This should include:

+ Explicitly building links between ISC-funded procurement opportunities and commercial procurement centres within the Government of Canada, allowing scaling companies access to contracts of larger economic value. (This could be modelled on similar provisions in the successful US SBIR program.)

+ Matching government departments with scaling firms that have the potential to provide products or services relevant to the business of those departments. This should focus on product/service awareness and should occur before any formal procurement process has started.

+ Explicitly building capacity into the new 'Platinum'-tier level of the AGS to help identify and broker procurement opportunities for scaling firms.

Many of these recommendations are also relevant to other levels of government in Canada and should be adapted and adopted by Canada's provinces, territories, and municipal governments.

B. Agile Regulations for New Products and Markets

Bringing new products or services to market is particularly crucial for high-growth scale-ups. When reviewing or developing new regulations, governments should give particular consideration to how regulations could make it more difficult—or easier—to bring new products or services to market. Regulations must protect health, the environment, and other core values but at the same time can be developed with advice from companies to support the opportunity to innovate and grow in our own domestic markets.

The federal government is currently undertaking an ambitious regulatory modernization effort, first announced in the 2018 Budget, with the goal of supporting innovation and promoting business investment. Within this broader effort, there are a number of initiatives that are particularly relevant to scale-ups, including regulatory roadmaps, targeted reviews of high-growth sectors and the use of 'regulatory sandboxes' for experimentation and innovation.

Thus, while undertaking this work, the government should:

+ Ensure that scale-ups are engaged as partners in developing regulations for new and emerging markets.

+ Within the new federal regulatory reform effort, continue to target high-growth sectors for review and regulatory modernization.

+ Leverage organizations like the Standards Council of Canada and the CIO Strategy Council to develop strategies for establishing and adopting global standards that are advantageous to Canadian scale-ups.

+ Expand the use of 'regulatory sandboxes' to facilitate innovation and the development of new products/services in heavily regulated areas.

Finally, many regulatory barriers to market also exist at the provincial or municipal levels of government and, as such, provincial and municipal levels of governments should initiate similar regulatory reform efforts.

C. Support the Creation of Integrated Domestic Markets

Canada is a small country in a competitive global environment. We cannot afford to allow our market opportunities to fragment. Where possible, governments should encourage creation of integrated domestic markets, particularly in areas that are heavily regulated and/or are largely funded by the public sector (for example, health tech or cleantech).

This model should leverage the strategic procurement strategies and agile approaches to regulation referenced above with the aim of fostering strong demand for new products and services from Canadian scale-ups. It should also leverage the consortia-based approaches that have been built into programs like the Strategic Innovation Fund and the Innovation Superclusters Initiative.

D. Boost Access to International Markets

While Canadian scale-ups have largely crossed the threshold into selling products and services abroad, there are interventions that would help increase their access to international markets:

+ Certain sectors, like cleantech, may benefit from more sophisticated approaches to gain entry to international markets. This could include moving to a 'scaling as a consortium' model, where Canadian firms can be matched together to complement each other and pursue larger and more complex projects in the international market.

+ EDC should devote more resources to facilitating and financing deals of smaller dollar values, which can be integral to the growth of scaling firms.

+ Expand the mandate of the Canadian Commercial Corporation (CCC) to take a larger role in serving markets where foreign governments are the direct or indirect buyers. This could help scaling firms expand into key emerging markets and could complement the consortia-based approach referenced above.

+ TCS and EDC should continue to reinforce their collaborative efforts to enhance and simplify the client experience for Canadian scale-up firms, with seamless referrals between them and other federal export promotion partners and close coordination with the new 'platinum'-level concierge service within the AGS.

E. Support Strategies for Companies to Protect, Register, and Enforce their IP

In today's shifting global economy, protecting and commercializing intellectual property is a critical component of gaining access to new markets. In addition, the growing economic importance of data–and the need to balance access against privacy concerns–is becoming increasing relevant to scaling companies.

The federal government has made significant progress on these fronts, developing a national IP strategy and recently releasing a Digital Charter for Canadians (Government of Canada, 2018j; 2019g) These efforts include initiatives aimed at improving awareness among startups and scale-ups of the need to develop firm-level IP strategies and adequately protect intellectual property.

Nevertheless, many companies we interviewed were not aware of the need to protect and register their IP or have limited capacity to do so.

To overcome this barrier, the Government of Canada should invest further in promoting and communicating the existing suite of programs that are available to help protect and register Canadian intellectual property.

5.0 CONCLUSION

Canada is home to a collection of promising high-growth firms that are on the verge of becoming global players. These scale-ups are committed to succeeding and creating home-grown success stories right here in Canada. Nevertheless, these firms require the support of federal, provincial/territorial, and municipal levels of government, as well as other ecosystem players including postsecondary and financial institutions in order to fully unlock their full potential.

Our goal was to highlight the voices and perspectives of entrepreneurs, balanced with contextual analysis and fact-checking. We hope this report has uncovered valuable nuances in some of the broader issues that relate to supporting high growth firms—and that it provides a roadmap for targeted intervention to maximize impact in supporting Canadian high-potential scale-ups.

Canada's economic prosperity and future depends on these leading firms; they are our hedge against a disruptive and changing economy, and vital sources of current and future employment and economic growth. It is imperative for Canada to forge a path that supports and enables scale-ups to reach their full potential.

We are confident that Canada has what it takes to get there.

APPENDIX A: COMPANY CHARACTERISTICS

Company	Location	Founding Year	Employees
Axonify: A provider of training solutions for businesses. Axonify uses unique principles of brain science, gamification and adaptive learning to engage the workforce of their client.	Ontario	2011	100-250
CarbonCure Technologies: CarbonCure's technology chemically repurposes waste carbon dioxide during the concrete manufacturing process to make greener and stronger concrete.	Nova Scotia	2007	10-50
Company A: B2B hardware and software developer operating within the entertainment industry.	Quebec	NA	NA
Circle Cardiovascular Imaging: Developers of software to help doctors do complex diagnostics. They are currently focused on improving Cardiac MRIs and CT scanning.	Alberta	2007	100-250
DevFacto: Providers of software solutions. Focused on business intelligence and analytics, process automation, portals and collaboration, and enterprise mobility, as well as custom development.	Alberta	2007	100-250
Farmers Edge Precision Consulting Inc: Collecting data from on-farm weather stations, telematics devices, satellite imagery and soil sampling. Analyzing on behalf of clients, and providing solutions help optimize agricultural processes.	Manitoba	2005	500+
Intellijoint Surgical: A medical device company committed to assisting orthopaedic surgeons meet their surgical objectives. Focused first on hip surgery, Intellijoint's Surgical Smart Tools enhance surgeon accuracy.	Ontario	2010	50-100

Company	Location	Founding Year	Employees
Kinduct: Developing software that analyzes data on sleep, nutrition, and workouts from wearable technologies, and correlates athletes' behaviour with their performance.	Nova Scotia	2009	50-100
Myant: Operating in the emerging field of 'textile computing' with a revolutionary R&D facility and full-scale production that includes end-to-end fiber-to-fabric-to-system product design and rapid prototyping capabilities.	Ontario	2010	50-100
Sightline Innovation: Providers of a platform called the AI Enterprise Server, which bridges the gap between the enterprise computing ecosystem and the field of AI.	Ontario	2012	10-50
Terramera: Developing more effective plant-based replacements to synthetic chemical pesticides and fertilizers. Using green chemistry, machine learning and AI technologies.	British Columbia	2010	100-250
Vendasta Technologies Inc: Delivering a white-label platform for companies who provide digital solutions to SMEs.	Saskatchewan	2008	250-500
Voti Detection: Specializing in the development and modernization of the latest generation of conventional X-ray screening platforms and detection software.	Quebec	2008	50-100

Diversity and representation: Companies on this list not only represent many of the cities, communities, and provinces of Canada, but every effort was made to ensure diversity of representation within the organisations themselves. Several of these firms have female founders as well as women and visible minorities in their C-suite.

APPENDIX B: BIBLIOGRAPHY

Andreessen, Mark. "Why Software is Eating the World." Wall Street Journal, August 20, 2011. https://a16z.com/2011/08/20/why-software-is-eating-the-world/

APMToronto. "Canada's Leading Product Management Training program. Creating the next generation of product leaders." Accessed June 7 2019. http://apmtoronto.com/

Asselin, Robert, and Sean Speer. "A New North Star: Canadian Competitiveness in an Intangibles Economy", Public Policy Forum, April 2019. https://ppforum.ca/wp-content/uploads/2019/04/PPF-NewNorthStar-EN4.pdf'

Audretsch, David. "Determinants of High-Growth Entrepreneurship" Report prepared for the OECD/DBA International Workshop on High-growth firms: local policies and local determinants. Copenhagen, March 28, 2012. https://www.oecd.org/cfe/leed/Audretsch_determinants%20of%20high-growth%20firms.pdf

Badenhausen, Kurt. "Map: The Best and Worst Countries for Business 2018." Forbes, December 19, 2017. https://www.forbes.com/sites/kurtbadenhausen/2017/12/19/ map-the-best-and-worst-countries-for-business-2018/#3f0d706c21bb.

Barwise, Patrick. "Nine reasons why tech markets are winner-take-all". London Business School Review, July 10, 2018. https://www.london.edu/lbsr/nine-reasons-why-tech-markets-are-winner-take-all

Bedard-Maltais, Pierre-Olivier, and Sylvie Ratte. "Future-Proof Your Business: Adapting to Technology and Demographic Trends." Business Development Bank of Canada, October 2017. https://www.bdc.ca/EN/Documents/analysis_research/bdc-study-future-proof-your-business.pdf?utm_campaign=Future-Proof-Business-Study-2017(—download(—EN&utm_medium=email&utm_source=Eloqua.

BetaKit. "Lightspeed Shares Surge After TSX IPO." March 11 2019. Accessed May 28, 2019. https://betakit.com/lightspeed-shares-surge-after-tsx-ipo/

Blatchford, Andy. "Tech CEOs Say Liberal Innovation Agenda Does Little to Help Firms Scale up: Poll." CityNews, January 3, 2019. https://toronto.citynews.ca/2019/01/03/tech- ceos-say-liberal-innovation-agenda-does-little-to-help-firms-scale-up-poll/.

Bloomberg. "CIBC acquires Wellington Financial, launches CIBC Innovation Banking for tech clients". January 2018. https://www.bnnbloomberg.ca/cibc-acquires-wellington-financial-launches-cibc-innovation-banking-for-tech-clients-1.961743

Brassell, Martin, and Kris Boschmans. "Fostering the Use of Intangibles to Strengthen SME Access to Finance." *OECD SME and Entrepreneurship Papers*, No. 12, OECD Publishing, Paris. January 2019. https://doi.org/10.1787/729bf864-en.

Business Development Bank of Canada. "The Scale Up Challenge: How Are Canadian Companies Performing?" September 2016. https://www.bdc.ca/EN/Documents/marketing/BDC-etude-canadian-firms-EN-9sept.pdf?utm_campaign=Scale-up-challenge--Studies--download--EN&utm_medium=email&utm_source=Eloqua

Business Development Bank of Canada. "Canada's Venture Capital Landscape: Challenges and Opportunities." June 2017. https://www.bdc.ca/EN/Documents/analysis_research/venture-capital-landscape-paper-en.pdf

Business Council of Canada: Morneau Shepell. "Navigating Change: 2018 Business Council Skills Survey." Spring 2018a. https://thebusinesscouncil.ca/wp-content/uploads/2018/04/Navigating-Change-2018-Skills-Survey-1.pdf.

Business Development Bank of Canada. "Growth Driver Program Advisory services for high-impact firms." 2018b. Accessed June 7, 2019. https://www.bdc.ca/en/consulting/pages/growth-driver-program.aspx

Business Development Bank of Canada. "About us". 2019a. Accessed May 17, 2019. https://www.bdc.ca/en/about/pages/default.aspx

Business Development Bank of Canada. "What is Late-Stage Investing?" 2019b. Accessed May 31, 2019. https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/pages/late-stage-investing.aspx

Business Development Bank of Canada. "BDC Capital launches $250 Million Industrial Innovation Venture Fund." June 2019c. Accessed June 7, 2019. https://www.bdc.ca/en/about/mediaroom/news_releases/pages/bdc-capital-launches-250-million-industrial-innovation-venture-fund.aspx

Canadian Commercial Corporation. "CCC supports government to government contracting across a wide range of sectors." Accessed June 7, 2019. https://www.ccc.ca/en/canadian-exporters/top-sectors-government-to-government-contracting .

Canadian Securities Administrators. "CSA Regulatory Sandbox." Accessed May 16, 2019. https://www.securities-administrators.ca/industry_resources.aspx?id=1588.

Caisse de Dépôt et Placement du Québec. "2017 Annual Report: Investing inFundamental Values." 2017. https://www.cdpq.com/sites/default/files/medias/pdf/en/ra/ra2017_rapport_annuel_en.pdf

Clayton, Richard, and Akbar Sadeghi. "High-employment-growth firms: defining and counting them," Monthly Labor Review, U.S. Bureau of Labor Statistics, June 2013. https://www.bls.gov/opub/mlr/2013/article/pdf/clayton.pdf

Clean Energy Canada. "The Power of Procurement: How Governments Can Drive Clean Growth, Cut Carbon and Create Jobs." April 2017. https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/energy-resources/The_Power_of_Procurement.pdf

Coad, Alex Sven-Olov, Daunfeldt Werner, Holzl Dan Johansson, Paul Nightingale. "High-Growth Firms: Introduction to the Special Section." *Industrial and Corporate Change* 23 (1): 91–112. 2014. https://doi.org/10.1093/icc/dtt052.

Cocolakis-Wormstall, Michael. "Labour Shortage: Here to Stay." Business Development Bank of Canada, September 2018. https://www.bdc.ca/en/documents/analysis_research/Labour-shortage.pdf.

Criscuolo, Chiara, Peter Gal, and Carlo Menon. "The Dynamics of Employment Growth: New Evidence from 18 Countries,"98. June 2014. http://cep.lse.ac.uk/pubs/download/dp1274.pdf.

Cross, Philip. "Unearthing the Full Economic Impact of Canada's Natural Resources." Macdonald-Laurier Institute. May 2015. https://www.macdonaldlaurier.ca/files/pdf/MLI-CrossNaturalResourcesPaper05-15-WebReady.pdf.

Crunchbase. "Discover Innovative Companies and the People behind Them." 2019a. Accessed May 14, 2019. https://www.crunchbase.com.

Crunchbase. "Database Search Parameters: Secondary Market fund raising in Canada, 2018-2010." 2019b. Accessed May 23, 2019. https://www.crunchbase.com/searches

CVCA. "The Performance of Canadian Firms That Received Venture Capital Financing." June 2013. https://www.cvca.ca/wp-content/uploads/2014/07/VC_Study_Final_English_September_4_2013.pdf.

De Coninck, Heleen, Todd Allyn Flach, Paul Curnow, Peter Richardson, Jason Anderson, Simon Shackley Gudmundur Sigurthorsson, David Reiner. "The acceptability of CO2 capture and storage (CCS) in Europe: An assessment of the key determining factors". *International Journal of Greenhouse Gas Control* 3, 2009. https://www.researchgate.net/publication/223382134_The_acceptability_of_CO2_capture_and_storage_CCS_in_Europe_An_assessment_of_the_key_determining_factors

Dell'Ariccia Dalida Kadyrzhanova, Camelia Minoiu, Lev Ratnovski. "Bank Lending in the Knowledge Economy." *IMF* 45, November 2017. https://www.imf.org/en/Publications/WP/Issues/2017/11/07/Bank-Lending-in-the-Knowledge-Economy-45343.

Deloitte. "A Journey through the FCA Regulatory Sandbox." Centre for Regulatory Strategy, 2018. https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/financial-services/deloitte-uk-fca-regulatory-sandbox-project-innovate-finance-journey.pdf.

Denney, Steven, Travis Southin, and David A. Wolfe. "Entrepreneurs, Scale-Ups and the Evolution of Toronto's ICT Cluster: Insights and Lessons Learned," May 7, 2019. https://munkschool.utoronto.ca/ipl/files/2019/04/Denney_Southin_Wolfe__CDO-slides_FINALv3_21AP2019.pdf.

Desjardins. "2018 Social and Cooperative Responsibility Report." 2018. https://www.desjardins.com/ressources/pdf/d50-rapport-sociale-2018-e.pdf?resVer=1556558829000

DeTienne, Dawn. "Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development." Journal of Business Venturing, 25, 203-215. 2010. https://pdfs.semanticscholar.org/5961/5fb437127196ba94ac32d9c3fe988fed7a45.pdf

Dines, Heather, James Watson, and Mohammed Sadiq. "High Growth Firms in the UK: Lessons from an Analysis of Comparative UK Performance." Department for Business Enterprise & Regulatory Reform. November 2008. https://webarchive.nationalarchives.gov.uk/20090609011533/http://www.berr.gov.uk/files/file49042.pdf.

Du, Ju, and Temouri Yama. "High-growth firms and productivity: evidence from the United Kingdom" Small Business Economics, 44, 123–143, 2015. https://link.springer.com/content/pdf/10.1007%2Fs11187-014-9584-2.pdf

Export Development Canada. "About Us." Accessed May 17, 2019. https://www.edc.ca/en/about-us.html

Fabre, Alain. "The German Economic Model: A Strategy for Europe?" Fondation Robert Schuman. European Issues. No. 237. April 2012. https://www.robert-schuman.eu/en/doc/questions-d-europe/qe-237-en.pdf

Falato, Antonio, Dalida Kadyrzhanova, and Jae Sim. "Rising Intangible Capital, Shrinking Debt Capacity and the US Corporate Savings Glut." 41. April 2014. https://financetheory.org/wp-content/uploads/2016/08/SS01.Kadyrzhanova.pdf.

Fransen, L and Ans Kolk. "Global rule-setting for business: A critical analysis of multi-stakeholder standards" Organization, 14(5), 667-684. 2007. https://pdfs.semanticscholar.org/de55/672cdae506e1d7b818223eb0a248d7aef0c0.pdf

Gabrielsson, Jonas., Åsa Lindholm Dahlstrand, and Diamanto Politis. "Sustainable High-Growth Entrepreneurship: A Study of Rapidly Growing Firms in the Scania Region." *The International Journal of Entrepreneurship and Innovation,* 15:1. February 2014. https://journals.sagepub.com/doi/10.5367/ijei.2014.0138#articleCitationDownloadContainer

Government of Canada. "Red Tape Reduction Action Plan." Program descriptions December 1, 2012. https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/red-tape-reduction-action-plan.html.

Government of Canada. "Global Skills Strategy." Promotional material. June 12, 2017a. https://www.canada.ca/en/employment-social-development/campaigns/global-skills-strategy.html.

Government of Canada. "Budget 2017: Canada's Innovation and Skills Plan." Chapter 1, p.44. March 2017b. https://www.budget.gc.ca/2017/docs/plan/budget-2017-en.pdf

Government of Canada. "The Contribution to Canadian Net Employment Change by High-Growth Firms, December 2017." November 30, 2017c. http://www.ic.gc.ca/eic/site/061.nsf/eng/h_03058.html.

Government of Canada. "Venture Capital Catalyst Initiative Call for Expressions of Interest Stream 3—Clean Technology" 2018a. Accessed May 24 2019. https://www.ic.gc.ca/eic/site/061.nsf/eng/03089.html

Government of Canada. "Canada Revamps Its Directive on Regulations —More Agile, Transparent, and Responsive so Businesses Can Thrive." News releases., September 7, 2018b. https://www.canada.ca/en/treasury-board-secretariat/news/2018/09/canada-revamps-its-directive-on-regulations---more-agile-transparent-and-responsive-so-businesses-can-thrive.html.

Government of Canada, Innovation. "Report from Canada's Economic Strategy Tables: Seizing Opportunities for Growth: September 25, 2018c." Government of Canada, September 24, 2018. https://www.ic.gc.ca/eic/site/098.nsf/eng/00027.html.

Government of Canada. "Canada's Economic Strategy Tables: Digital Industries." The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth. 2018d. Accessed May 14, 2019. https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC_Digital_Industries.pdf/$file/ISEDC_Digital_Industries.pdf.

Government of Canada. "The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth: Report of Canada's Economic Strategy Tables: Health and Biosciences." 2018e. Accessed May 24 ,2019. https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC_HealthBioscience.pdf/$file/ISEDC_HealthBioscience.pdf

Government of Canada. "The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth: Report of Canada's Economic Strategy Tables: Clean Technology." 2018f. Accessed May 24, 2019. https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC_Table_CT.pdf/$file/ISEDC_Table_CT.pdf

Government of Canada. "Summary of the Survey on Financing and Growth of Small and Medium Enterprises, 2017." December 2018g. https://www.ic.gc.ca/eic/site/061.nsf/eng/03086.html

Government of Canada. "Fall Economic Statement: Chapter 3 —Confidence in Canada's Economic Future." November 2018h. https://www.budget.gc.ca/fes-eea/2018/docs/statement-enonce/chap03-en.html#s5

Government of Canada. "Canadian New Firms: Birth and Survival Rates Over the Period 2002-2014." Innovation, Science and Economic Development Canada, Small Business Branch, 2018i. http://publications.gc.ca/collections/collection_2018/isde-ised/Iu188-131-2018-eng.pdf

Government of Canada. "Intellectual Property Strategy." Department for Innovation, Science and Economic Development Canada. 2018j. Accessed June 13, 2019. https://www.ic.gc.ca/eic/site/108.nsf/eng/home

Government of Canada. "Budget 2018." 2018k. https://www.budget.gc.ca/2018/docs/plan/budget-2018-en.pdf

Government of Canada. "Program requirements for the Global Talent Stream." 2019a. Accessed May 29, 2019. https://www.canada.ca/en/employment-social-development/services/foreign-workers/global-talent/requirements.html

Government of Canada. "Key Small Business Statistics —January 2019."2019b. January 31, 2019. https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03090.html.

Government of Canada. "Employment and Social Development Canada: Program Requirements for High-Wage Positions." April 24, 2019c. https://www.canada.ca/en/employment-social-development/services/foreign-workers/median-wage/high/requirements.html#h2.6.

Government of Canada. "Investing in the Middle Class." Budget 2019d. Accessed May 14, 2019. https://www.budget.gc.ca/2019/home-accueil-en.html.

Government of Canada. "Build in Canada Innovation Program." May 10, 2019e. https://www.tpsgc-pwgsc.gc.ca/app-acq/picc-bcip/index-eng.html.

Government of Canada. "Innovation for a Better Canada." Accessed May 17, 2019f. https://www.ic.gc.ca/eic/site/062.nsf/eng/home

Government of Canada. "Canada's Digital Charter: A Plan by Canadians, for Canadians." Ministry of Innovation, Science and Economic Development Canada. 2019g. https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00109.html

Government of Canada. "Skills training Statistics" Innovation, Science and Economic Development: Internal Figures Provided to the Brookfield Institute of Innovation and Entrepreneurship. May 2019h.

Grant, Michael. "The Private Equity Experience of Canadian Business." The Conference Board of Canada, November 2013. https://www.cvca.ca/wp-content/uploads/2014/07/PrivateEquity_RPT_FINAL.pdf.

Greer, Ryan. "Death by 130,000 Cuts." Canadian Chamber of Commerce. May 2018. https://static1.squarespace.com/static/5afb304d506fbeacf1448abf/t/5b0ff4cc2b6a282944f06c80/1527772373167/180531DeathBy130000CutsImprovingCanadasRegulatoryCompetitiveness.pdf

Halabisky, David.,Erwin Dreessen and Chris Parsley. "Growth in Firms in Canada." Eurostat-OECD Manual on Business Demography Statistics, 2006. https://www.oecd.org/sdd/business-stats/eurostat-oecdmanualonbusinessdemographystatistics.htm

Hanke, Jacob. "Germany's industrial plan signals Europe's protectionist lurch." Politico. 2019. https://www.politico.eu/article/germany-industrial-plan-signals-europes-protectionist-lurch/

Haskel, Johnathan and Stian Westlake. "Capitalism without Capital: The rise of the Intangible Economy." Princeton University Press, Princeton, New Jersey. 2017. https://press.princeton.edu/titles/11086.html

Herman, Dan, & Sarah Marion. "Scaling Success: Tackling the Management Gap in Canada's Technology Sector." Wilfrid Laurier University, March 2016. http://deepcentre.com/wordpress/wp-content/uploads/2016/05/Scaling-Success-Lazaridis-Institute-Whitepaper-March-2016.pdf.

Hwang, Victor, & Greg Horowitt. "The Rainforest: The Secret to Building the Next Silicon Valley." Regenwald, Los Altos Hills, California, U.S.A. Edition 1.02. February 2012.

Intellectual Property Office: British Business Bank. "Using Intellectual Property to Access Growth Funding." 2018. https://www.british-business-bank.co.uk/wp-content/uploads/2018/10/502-IP-Report_singles.pdf.

Investissement Quebec. "Production of Multimedia Titles." Accessed May 15, 2019. https://www.investquebec.com/quebec/en/financial-products/smbs-and-large-corporations/tax-credits/production-of-multimedia-titles.html.

Jackson, Jon. "VC & PE Canadian Market Overview." Canadian Venture Capital and Private Equity Association. Accessed May 15, 2019. https://www.cvca.ca/reports/vc-pe-canadian-market-overview-q4-2018/.

Kaplan, Steven and Per Stromberg. "Venture Capitalists as Principals: Contracting, Screening, and Monitoring." NBER Working Paper, 8202. April 2001. https://www.nber.org/papers/w8202

Liao, Diane, Barbara Orser, and Allan Riding. "Canadian Federal Procurement as a Policy Lever to Support Innovation and SME Growth." University of Ottawa: Telfer School of Management. Accessed May 15, 2019. https://www.womensenterprise.ca/wp-content/uploads/2018/05/Liao-Orser-Riding-2017-Federal-Procurement-and-SMEs.pdf.

Lim, Steve C., Antonio J.Macias. and Thomas Moeller. "Intangible Assets and Capital Structure." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, October 25, 2014. https://papers.ssrn.com/abstract=2514551.

Loumioti, Maria. "The Use of Intangible Assets as Loan Collateral." *SSRN Electronic Journal*, 64. Accessed May 15, 2019. https://doi.org/10.2139/ssrn.1748675.

Lukiwski, Tom. "Modernizing Federal Procurement for Small and Medium Enterprises, Women-Owned and Indigenous Business." House of Commons, June 2018. https://www.ourcommons.ca/Content/Committee/421/OGGO/Reports/RP9996115/oggorp15/oggorp15-e.pdf.

May, Bryan. "Temporary Foreign Worker Program: Report of the Standing Committee on human Resources, Skills and Social Development and the Status of Persons with Disabilities." House of Commons, Canada. September 2016. https://www.ourcommons.ca/Content/Committee/421/HUMA/Reports/RP8374415/humarp04/humarp04-e.pdf

MaRS. "Venture Capital: Financing a Startup in the Growth Stage of Company Development." MaRS Courses and Guides. Accessed May 14, 2019. https://learn.marsdd.com/mars-library/venture-capital-financing-a-startup-in-the-later-stages-of-growth/.

May, Peter J. "Regulatory Regimes and Accountability." *Regulation & Governance* 1, 1: 8–26, 2007. https://doi.org/10.1111/j.1748-5991.2007.00002.x.

McIntyre, Catherine. "Shredding Tax Credits? Why Canada's Biggest R&D Program May Be Funding the Wrong Innovation." The Logic, October 15, 2018. https://thelogic.co/news/the-big-read/shredding-tax-credits-why-canadas-biggest-rd-program-may-be-funding-the-wrong-innovation/.

Morelix, Arnobio., E.J. Reedy, and Joshua Russell. "The Kauffman Index 2016: Growth Entrepreneurship — National Trends." Ewing Marion Kauffman Foundation, 2016. https://www.issuelab.org/resource/the-kauffman-index-2016-growth-entrepreneurship-national-trends.html

Nicholson, Peter. "Facing the Facts: Reconsidering Business Innovation Policy in Canada." Institute for Research on Public Policy, October 4, 2018. https://irpp.org/research-studies/facing-facts-reconsidering-business-innovation-policy-canada/.

Nesta. "The vital 6 per cent: How high-growth innovative businesses generate prosperity and jobs" Research Summary. London (October 2009). https://media.nesta.org.uk/documents/vital-six-per-cent.pdf

OECD. "Eurostat – OECD Manual on Business Demography Statistics 2007 Edition." 82, 2007. https://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-07-010-EN.pdf

OECD. "SMEs in Public Procurement." OECD Public Governance Reviews. October 26, 2018a. https://www.oecd.org/publications/smes-in-public-procurement-9789264307476-en.htm.

OECD. "Population (indicator)." 2018b. Accessed on 12 June 2019. http://data.oecd.org/pop/population.htm.

OECD. "SMEs in Public Procurement: Practices and Strategies for Shared Benefits, OECD Public Governance Reviews" OECD Publishing, Paris. 2018c. https://read.oecd-ilibrary.org/governance/smes-in-public-procurement_9789264307476-en#page2

OECD. "Enabling SMEs to scale up, Plenary session 1." Discussion Paper: SME Ministerial Conference, Mexico City, February 23, 2018d. https://www.oecd.org/cfe/smes/ministerial/documents/2018-SME-Ministerial-Conference-Plenary-Session-1.pdf

OECD. "Entrepreneurship at a Glance: 2018 Highlights." SDD. October 2018e. https://www.oecd.org/sdd/business-stats/EAG-2018-Highlights.pdf

OECD. "Public Procurement —OECD." Accessed May 15, 2019a. https://www.oecd.org/governance/ethics/public-procurement.htm.

OECD. "Financing SMEs and Entrepreneurs 2019: An OECD Scoreboard". OECD Publishing, Paris. 2019b. https://read.oecd-ilibrary.org/industry-and-services/financing-smes-and-entrepreneurs-2019_fin_sme_ent-2019-en#page56

Parliament of Canada: House of Commons. "Chapter 2: The Labour Market Impact Assessment Process." HUMA Committee Report. Accessed May 14, 2019. https://www.ourcommons.ca/DocumentViewer/en/42-1/HUMA/report-4/page-42#timeline.

Parsley, Chris, & David Halabisky. "Profile of Growth Firms: A Summary of Industry Canada Research." Industry Canada, March 2008. https://www.ic.gc.ca/eic/site/061.nsf/vwapj/ProfileGrowthFirms_Eng.pdf/$file/ProfileGrowthFirms_Eng.pdf

Petrevan, Sarah. "Green Government Procurement Can Help Companies Compete." Policy Options, January 18, 2018. https://policyoptions.irpp.org/magazines/january-2018/how-government-procurement-can-help-companies-compete/.

Picot, Garnett & Richard Dupuy. "Job Creation by Company Size Class: The Magnitude, Concentration and Persistence of Job Gains and Losses in Canada". Small Business Economics. 10: 117. 1998. https://doi.org/10.1023/A:1007981800219

Picker, L and Scott Deveaui. "Shopify raises $131-million, pricing IPO above increased range" May 20 2015. Accessed May 30, 2019. https://www.theglobeandmail.com/technology/tech-news/shopify-raises-131-million-pricing-ipo-above-increased-range/article24525737/

Pinto, Darrell and David Kornacki. "VC & PE Canadian Market Overview 2017." Canadian Venture Capital and Private Equity Association. 2017. https://www.cvca.ca/reports/vc-pe-canadian-market-overview-2017-year-in-review/

Pinto, Darrell and David Kornacki. "VC & PE Canadian Market Overview 2018." Canadian Venture Capital and Private Equity Association. 2018. https://www.cvca.ca/reports/vc-pe-canadian-market-overview-q4-2018/

Plant, Charles. "A Failure to Scale." Impact Centre: University of Toronto, February 2017. https://www.impactcentre.ca/wp-content/uploads/2015/05/Velocity-Impact-Brief.pdf.

Plant, Charles, Lidia Seline, James Li, Harim Ulfig and Emina Veletanlic. Ed. "Measuring Canada's Scaleup Potential A Framework for a National High-Tech Funnel." An Impact Brief, March 2018. https://www.impactcentre.ca/wp-content/uploads/2018/03/Measuring-Canadas-Scaleup-Pontential.pdf

Prime Minister's Office. "New growth and innovation network in Ontario to help create 18,000 jobs". April 16 2019. Accessed May 30, 2019. https://pm.gc.ca/eng/news/2019/04/16/new-growth-and-innovation-network-ontario-help-create-18000-jobs

Rivard, Patrice. "The Contribution to Canadian Net Comms rulez Change by High Growth Firms." Ministry of Innovation, Science & Economic Development. 2017. http://publications.gc.ca/collections/collection_2018/isde-ised/Iu188-129-2017-eng.pdf

Rowley, Jason D. "Q4 2018 Closes Out a Record Year for the Global VC Market." Crunchbase, January 7, 2019. https://news.crunchbase.com/news/q4-2018-closes-out-a-record-year-for-the-global-vc-market/

Scarpetti, Scarpetta and Thierry Tressel. "Productivity and Convergence in a Panel of OECD Industries: Do Regulations and Institutions Matter?" OECD Economics Working Paper No. 342. January 2003. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=335520

Seetzen, Helge. "To place first in the startup race, Canada needs a thriving secondary market." Globe & Mail. 2018. Accessed June 7, 2019. https://www.theglobeandmail.com/business/commentary/article-to-place-first-in-the-startup-race-canada-needs-a-thriving-secondary/

Silcoff, Sean. "Georgian Partners seeks to raise Canada's first $1-billion private venture fund." Globe & Mail. Accessed June 7, 2019. https://www.theglobeandmail.com/business/technology/article-georgian-partners-seeks-to-raise-canadas-first-1-billion-private/

Small Business Innovation Research. "About SBIR." Accessed June 7, 2019. https://www.sbir.gov/about/about-sbir

Sullivan, Tim. "Blitzscaling." Harvard Business Review, April 2016. https://hbr.org/2016/04/blitzscaling

Tetu, Louis., et al. "Quebec Needs New Innovation Strategies to Level the Playing Field for Domestic Tech." The Globe and Mail, September 19, 2018. https://www.theglobeandmail.com/business/commentary/article-quebec-needs-new-innovation-strategies-to-level-the-playing-field-for/.

Tibando, AJ and Andrew Do. "Understanding the Talent Gap: Lessons + Opportunities for Canada." Brookfield Institute of Innovation + Entrepreneurship, March 2018. https://brookfieldinstitute.ca/wp-content/uploads/BrookfieldInstitute_Understanding-the-Talent-Gap-1.pdf.

Treasury Board of Canada Secretariat. "Summaries of Academic Reviews —Horizontal Business Innovation and Clean Technology." January 8, 2018. https://www.canada.ca/en/treasury-board-secretariat/corporate/reports/summaries-academic-reviews.html.

Treasury Board of Canada Secretariat. "Improving Results: 2017 Horizontal and Departmental Reviews." February 27, 2018. https://www.canada.ca/en/treasury-board-secretariat/corporate/reports/improving-results-2017-horizontal-departmental-reviews.html.

UK Home Office. "Small and Medium Enterprise Action Plan, 2015-2022". October 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751560/Home_Office_2018_SME_Action_Plan.pdf

US Small Business Administration. "The Federal Government Achieves Small Business Contracting Goal for the Fifth Consecutive Year with Record-Breaking $105 Billion to Small Businesses." May 2018. https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/federal-government-achieves-small-business-contracting-goal-fifth-consecutive-year-record-breaking

Van Praet, Nicolas. "Quebec's Video Game Tax Break Makes the Province an Industry Player." Financial Post, October 15, 2012. https://financialpost.com/entrepreneur/video-game-tax-break-makes-quebec-an-industry-hub.

Vu, Viet, and Annalise Huynh. "Scale-up Activity in Ontario." Brookfield Institute of Innovation + Entrepreneurship, May 2019. https://brookfieldinstitute.ca/wp-content/uploads/Scale-up-Activity-in-Ontario_FINAL.pdf

Walks, Alan, and Brian Clifford. "The Political Economy of Mortgage Securitization and the Neoliberalization of Housing Policy in Canada." 47: 8, 1624–42, January 1, 2015. https://journals-sagepub-com.ezproxy.lib.ryerson.ca/doi/10.1068/a130226p.

Wallmeroth, Johannes., Peter Wirtz and Alexander Peter Groh. "Venture Capital, Angel Financing, and Crowdfunding of Entrepreneurial Ventures: A Literature Review." *Foundations and Trends® in Entrepreneurship* 14: 1, 1-129, February 21, 2018. https://doi.org/10.1561/0300000066.

White, Rick. "Impacts of Canada's Regulatory Structure on Small Business." February 14, 2019. https://www.ourcommons.ca/Content/Committee/421/INDU/Brief/BR10319419/br-external/CanadianCanolaGrowersAssociation-e.pdf.

Wolfe, David. "A Digital Strategy for Canada: The Current Challenge." Munk School of Global Affairs and Public Policy, January 25, 2019. https://munkschool.utoronto.ca/blog/david-wolfe-a-digital-strategy-for-canada-the-current-challenge/

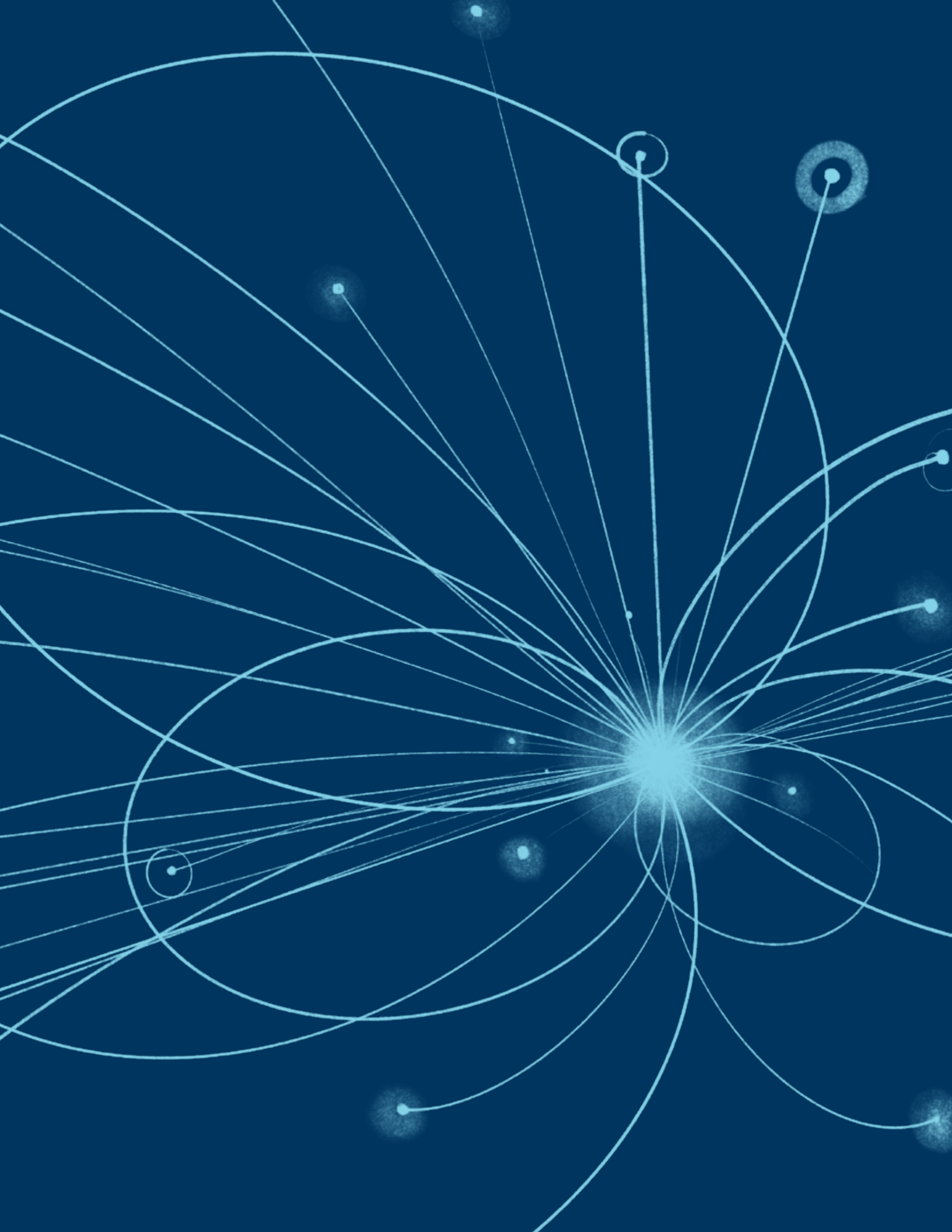
Wolf, Martin. "The challenges of a disembodied economy: Policymakers must reckon with a world in which companies invest in intangible assets" Financial Times. November 28 2017. Accessed May 24, 2019. https://www.ft.com/content/a01e7262-d35a-11e7-a303-9060cb1e5f44

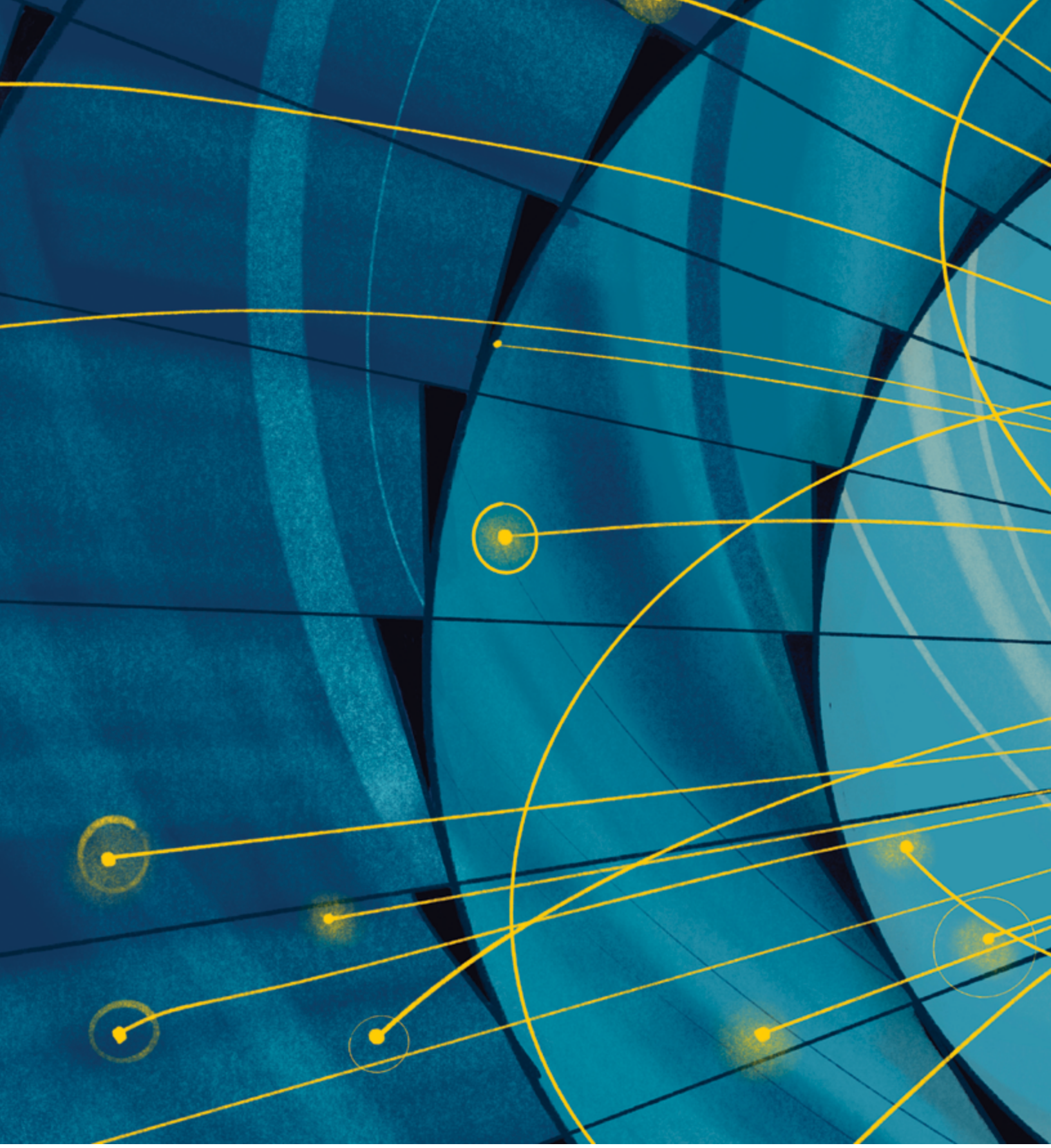
Wong, Queenie. "The Cost of Government Regulation on Canadian Businesses." Canadian Federation of Independent Business, January 2018. https://www.cfib-fcei.ca/sites/default/files/2018-01/Cost-Red-Tape-Snapshot-2018_0.pdf.

World Bank. "Rankings & Ease of Doing Business Score." Accessed May 15, 2019. http://www.doingbusiness.org/en/rankings.

World Trade Organisation. "The Economic of Standards and Trade." World Trade Report. 2005. https://www.wto.org/english/res_e/booksp_e/anrep_e/wtro5-2b_e.pdf

Ye, Zhenzhen and Maryna Ivus. "The Next Talent Wave: Navigating the Digital Shift —Outlook 2021." https://www.ictc-ctic.ca/wp-content/uploads/2017/04/ICTC_Outlook-2021.pdf.





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