CENTRE FOR DIGITAL ENTREPRENEURSHIP & ECONOMIC PERFORMANCE

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PARTNERS FOR PROSPERITY AND INNOVATION

deepcentre

PART 4: RECOMMENDATIONS FOR INCREASING FISCAL SUSTAINABILITY IN CANADA'S STARTUP ECOSYSTEM

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ABOUT THE DEEP CENTRE

ADVICE - IMPACT - SUCCESS

The Centre for Digital Entrepreneurship and Economic Performance (DEEP Centre) is a Canadian economic policy think-tank. Founded by Anthony Williams in 2012 as a non-partisan research firm, the DEEP Centre's work shapes how jurisdictions build fertile environments for launching, nurturing and scaling companies that will thrive in an increasingly connected world. Its research and advisory services have helped policymakers around the world identify and implement powerful new policies, programs and services to foster innovation, growth and employment in their jurisdictions.

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PART 4: RECOMMENDATIONS FOR INCREASING FISCAL SUSTAINABILITY IN CANADA'S STARTUP ECOSYSTEM

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ABOUT THE REPORT

The Partners for Prosperity and Innovation Project is the first nation-wide effort to assess the viability of self-sustaining business models for business accelerators and incubators (BAIs) in Canada. Drawing on a national survey and a wide-ranging series of executive interviews, the study highlights critical strategies for growing private sector revenue streams and establishes a better understanding of the challenges startup support organizations are encountering in their pursuit of fiscal sustainability.

This study on the fiscal sustainability of business accelerators and incubators in Canada was generously funded by the Atlantic Canada Opportunities Agency (ACOA), the Business Development Bank of Canada (BDC), FedDev Ontario,Innovation, Science and Economic Development Canada (ISED) and Western Economic Diversification Canada (WD). The information, opinions and interpretations expressed in this report are those of the authors and do not necessarily reflect the official policy or position of the Government of Canada. The Government of Canada and the aforementioned agencies are not responsible for the accuracy, reliability or currency of the information.

Readers should note that the research for this report was conducted before the onset of the COVID-19 pandemic. The impact of the pandemic is therefore not captured in data gathered about the revenue models and fiscal sustainability of business accelerators and incubators (BAIs) in Canada. Likewise, any forward-looking assessments of the capacity of BAIs to maintain or enhance their fiscal sustainability going forward will not account for the impact of COVID-19 on the operations of BAIs.

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KEY CONCLUSIONS ON FISCAL SUSTAINABILITY FOR BUSINESS ACCELERATORS AND INCUBATORS IN CANADA

Consistent with the rest of the world, Canada has seen rapid growth in the numbers of startup support organizations in recent years, and there are now more accelerators, incubators and innovation hubs than ever before. While many BAIs would like to operate more independently from government, the inherent risks and uncertainty of supporting early-stage companies make financial sustainability difficult for even the best-run organizations to achieve. Even TechStars and Y Combinator, the most lucrative of the commercial accelerators in the United States, only started to be profitable after many years of operation.

For Canadian organizations, the reality of the business lifecycle and the inability to generate a significant number of high-value exits means that patient, long-term capital (i.e., public funding) will continue to be necessary to support the business incubation and acceleration system. Nevertheless, there is also widespread recognition that greater fiscal self-reliance is both desirable and achievable, at least for a subset of BAIs operating in Canada.

The array of economic benefits created by BAIs suggests several revenue-generating opportunities that could diversify and improve the funding sources available to BAIs while deepening their relationships with angel investors, VCs and large corporates. With a focus on equity investments, service fees and partnerships, this study contributes to a better understanding of the revenue models with the most potential to contribute to the fiscal sustainability of Canada's startup support organizations.

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The DEEP Centre's fiscal sustainability survey represents the first-ever attempt to understand how BAIs in Canada fund their operations. The study provides insight into the different ways in which BAIs generate revenue. More importantly, the survey results reveal the proportion of revenues from various sources, including funding from government and revenues generated from service fees, partnerships, equity investments and real estate leasing. Looking at the principal sources BAI revenue, we can draw some conclusions about the prospects for fiscal sustainability in Canada's startup support system.

GOVERNMENT FUNDING

Despite evidence of traction in generating private sector revenues, the DEEP Centre found that, with just one exception, almost all BAIs currently receive some level of funding from government. More importantly, government funding still accounts for 55% of the overall funding mix for the population of 25 BAIs in our sample.

The average amount of funding from government, however, obscures some noteworthy divergences in the sample. For example, at one end of the funding spectrum, we find that nine BAIs in the sample receive an average of 88% of their funding from government. At the other end of the spectrum, we see five privately financed BAIs that receive an average of just 4% of their funding from government. In the middle, eleven BAIs with a balanced funding model receive an average of 51% of their funding from government.

On a forward-looking basis, the survey and interview results suggest that public funding will continue to be necessary to keep the majority of Canadian BAIs afloat. Very few of the BAIs surveyed by the DEEP Centre anticipate any changes in their revenue mix over the next two to three years, which suggests that most BAIs will not viable without at least 50% public funding going forward. In several regions and sectors, even greater public contribution levels will be required. The bottom line is that only a small number of BAIs have fashioned a path to fiscal self-reliance, and the executive interviews do not engender confidence in the ability of a large number of BAIs to follow in their footsteps.

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SERVICE FEES

While 72% of BAIs earn revenue from services fees, these fees represent a small share (11%) of the overall revenue mix for BAIs in the sample. While publicly funded entities see service fees as the most likely route to achieving a more balanced revenue mix, the evidence suggests that even a healthy combination of membership, participation and consulting fees is a supplement to public funding, not a replacement. In particular, we found the following.

- **Viable advisory service models will still need to be heavily subsidized by public funding**, including the services BAIs provide to later-stage growth companies. In our sample, BAIs are paying close to full market rates for consultants and then passing somewhere between 30 to 60% of these fees on to their clients.
- **Service fees for early-stage programming will contribute little to fiscal sustainability**. BAIs see little to no opportunity to increase revenues from the services delivered to early-stage startups, which remain the mainstay for most BAIs in Canada.
- **Service fees for scale-up programming are relatively new and untested**. It remains to be seen whether these fees are sustainable and whether there is much scope for expanding the model. Some BAIs are reporting a push back on fee-for-service models, and everyone concedes that there is a definite ceiling on affordability that will cap the ability to increase fees going forward.
- **The dearth of experienced executives to deliver scale-up support places a constraint on the scale and quality** of the services BAIs provide. As several executives argued, the expertise in creating scalable tech companies is not broadly available.

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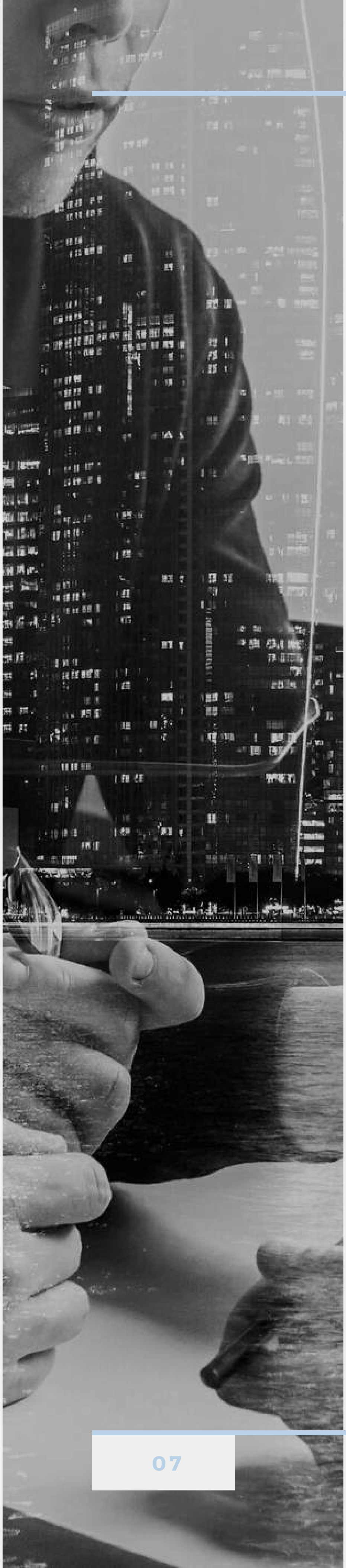
CORPORATE PARTNERSHIPS

In the survey, we observe that a significant majority of BAIs (88%) receive some revenue from corporate partners and that this revenue constitutes an average of 17% of the overall revenue mix for BAIs in the sample. Despite the small share, BAI leaders see corporate partnerships as a critical component of balanced funding models. However, as a source of long-term sustainable funding, the corporate partnership model also presents many challenges. Here we highlight four conclusions.

- **There is a limited pool of innovative-driven corporates in Canada**. The population of large corporations in Canada is small and predominantly consists of firms that are late or reluctant adopters of new technologies. Moreover, many companies invest in BAIs for the wrong reasons. They want to put a more attractive hue on a corporate brand, but their investments don't lead to tangible outcomes.
- **Only a small number of BAIs in Canada have the deal-flow**, credibility and capacity to address the innovation needs of large corporate partners. While the 84% of BAIs earn sponsorship revenue from corporate partners, only 44% have succeeded in attracting more significant funding for innovation outposts, corporate accelerators and corporate innovation consulting. BAIs outside of Canada's largest urban centres have an especially hard time attracting corporate partners.
- **There appears to be a shelf-life for corporate partnerships**. After three to four years of exposure, corporates are looking for a meaningful ROI on their relationships with BAIs. While corporates want to contribute to building the ecosystem, executives say they can't justify large cheques in the absence of significant deal flow.
- **Corporate partnerships are time-consuming to set up and expensive to staff up and deliver**. The experience with corporate innovation consulting to date suggests that it is challenging to find the right people to deliver the programming and hard for BAIs to make any margin.

In short, the prospect of significant new inflows of corporate dollars looks uncertain. If anything, interviews with corporates suggest there could be a near-term retrenchment in private investment for all but a handful of the highest-performing BAIs in Canada.



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RETURN ON EQUITY

A small number of BAIs in Canada (just 6 of 25 entities surveyed) take equity stakes in client companies. The survey reveals that returns on equity investments account for 6% of revenue across the entire sample, However, for privately-financed BAIs, equity stakes account for nearly 30% of annual revenues. While some non-profit entities are trying to increase their engagement with private pools of capital, the survey results suggest that we should not expect much of an increase, if any, in the number of Canadian entities with the capacity to achieve VC-like returns. Three additional findings are worth emphasizing.

- **Equity investments won't work for the majority of BAIs**. The return-on-equity models only work for entities with a highly selective intake that prioritizes later stage companies for whom it is easier to obtain exit financing. Most Canadian BAIs don't have investment funds, don't want to pick winners and worry that equity investments undermine trust-based relationships,
- **The return on equity model requires patient capital**. Of the six entities that take equity stakes in our sample, only one has seen meaningful exits. The inability to generate high-value exits to date means that most equity-driven BAIs have patient investors that are willing to play the long game. VC-backed BAIs typically expect a seven to ten-year wait for returns.
- **Deal flow partnerships look doubtful**. Although BAIs would like to increase their engagement with investors, it's hard to see significant potential for BAIs to strike new deal flow partnerships. Most of the VCs interviewed by the DEEP Centre do not see BAIs as their primary source of deal flow and many expressed doubts about the capacity of BAIs to create venture-track companies.

A SPECTRUM OF FISCAL SUSTAINABILITY

Wide-spread difficulties in achieving fiscal sustainability point to the need for a carefully calibrated funding strategy for BAIs. First and foremost, this study suggests the need to adjust expectations to the realities of Canada's startup ecosystem. More specifically, our research points to a spectrum of fiscal sustainability.

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- **Privately funded BAIs**. First, there are a small number of BAIs in Canada that will see a disproportionate level of success, and likely less than a dozen across the country that can operate as self-sustaining entities. These privately financed BAIs include VC-backed entities and those that have been successful in attracting significant corporate investment. BAIs at this end of the spectrum typically specialize in vertical niches and have a highly selective intake that prioritizes later-stage companies.

- **BAIs with balanced funding**. Second, there is a larger cohort of BAIs in the middle of the fiscal sustainability spectrum that generates revenue from a stable mix of public and private sources. In our survey pool, BAIs with balanced funding represent slightly less than half the sample (44%) and receive an average of 50% of their funding from government. Advocates of the balanced model suggest that the public-private mix allows diverse organizations to contribute to and benefit from building the startup ecosystem. In practice, these diversified entities serve clients across the spectrum of maturity and draw revenue from a mix of service fees, partnerships and real estate.

- **Publicly funded BAIs**. Finally, our sample included a significant number of BAIs (36%) that derive 70% or more of their funding from the public sector. BAIs at the publicly-funded end of the spectrum are typically mandated to serve the community. These entities tend to focus on early-stage companies and are more likely to be located outside of Canada's largest urban centres. Publicly funded BAIs are also common in capital-intensive sectors (e.g., health sciences and cleantech) where executives cite the need for long-term support and the capacity to use public funding to leverage more private sector engagement. Our executive interviews suggest that few publicly funded BAIs will produce venture track companies. However, there is a more modest role for publicly funded BAIs as economic development engines that produce sustainable SMEs that will contribute to local growth and employment. Given that our sample includes 25 of Canada's most recognized BAIs, we suspect that the majority of the approximately 250 BAIs across the country fall into the publicly-funded end of the spectrum.

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The variability in the capacity to earn private sector revenues implies that Canada needs different funding models for BAIs across the spectrum of fiscal sustainability, including a differentiated strategy for distinct stages, sectors and regions of the country. In our recommendations, we suggest that funding programs establish a more precise division of labour among BAIs and fund entities to do specialized jobs in the ecosystem based on client stage, sector and location.

The findings in this study also underline the importance of measures that will improve the capacity of BAIs to deliver a more robust return on investment. Top of the list in these measures is the need to “flood the system” with genuine startup experience. Experienced entrepreneurs are needed to instill sound business judgement, improve access to targeted strategic and operational advice, and help entrepreneurs open the right doors and avoid costly mistakes. BAIs with entrepreneurial leaders are also more likely to put time and energy into tapping into new markets and new client segments to grow new revenue streams. In short, there are loud calls for more entrepreneur-led BAIs that can attract and sustain meaningful engagement with the private sector, including VCs and corporates that will contribute significant resources to the ongoing growth and success of Canada’s startup ecosystem.

While seasoned entrepreneurial leadership is critical, DEEP Centre research has identified an array of factors that contribute to success. These factors include a strong organizational culture; a world-class roster of mentors; active engagement with investors, universities and corporate partners; and the ability to connect their entrepreneurs to international startup hubs. As noted throughout this document, there is also an urgent need to attend to a series of ecosystem deficits. Above all, it is critical to ensure that startups have access to the capital, customers and highly-skilled talent they need to fulfill their growth ambitions.

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RECOMMENDATIONS FOR GOVERNMENTS AND BUSINESS ACCELERATORS

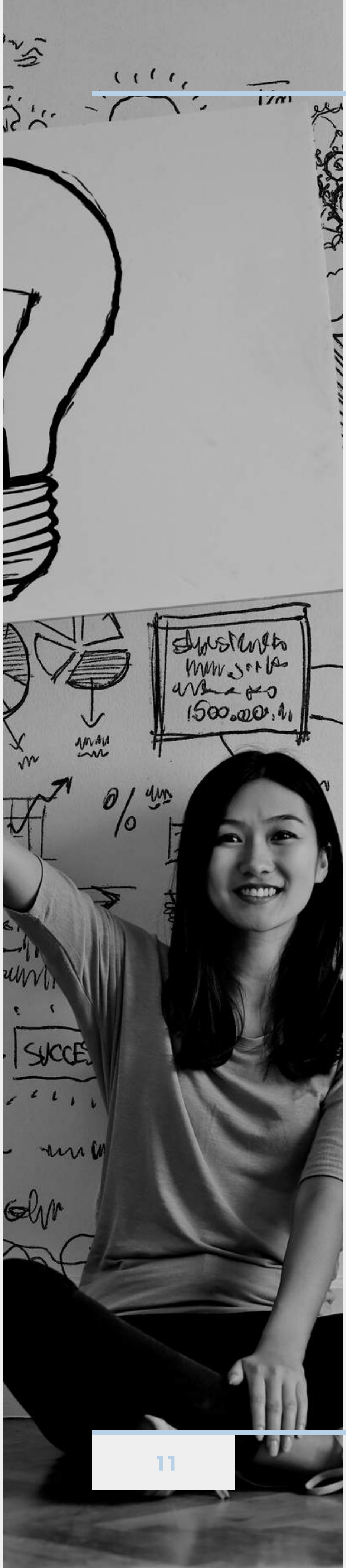
In our recommendations for BAIs and governments, we identify measures to increase fiscal sustainability and increase the clock speed of Canada's startup ecosystem. We also offer suggestions for boosting corporate investment in BAIs and innovation clusters.

FUNDING BAIS AND INCREASING FISCAL SUSTAINABILITY

Given the vital role that governments play in providing financial support to BAIs, the insights from this research suggest several funding-related considerations for policymakers and economic development officials.

Promote specialization by establishing clear sector and stage mandates for BAIs and funding them appropriately. ISED and the regional development agencies should use their central role in BAI funding and accountability to provide clear roles and responsibilities for publicly funded BAIs. Clarity about the division of labour will enable better triaging of clients to the appropriate center of expertise based on sector, technology, or company size and stage of development. According to BAI leaders and other stakeholders, greater specialization should also improve performance as focused entities concentrate their efforts in the areas where they can have the most significant impact.

A healthy ecosystem needs specialized services for all stages of growth and a clearly defined pathway of support from ideation to market traction and growth. At least two essential tiers or stages of support are required across the country. Each tier requires unique funding and delivery models.



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- **Stage 1: Ideation and validation.** At the early stages, firms need access to low-cost space, a supportive environment and structured programming to help them build, refine and validate their ideas. Among other things, this includes support for developing minimum viable products, establishing product/market fit, marketing and competitive intelligence, start-up financing, and intellectual property protection. The executive interviews suggest that funding from the government is critical to sustain programming that builds the funnel and will act as a feeder to entities delivering more advanced programming. BAIs that serve early-stage companies emphasized the need for stable support for core operations and programming. While accepting the need performance-driven accountability, they argue the perpetual fundraising cycle diverts resources from service delivery, creates instability and requires BAIs to reinvent foundational programming.

- **Stage 2: Market traction, growth and maturity**. As startups mature, BAIs shift focus to creating and executing a go-to-market plan. BAIs operating in this space tend to gravitate away from "classroom programming" and spend more time and resources providing tailored, one-to-one support to experienced founder teams. Among other things, this includes a sharper focus on customer acquisition and retention, brokering connections to investors and corporate partners and the transition from founder to chief executive. In establishing clear stage mandates for BAIs, regional development agencies should identify a small number of national leaders and arm them with the resources required to provide advanced scale-up programming. Appropriate resourcing means a level of funding that is a) sufficient to retain top talent and deliver world-class programming and b) commensurate with their economic impact as determined by rigorous performance measurement. Here, the emphasis needs to be on VC and entrepreneur-led entities with a strong track record and the ability to attract significant dollars from the private sector.

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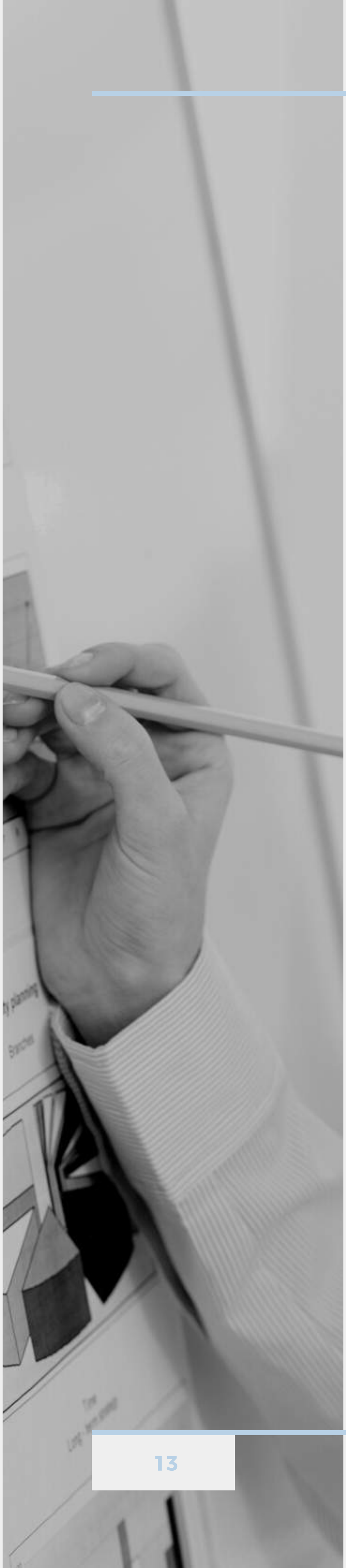
We can make a similar case can for greater specialization by verticals and sectors. Sector specialization is an essential driver of performance for BAIs because companies operating in different sectors have unique needs that are impossible to service adequately without in-depth sector-specific knowledge and connections to customers, channel partners and investors that work in those sectors. Industries such as agri-food, biotech, cleantech and advanced manufacturing, for example, all have needs that are not adequately addressed by the quintessential business support formula that caters to digital technology startups. Moreover, our executive interviews suggest that specialized entities are often more attractive to investors and corporate partners.

Produce a dynamic map of the Canadian ecosystem. Corporates, VCs, entrepreneurs and BAIs need better intelligence on where firms at different stages and in different sectors should go for support. At present, there is no definitive and up-to-date source of information about startup support services in Canada. Working in conjunction with Hockeystick, ISED and the RDAs should produce a dynamic online map that aggregates information about startups, investors and support services in the Canadian startup ecosystem, providing both a visual reference and essential contact information in one place. Data collected through Hockeystick and the national performance measurement framework can inform and refresh the ecosystem map on an annual basis to ensure that it reflects up-to-date information about startups across the country and the programs delivered by BAIs.

Fund bold, transformative efforts to attract private sector engagement. VCs and corporates have very little interest or need to engage with BAIs that deliver early-stage programming. On the other hand, there is a perception that government funding agencies have given disproportionate funding to non-profit entities and generally shied away from providing support to for-profit and VC-backed BAIs. Our interviews confirmed that VCs and large firms would make investments in "game-changing" innovation projects, and they are calling on Canadian economic development agencies to get on board.



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Among other things, these game-changing projects could include investments in cutting edge technology engineering (e.g. artificial intelligence technologies developed by the Vector Institute and other AI labs in Canada) and the commercialization of healthcare innovation (e.g. the Structural Genomics Consortium and JLABs @ Toronto). Other examples include large-scale technology integration and demonstration projects (e.g., CUTRIC's electric bus demonstration project) and the development and adoption of clean technologies in the energy sector (e.g. Evok Innovations). In other words, to attract large anchor firms, focus on funding clusters, hubs and corporate innovation partnerships that will achieve something bold and unique that even the largest and most sophisticated firms cannot achieve on their own.

Don't spread support too thinly. Public funding decisions are guided, in part, by the need to address regional inequities and public concerns. This may lead funding agencies to avoid or wait too long to cut off funding for initiatives that do not generate meaningful traction. Such considerations have contributed to federal and provincial economic development agencies funding a large number of projects. To maximize support and rationalize funding, funding agencies could opt instead to offer more substantial sums of funding to a select group of projects with outsized potential.

Critical mass is essential in innovation clusters and BAIs. Granting larger funding envelopes to entities that can attract equivalent matching funds from large anchor firms and VCs will help ensure that there are sufficient resources to achieve bold and transformative outcomes. If economic development officials do the work to identify unique competencies and specific areas of comparative advantage, then they should feel confident to make significant investments that can move the needle on innovation.

Identify opportunities to implement lower-cost delivery models. While the focus of this report is growing private sector revenue streams, using resources more judiciously is another way to enhance fiscal sustainability. As noted in our case study on the BC Scaleup Program, building a big funnel of early-stage companies is time-consuming and expensive. The success rates are low, and the short-term economic impact is thin.

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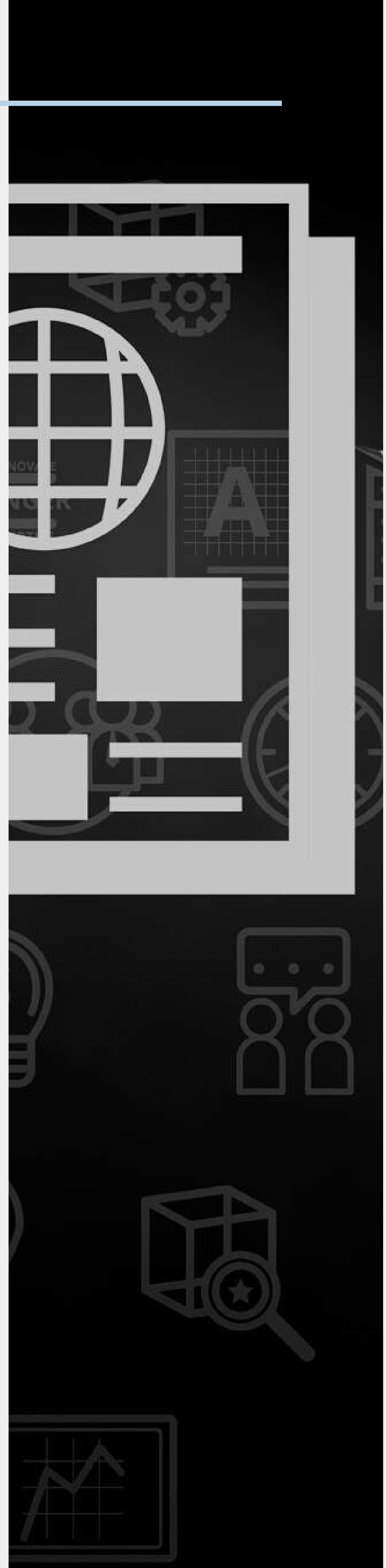
However, with online delivery for early-stage programming, BAIs can build an early-stage funnel without consuming an enormous amount of organizational bandwidth. Shifting to an online delivery model for basic entrepreneurial education would ensure that foundational programming remains highly accessible. In the meantime, high-priced experts could spend less time imparting the basics to early-stage companies with highly uncertain outcomes, and more time on tailored engagements for growth-stage companies.

Encourage BAIs to share programming tools and resources. Several BAI leaders pointed out that pooling of resources across the ecosystem would enable resource-constrained entities to provide more robust support with limited dollars. Where possible, RDAs should encourage BAIs to develop regional or even national solutions for program delivery. For example, there is no need for dozens of entities to build unique programming for export development or international market intelligence when a shared curriculum could be delivered, in a customized way, by local BAIs to create the same value for less cost.

A bias towards sharing rather than duplicating programming does not mean standardizing programming for the country or ignoring regional and sector-based differences. Nor does it preclude the ability to be flexible in how programming is designed and implemented in a local context. The goal in crafting regional and national solutions is to avoid making redundant and duplicative investments and to improve regional coordination and coherence for program delivery. BAIs should also proactively seize opportunities for collaboration using forums such as the CDMN. For example, rather than build in-house capacity in digital health, a BAI focused on biotech and life sciences can collaborate with a tech-focused BAI to leverage complementary expertise on artificial intelligence and big data. Other opportunities for collaboration include corridor demo days and pooling companies for foreign delegations and field trips to the United States.



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BOOSTING IMPACT AND INCREASING THE CLOCK SPEED OF THE ECOSYSTEM

A message heard time and again from executives and VCs is that the whole Canadian ecosystem needs to move much faster if it expects its firms to be competitive on the world stage. "Canadian founders are just as smart as US founders, but US founders move more quickly," said one investor. "They are surrounded by competition and have a sense of urgency. They are more connected to customers. They figure out what to build more quickly. They sell it, and then they build it."

The argument advanced by many executives consulted by the DEEP Centre is that in Canada's comparatively small ecosystem, it is easy to fall into a false sense of complacency. One can assume that because you don't see the competition in front of you, it doesn't exist. One can also fail to appreciate that the world's most prominent and dynamic ecosystems are much faster at getting their ideas to market. It's not until firms gain exposure to how quickly world-class ecosystems are moving that the bubble bursts and entrepreneurs are awakened to what it really means to compete on a global playing field.

The metabolism or clock speed of an ecosystem is mostly a function of intrinsic dynamics such as the degree of economic density and competition and the local norms and culture. Higher density, for example, means greater exposure to competitors, which creates a more acute sense of urgency to act quickly. Density also means closer proximity to opportunities for advancement, like access to customers, mentors, investors and service providers. Firms spend less time searching for and connecting with the right people, and more time just getting stuff done.

These intrinsic factors make it challenging to instigate improvements in the speed at which key actors make decisions and reach critical milestones. Nevertheless, there are concrete actions that funding agencies and Canadian BAIs can undertake to help improve the metabolism of the ecosystem.

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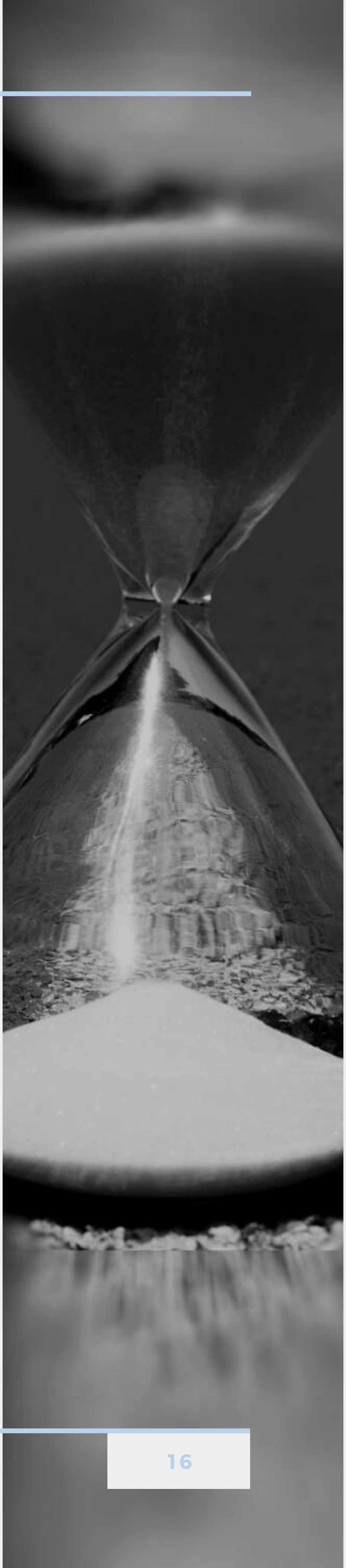
Establish sector and stage appropriate timelines for accelerating companies towards success or failure. There is a common perception that Canada does not have enough fast failures and that too many companies are allowed to linger in incubators for years. Several best practices would help BAIs ensure that they are supporting viable companies and not merely prolonging the life of a walking zombie.

- **Establish timelines for achieving key milestones**. BAIs should work with each supported company to establish clear objectives for reaching stringent targets that are appropriate for their sector and stage of growth. Milestones should be ambitious, foster a sense of urgency and a hard work ethic. EiRs should evaluate progress towards meeting these milestones on a monthly or bi-monthly basis as appropriate.
- **Seek external validation at regular intervals**. BAI clients should be seeking external validation of their ideas and progress from potential customers and investors as early and often as possible. Validation from the marketplace is the best way to ensure that companies are building a product or service with the potential gain traction. A lack of validation, on the other hand, is a clear sign that it is time to pivot or wind down and start afresh.
- **Keep fingers on the pulse of the top international startup hubs**. Tracking the rapid evolution of digital technologies and markets in the international startup hubs is the best way to validate whether Canadian firms are producing products and services that will stand up to global competition. Making regular trips to the global startup capitals will enable faster pivots by entrepreneurs seeking to tap emerging opportunities.
- **Implement a greater willingness to cull or divert firms that exhibit less potential**. Creative Destruction Lab, for example, routinely drops companies from its program when they fail to hit milestones or when CDL Fellows lose interest in continuing to mentor the participating founders. Historically, only half the companies that start in each cohort will complete the nine-month program.
- **Link BAIs funding to economic outcomes**. Economic development agencies should tie funding to economic outcomes that clients achieve rather than the volume of support (i.e., the number of supported companies and activities). Metrics based on volume of support rather than economic outcomes create little incentive to declare failures and show underperforming firms the exit door.



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Measure velocity as part of BAI performance measurement. The metabolism of the ecosystem would be improved if more BAIs started paying attention to the speed at which their client companies reach milestones (e.g., the time required to develop an MVP, to gain customer traction, obtain series A financing, or exit by acquisition). Leading accelerators, for example, assess their success based on their ability to accelerate their clients' achievement of critical milestones. Indeed, the best way to objectively measure the contribution of BAIs is to run a statistical analysis to assess whether accelerated companies are raising financing or hitting revenue growth rates more quickly than a comparable cohort of non-accelerated firms.

In developing the national performance measurement framework for BAIs, BAIs suggested that the measurement framework account for velocity in achieving milestones in addition to static indicators such as the amount of revenue or capital raised in a given year. ISED and its partners could incorporate such measures into future versions of the PMF. In the meantime, ISED could begin working with BAIs to develop tools and solutions for tracking the economic performance of client cohorts over time and analyzing the time required to meet particular targets for revenue, investment attraction and job creation.

Use the PMF to identify BAIs where Canadian companies have the greatest opportunity to succeed. One purpose of the PMF is to drive evidence-based decisions about which firms and BAIs merit ongoing public support. For their part, BAIs must evaluate clients more strictly on their performance and ability to reach explicit targets. Using Hockeystick will enable better tracking client performance, helping BAIs make hard choices about whether to drop some companies from their client base. The RDAs, on the other hand, could also align their funding and program investment decisions with what the performance data reveals to be the most effective channels for supporting entrepreneurs across the country. Doing so could lead to some tough choices, but, in a time of scarce resources, the responsibility of economic policymakers is to ensure that RDAs allocate public dollars to programs and institutions that are producing the most significant public benefits.

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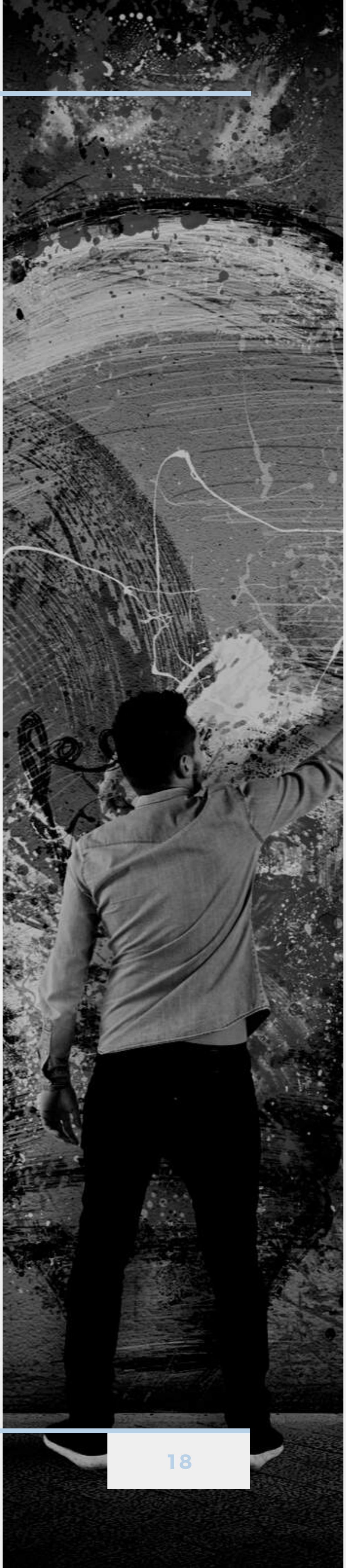
Identify key success factors and share best practices. While not directly captured within national performance measurement framework, is it worth thinking about how to shed light on the success factors that drive high-performing organizations. Indeed, as innovative models continue to evolve, it is vital to seek a deeper understanding of the factors that distinguish the most successful BAIs. Is success attributable to management capabilities, location, a competitive client selection process, partnerships with investors, research universities and corporate tenants or some combination of other factors? As more data is collected, ISED and the RDAs should work with BAI leaders and researchers to determine whether there are common characteristics or design choices that influence success or failure. While not an exact science, a combination of data modelling and qualitative interviews could generate valuable insights about the structures and best practices that BAIs should replicate across the ecosystem.

INCREASING CORPORATE INVESTMENT IN CANADA'S INNOVATION CLUSTERS

While the executive interviews shed light on the best practices for attracting global anchor companies to Canadian startup ecosystems, the question for federal policymakers is how to seed, encourage and nurture promising new investments in Canada's BAIs and innovation clusters. In other words, how can federal agencies help get the ball rolling? The insights from this research suggest a couple of proactive strategies to advance and support corporate engagement in Canada's startup ecosystem.

Engage with industry innovation executives. In today's world, winning companies succeed by keeping their fingers on the pulse of the global innovation economy, including its markets, technologies, and peoples. BAI leaders, policymakers and economic development officials should do the same. By meeting regularly with innovation executives at top global companies, they can better understand their technology roadmaps, including the types of innovation investments they are making now and those they are seeking to make in the future. Where do senior executives see their sectors going in the next ten years? What kind of technologies, capabilities and talent will be required to get them there? Could an innovation outpost or corporate accelerator help fulfil these objectives? If so, who and what would provincial or federal levels of government need to bring to the table to make participation in an innovation cluster worthwhile?



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In short, meetings with innovation executives will provide vital market intelligence. They can help pinpoint areas of potential alignment and synergy between corporate innovation agendas and those of key actors and significant activities occurring in Canadian clusters. If one-to-one meetings with top executives are not always possible, industry meetings and conferences provide other avenues for identifying key industry trends.

Identify significant market opportunities that could provide a carrot for corporate investments in BAIs and innovation clusters. The best way to convince companies that there is an ROI on participating in BAIs is to create a significant market opportunity as an outcome of the investment. For example, MaRS was able to attract a considerable investment from Johnson & Johnson in a new JLABs location because of Toronto's vast publicly funded infrastructure for commercializing biomedical innovation and discovery research. Among other things, this includes a series of world-class biomedical research consortia and investments in making Canada an undisputed center of excellence in artificial intelligence. Could policymakers help orchestrate other such opportunities in Canada that would compel global anchor firms to make significant innovation investments? The provincial and federal governments, after all, are substantial purchasers of a vast array of products and services, many of which intersect with the innovation focus of strategic clusters across Canada. Opportunities could include orchestrating a volume purchase of innovative new medical devices or health IT systems by provincial hospitals; a widespread roll-out of new blockchain or AI-based business intelligence and data management systems; or the integration of new clean technologies into Canada's network of buildings, transportation fleets, and other infrastructure assets.

Build capacity for corporate innovation partnerships. In building a case for public intervention in support of corporate innovation partnerships and reviewing the landscape of associated initiatives in Canada and beyond, a couple of key findings and conclusions become apparent.

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First, there are distinct challenges and market imperfections that require solutions. Among other things, these include:

- **A lack of transparency and connectivity for buyers and sellers**. Startups and SMEs have imperfect visibility into the operations of large firms in Canada and a lack of accessible entry points for marketing their solutions. Large corporate buyers also lack visibility into the landscape of potential solutions that could address their innovation needs. When searching for innovative solutions, they confront a complex innovation landscape populated by a plethora of universities, colleges, incubators and accelerators—all of which host entrepreneurs who are developing new technologies and solutions that could reshape their industries. This lack of transparency and connectivity on both sides underlines the need for more effective matchmaking and visible entry points that can bring small and large firms together in mutually beneficial relationships.
- **A shortage of know-how for forging effective partnerships**. Startups often fail to understand the intricacies and the economics of large-scale industrial processes and are ill-equipped to enter into serious business negotiations with a larger partner. Large companies may lack necessary innovation skills and competencies, or not fully appreciate how to work with startups without quashing the very qualities that make them agile and innovative. This shortage of know-how highlights the need for education, culture change and capacity building to support corporate innovation efforts and secure a more significant number of first sale opportunities for startups.

Second, our international best practices suggest some policy options and instruments that economic development agencies could deploy to pave the way for greater corporate engagement in Canadian startup ecosystems and innovation clusters. In particular, there is merit in exploring the potential to replicate the Ignite Sweden model here in Canada. Such an entity could help build corporate innovation capacity and focus the attention of corporate leaders on the partnership and investment opportunities that exist across the country. Indeed, there is considerable support among those consulted for a) education, training and support on how to engage with startups, and b) a streamlined model of engagement that could enable larger corporate entities to gain exposure to companies and opportunities across the country, rather than working bilaterally through individual BAIs.

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Some of the critical activities would include:

- **Educating corporate executives about the merits of corporate innovation partnerships** and sharing best practices across the community. Capacity-building workshops could take this a step further by training corporate executives on topics ranging from start-up financing to intellectual property management to acquisitions.
- **Hosting demo days** in which BAIs can bring their best startups to pitch their solutions to corporate executives. Demo days could be held monthly and rotate through the various accelerators and incubators across the country, ensuring that there is equal opportunity to get in front of corporate audiences. Demo days could also be structured around sector themes to ensure there is close alignment between corporate innovation goals and the solutions that startups are pitching.
- **Offering product development support and mentorship** by connecting new entrepreneurs to experienced business executives who can provide advice at key pivot points, shape product development and help mould vital management competencies. In some cases, product development support can extend to allowing entrepreneurs to work directly with the engineering and operations teams at large companies to optimize product performance and minimize costs during the product development phase.
- **Offering legal advice and a legal structure for engagement** to ensure that both startups and large corporations enter into mutually beneficial relationships and that each partner's interests are adequately protected. Corporate executives also expressed an interest in ensuring that there is a safe space (i.e., non-disclosure environment) for exposing corporate innovation challenges or problems so that they aren't necessarily in the public domain.
- **Train start-ups on how to engage with large corporations**. While much of the focus is on persuading large companies to invest more in the local ecosystem, it is equally important to teach entrepreneurs how to engage effectively with large companies. For example, startups need to talk the same language as corporate executives, they need a compelling business case for investment, and they need to demonstrate that the solution they are offering can work at scale and meet the complex needs of a large international company.

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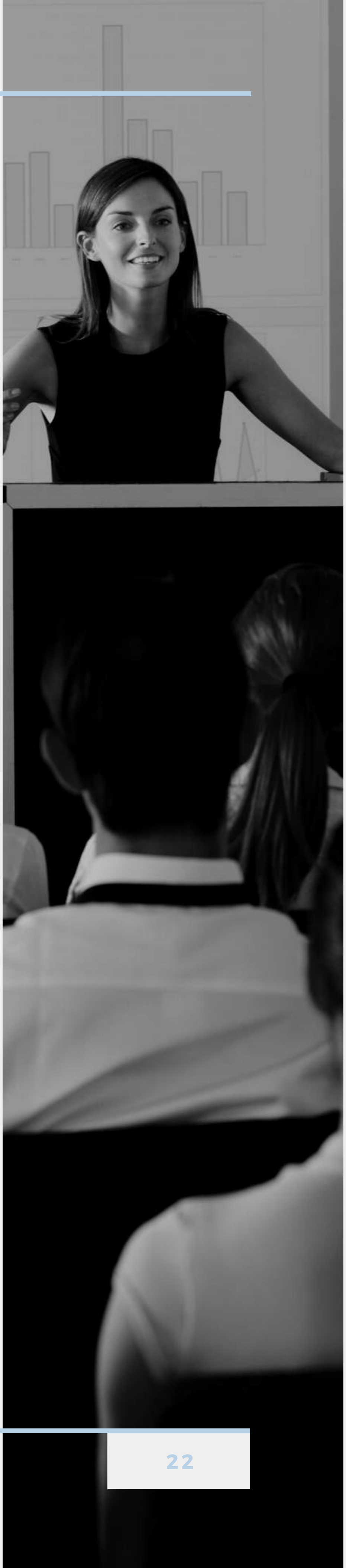
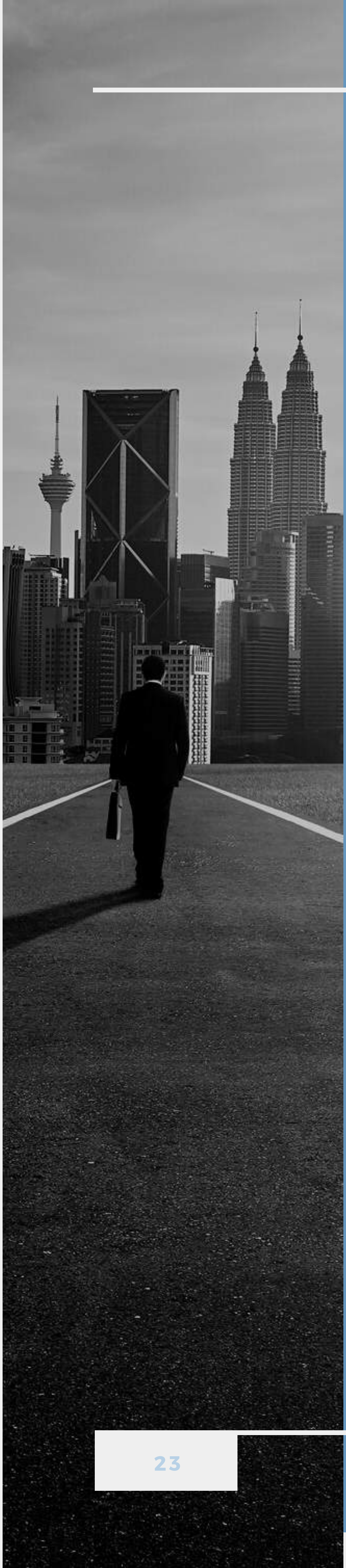
Convening Canada's CEOs and highlighting best practices can also help build a case for greater engagement in startup ecosystems and for boosting early adoption partnerships in Canada. Peer pressure is an excellent motivator. One should not underestimate it as a tool for getting more companies to a point where the leadership will seriously entertain the idea of becoming a first buyer or early adopter of technologies and solutions developed by Canadian startups. Several executives consulted by the DEEP Centre noted that they would like to see more opportunities to connect with their peers around partnering with startups and to gain access to specific use cases and company case studies. "Knowledge sharing across companies would help build our business case," said one executive. "How did you build the business case? Did your pilots work? What can we learn?"





CHAPTER 3

RECOMMENDATIONS FOR CORPORATIONS

While most of our recommendations are focused on boosting the fiscal sustainability of BAIs, our research has also uncovered several best practices for corporate leaders in Canada. Here we offer a summary of recommendations for creating significant value from corporate innovation partnerships.

Make sure there's leadership from the top. Initiatives such as JLABs, the Disney Accelerator and Evok Innovations exist because the CEOs behind these initiatives provided the mandate and guidance to make it happen. In each case, the company leaders set bold innovation goals, removed barriers to achieving the vision and held managers accountable for reaching company targets. Disney CEO Bob Iger even gets directly involved in meeting and mentoring startups, calling the process not only energizing but also crucial to Disney's efforts to keep pace with the rapid evolution of technology and media. "There's nothing like being introduced to new ideas, new concepts and new people, and the energy that we derive from the relationships that we've generated through our accelerator programs is substantial," said Iger.146 Among other companies, Iger personally advised Sphero. This robotics company graduated from the Disney Accelerator in the first class and went on to work closely with Lucasfilm on its Star Wars series.

Commit to significant innovation, not innovation theatre or brand-building. Some companies engage with startup ecosystems for the wrong reasons. They want to show that innovation is happening, but their investments don't lead to tangible outcomes. As one executive put it: "Many companies are relatively early in their journey and unsure about how to engage with an innovation ecosystem. They are seeking to inject more creativity into a staid corporate culture or put a more attractive hue on a corporate brand."

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Another danger with innovation outposts is that the teams tasked with designing big new ideas become separated from the business they are trying to change, making it harder to integrate their innovations once developed. Real innovation means scaling new capabilities into the core business and supporting startup companies that go on to achieve genuine success in the marketplace. Achieving these outcomes requires more investment and executive attention, but the companies making a serious commitment will reap the dividends. JLABs can boast, for example, that 12 companies in its network are now publicly traded; 88% of JLABS companies are still in business or have been acquired; 26% have therapies in human trials, and 25% of residents have a commercial product in the market.

Provide access to valuable corporate assets. Companies like GE, Disney and Johnson & Johnson help startups and SMEs grow by providing access to valuable corporate assets that startups could not otherwise access, including intellectual property, expensive equipment, proprietary data, and industrial testbeds. Disney provides its portfolio companies with access to a broad range of media properties and a war chest of creative content and intellectual property. JLABS offers access to world-class life sciences research facilities, including cutting edge medical equipment. Startups working with GE Ventures can leverage the innovation horsepower of eight global research centers and a deep reservoir of more than 50,000 patents. Other valuable assets include providing access to customers and supply chain partners who may be willing to test and help refine a startups' products and services.

Offer mentor support through a network of executive talent. Both corporate accelerators and corporate venture capital outfits like to trumpet the “differentiated advantage” they bring with their deep understanding of and connections within the sectors in which they operate. Smart companies leverage this advantage by connecting company founders and team members to experienced business executives who can provide expertise on science, marketing and regulatory issues.

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With Evok Innovations, for example, entrepreneurs gain a visible and accessible entry point into the global energy value chain. In Cenovus and Suncor, they also have access to two highly experienced executive teams who can help them better understand industry needs and give them feedback on unit economics, time to market and product performance specifications.

Deliver no-strings-attached support. Corporate venture programs have failed in the past because large corporates have put their strategic interests ahead of the startups they alleged to support. Disney, Johnson & Johnson and GE have learned to balance their strategic interests with a no-strings-attached model that provides entrepreneurs with the freedom to follow the path that will maximize growth and success. This means no one-sided partnership agreements, first right of refusal clauses or exclusive rights to the technologies startups develop. As one senior Cenovus executive put it, "We're in a collaboration economy. You can't put entrepreneurs in handcuffs, or you won't get the best entrepreneurs coming to you."

Maintain flexibility and evolve the model. Whereas in the past, all startups in an accelerator were offered a fixed amount of money for a set amount of equity (e.g. $100K for 5%), smart companies attract the most promising startups by making their deal terms more dynamic. For example, in 2016, Disney removed the cap on the amount of money it invests in each startup. It also shifted the program focus to expanding the commercial reach of existing products from mature startups. Many of the companies in its accelerator generate recurring revenue and have raised 10's of millions of dollars. Atom Tickets was part of Disney's 2016 accelerator, after raising $50M in its previous round. In short, corporate accelerators shouldn't expect great startups to accept blanket terms and must be willing to negotiate with each of them independently.

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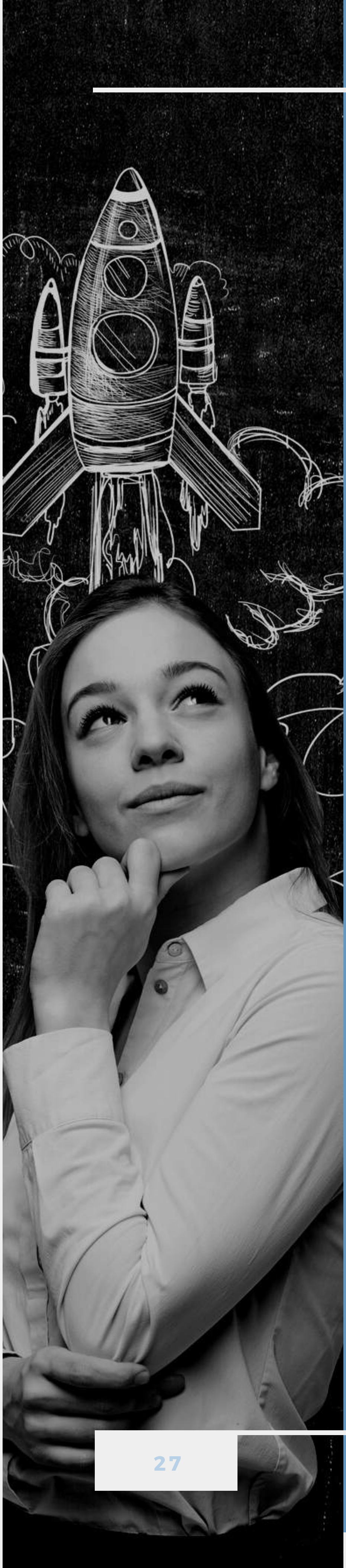
Don't just follow trends, lead them. An ever-growing roster of domestic corporations and foreign multinationals are flocking to Canada's AI ecosystem, both to absorb its talent and make strategic investments in AI startups. In addition to the usual U.S. tech giants, the list of corporate investors in new AI labs includes Royal Bank of Canada, Toronto-Dominion Bank, Manulife Financial and Thomson Reuters. Participation in startup ecosystems can provide companies with access to new talent, ideas and technologies. But executives should go in with a clear strategy. For example, are we looking for talent, acquisitions or go-to-market partners? Do we have the expertise and resources to work with startups without quashing the very qualities that make them agile and innovative? Executives should also look past what's obvious and trendy. Beyond AI, there are compelling opportunities for investment and collaboration in biotech, clean technology, industrial automation, smart mobility and other areas that complement the industrial mix here in Canada. These sectors don't always make the headlines, but they could help reinvigorate a long list of sleepy giants in industries including agriculture, construction, energy, forestry and mining.

Greater engagement from Canada's traditional industries will benefit Canadian startups that too often find their first customers in other countries. While internationalization is vital, Canadian entrepreneurs will be better positioned in international markets if they can secure financing or their first sale on home turf. Cleantech SMEs note, for example, that early adopters in Canada can play an essential role as "reference customers" and "market makers" by helping demonstrate early traction for Canadian solutions in key export markets.

For Canada as a whole, corporate innovation partnerships represent an opportunity to attract investment, foster innovation and create the jobs and companies of the future. "Now more than ever, it is crucial to leverage the pace and creativity of the startup ecosystem," said Jonas Almeling, director of innovation partnerships with Ericsson ONE. "Innovation is not a private territory, but an open ecosystem that empowers and accelerates the ambitions of all those who meaningfully engage with it."



CHAPTER 4

TOWARDS FISCAL SUSTAINABILITY

At this stage in the development of Canada's startup ecosystem, there is a need to tackle two interconnected priorities: improving the capacity of BAIs to provide effective support to Canadian startups and implementing regional solutions that will enhance the fiscal sustainability of the startup support system. In doing so, there is an imperative for both federal and provincial levels of government to promote pan-Canadian thinking and approaches when it comes to setting policy, supporting research opportunities, encouraging coordination and collaboration among ecosystem participants, and addressing gaps in startup financing, talent, mentorship and global engagement, among other things.

For Canada to promote its future economic prosperity through the further development of high-tech jobs, firms and clusters, policymakers and other stakeholders need to offer concrete solutions for unleashing the country's entrepreneurial potential. Among other things, this will require business incubators and accelerators to improve their programming by specializing in particular sectors and stages of growth. It means promoting more significant partnership activity between tech startups and large multinationals that can act as anchor customers and open up access to global value chains. There will need to be better engagement with venture and angel investors who can unleash the capital and transaction activity required to help firms scale. High-potential companies must be encouraged to gain international exposure early and should have easy access to the necessary export supports to tap Asian and North American markets. Canada must also invest in the creation of a roster of home-grown management talent with the specialized skill sets to help Canada's cadre of brilliant technical founders build large, sophisticated businesses with the enterprise capabilities to serve a truly global market.

CHAPTER 4

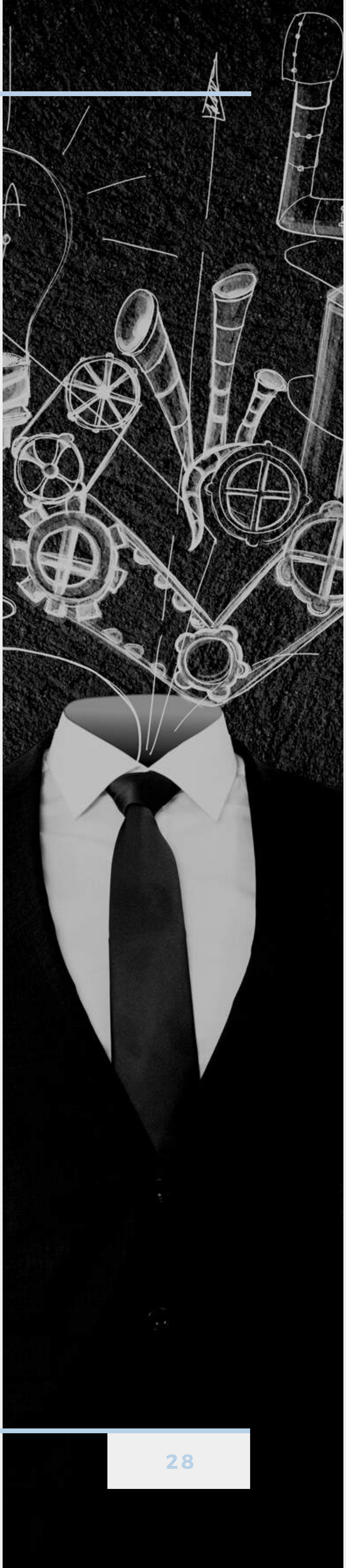
TOWARDS FISCAL SUSTAINABILITY

Without a focus on these remaining challenges, Canada's startup ecosystem will be unable to fully exploit the tremendous entrepreneurial activity that the digital revolution has helped to create. While entrepreneurship in and of itself is a valuable activity, especially given prevailing labour market trends, it remains an intermediate step towards the ultimate goal of creating sustainable high growth firms that can drive economic and employment growth. For Canada to become a creator of global technology champions, the federal and provincial governments must work together to create the enabling conditions to allow our highest-potential companies to grow beyond Canada's borders and become the significant global employers of tomorrow.

Already, a positive shift is unfolding in the ecosystem, including efforts by BAIs to generate more revenue from the private sector. Government partners can play a decisive role in nurturing this pivot by developing a BAI investment strategy that creates a clear division of labour in the ecosystem and promote a coordinated pan-Canadian approach to growing start-ups. BAIs and their partners in government must also commit to using standard performance measures to support evidence-based decisions.

Doing so will enhance the ability to identify and implement improvements in programming, to share best practices across institutions and jurisdictions, to generate better outcomes systematically and to market Canada as a dynamic place in which to start and grow a business. It will also help firms make better decisions about where and how to access support. BAIs will be able to identify opportunities to collaborate. And, a commitment to openly reporting the results, will build public confidence in the economic benefits these organizations create for Canada.

Looking to the future, these new approaches can help ensure that BAIs across the country contribute to the development of high-potential firms, stimulate the creation of innovative technologies, and provide the ability for start-ups to succeed and contribute to long-term, sustainable economic growth in Canada.



ABOUT THE AUTHOR

Anthony Williams is founder and president of the DEEP Centre and an internationally recognized authority on the digital revolution, innovation and creativity in business and society. He is co-author (with Don Tapscott) of the groundbreaking bestseller *Wikinomics* and its follow-up *Macrowikinomics: New Solutions for a Connected Planet*. In addition to his work with the DEEP Centre, Anthony is a research director with the Blockchain Research Institute, an expert advisor to the Markle Foundation's Initiative for America's Economic Future, a senior fellow with the Lisbon Council in Brussels, and chief advisor to Brazil's Free Education Project, a national strategy to equip 2 million young Brazilians with the skills required for a 21st Century workforce.

READ ON

PARTNERS FOR INNOVATION AND PROSPERITY: TOWARDS FISCAL SUSTAINABILLITY IN CANADA'S STARTUP ECOSYSTEM

With the *Partners for Prosperity and Innovation* project, the DEEP Centre led the first nation-wide effort to assess the viability of self-sustaining business models for business accelerators and incubators (BAIs) in Canada. Drawing on a national survey and a wide-ranging series of executive interviews, the study highlights critical strategies for growing private sector revenue streams and establishes a better understanding of the challenges startup support organizations are encountering in their pursuit of fiscal sustainability.

PART 1 provides a taxonomy of BAI revenue models and the findings from a national survey of business accelerators and incubators across Canada.

PART 2 highlights key insights and findings on fiscal sustainability from a series of executive interviews.

PART 3 includes an analysis of domestic and international best practices in business acceleration.

PART 4 provides a summary of the key conclusions and recommendations for executives and policymakers.

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