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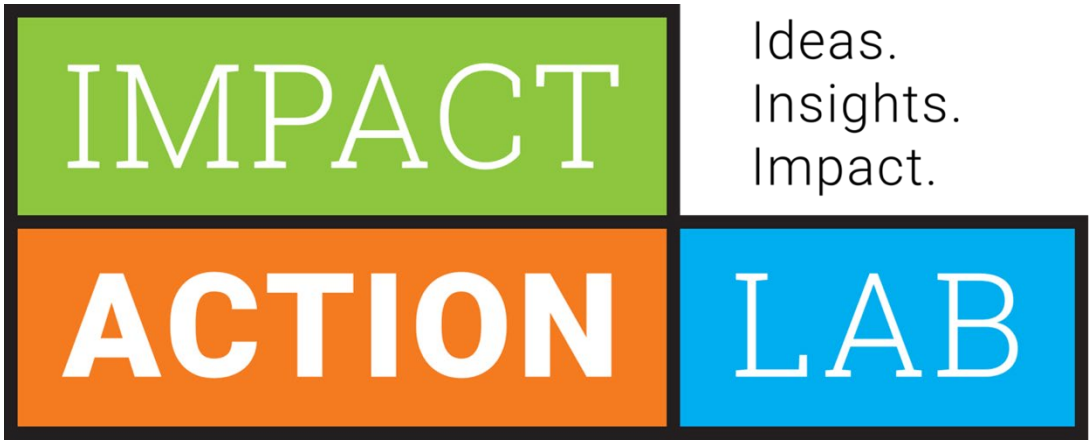
A Formative Realist Impact Assessment

Of Alberta Innovates Scaleup and Growth Accelerator Program

May 2024

Prepared by Jonathan Grant for Alberta Innovates



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About this Report

This report was commissioned by the Alberta Innovates Impact Action Lab (IAL) in collaboration with the Investments Business Unit as part of an overall performance and impact management strategy cycle.

About the Impact Action Lab

The Impact Action Lab, at Alberta Innovates, partners with ecosystem players to amplify and activate the collective economic and societal impact of research and innovation investments. The IAL is made up of global and local impact experts that help move ideas to actionable insights. They are creative in iterating fit for purpose approaches to effect real change and scale impact. The IAL works with organizations to enhance their capacity by incorporating performance and impact management systems to demonstrate their value and generate benefits to their communities.

About the Alberta Innovates Investments Business Unit

The Entrepreneurial Investments team is a group of business experts with one common goal – to see Alberta technology and knowledge-based businesses succeed. By designing and delivering impactful programs, providing leading business coaching services, and fostering an entrepreneurial community, we are investing in Alberta's greatest resource – its people.

Through coaching, community, and capital, they invest in and support Alberta technology and knowledge-based businesses to help them reduce the time it takes to commercialize their product or service. They want to see their clients scale to new heights and to positively contribute to the provincial economy and make it more competitive on a global stage. In addition, they help their clients get investor-ready and connect with investors that will further support their business growth.

They support Alberta-based technology and knowledge-based businesses in every corner of the province through the *Regional Innovation Network*.

About the Lead Author

Jonathan Grant is founding Director of Different Angles Ltd, a consultancy that focuses on the social impact of research, innovation and universities. His main interests are in research and innovation policy, research impact assessment, the social purpose of universities and the use of evidence in policy and decision-taking. Jonathan was professor of public policy and Vice President & Vice Principal (Service) at King's College London, which he joined in 2014 to set up the Policy Institute at King's. Jonathan's book, *The New Power University. The social purpose of higher education in the 21st century*, was published by Pearson in March 2021.

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Executive Summary

This report describes findings and insights from a formative realist impact assessment of the Alberta Scaleup and Growth Accelerator Program. In Alberta, like in many regions of the developed world, business accelerators are part of a public policy mix that aims to stimulate innovation by supporting entrepreneurs in starting up companies and, in time, scaling those companies to create jobs, economic growth and social vibrancy. In 2021, Alberta Innovates (a provincial research and innovation funder and catalyzer) developed a scaleup and growth strategy to accelerate startup and growth for technology-based companies in the province with the financial support of federal, provincial and municipal governments. Following an open competition, C$35 million was awarded to six accelerators through the Scaleup and Growth Accelerator Program for an initial three-year pilot. The Scaleup and Growth Accelerator Program was designed with two equal pillars. The first was the attraction of global accelerators to Alberta, and the second was a Fund and Fellowship approach that invited accelerators to participate in the co-development of an Alberta-based 'network of networks' along with Alberta Innovates, participating companies and its partners.

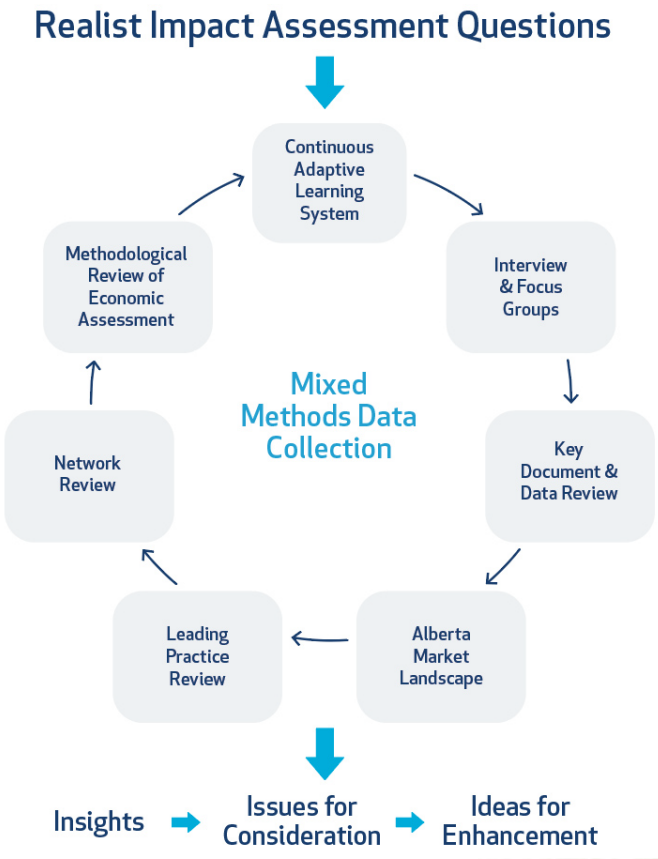
The objective of this realist impact assessment is to assess the context, mechanisms and outcomes of innovation accelerators funded through the Scaleup and Growth Accelerator Program. A realist approach is focused on a C+M=O framework, where C is context, M is Mechanism and O is outcome (or impact). This framework conceptualizes outcome/impact as an interaction between context and mechanism that is likely to be dynamic, time and place dependent, and iterative, i.e., a process of learning and relearning. This framing moves away from the simple question as to whether a specific intervention worked (or not) to a more nuanced one that elucidates: What works (or does not work)? For whom (and to what extent)? In which circumstances does it work? How and why does it work? In short, a realist approach seeks to understand *how* a program *causes or contributes to* the desired outcome and, critically, issues such as relational power, trust and community effects. Given that the Scaleup and Growth Accelerator Program is in year two of a three-year pilot, the insights from this realist impact assessment will inform adaptation and course correction (as applicable) to achieve desired outcomes/impacts.

The governing question for the assessment was ***'In what ways has the Scaleup and Growth Accelerator Program contributed to the impact and evolution of a strengthened and***

vibrant entrepreneurial ecosystems in Alberta?' and this was supported by a series of supplementary questions organized around context, mechanisms and outcomes. As summarized in Figure ES1, the impact assessment questions were addressed through a mix of data collection methods and led to a series of insights that were derived, in a bottom-up way, from the evidence. These insights were then organized into a set of issues that Alberta Innovates and other stakeholders may wish to consider and, from these, some ideas for future enhancement of the Scaleup and Growth Accelerator Program. It should be noted from the outset that the program is still relatively new having been launched in September 2021. The first year was very much focused on establishing the program, with full programming being implemented in year two. Each accelerator has graduated four to five cohorts to date, but only two cohorts have reached the two-year follow-up period. Hence this impact assessment is very focused on formative lessons as opposed to identifying the summative impacts of the program.

Figure ES1:

Conceptual overview of relationship between the assessment questions, key insights, consequential issues and ideas for future iterations of the program



The main finding of this impact assessment is that the **Scaleup and Growth Accelerator Program is contributing to the impact and evolution of a strengthened and vibrant entrepreneurial ecosystem in Alberta** as summarized in Table ES1. This is based on the observation that there is no evidence to support closing the program, there is good evidence to support its continuation, but that in a second phase there are a number of enhancements to consider for sustainability (i.e., financial and sustaining outcomes/impacts).

This overall assessment that the Scaleup and Growth Accelerator Program is meeting its original objectives is informed by 10 key insights identified during the realist assessment:

1. **Alberta has a unique entrepreneurial ecosystem, shaped by its vast geography and historical focus on fossil fuels, that needs to be accounted for in programming**. As identified through international benchmarking, entrepreneurial ecosystems are shaped by their social, economic and geographical context. While ideas for good and interesting practice can be identified from other jurisdictions, it is important that they are adequately 'localized'. In the context of Alberta this means taking into account its large geography, and particularly the role of rural entrepreneurs, and the rebalancing of economies away from fossil fuels towards newer industries such as ag-tech, digital and Artificial Intelligence. Although the unique characteristics of Alberta were emphasized at the outset of the program, there was a tendency for some of the provider accelerators to adopt a 'cookie cutter' model of delivery without localizing programs to the Albertan context. In terms of successful adoption, this issue of 'adapting' programs to be more 'fit for purpose' is important while balancing the 'fidelity' of program design when implementing.

Table ES1:

Overall assessment of the Scaleup and Growth Accelerator Program against original stated objectives and targeted outcomes (Data from Sept 7, 2021 to Dec 1, 2023)

Program Objectives:

- Address scaleup gaps to help Alberta, Canadian and global ventures to scale and grow and contribute to a thriving ecosystem in Alberta.
- Diversify Alberta's economy by supporting entrepreneurship and innovation in new technology areas that will create high quality jobs throughout the province.
- Drive Alberta's global innovation mindset by attracting global technology firms and investment to Alberta via a world class acceleration ecosystem.

Targeted Outcome	Comment and findings	RAG Assessment*
Increase entrepreneurial scaleup capacity and knowledge in Alberta	The Scaleup and Growth Accelerator Program has contributed to an increase in the overall 'entrepreneurial capital' in Alberta with 401 Alberta companies (292 Pre-Accelerator, 109 Accelerator) participating in the program to date.	
Improve business maturity	As is normal practice, accelerator programs range from eight to 12 weeks which is insufficient time for company stage change, but for participants of the program there is qualitative evidence of increased business acumen.	
Increase the number of Alberta new scalable junior technology companies	The program exposed 76 other Canadian province, 55 U.S. and 42 international companies to Alberta. Eight companies registered to do business in Alberta after completing the program (five from other Canadian provinces and three from non-North American countries). In addition, one founder sold their company and started a new venture and one company went public after participating in the program.	
Create Alberta jobs	Alberta companies reported creating 249 new jobs after completing the program; 171 (69 per cent) of them were for 'High Quality Personnel'.	
Increase new Alberta technology company revenue	Alberta companies reported C$58 million of new revenue growth after participating in the Scaleup and Growth Accelerator Program.	
Increase follow on investment (investment attraction)	Alberta companies obtained C$282.7 million in investment after participating in the Scaleup and Growth Accelerator Program.	
Promote Accelerator sustainability	The perceived lack of maturity of the overall entrepreneurial ecosystem, suggests that for-profit investor-led global accelerators are unlikely to establish themselves in Alberta on their standard terms without the support of a government funder like Alberta Innovates.	

**R = Red; A = Amber; G = Green.*

2. **The focus on global accelerator providers to increase the entrepreneurial capital of Alberta in closing the scaleup gap and rebalancing the economy to new industries is based on sound logic and data**. Alberta Innovates and its partners need to be congratulated for their theory of change (albeit one that was somewhat externally hidden). The scaleup gap in Alberta (and Canada) has been increasing since 2015 and needs addressing through policy intervention. The deliberate policy of encouraging global accelerators to set up in Alberta, and the financial model to support that activity, was coherent. Not only should the program increase the capacity and capability of entrepreneurs in Alberta, but it is likely to have other anticipated spillover or ripple effects on the entrepreneurial ecosystem – including the practice of local accelerators, the training of mentors, and raising the profile of the province for investment opportunities – helping to address the absorptive capacity needs in terms of talent and scaleup.

3. **The adoption of a mix of providers focused on different stages of the entrepreneurial journey provided a natural experiment, creating the opportunity for further enhancements of the program in the future**. The Scaleup and Growth Accelerator Program consisted of two pre-accelerators and four global accelerators and a mix of agnostic and specialized programs. These programs followed generic international best practice in providing education, training, mentorship and access to networks. Given the program has only completed its second year, robust quantitative evidence of the performance of different components, models and providers is incomplete. Nevertheless, from the triangulated sources of assessment information there is evidence to suggest that this mix of provision is appropriate. There is a demand for both pre-accelerators and accelerators in the province and a need for both agnostic and specialized accelerators, with different elements of different programs being particularly valued. There is an opportunity to consider what is the appropriate supply of accelerators, and specific components of accelerator programs, given likely future demand from founders and entrepreneurs within the specific context of Alberta. In doing so it might be worthwhile exploring a 'pick and mix' approach selecting different components of different accelerator programs to design a 'fit for purpose' program intervention that is specific for the needs of Alberta at this time.

4. **Many founders and enterprises that participated in the Scaleup and Growth Accelerator Program were very early in their entrepreneurial journey**. In practice, it was evident that the 'maturity' of participating entrepreneurs was lower than typical for-profit investor-led global accelerators. This was a recurring theme from the accelerators, mentors and investors, and further supported by the selection rates to accelerators. This is not to say that there is not a demand for such a policy intervention such as the Scaleup and Growth Accelerator Program in Alberta, but to acknowledge that it has implications for its delivery and subsequent outcomes and impacts.

5. **Accelerators and participant entrepreneurs had little 'skin in the game'.** One of the consequences of the 'fee for service' business model adopted by Alberta Innovates and its partners for the Scaleup and Growth Accelerator Program was that participants did not have to forego equity or a fee for participation, and accelerators were not financially invested in enrolled enterprises. This also incentivized unintentional behaviour in accelerators recruiting earlier stage enterprises by prioritizing quantity over quality and contributing, in some cases, to low motivation and engagement of entrepreneurs. As seen in the international benchmarking, this is a common model adopted by public funders but has consequences for both the way programs are delivered by accelerators and the participant entrepreneurs. For example, there was some evidence from the interviews and focus groups that a minority of entrepreneurs were participating in the program to acquire the 'signalling' benefit of enrolment but were not active participants. Similarly, there was concern from some entrepreneurs that the accelerators were adopting the 'cookie cutter' approach to program delivery that might not have applied if they had a monetary stake in the outcomes.

6. **There is a need for a greater focus on embedding the accelerator program and the fellowship pillar into the entrepreneurial ecosystem in Alberta.** One issue that came up in interviews with entrepreneurs and focus groups with mentors and Regional Innovation Networks (RINS) was the perceived lack of a 'joined up' or integrated process between different elements of the entrepreneurial ecosystem in Alberta. Examples of this included lack of knowledge by RINS in which entrepreneurs were participating in the program and when they graduated, and concern from entrepreneurs about 'what happens next' after graduation. The fellowship approach was intended to promote network connections, providing a novel approach to support entrepreneurs during and

after they have graduated from the program. Despite being envisaged as an equal pillar to the provision of accelerators, there was low name recognition to the concept of fellowship from the stakeholder interviews, although there was a mix of satisfaction with associated events (e.g., SXSW, Inventure$) and a desire for more post-accelerator support. Combined with the need for greater coordination and stewardship of the ecosystem, there is an opportunity to greater connect the RINS and other ecosystem stakeholders with the Scaleup and Growth Accelerator Program and to enhance the **f**ellowship in future iterations of the program.

7. **There is an opportunity for the Scaleup and Growth Accelerator Program to further extend support for under-represented groups.** Alberta Innovates articulated the principle that the Alberta research and innovation ecosystem is stronger and more sustainable when it is broadly representative of the overall diversity of the community. This ethos was embedded in the Scaleup and Growth Accelerator Program with the requirement for accelerators to provide Equity, Diversity and Inclusivity (EDI) plans to expand access to rural and underserved communities. However, in practice, there was little evidence in the data that under-represented groups received targeted participation campaigns or were provided additional support during programming. Submitted EDI plans were generic and, without prompting, the issue of EDI rarely came up in interviews. This could be related to the tension between the merit-based approach to recruitment of entrepreneurs by accelerators and the social justice need to specifically support under-represented groups. There was also an additional issue for remote/rural entrepreneurs related to the artifact of programming only being available in the two major cities of Calgary and Edmonton. Evidence from the international practice review identifies a number of strategies that are focused on supporting participation of different populations in accelerators.

8. **There is a need to think creatively about alternative routes to scaling.** A lot of the focus of accelerators is to secure funding with investment raised being the holy grail of Key Performance Indicators (KPIs), which is possibly an artefact of the traditional investor-led model of accelerators. However, for some enterprises it is possible to scale through revenue growth and this is preferable to giving up equity stakes through investment pathways. There are a number of policy instruments that could be used including setting aside a proportion of government procurement budgets to buy from startup and scaleup

enterprises and providing future purchases guarantees for innovative products that meet a given specification. For government and other public sector organizations to take on the role of a 'first buyer' not only channels revenues into enterprises but sends signals to the broader market of the viability of the product.

9. **The Scaleup and Growth Accelerator Program has increased the 'entrepreneurial capital' in Alberta**. Entrepreneurial capital is the mix of human, financial, social and cultural capital. The Scaleup and Growth Accelerator Program has contributed to each of these capitals in different ways. For example, the training and mentorship provided by the accelerators has increased human capital. Likewise supporting companies to be more 'investor ready' and making introductions to potential investors and/or customers has contributed to participating enterprises financial capital. The interviews and focus groups demonstrated that the program has increased social capital in the province through strengthening existing and new collaborations and networks. Finally, the act of inviting global accelerators to Alberta and then participation by global individuals in the program has increased the cultural capital of both the province and enterprises. Focusing on entrepreneurial capital as an organizing principal of the Scaleup and Growth Accelerator Program is likely to increase its overall impact while embedding it within the Alberta ecosystem.

10. **The Performance Impact and Management System (PIMS) used by Alberta Innovates is a novel approach to build entrepreneurial capital as part of the strategic curation of the entrepreneurial ecosystem in Alberta**. Alberta Innovates has an impressive track record in performance impact management for which it should be congratulated. The strength of a proactive approach to impact management is that it can help in the curation and stewardship of the entrepreneurial ecosystem as it will take a holistic approach focused on impact. The use of PIMS is a competitive asset in positioning Alberta as a world class acceleration ecosystem but could be enhanced to increase the effectiveness of its real time data collection, measurement, synthesis and reporting to support the cycle of adaptive learning and feedback.

Arising from these 10 insights are a corresponding number of issues/opportunities that Alberta Innovates and its partners may wish to consider as it begins to think about the next chapter in the Scaleup and Growth Accelerator Program:

- What is the appropriate mix of accelerator models for Alberta's entrepreneurial ecosystem? (Insights 2, 3, 4 and 9)
- How to introduce 'skin in the game' for both accelerators and participating enterprises? (Insights 5 and 10)
- How to improve coordination across and within different program elements of the Alberta entrepreneurial ecosystem? (Insight 6)
- How to build out the pillar of fellowship for maximum network effects? (Insight 6)
- How to support alternative pathways for scaling and growth? (Insights 1, 4 and 8)
- How to better support under-represented groups? (Insight 7)
- How to develop a more nuanced understanding of the demand for accelerator programs to ensure an appropriate supply of accelerators? (Insights 3, 9 and 10)
- How to enhance the Performance Impact and Management System (PIMS)? (Insights 9 and 10)

In Table ES2, each of these issues are mapped onto the insights and matched with some ideas that Alberta Innovates and its partners may wish to explore to enhance the Scaleup and Growth Accelerator Program. The table is ordered by issue (as opposed to insight) to aid reading, given multiple insights can map onto one issue. While these ideas are informed by leading international practices, it should be stressed that their implementation should be tested given, as already noted, the importance of context in determining the successful outcome of accelerators in closing the scaleup gap. This supports an extension of the pilot to a) allow enough elapsed time to evaluate the full three years of programming, and b) to further refine programming and test the insights and enhancements identified from the formative impact assessment.

Table ES2:

Summary of issues, insights and ideas

Issues for considerations	Insights from realist assessment	Ideas for enhancement
What is the appropriate mix of accelerator models for Alberta's entrepreneurial ecosystem?	The focus on global accelerator providers to increase the entrepreneurial capital of Alberta in closing the scaleup gap and rebalancing the economy to new industries is based on sound logic and data. (Insight 2) The adoption of a mix of providers focused on different stages of the entrepreneurial journey provided a natural experiment, creating the opportunity for further enhancements of the program in the future. (Insight 3) Many founders and enterprises that participated in the Scaleup and Growth Accelerator Program were very early in their entrepreneurial journey. (Insight 4) The Scaleup and Growth Accelerator Program has increased the 'entrepreneurial capital' in Alberta. (Insight 10)	Explore strategies to enhance entrepreneur triaging into best fit programs such as centrally-coordinated intake process, integrating company readiness and maturity as part of selection. Scope a 'pick and mix' model taking different elements from different accelerator providers to create a unique program for the Albertan context. Develop a guidance document (and associated toolkit) on the best mix and intensity of 'best in class' support for enterprises.
How to introduce 'skin in the game' for both accelerators and participating enterprises?	Accelerators and participant entrepreneurs had little 'skin in the game'. (Insight 5) The Performance Impact and Management System (PIMS) used by Alberta Innovates could be enhanced to provide more robust, accessible data to support the curation of the entrepreneurial ecosystem in Alberta. (Insight 9)	Explore different funding models such as charging a fee for participation in the program, with waivers for under-represented groups. Increase accelerator and entrepreneur accountability by exploring different outcome and performance incentive strategies.
How to improve coordination across and within different program elements of the Alberta	There is a need for a greater focus on embedding the accelerator program into the entrepreneurial ecosystem in Alberta. (Insight 6)	Support entrepreneurs in navigating (or wayfinding) their path through the Alberta entrepreneurial ecosystem by

Issues for considerations	Insights from realist assessment	Ideas for enhancement
entrepreneurial ecosystem?		exploring the recommendations made by Raby et al (2023).[1] Scope the introduction of an 'entrepreneur's passport' to enhance coordination across the ecosystem.
How to build out the pillar of fellowship for maximum effect?	There is a need for a greater focus on embedding the accelerator program into the entrepreneurial ecosystem in Alberta. (Insight 6)	As the alumni network grows, deepen relationship-building and sharing of lessons learned across Alberta and elsewhere through the strengthening and expansion of the Fund and Fellowship pillar of the program.
How to support alternative pathways for scaling and growth	Alberta has a unique entrepreneurial ecosystem, shaped by its vast geography and historical focus on fossil fuels, that needs to be accounted for in programming. (Insight 1) Many founders and enterprises that participated in the Scaleup and Growth Accelerator Program were very early in their entrepreneurial journey. (Insight 4) There is a need to think creatively about alternative routes to scaling. (Insight 8)	Enhance post-accelerator support, including through RINS, fellowship strategies and other Alberta Innovates programs. Continue to position Alberta as a global innovation hub, increasing global connections and working with leading partners. Explore the introduction or expansion of procurement policy focused on supporting startups and scaleup enterprises.
How to better support under-represented groups?	There is an opportunity for the Scaleup and Growth Accelerator Program to further extend support for under-represented groups. (Insight 7)	Scope more targeted interventions to increase the participation of under-represented groups, including accelerators (or cohorts) that are exclusively open to such groups.
How to develop a more nuanced understanding of the demand for accelerator programs to ensure and appropriate supply of accelerators?	The adoption of a mix of providers focused on different stages of the entrepreneurial journey provided a natural experiment, creating the opportunity for further enhancements of the program in the future. (Insight 3) The Scaleup and Growth Accelerator Program has increased the	Develop a more systematic approach to predicting the number of entrepreneurs in need of accelerator support and use that to plan future demand for accelerators.

[1] In summary these are: Provide resource and individuals to support entrepreneurs in navigating their path through the Alberta entrepreneurial ecosystem; Align and explain common language and simplify terminology. Design a common needs assessment tool that would support navigation, champion accessible services and integrate the entrepreneurs' data profile; Make services more accessible; Build an entrepreneurial data profile.

Issues for considerations	Insights from realist assessment	Ideas for enhancement
	'entrepreneurial capital' in Alberta. (Insight 9) The Performance Impact and Management System (PIMS) used by Alberta Innovates could be enhanced to provide more robust, accessible data to support the curation of the entrepreneurial ecosystem in Alberta. (Insight 10)	
How to enhance the Performance Impact and Management System (PIMS)?	The Scaleup and Growth Accelerator Program has increased the 'entrepreneurial capital' in Alberta. (Insight 9) The Performance Impact and Management System (PIMS) used by Alberta Innovates could be enhanced to provide more robust, accessible data to support the curation of the entrepreneurial ecosystem in Alberta. (Insight 10)	Review how to streamline, strengthen and enhance data collection, measurement and reporting cycles including increased automation, improved synthesis and (where feasible) applying the principle of only collecting data once. Develop global partnerships with other funders of accelerators, municipalities and jurisdictions to enhance shared learning and collaboration.

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Chapter One: Introduction

In Alberta, like in many regions of the developed world, business accelerators are part of a public policy mix that aims to stimulate innovation by supporting entrepreneurs in starting up companies and, in time, scaling those companies to create jobs, economic growth and social vibrancy. In 2021, Alberta Innovates (a provincial research and innovation funder and catalyzer) developed a scaleup and growth strategy to accelerate startup and growth for technology-based companies in the province with the financial support of federal, provincial and municipal governments. Following an open competition, funding was awarded to six accelerators through the Scaleup and Growth Accelerator Program for an initial three-year pilot.

This report describes a realist impact assessment of the Alberta Scaleup and Growth Accelerator Program. The aim of the assessment is twofold. The first is to inform decision making about whether to continue with the program and, if so, in what form. The second is to undertake a proof-of-concept study with the view of expanding the approach across different national and international jurisdictions for a wider international assessment of the use of accelerators in supporting economic development.

This opening chapter providers further background on accelerators, their history and practice, the realist methodology applied in the impact assessment, and a 'route map' for the rest of the report.

Accelerators support early-stage, growth-driven companies through education, mentorship and financing

The term accelerator can be dated back to founding of the Y Combinator in 2005 in Boston, U.S. The Y Combinator created a new model for funding early-stage startups.[2] In exchange for equity, Y Combinator would help startup and scaleup companies through investment, training, mentorships and accessing networks. Today Y Combinator has supported over 4,000 companies with a combined valuation of US$60 billion, including supporting household names such as Airbnb, Dropbox and Coinbase.[3]

[2] https://www.wired.com/story/how-y-combinator-changed-the-world/
[3] https://www.ycombinator.com

Accelerators differ from other interventions to support startups, as illustrated in Table 1, by being "fixed-term, cohort-based program[s], including mentorship and educational components, that culminate in a public pitch event or demo-day" (Cohen & Hochberg, 2014). As Hathaway (2016) summarized in the *Harvard Business Review*, "The accelerator experience is a process of intense, rapid, and immersive education aimed at accelerating the life cycle of young innovative companies, compressing years' worth of learning-by-doing into just a few months." Accelerators are different to incubators in that they do not rely on the provision of office space for a fee as their main source of income (Gregson, 2019).

Table 1:

Class characteristics of Incubators and Accelerators

	Incubators	Accelerators
Duration	1 to 5 years	3 to 6 months
Cohorts	No	Yes
Business model	Rent; non-profit	Investment; can also be non-profit
Selection	Non-competitive	Competitive, cyclical
Venture stage	Early or late	Early
Education	Ad hoc, human resources, legal	Seminars
Mentorship	Minimal, tactical	Intense, by self and others

Source: Cohen et al (2019); Hathaway (2016); Gregson, 2019

There is evidence that accelerator programs, as part of a broader policy mix, stimulate entrepreneurship and economic growth

The academic literature on whether accelerators work is mixed but positive, not least due to a number of legitimate methodological issues. For example, one issue is what is the measure of success? Business survival, jobs created, or broader economic wealth? Is a single employee company that has survived 15 years a success? It may be that such a company has high revenues (especially if service- or tech-based) but is not generating jobs. A second issue is the selectivity of accelerators. Part of their program design is to recruit startups that are likely to succeed. But such enterprises may have succeeded without the accelerator (known as the counterfactual in impact assessment terminology). Finally, there could be a signalling

effect – that is the sheer success of being recruited to an accelerator may act as a signal of quality to other investors, irrespective of the program design.

That said, the broad consensus of the academic literature is that accelerators work. For example, a U.K. government research paper (Bone et al, 2019) reviewed the literature on the effectiveness and concluded that:

> *"We have moderately strong evidence that accelerators can increase the speed at which startups raise investment (Roberts et al. 2016; Hallen et al. 2016; Fehder 2015; Hallen et al. 2014), gain customer traction (Hallen et al. 2016, 2014), grow their number of employees (Gonzalez-Uribe and Leatherbee 2016; González-Uribe and Reyes 2019; Lasrado et al. 2016; Fehder 2015), and reduce the time it takes them to be acquired (Hallen et al. 2016; Smith and Hannigan 2015). We also have some weaker evidence that accelerators may increase the rate at which firms grow their revenues (Lasrado et al. 2016; Roberts et al. 2016). Furthermore, as with incubators, accelerators may help funders to understand the viability of their business idea and thus, help bad ideas to 'fail faster' (Smith and Hannigan 2015; Yu 2016)."*

It is, however, important to acknowledge some of the downside effects accelerators can have on startups, as summarized by Gregson (2021) (see Box 1). Moreover, it is noteworthy that the evidence base on the effectiveness of accelerators is for a mix of private- and public-funded accelerators in a range of different geographical locations with different levels of ecosystem maturity. As Gregson (2021) noted in an earlier report for Alberta Innovates:

> *"Accelerator programs vary in their contributions to regional ecosystem building. While many leading accelerators have become international in scope and operations, entrepreneurship remains primarily a local phenomenon, where geography and proximity tend to be predictors of success. In some cases, accelerator models do not have an explicit mandate to engage in ecosystem building – as is common with a number of investor-led accelerators. Rather, the contribution to regional ecosystem building will be indirect. [However] government can play an important role in engaging and empowering accelerators to become more active in regional ecosystem building – as part of a broader ecosystem architecture strategy."*

Box 1:

The downside effects of accelerators on startups

- While there is evidence that accelerators work overall – for survival, employment growth and receiving external finance, there is much less clarity about how accelerator programs achieve results.
- Many accelerator programs do not accelerate startup development, and in some cases may be detrimental to startup development.[4]
- Accelerator intensity and program schedule may limit the freedom and flexibility of certain founders and take an element of control away from a founder. If this takes focus away from a vital task, it can be detrimental.
- Some startups may not need an accelerator – opting for virtual accelerators or startup mentoring/coaching. The costs, which may include relocation, giving up equity or paying fees, may affect the startup's short-term and long-term growth.
- Access to certain basic services, such as the co-working space, showed limited impact on the future performance of accelerator graduates.[5]
- New ventures admitted to accelerators are less likely to reach key milestones, when compared with (non-accelerated) startups backed by VCs.[6]
- Large exits by startups in leading accelerators is not a common occurrence, highlighting that substantial exits require longer time horizons beyond the accelerator program.[7]

Source: Gregson (2021)

In other words, from a public sector viewpoint – which is the focus of this realist impact assessment – the evidence would support investments in accelerator programs as part of a broader policy mix to stimulate innovation, entrepreneurship, and social and economic growth (Grant and Ribeiro, 2022).

[4] Hallen et al (2014).
[5] Gonzalez-Uribe and Leatherbee (2017).
[6] Yu (2020).
[7] Crunchbase data showed that in 2018, only eight of the top 20 U.S.-based seed accelerators had exits of more the US$1 million.

Accelerators have a number of different characteristics shaped by the business model, the providers motivation and the maturity of the enterprise

The defining characteristics of different types of accelerators are summarized in Table 2 and described below.[8] Historically, accelerators have been investor-led, funded by venture capitalists and other for-profit investors as a way of seeking early sight of investment opportunities, taking a stake in those opportunities through equity and helping to maximize that opportunity through the intervention of the accelerator. However, over time, two complementary models developed. The first was for business-to-business startups where the accelerator provider would seek corporate partners to share costs (via a membership fee) and investment opportunities. Here the provider would recruit a network of partners and look to match the startup with them, either as a potential customer or in some cases to acquire. The second evolution was that public entities would pay accelerators to provide a fee for service, where they would support entrepreneurs in their startup to scaleup journey. Today, a number of the accelerator providers will operate all three models – investor-led i.e., taking an equity stake, corporate networks for business-to-business startups and public fee for service – mixing them up as appropriate.

Table 2:

Defining characteristics of different types of accelerator programs

Model	Motive	Maturity
Investor-led	For profit	**Pre-accelerator**
Corporate partner	Non-profit	**Accelerator**
Fee for service	**Regional economic development**	**Post-accelerators**

The model, motive and maturity of Alberta Scaleup and Growth Program is bolded in Table 2

Concurrent with this supply-side evolution in the accelerator model, governments and especially regional governments, and other non-profits such as universities and NGOs have looked to stimulate innovation through the sponsorship of accelerators. The motive for such policy interventions has been mixed but is often a combination of supporting a generation of new ideas (especially in the case of NGOs and social enterprises), through to stimulating regional economic growth through job creation. Importantly, this differs from the investor-led model where a return on investment is the primary motivation.

[8] See Bagnoli et al (2020) for literature review of accelerator business models.

A final defining characteristic is where accelerators fit on an entrepreneurial journey, with a focus on the maturity of the company. For example, there are pre-accelerators which are very much focused on early-stage startups. Accelerators are typically (but not exclusively) focus on late-stage startups who have a product or service and a customer base but looking to grow or scaleup. There are also post-accelerators that look to support companies in their growth plans. The idea of pre- and post-accelerator is important to ensure that a region has sufficient startup companies to feed into the accelerator and from a 'stickiness' perspective (that is they stay in the region) have an off-ramp for companies in the post-accelerator phase.

A final characterisation is the differences between specialized and agnostic accelerators. Agnostic accelerators support ventures across various industries, offering general resources, mentorship, and networking opportunities. They prioritize adaptability and versatility, catering to a broad spectrum of startups. Specialized business accelerators, however, focus on specific industries or niches, providing tailored support and expertise suited to those sectors. While agnostic accelerators foster diversity and innovation, specialized accelerators offer targeted assistance, often leading to deeper industry knowledge and connections.

The Alberta Scaleup and Growth Accelerator Program helps entrepreneurs bridge the scaleup gap, taking their businesses to new heights and to go global

In 2021, the Government of Alberta announced that it intended to invest funds to accelerate scaleup and growth for technology-based companies in Alberta to address an identified scaleup gap.[9] Alberta, like Canada, has a scaleup gap.[10] While a half of all startups survive over five years, only 0.1 per cent of small firms become mid-sized, and only two per cent of mid-sized firms become large.[11] This scaleup gap is a massive missed opportunity for the economy of Alberta, as both Canada and especially Alberta have some of the highest early-stage startup activity in the world's western economies.

In response, and as described in Chapter Two, Alberta Innovates, a provincial agency and Crown corporation who is the primary research and innovation catalyst of the Government

[9] Treasuring Board and Minister of Finance. Budget 2021: Fiscal Plan Edmonton, Government of Alberta.
[10] Raby et al (2021).
[11] Chakarova and Ruttan (2019).

of Alberta, conducted an environmental scan to determine the best way to address the scaleup gap in Alberta. The result was the Alberta Scaleup and Growth Accelerator Program that is nearing the completion of its three-year pilot.

Alberta Innovates commissioned a realist impact assessment of the Scaleup and Growth Accelerator Program to understand its role in strengthening the entrepreneurial innovation ecosystem in Alberta

The objective of this realist impact assessment is to assess the context, mechanisms and outcomes of innovation accelerators funded through the Scaleup and Growth Accelerator Program. It builds on a successful assessment of the Regional Innovation Network of Southern Alberta (RINSA) that employed a realist framework to evaluate the impact of Alberta Innovates support over a 10-year period,[12] and incorporates learnings and actionable insights from an assessment conducted on seven local pilot startup accelerator programs in 2021.[13]

Alberta Innovates is interested in building on lessons learned from the RINSA impact assessment and Scaleup and Growth Accelerator pilot to inform the design and application of a realist approach to assess innovation accelerators across a number of different countries and regions to understand both the impact of such investment but more importantly to generate actionable insights that can be applied to current and future innovation support and funding.

To develop, test and refine the approach Alberta Innovate is undertaking a proof-of-concept assessment of its Scaleup and Growth Accelerator Program.[14] The dual purpose of this assessment is to inform decision making on the potential extension of the Scaleup and Growth Accelerator Program, and to refine methodologies for a potential broader international study.

A realist approach is focused on a C+M=O framework, where C is context, M is Mechanism and O is outcome.[15] This framework was adapted successfully for the RINSA evaluation,

[12] Grant (2022).
[13] RSM (2021).
[14] https://albertainnovates.ca/strategic-initiatives/alberta-scaleup-and-growth-accelerators/
[15] Pawson and Tilley (1997).

namely that outcomes (or impact) when thinking about entrepreneurship and innovation, will be an interaction between context and mechanism that is likely to be dynamic, time and place dependent, and iterative, i.e., process of learning and relearning.[16] This framing moves away from the simple question as to whether a specific intervention worked (or not) to a more nuanced one that elucidates: What works (or does not work)? For whom (and to what extent)? In which circumstances does it work? How and why does it work? In short, a realist approach seeks to understand *how* a program *causes or contributes to* the desired outcome and critically issues such as relational power, trust and community effects.[17]

Table 3 specifies a set of key questions that were identified at the outset and explored in the realist assessment, underpinned an overarching governing question. To address this governing question and the questions in Table 3, the study had a number of different evidence streams as summarized in Figure 1 and the Annex. The evidence streams included:

1. Undertake and update a **market landscape** of Alberta's entrepreneurial ecosystem to see how the existing accelerator program offering is meeting existing and future needs for startups.
2. Update a **leading practice review**, with a focus on best and innovative scaleup and growth practices from around the world. Use this as a mechanism to initiate a potential international collaboration and learning network. As summarized in Figure 2 this involved reviewing practice in 27 accelerators through a mix of desk research and interviews.
3. **Review, validate and synthesize existing results to date**, including process and economic indicators and stakeholder experience; and
4. Examine the **network effects** of the Alberta Scaleup and Growth Accelerator Program.

[16] From methodological and conceptual perspective, it is important to acknowledge how the majority of research monitoring, evaluation and impact assessment activities are embedded in a 'theory of change' and 'logic model' paradigm and that other conceptual approaches to evaluation – such as systems analysis of realist evaluation – are non-existent or at least relatively rare in the research evaluation field. To a degree this is understandable as the funding process is itself a series of linear steps that naturally follow the logic model of inputs, process, outputs, outcomes and impact. However, it is also the case that the innovation literature is quite clear that the research process is itself not linear and thus it would be interesting and beneficial to see wider use of other evaluation paradigms. [See Appendix 1 for methodological context].

[17] *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879435/Magenta_Book_supplementary_guide._Realist_Evaluation.pdf*

In addition, and running parallel with the proof-of-concept study, Alberta Innovates commissioned a methodological review on assessing the economic impact of accelerators, with a focus on understanding local and regional impacts. This is one of the lessons from the RINSA assessment, where it was felt that existing approaches of economic evaluation, which relied on Input Output models and multipliers, were not as useful for evaluating local economic impacts arising from innovation given some of the key assumptions used in such models.

Table 3:

Governing and primary questions for the realist impact assessment of the Scaleup and Growth Accelerator Program

Governing question: ***In what ways has the Scaleup and Growth Accelerator Program contributed to the impact and evolution of a strengthened and vibrant entrepreneurial ecosystems in Alberta?***		
Context	**Mechanisms**	**Outcomes**
• What were the drivers for establishing an accelerator in/across local ecosystems? • What were the original long-term goals for accelerator? What were the plans for working towards and reaching those goals? • How did different accelerator models align to different funders (e.g., government vs. private) • How are different jurisdictions approaching investment considering regional assets to promote better up-front decision making? What is the policy mix? How is this shaped by the existing industrial mix?	• What were the activities that the accelerator established, supported or sponsored (and over what timeline)? • What is common and unique across accelerators? • How were accelerators used within a systems approach? • What strategies are used to foster and strengthen different networks (e.g., mentor-participant, company-to-company, etc.) • Have these activities evolved over time? If so, what were the reasons for change? • In Alberta, which accelerator model and component parts appear to have the best fit with the Alberta government-funded innovation ecosystem?	• What were the economic and societal benefits of the accelerator? • What activities did/did not work? What were the likely reasons those activities did/did not work? How could they be changed to get a different outcome? What were the unintended impacts, positive and negative? • How was progress to impact measured and what were the feedback mechanisms to adapt and learn across the lifecycle (provide illustrative examples)? • How did the interrelationship between the context and activities help or hinder the impact of the accelerator? • How did the accelerator program address equity, diversity and inclusion in each of the regions? • In Alberta, which accelerator components appear to have the highest impact to the Alberta innovation ecosystem? • What are the lessons learned and actionable insights for other accelerators? • In Alberta, what is the optimal number of companies that would benefit from an Accelerator model on a yearly basis in Alberta (projection out)? • What are Alberta's big bets that should be factored into the Accelerator model and how can these be identified?

Figure 1:

Project schema

Figure 2:

Accelerators included in the leading practice review

This report describes the results of the realist impact assessment of the Alberta Scaleup and Growth Accelerator Program

The report is structured around the realist framework. The following Chapter Two provides an overview of the Performance and Impact Management System that was used to design, implement and manage the program. Chapter Three describes the context associated with the six accelerators that were awarded contracts by Alberta Innovates, and the Fund and Fellowship approach. Chapter Four looks at the mechanisms or activities that were deployed by the accelerators and Chapter Five assesses the various outcomes or impacts. The Executive Summary draws out a number of insights and ideas that could be applied in the next iteration of the Scaleup and Growth Accelerator Program. The Annex provides details regarding the methodological approach.

Chapter Two: Alberta Innovates' Performance and Impact Management System

A number of years ago, Alberta Innovates recognized that to generate and assess impact in the complex dynamic of technology advancement required a different approach than that typically adopted for research funders. Critically, there was a need to focus on the ecosystem level and take a more holistic and systems approach that focused not only on assessment but also on supporting the institutionalization and generation of impact. This resulted in the development of the Performance Impact Management System (PIMS) which is summarized in this chapter as it is a key foundation to both the development of the Scaleup and Growth Accelerator Program and its formative assessment.

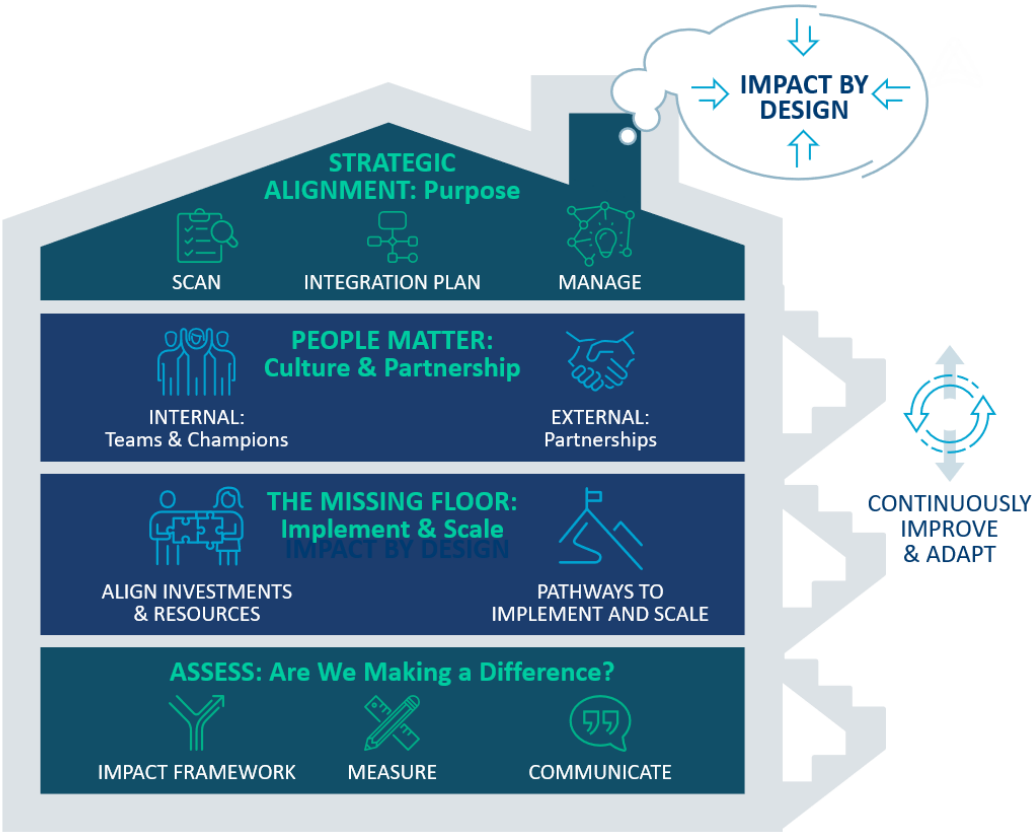
PIMS starts with embedding impact strategies in strategic plans which are developed prior (ex-ante) to a major investment to inform the creation and assessment of impact. Impact plans developed in such a way, help with strategic alignment, improve organizational relevance, efficiency and the effectiveness of impact generation, and improve the quality of evidence collected. To implement such planning and execution, Alberta Innovates' Impact Action Lab developed PIMS to integrate impact into operations for business decision making. The components of the PIMS model have been evolving over time across multiple sector applications but starts with a set of key guiding principles:

- Co-development and co-implementation to create an impact culture.
- Strategic alignment and collaboration using cross functional teams.
- Balancing evidence-based rigor with feasibility.
- Use of adaptive management approaches.
- Fit for purpose and proportionality.
- Learning and continuous improvement to iterate and innovate.

In late 2019, the Impact Action Lab – a business unit within Alberta Innovates – was commissioned to use the PIMS approach to inform the development of the Scaleup and Growth Accelerator Program. The application of PIMS to the Scaleup and Growth Accelerator Program is described in the rest of this chapter using the visual representation of PIMS – 'The House that Impact Built' – outlining the tools and processes associated with each floor of the house. (Figure 3)

Figure 3:

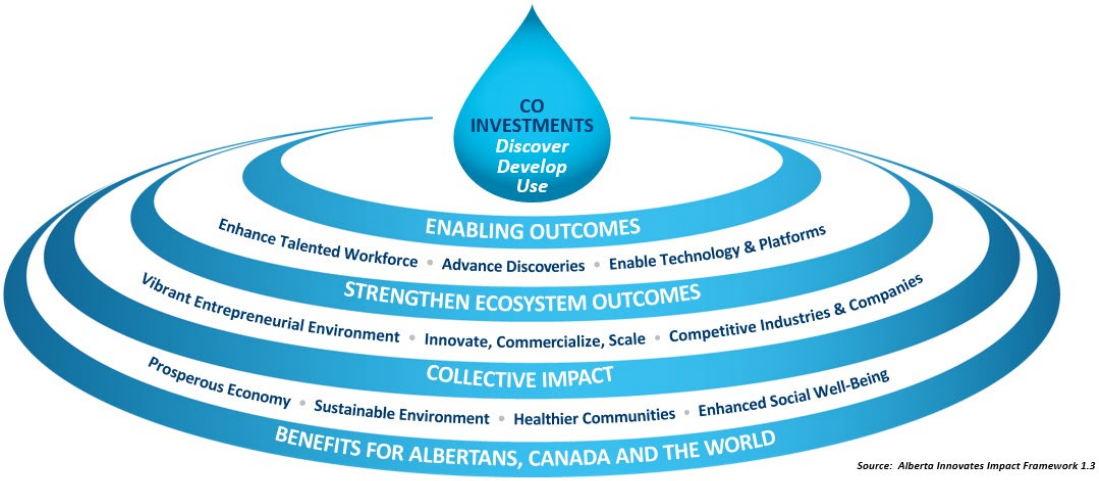
The House that Impact Built



The top floor IMPACT BY DESIGN AND STRATEGIC ALIGNMENT: The process started by clearly identifying the North Star – the vision, objectives and targeted outcomes and impacts for the program in relation to the overriding Alberta Innovates Impact Framework (Figure 4). Desired impact is designed upfront using a 'splash and ripple' representation of an impact logic model – i.e., the input of investing strategically with partners across the discover, develop, use continuum will enable outcomes which will ripple into collective impact for the ecosystem. (Figure 4)

Figure 4:

Alberta Innovates Impact Framework



Focusing on the ring of strengthening ecosystem outcomes (vibrant entrepreneurial environment/innovate, commercialize, scale and competitive industries and companies) a set of targeted objectives for the Scaleup and Growth Accelerator Program were identified. This informed an environmental scan that aimed to fully understand the Alberta scaleup ecosystem gaps and future opportunities. The scan included commissioning reports to conduct a landscape analysis to identify the gaps as well as conducting a qualitative metanalysis on incubators, accelerators and network effects. A leading practice forum invited international guest speakers to share lessons learned from their jurisdictions. In addition, an evaluation of local accelerator pilot programs was commissioned that highlighted the role that leading global accelerators could play in transforming local economies – a policy and funding tool that was not previously used by Alberta Innovates.[18] The scan was used to inform the development of a scaleup and growth strategy plan that included two pillars – the use of global accelerators via an integrated performance framework managed by Alberta Innovates, and a fellowship approach to supporting entrepreneurs via an alumni network.

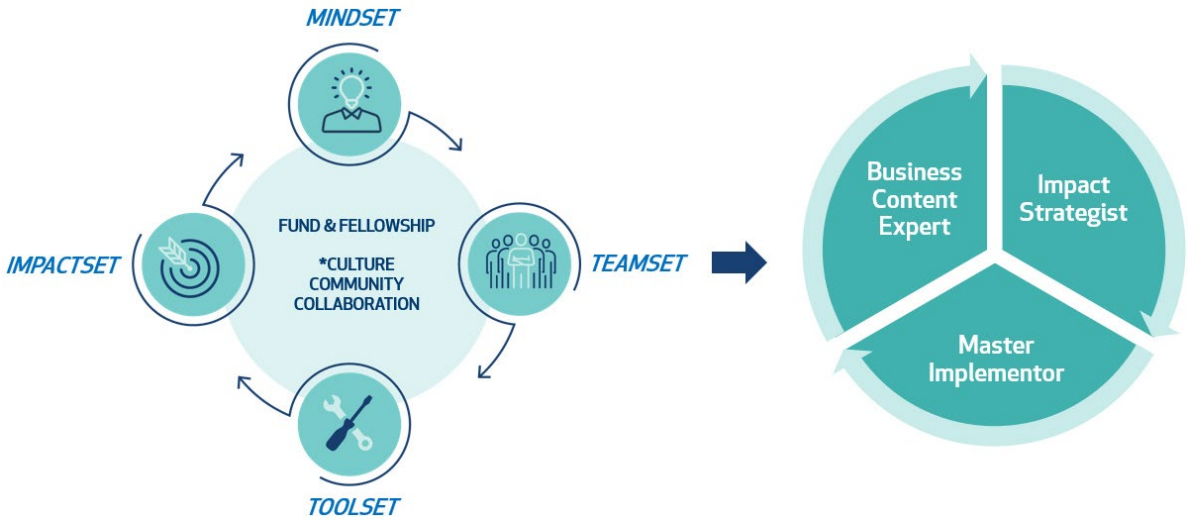
Complementing this, a 'Roadmap for Growth Playsets' (Figure 5) was developed to further embed an impact culture given lessons learned from the previous PIMS environmental application (Alberta Climate Change Innovation and Technology Framework). The premise was that if you want a thriving entrepreneurial ecosystem, there are four interconnecting

[18] Gregson (2019); Gregson (2021); Raby et al (2021); Raby et al (2022).

playsets instrumental to executing an innovation roadmap across the client journey: *Mindset* (fostering an entrepreneur leadership state of mind), *Teamset* (the people needed across different disciplines to achieve collective impact), *Toolset* (access to the relevant tools for the team to execute the roadmap), *Impactset* (design for impact strategically up front and integrate progress monitoring and evaluation across the program lifecycle). The thread that connects the playsets is *fellowship* that focuses on collaboration and connection to further an impact culture. This fellowship pillar was designed to establish the conditions for strengthening an ecosystem that promotes entrepreneurial growth that includes:

- using learning to accelerate getting to the next growth horizon,
- creating a culture of innovation and impact,
- building a connected and inclusive community, and
- fostering collaboration across all ecosystem players.

Figure 5:
Growth Playsets



The premise was that institutionalizing fellowship would help generate a network effect and 'stickiness' in terms of social and cultural capital, and would be one of the key pathways to generating impact. A key learning from conducting a realist impact assessment on the Regional Innovation Networks of Alberta was the importance of trust and trusted relationships to getting to outcomes and impacts.[19]

[19] Grant (2022)

The third floor PEOPLE MATTER: Fundamental to the PIMS model is a focus on people as key to establishing an impact culture and partnerships as part of the secret sauce for amplifying the impact. The playsets and fellowship frameworks were used to create a set of guiding principles to program design and implementation which included co-development, capacity building, sustainability, learning, and Advancing Belonging, Inclusion, Diversity and Equity (ABIDE). Internal teams and champions were identified and provided with implementation playbooks. For external partners, a co-funder consortium was established at the municipal, provincial and federal government levels to bring the Scaleup and Growth Accelerator Program to Alberta. The ultimate goal was to bridge the scaleup gap.

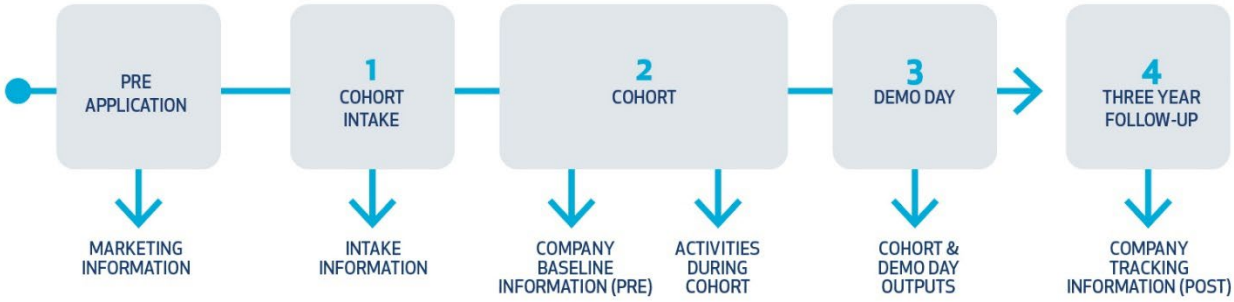
The second floor MISSING FLOOR: The next step in the PIMS model which is often referred to as the missing floor was to align investments and resources to the pathways to implement and scale objectives. Working backwards from the North Star objectives, a Request for Proposal (RFP) was designed to select the best 'fit for Alberta' accelerators who would be most likely to meet the program goals and key performance indicators. As described in more detail in Chapter Three (Table 4), RFP performance criteria included Relevance to Alberta, Excellence of the Accelerators, Feasibility to implement the targeted model in Alberta, Innovation value-adds and ability to obtain targeted Outcomes, and Impact which included a weighted score for an ABIDE strategy. Service delivery roadmaps were developed to guide program implementation and were embedded and translated into a suite of program tools from service agreements with the accelerators to orientation packages and procedures, etc.

The ground floor CONTINUOUSLY ASSESS: A PIMS evaluation working group was convened to co-develop an impact framework, measurement methodology and communication strategy with accelerators and co-funders. A comprehensive lifecycle data collection methodology was developed to track inputs, activities and outputs of the program out to three years post to allow time for outcomes to be achieved (see Figure 6). This information was collated and shared back to the accelerators and co-funders in 'Lesson Learned Huddles' after each Accelerator cohort was completed to be used to foster continuous improvement and adaptation. Annual reports and a set of cascading scorecards were developed to monitor, evaluate and communicate program benefits and respond to return on investment accountability. In addition, a series of impact stories were collected from the participating companies to showcase qualitative benefits. A unique feature was the delivery

of a scale and growth Leading in Learning forum over four days that shared the model and initial program results with the local and global community for learnings and ongoing culture development.

Figure 6:

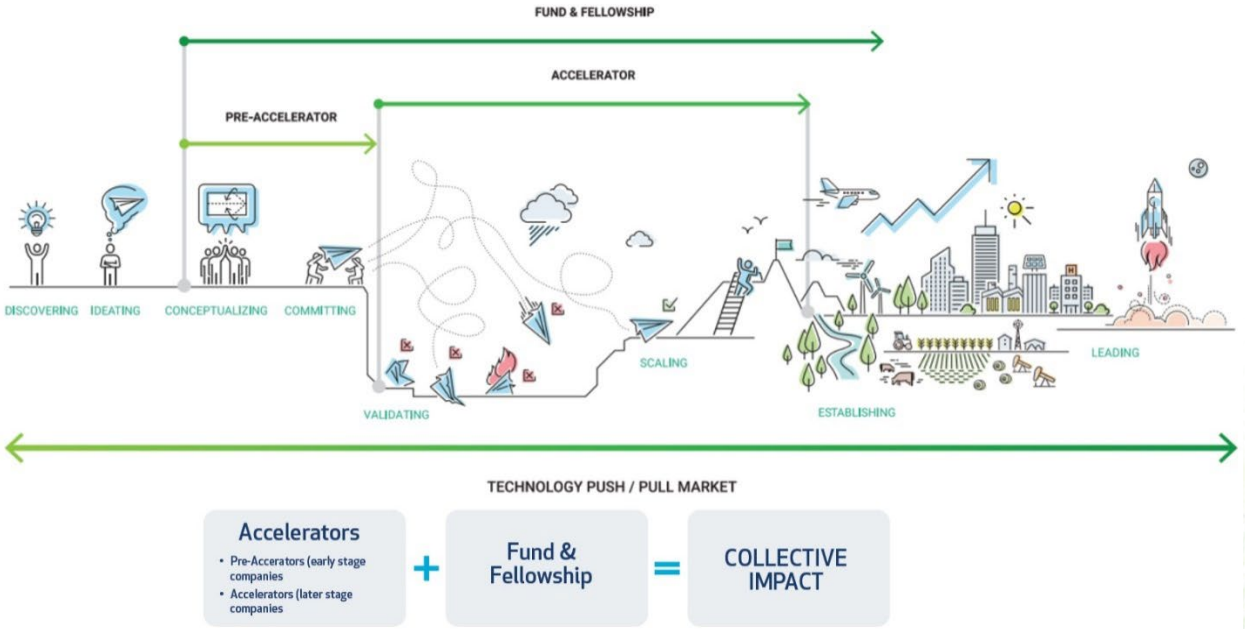
Impact Plan – Lifecycle Data Collection



The application of the PIMS approach to the Scaleup and Growth Accelerator Program has been critical to the design of the program, resulting in the two pillars of accelerators and fellowship as part of long-term sustainability while meeting the needs of entrepreneurs across the client journey, as summarized in Figure 7.

Figure 7:

Scaleup and Growth Accelerator Program Pillars



Chapter Three: The context for the establishment of the Alberta Scaleup and Growth Accelerator Program

Key assessment questions

- What were the drivers for establishing an accelerator in/across local ecosystems?
- What were the original long-term goals for accelerator? What were the plans for working towards and reaching those goals?
- How did different accelerator models align to different funders (e.g., government vs. private)?
- How are different jurisdictions approaching investment considering regional assets to promote better up-front decision making? What is the policy mix? How is this shaped by the existing industrial mix?

Key insights

1. Alberta has a unique entrepreneurial ecosystem, shaped by its vast geography and historical focus on fossil fuels, that needs to be accounted for in programming.
2. The focus on global accelerator providers to increase the entrepreneurial capital of Alberta in closing the scaleup gap and rebalancing the economy to new industries is based on sound logic and data.
3. The adoption of a mix of providers focused on different stages of the entrepreneurial journey provided a natural experiment, creating the opportunity for further enhancements of the program in the future.
4. Many founders and enterprises that participated in the Scaleup and Growth Accelerator Program were very early in their entrepreneurial journey.
5. Accelerators and participant entrepreneurs had little 'skin in the game'.

Alberta is a province located in Western Canada, known for its stunning natural landscapes and oil industry. It is bordered by the Canadian provinces of British Columbia to the west and Saskatchewan to the east, the Northwest Territories to the north, and the U.S. state of Montana to the south (see Figure 8). Alberta is characterized by its size and low population density. For example, Alberta is three times the size of the United Kingdom and slightly smaller than Japan, but in comparison to these two countries Alberta's population density is only seven people per square kilometre compared to 276 in the U.K. and 338 in Japan. The province has a diverse population, with significant Indigenous communities alongside people of European, Asian and other backgrounds.

Figure 8:

Alberta and its surrounding geography

Alberta's economy is heavily influenced by its abundant natural resources, particularly oil and gas, contributing to one of the highest GDP per capita figures in Canada.[20] The Athabasca oil sands in northern Alberta are one of the largest oil reserves in the world,

[20] https://www150.statcan.gc.ca/n1/pub/11-626-x/11-626-x2019009-eng.htm

making the province a major player in the global energy market. Edmonton, the provincial capital, and Calgary, the largest city, are both centres for the oil and gas industry. However, while Alberta's economy has traditionally been reliant on the energy sector, with global concerns about climate change and ambitions towards net zero,[21] efforts have been made to diversify into other industries such as clean energy, technology including artificial intelligence and machine learning, agriculture, and tourism.

As described in the Market Landscape, Alberta has a strong economy. It has:

- The **highest GDP** per capita in Canada[22]
- The **highest average weekly earnings** of any province[23]
- The **highest labour force participation rate** of Canada's provinces, with above-average participation rates for all levels of education[24]
- The **highest inter-provincial net migration** in Canada[25]
- **Unemployment in line with** the rest of Canada[26]

This has mixed implications when it comes to entrepreneurialism. Alberta had the fourth-highest number of active businesses of the Canadian provinces in December 2023.[27] This is in line with its population. It also had the strongest proportional growth in the number of active businesses of any province in the year to December 2023 – with Manitoba being the only other province to have seen an increase in the number of active businesses in this period.[28] Alberta's generally strong economy translates into strong entrepreneurial activity. As illustrated in Figure 9, normalizing for population, Alberta is above the national average

[21] https://open.alberta.ca/dataset/7483e660-cd1a-4ded-a09d-82112c2fc6e7/resource/75eec73f-8ba9-40cc-b7f4-cdf335a1bd30/download/epa-emissions-reduction-and-energy-development-plan.pdf
[22] Government of Alberta, GDP per capita, updated November 14, 2023 (accessed April 1, 2024), *https://economicdashboard.alberta.ca/dashboard/gdp-per-capita/*
[23] Government of Alberta, Average weekly earnings, updated March 28, 2024 (accessed April 1, 2024), *https://economicdashboard.alberta.ca/dashboard/average-weekly-earnings#*
[24] Government of Alberta, Participation rate, updated March 14, 2024 (accessed April 1, 2024), *https://economicdashboard.alberta.ca/dashboard/participation-rate#*
[25] StatCan, Estimates of the components of interprovincial migration (quarterly), March 27, 2024 (accessed April 1, 2024), *https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1710002001*
[26] Government of Alberta, Job vacancy rate, March 19, 2024 (accessed April 1, 2024), *https://economicdashboard.alberta.ca/dashboard/job-vacancy-rate#*
[27] StatCan defines active businesses as those with a at least one employee
[28] StatCan, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted, March 22, 2024 (accessed April 1, 2024), *https://www150.statcan.gc.ca/t1/tbl/en/tv.action?pid=3310027001*

for active businesses per capita in 2023, new active businesses in 2023, and first-time newly active businesses in 2023. This emphasizes Alberta's success in supporting an environment of entrepreneurialism. Indeed, British Columbia is the only large province to perform more strongly than Alberta on these metrics of business creation.

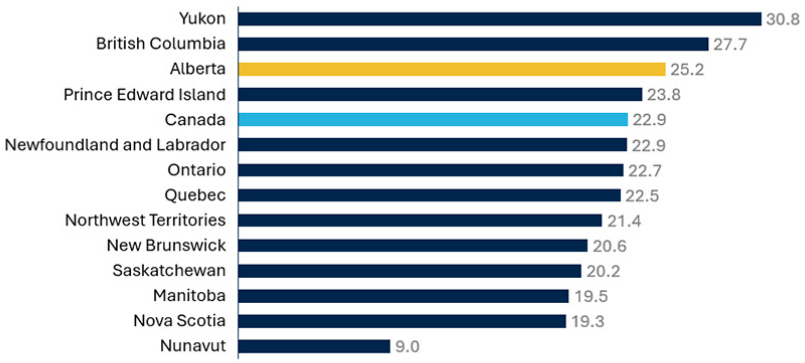
A landmark policy statement on how to diversify the economy was the Alberta Government's, *Alberta Technology and Innovation Strategy (ATIS)*[29], published in 2022, that sets out "an ambitious path forward [to] cement Alberta as a dominant player and innovation hub that attracts talent, business and job-creating investment from across Canada and around the world" (as the Minister for Jobs, Economy and Innovation articulated in his introduction). This strategy set out a number of initiatives including to "Introduce business accelerators to support local entrepreneurs to grow the province's technology startup sector through Alberta Innovates", confirming the provincial government's C$25 million investment in the Alberta Scaleup and Growth Accelerator Program in 2021.

[29] https://open.alberta.ca/publications/alberta-technology-and-innovation-strategy

Figure 9:

Alberta normalized comparative entrepreneurial performance

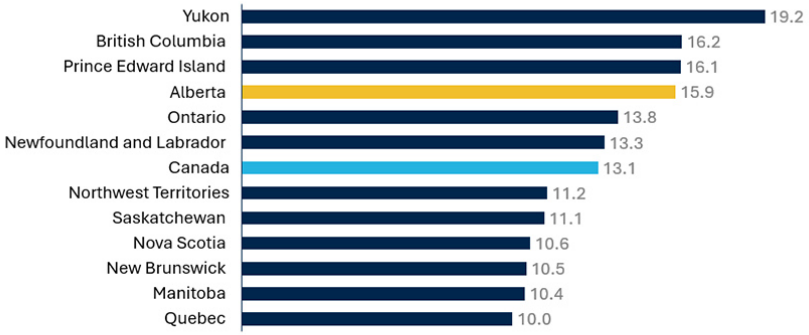
1. Active Business per 1000 people by province



Source: StatCan 2023

Source: Source: StatCan, Population Estimates, Quarterly, Q4 2023; StatCan, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted, December 2023

2. New active business per 1000 people by province



Note: Data not available for Nunavut
Source: StatCan

Source: StatCan, Population Estimates, Quarterly, Q1 2023; StatCan, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted, full year 2023

3. First time active business per 1000 people by province (entrant)

Note: Data not available for Nunavut or the Northwest Territories.
Source: StatCan

Source: StatCan, Population Estimates, Quarterly, Q1 2023; StatCan, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted, full year 2023

Source: Landscape Review

Alberta, along with many other regions in the West, have a scaleup gap

One of the challenges that is facing Alberta, Canada and many other western economies[30] is the observation that startups are not maturing to larger companies. This matters, as economic growth and job creation is dependent on high growth firms (HGF). For example, in Canada between 2009 and 2012 HGF made up only 1.24 per cent of all firms but accounted for 63 per cent of the total net job growth.[31] However, in Canada, 99 out of 100 firms are small- to medium-size enterprises (SMEs) that have less than 500 employees, that make up for over half of Canada's GDP and two-thirds of all new jobs.

The Global Entrepreneurship Monitor (GEM)[32] provides a comprehensive assessment of entrepreneurial activity worldwide through a population-based survey, offering valuable insights into economic development and innovation. Two key measures are Total Entrepreneurial Activity (TEA) and Established Business Ownership (EBO), with the difference between them providing a proxy measure of transition, or survival beyond the fragile earliest years of a venture, colloquially known as the scaleup gap. The TEA is the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business, while the EBO is percentage of 18-64 population who are currently an owner-manager of an established business, i.e., owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months.

The strength of the GEM lies in its broad scope, capturing data from various economies and stages of entrepreneurship. GEM facilitates cross-country comparisons, aiding policymakers and researchers in understanding entrepreneurial ecosystems. However, its reliance on self-reported data and variations in methodology across countries can introduce biases and limit comparability. Despite these limitations, GEM remains a pivotal tool for assessing global entrepreneurship trends and informing policy decisions.

Figure 10 tracks the TEA and EBO for Alberta and Canada. The upper panel shows that Alberta's level of TEA fell at the start of the pandemic (2019), recovered somewhat to 2021,

[30] It is also noteworthy that this is also an issue in China. See: Brown et al (2023).
[31] Raby et al (2021).
[32] *https://www.gemconsortium.org*

and then fell again in 2022.[33] When compared to the lower panel for Canada it is evident that Alberta's TEA and EBO are higher, and indeed they were the highest amongst Canadian provinces in 2022. The difference between the two lines in both panels estimates the size of the scaleup gap which, without the interpretation of the COVID pandemic, started to diverge in 2015 and has been constant thereafter.

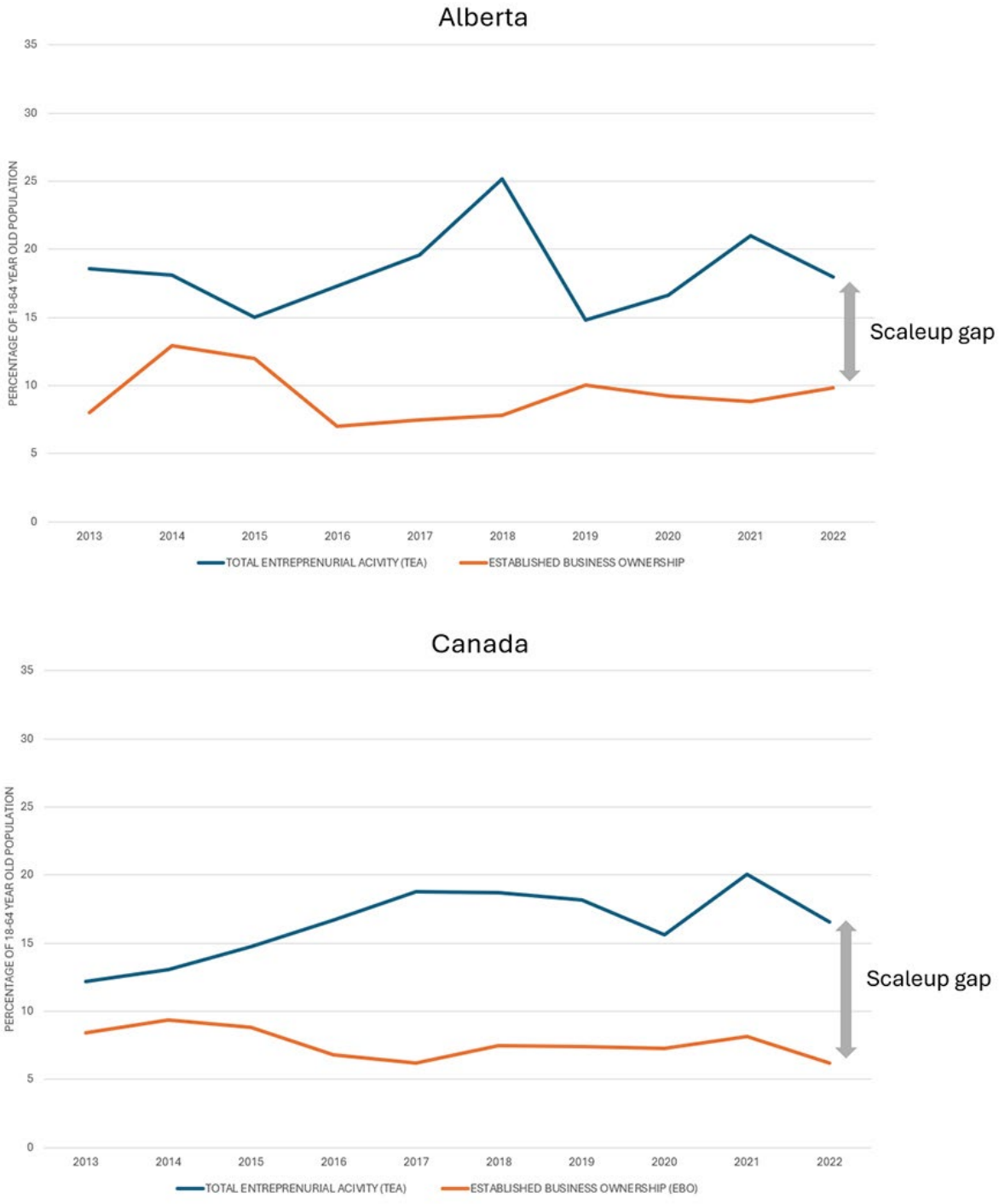
Figure 11 then compares the current size of the scaleup gap for Alberta, Canada and a number of countries that were looked at as part of the leading practice review. As noted in the figure the shaded bars illustrate the difference between the EBO (at the bottom) and the TEA (at the top) with the size of the bar being the scaleup gap. For the three countries to the right – which are not shaded – the bar is flipped, that is the EBO is at the top and the TEA at the bottom indicating that, especially in South Korea, there are more established business owners than people engaged in entrepreneurial activity.

The key observation to be made from Figure 11 is that Canada and Alberta perform comparatively well against these benchmarks. For example, Alberta has higher established business ownership than any of the benchmarks except South Korea. Similarly, Alberta has higher entrepreneurial activity than the other regions except for Canada as a whole, Chile and the U.S. Finally, the scaleup gap in Alberta is eight (i.e., the percentage point difference between the TEA and EBO indicators), which is lower than that for Canada (12) as a whole, Chile (26) and the U.S. (19), but higher than the rest of the other countries.

[33] Gregson and Saunders (2022).

Figure 10:

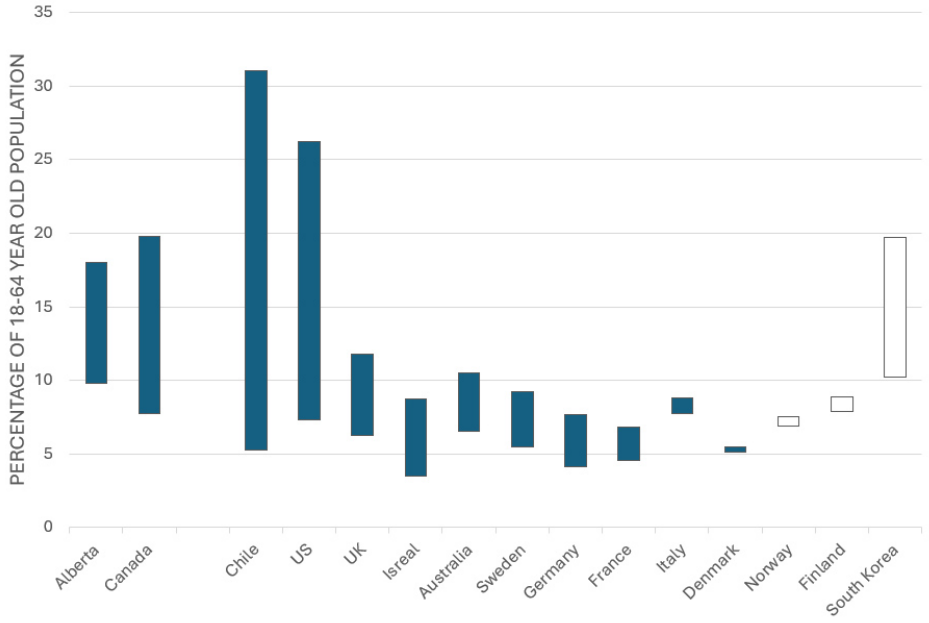
Total Entrepreneurial Activity (TEA) versus Established Business Ownership (EBO), 2013-2022, for Alberta (upper panel) and Canada (lower panel)



Source: Global Entreprenership Monitor

Figure 11:

The scaleup gap for selected jurisdictions



The bottom of the shaded bars indicates the level of established business ownership (for the latest year, typically 2023). The top the total entrepreneurial activity.

The difference between the two is the 'scaleup gap'.

Norway, Finland and South Korea have more established business owners than people engaged in entrepreneurial activity and that is why these bars are unshaded.

Source: Global Entreprenership Monitor

The Alberta Scaleup and Growth Accelerator Program was founded in 2021, resulting in the support for six accelerators and a 'Fund and Fellowship' initiative

The Alberta Scaleup and Growth Accelerator Program is run by a consortium led by Alberta Innovates. The consortium includes the Government of Alberta, Prairies Economic Development Canada (PrairiesCan), the City of Edmonton through Edmonton Unlimited, and the City of Calgary's Opportunity Calgary Investment Fund. Collectively these partners allocated C$35 million over three years to attract and retain business accelerators to Alberta. It is noteworthy that the program had federal (PrairiesCan), provincial (Government of Alberta) and municipal (Edmonton and Calgary) involvement. In the interviews with the funders, they explained that the main reasons behind their investments in the Alberta Scaleup and Growth Accelerator Program was a desire to catalyze economic growth, provide comprehensive support for startups, expand global market reach, and enhance the province's innovation ecosystem.

The overall objectives for the program are given in Box 2, with the targeted outcomes summarized in Figure 12. A request for proposals (RFP) was issued by Alberta Innovates in March 2021 with a deadline for responses by the end of April. Overall, 64 accelerators

applied to the program with 15 bids being shortlisted for consideration by a merit review committee that met in June 2021. The merit review committee were asked to consider three types of accelerators, organized by streams – pre-accelerators, sector-agonistic accelerators, and sector-based accelerators (see Box 3). Shortlisted candidate accelerators made presentations to the merit review committee and, along with the written proposal, each was evaluated against five criteria as reproduced in Table 4.

Box 2:

Overall objectives of the Scaleup and Growth Accelerator program

- Increase entrepreneurial scaleup capacity and knowledge in Alberta
- Improve business maturity
- Increase the number of Alberta new scalable junior technology companies
- Create Alberta jobs
- Increase new Alberta technology company revenue
- Increase follow-on investment (investment attraction)
- Provide a platform for global accelerator sustainability in Alberta

Source: Alberta Scaleup and Growth Program, Request for Proposals.

Figure 12:

Targeted Outcomes of the Scaleup and Growth Accelerator program

Box 3:

Different types of accelerators

Stream 1: Pre-accelerator: A program or suite of programs to assist entrepreneurs at the earliest stages of building a technology or technology-enabled startup to validate their ideas, solidify their business foundations, and make their business attractive to ccelerators.

Stream 2: Sector-based Accelerator: Fixed-term, cohort-based sector-based programs providing intensive mentoring, networking and educational services, usually culminating in a 'demo-day' or pitching event to investors and industry representatives. Focus on an industry specialized area, characterized by specialized knowledge, capabilities, and connections such as regulatory and/or hardware requirements. Alberta Innovates emphasized in the RFP that it was particularly interested in sector-based accelerators in Clean Resource technology, Smart Agriculture, Digital Health, and Artificial Intelligence, or accelerators that leverage artificial intelligence as a technology enabler.

Stream 3. Sector-agnostic Accelerator: Similar to sector-based. Have established leading sector-agnostic, globally recognized acceleration services with demonstrably strong track records and top quality, experienced mentors.

Source: Merit Review Committee meeting slides

When asked, staff from accelerators that were successful in the RFP process explained that the decision to apply to the Alberta Innovates RFP was influenced by a combination of factors, including the alignment of the organization's vision with the goals of the RFP, the perceived market opportunity in Alberta, and the collaborative efforts to expand and enhance programming accessibility. Overall, the experience with the RFP process involved navigating some initial challenges, adapting to evolving needs, managing program scale and intensity and participating in a standardized selection process as illustrated by the following quotes:

- *"It was pretty straightforward, pretty standard. Nothing kind of out of the norm."*
- *"The scale of the programming was projected to be intense. It was an ambitious target…"*
- *"At the beginning there was a lot of information that they required from us even after the RFP was accepted … So, like I said, documents in terms of data collection, in terms of KPIs, in terms of short-term, medium-term, long-term milestones and goals."*
- *"Definitely for the first year of that agreement it was very much the RFP acted as that source of truth … But we have to do it because it was in the RFP."*

But overall, while there were areas for improvement, the process was generally perceived as fair and manageable.

Table 4:

Evaluation criteria for accelerator selection process

Investment Criteria	Sub Criteria	Description	Weighting
RELEVANCE	Relevance to Alberta	Vendor exhibits a commitment to participate in the Albertan community and enhance the Alberta innovation ecosystem. The Proposal outlines a commitment to work with Alberta Innovates to co-develop a new Fund and Fellowship model. Vendor describes its approach for fitting into the local Alberta context with two major urban centres desiring to create a technology corridor (e.g., Kitchener-Waterloo Corridor, Alberta Corridor) and multiple rural hubs (e.g., Regional Innovation Networks).	10%
EXCELLENCE	Mentorship	Vendor exhibits significant mentoring expertise and mentor management capabilities.	5%
	Network Building	Vendor exhibits high potential to deploy existing network to Alberta and to build local network capacity through collaboration(s) with existing innovation ecosystem, new mentors, subject matter experts, partners, and industry collaborators, corporate relationships, and investors.	5%
FEASIBILITY	Qualifications & Experience	Vendor exhibits a sustainable successful track record of launching and operating technology-focused accelerator programs (in particular for government/quasi-government with a focus on regional development) including use of performance statistics (e.g., # of alumni, funding raised, jobs created).	20%
	Proposed Accelerator Program	Vendor presents a strong, relevant, and feasible accelerator program and business model with ability to rapidly scale and spread the program and optimize number of participants.	20%
	Ability to Attract & Recruit	Vendor exhibits a strong track record of sourcing and identifying high-potential technology-based companies and demonstrates the ability to effectively market the accelerator.	5%
	Access to Capital	Vendor exhibits ability to draw in investment and support investor readiness of cohorts. Preference will be given to accelerators that can demonstrate private funding support (industry or individuals).	10%
OUTCOMES/ IMPACT	Metrics & Measures	Vendor demonstrates a commitment to measuring program outcomes and aligning activities with impact measures.	5%
	Financial Strength & Sustainability	Vendor demonstrates financial strength, clearly outlines fees, costs to participants or alternative funding mechanisms including equity agreements and provides a realistic strategy which identifies how the accelerator will become self-sustaining beyond the Alberta Innovates funding horizon.	10%
	Equity, Diversity, and Inclusion	Vendor demonstrates a commitment to inclusion and diversity access practices and engagement with under-represented populations.	5%
INNOVATION	Unique Value Add	Vendor demonstrates what differentiates them from other accelerators and how their program will add value to the Alberta innovation ecosystem. Vendor demonstrates how they will engage with Alberta Innovates Inventure$ events.	5%

The investment strategy was to select a mix of models to test which approach works best in the context of Alberta's unique social, economic and geographical context and the scaleup gap described above. The merit committee recommend the funding of six accelerators from five vendors as summarised in Box 4 and illustrated in Figure 13.

One local pre-accelerator (Alberta Catalyzer) was chosen as the pipeline to the other accelerators. A second pre-accelerator via SVG Thrive was introduced a year later to both meet demand, test out the full sector specialized pathway and also provide a comparator to the Alberta Catalyzer for evaluation purposes. SVG Thrive also used the opportunity to pilot their Thrive Studio model which is aimed at connecting industry demand with researchers/entrepreneurs to create new ventures.[34]

The Alberta Accelerator by 500 was chosen to test their agnostic capacity building approach. The Alberta Plug and Play model was chosen to evaluate their corporate partner/matchmaking model across three verticals (agnostic, sustainability and digital health). SVG Thrive Accelerator was selected to compare a specialized sector-based approach focused on agrifood tech. Finally, TELUS Community Safety & Wellness (CSW) Accelerator powered by Alchemist was chosen for a novel focus on social impact and a local partnership model with community agencies.

[34] *https://thriveagrifood.com/thrive-studio/*

Box 4:

Profiles of the providers selected for the Scaleup and Growth Accelerator Program

Alberta Catalyzer is a merit-based pre-accelerator offering free programs, coaching, and resources to early-stage entrepreneurs launching and growing scalable, tech-enabled companies in Alberta. Alberta Catalyzer supports founders in building strong foundations for startup success by helping them test their first minimum viable product (MVP), achieve their first sale, validate a product-market fit, and prepare for investment readiness, while equipping them for entry into one of the other listed accelerator programs below. (See: *https://albertacatalyzer.com*).

The TELUS Community Safety & Wellness Accelerator powered by Alchemist (TELUS CSW) is focused on addressing the social and safety challenges facing local communities. The accelerator was the idea of the Edmonton Police Foundation, in partnership with AlchemistX, and funded by a consortium led by Alberta Innovates that includes PrairiesCan and Innovate Edmonton. The TELUS Community Safety & Wellness Accelerator's mission is to accelerate startups to make a difference for local communities through innovation, alongside our community partners to create social and economic growth and showcase Edmonton and Alberta in doing so. This 12-week program blends the programming of the global Alchemist Accelerator with specific local-social impact sessions delivered by community partners. It strives to cover topics that support up-and-coming business ventures to succeed in the community and deliver positive impact locally. (See: *https://cswaccelerator.com*).

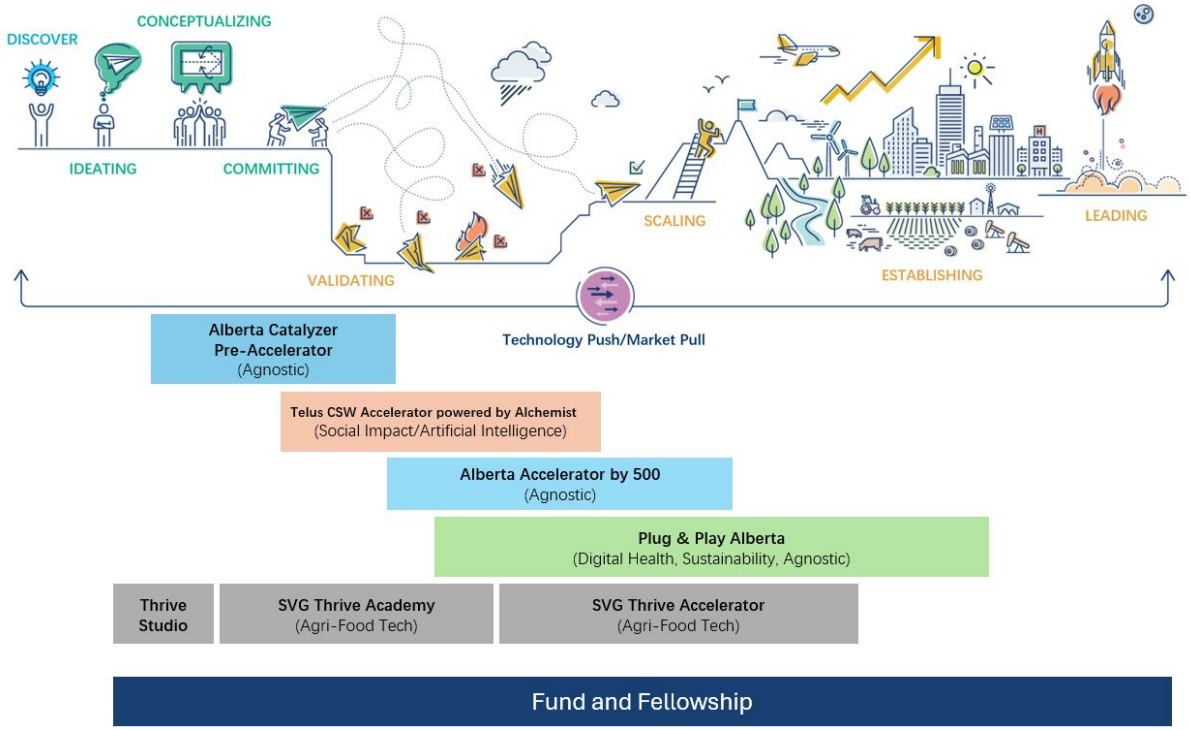
Alberta Accelerator by 500 is managed by 500 Global, a global venture capital firm with over $2.4 billion in assets under management. 500 invests in founders building fast-growing tech companies, focusing on markets where companies can unlock long-term value and drive economic growth. Its portfolio includes over 2,900 startups with 45 unicorns. 500 has operations and team members in over 80 countries around the world. The Alberta Accelerator by 500 is a program for local and global entrepreneurs to land and expand the tech innovation ecosystem of the Edmonton-Calgary Corridor. The Alberta Accelerator program focuses on growth and scaling and is a non-investment sector-agnostic program.
(See: *https://500.co/accelerators/alberta-accelerator*).

Plug and Play is an innovation platform that aims to attract top technology and investment to the region and support Albertan entrepreneurs to scale and grow, hire tech talent, and propel digital transformation across the province. With over 500 major corporate partners, Plug and Play's accelerator model helps match startups to corporate partners, providing access to customers and associated revenue streams. The Plug and Play Alberta program focuses on three sectors: Digital Health, Sustainability, and Sector Agnostic Artificial Intelligence. (See *https://www.plugandplaytechcenter.com/alberta/*).

The SVG THRIVE Accelerator supports early-stage agrifood tech startups whose technologies provide a more efficient, sustainable, and secure agriculture future. Supporting companies across the agrifood value chain, the THRIVE Canada Accelerator places a strong emphasis on companies creating a sustainable future through innovation. THRIVE is headquartered in Silicon Valley and has a community of over 10,000 startups from 100 countries. In addition to the Accelerator program, SVG THRIVE provides a pre-accelerator (the THRIVE Academy) and the THRIVE Studio which is pre-accelerator and designed to help researchers and early-stage entrepreneurs validate their idea. (See: *https://thriveagrifood.com/canada-accelerator-program/*).

Figure 13:

The Scaleup and Growth Program, mapped against the client journey



Following the awarding of contracts, a service delivery framework (Figure 14) and set of guiding service principles was developed for successful vendors to focus accelerators on integrated service delivery (Box 5). These were developed to ensure a consistent and collaborative process was utilized across all accelerators, while respecting each accelerators individual programming.

Figure 14:

Service delivery framework for implementation of selected accelerators

Box 5:

Guiding service principles for implementation of selected accelerators

- Consider the Albertan urban/rural context and participate in the Alberta community and innovation ecosystem and contribute to the building of a functional and effective technology/innovation corridor.
- Alberta Innovates believes the Alberta Research and Innovation ecosystem is stronger and more sustainable when it is broadly representative of the overall diversity of our community. Accelerators shall include programming and services that expand access to rural and underserved communities and expand provincial development of mentor capabilities and capacity.
- Expand and build provincial entrepreneurial capacity, create long-term sustainability within Alberta, and leverage opportunities through accelerator connections, mentors, global partnerships, and capital.
- Identify, train, develop, and monitor local mentors with the purpose of expanding mentor capability in Alberta.
- Focus on Artificial Intelligence as a horizontal technology enabler and leverage Alberta's position as an Artificial Intelligence commercialization and establish the province as a leader for investment attraction.

The Alberta Scaleup and Growth Accelerator Program's theory of change was based on sound logic and evidence

The Scaleup and Growth Accelerator Program was designed to attract global accelerators to Alberta to address perceived missing elements in the Alberta ecosystem. The logic behind this was that by inviting internationally-renowned accelerator providers into Alberta it would 'level up' the entrepreneurial ecosystem (as a couple of interviewees put it) by: introducing best practices; connecting local Alberta companies with the accelerator's global networks and global entrepreneur cohorts; attracting global investors and companies to Alberta; and, showcasing local startup and scaleup companies internationally.

The rationale for the focus on global accelerators is entirely coherent and aligns with the overall Government of Alberta strategy "to be a global leader".[35] Indeed, a large number of interviewees across all stakeholder groups supported this approach:

- *"Well, the beautiful thing about one of the best things that Alberta Innovates did is actually open up the market to try to bring in the Plug and Plays … [I] think that was a genius move*

[35] https://open.alberta.ca/publications/alberta-technology-and-innovation-strategy, page 6.

because it really started to highlight what's going on in Alberta." – Regional Innovation Network

- *"I think one of some of the benefits to date… [are] … to attract those global accelerators, [bringing] those tried and tested curriculum information, mentorship and networks to Alberta that may otherwise not have come to our region just because of where we are." – Funder*
- *"And over the last three years, we have grown proper. We've iterated, we've fundraised, we've had some close calls from like a financial point of view. We are now in six provinces. And I think that a key piece of our story was these accelerators and Alberta innovates funding." – Entrepreneur*
- *"One of the most beneficial aspects of the program was the Network. Both Canadian cohort but also international and businesses we've been introduced to!" – Entrepreneur*
- *"They've done a really good job filling some of the talent gaps … because I think truthfully, when this program came in, [they] cannibalized talent in this space … because there were so few people who actually had an understanding of how accelerators worked, what we're looking at with respects to programming, or at least stage company programming, and having any type of base level investor knowledge." – Investor*

However, although a minority view, there were some concerns that this approach meant that the global accelerator providers were not needed, were out of touch with the local context or did not provide good value for money for the Alberta taxpayer. For example:

- *"I do find value in the global accelerators, but there's only a few clients that really can take advantage." – Regional Innovation Network*
- *"Do the global accelerators really understand rural Alberta? I think it works fine for Edmonton and Calgary, but despite this, isn't Toronto. They're not the centre of the universe. … I don't have an issue with them … but this is Alberta taxpayers' dollars for spending and Alberta companies are, I would say, especially rural companies are getting less service based on the global intake." – Regional Innovation Network*

This last point is important as by design the accelerator programs were open to companies that were not registered in Alberta (as a means of attracting them to the province). Although this critique is legitimate, the overall weight of evidence amassed for this assessment supports the strategy of focusing on global accelerator providers. But, as described below, there were a number of consequences of this approach which impact on the overall performance of the program given the relatively early stage of many companies participating in the program, when compared to intake in other jurisdictions.

The selected accelerators ended up prioritizing quantity over quality reflecting both the early stage of enterprises and the incentives of the accelerators

The first stage of any accelerator program is the selection process. This involves identifying startups through a mix of processes including awareness raising, 'cold' applications, and referrals. In investor-led accelerators this process is often multistage, with interviews, pitches and in-depth reviews of business plans. The reason for this is that accelerator will be investing in the enterprise (often in exchange for an equity stake). In contrast, for publicly-funded programs like the Alberta Scaleup and Growth Accelerator Program, the 'skin in the game' for both the enterprise and the accelerator is less clear, resulting in less risk to both parties. However, as the leading practice review illustrated, this is common practice for public or philanthropic supported accelerators with some interesting exceptions. For example, Bpifrance, has adopted a flexible cost sharing approach. As summarized in Box 6, the share of the cost borne by the participating company varies depending on the sector and the maturity of the company. On a program targeting mid-sized automotive companies 66 per cent of the costs are supported by fees (amounting to €63,000 per company, on a program valued at €96,000 excluding taxes). However, another program focused on industrial startups, 44 per cent of the costs are supported by fees (amount to €21,000 per company, on a program valued at €37,000). Another example comes from Pipeline in the U.S. (Box 7). Although originally launched through publicly funding (like the Scaleup and Growth Accelerator Program), the funding was discontinued forcing a diversification of streams, including fees, corporate sponsors and donations.

As a likely consequence of a lack of fee (in whole or in part) enterprises selected for publicly-funded accelerators are typically 'less mature' than those for investor-led accelerators. This is illustrated in Table 5 for the Alberta Scaleup and Growth Accelerator Program, where the selection rate for the accelerators that are part of the program are compared. As evident in this table, the demand for the accelerator program outstrip supply with the overall selection rate for the two pre-accelerators was 46 per cent and the four accelerators was 18 per cent (29 per cent for Alberta companies) as of December 1, 2023. Comparatively, the members Global Accelerator Network accept about two per cent of applications.[36]

[36] Gregson (2019)

Box 6:

Bpifrance – France

Context: Bpifrance is the French innovation agency and public investment bank, which supports entrepreneurs and the growth of companies of all sectors.

Challenge: Provide a portfolio of acceleration support to very diverse sets of companies across French priority sectors and regions.

Interesting practice: Bpifrance's acceleration model is characterized by long (12 to 24 months), in-depth programs. They take up between 15 and 30 companies per cohort. It has a frequent and very granular offer, having run around 200 programs since 2015 focusing on different sectors, company growth stages and regions. The programs provide a significant amount of individual business consulting for the participating companies, which represents an important share of the (high) cost of Bpifrance's programs. For established companies, Bpifrance also runs leadership development services for senior executives.

Bpifrance's acceleration programs are designed and managed internally, with the support of external consultants. The acceleration program (Neo program) run by "la Direction de L'Accompagnement" are primarily designed for industrial Small to Medium Sized Enterprises

Companies cover a part of the cost of the programs, with the rest being subsidized. The public support rate varies depending on the sector, program and development stage of the company (for instance, a program with a 44 per cent subsidy rate, another one with a 66 per cent rate).

Bpifrance also has an acceleration support service for companies in Bpifrance's risk investment portfolio, called Le Hub, also heavily based on the provision of expert mentors and consultants, adapted to the company's development stage, with a particular track for HealthTech ventures. With seven funds (some sector-specific, some stage-specific), and 330 companies currently in portfolio, Bpifrance's Le Hub integrates organically the funding and acceleration functions required by growth startups.

Externally and internally facing acceleration services share a catalogue of high qualified national and regional experts (business in general as well as sector-specialized and technological advice).

Inspirational value or lesson: A very granular portfolio of acceleration programs, targeting narrow sets of potential companies (by sector and stage, and with some accelerators running at the regional level) as well as a set of specific accelerators targeting exports, industrial startups, industrial companies in transition and family-owned companies. Apart from the public accelerators, open to all French companies, Bpifrance also supports, through Le Hub the small set of companies having received risk funding from Bpifrance's equity investment funds, as early-stage private accelerators generally do.

Source: Leading practice review

Box 7:

Pipeline – Kansas, U.S.

PIPELINE ACCELERATOR

Context: This Kansas-based accelerator offers comprehensive development programs focusing on building successful businesses through high-impact networking, mentorship, and workshops.

Challenge: It was launched with philanthropic funding after a previously publicly supported accelerator with a similar mission had its budget discontinued, illustrating the risk of 100 per cent public funding. Initially, it was the only program in the area that offered non-dilutive investment to their participants (a US$30,000 gift); this was discontinued rapidly, when the quality and value of the accelerator was established, and demand grew.

Interesting practice: After 10 successful years 'working alone', they started to connect and collaborate with other ecosystem builders. This evolution enabled Pipeline to access resources previously inaccessible, forging deeper philanthropic and corporate partnerships, exploring sponsorship agreements and applying for grants from public entities like the U.S. Economic Development Administration. The flexibility of the (philanthropic) public funding allowed them to grow faster, and to expand to Missouri and Nebraska.

Inspirational value or lesson: For public- and mission-driven accelerators, we observed that the diversification of funding streams (from public funds, donations, fees, corporate sponsorship) grants more autonomy and flexibility, which are often associated with the ability of seizing and rapidly adapting to new appearing opportunities. In Pipeline's case, by extending their mission to under-represented communities, they have been able to access certain public grants and at the same time better serve the jurisdictions where they operate (Kansas, Missouri, and Nebraska).

Source: Leading practice review

This difference between the selection rate for Alberta and the global average suggests one of two things – first, that Alberta Innovates unintentionally over-supplied the market by testing out different accelerator models for the province, or second, that the typical entry requirements were lowered for the program. In interviewing various stakeholders, we heard that it was a mix of oversupply and lower entry requirements. For example:

- *"Our companies have been very, very immature and I think it takes a few cycles of this to see more and more of those companies. To be completely frank with you, I had hoped that by this point in time I would have found many, many more investment opportunities for my own fund out of the companies that graduate from this program. It hasn't happened yet, but we're only two and a half years into the program." – Mentor*
- *"I'd say the investment community in life sciences is relatively immature and that needs to be developed." – Entrepreneur*

- *"I don't think there's a ton of international money looking for early-stage stuff here." – Investor*
- *"I'd say that the majority of applicants and companies that we onboard still meet our requirements with regards to stage. However, they do lack overall some traction and milestones completed compared to other global companies." – Accelerator Staff*
- *"I think we're in that stage where they're all in that early sort of development phase where they have customers, they have a product, but they're still struggling to really fully scale it and get big investment." – Accelerator Staff*

It is also important to note the final column in Table 5, which provides the proportion of companies that were registered in Alberta. The proportion of companies that successfully completed the program ranged between 34 per cent to 46 per cent for the global accelerators but was significantly higher for the local pre-accelerator (Alberta Catalyzer) at 96 per cent. As noted above, part of the theory of change for the Scaleup and Growth Accelerator Program was to bring in global accelerators so that Albertan participants would be part of a global cohort thereby, it was assumed, further expanding networks, learnings and potential to grow.

In the early part of the program the relatively high selection rates may not have been a major issue as there was likely to be latent demand within the entrepreneurial ecosystem but as the program developed, and looking to the future, this supply-based approach could become counterproductive.

Finally, we heard from stakeholders that a small number of entrepreneurs were not fully committed to the program and only enrolled to get the 'signalling' effect of participation. This was in part reinforced by the accelerators who, despite being encouraged by Alberta Innovate to have strict participation agreements, did not stage gate anyone from the programs. However, six per cent of companies voluntarily opted out for multiple reasons such as time commitment.

It should be stressed this is not a criticism of the program, but to point out the context and implications of an immature ecosystem and its consequences to both the program design of accelerators and their impacts or outcomes. Indeed, entrepreneurs identified a number of reasons for participating in accelerators including seeking funding, mentorship, connections, and strategic partnerships *("support, mentorship, ideas, strategies, and pretty much our blind spots,"* as one entrepreneur put it). Some hoped to learn more about running a

business, to improve their entrepreneurship skills, or to get help with scaling their startups. Others were looking to gain insight into what they did not know about business, to increase their network, and to connect with potential corporate partners and investors. Accelerators like Plug and Play were particularly appealing due to their perceived global connections and the ability to offer introductions to larger companies and corporations – *"We need those introductions, we need to fill our sales pipeline."*

Table 5:

Selection rates by accelerator, as of December 1, 2023

Accelerator	Number of Cohorts	Number of applicants	Number of Successful Applicants	Selection rate	Proportion of companies from Alberta who completed program
Pre-Accelerators (2)	38	955	443	46% Range: 19% to 52%	92% Range: 50% to 96%
Accelerators (4)	11	1493	272	18% Range: 8% to 30%	43% Range: 34% to 46%

Many participants emphasized the value of mentorship and networking opportunities provided by these programs ("*I think the main part of that was the mentors*" and *"what we want to get is definitely the network, the meetings, the customers"*). For those who were more experienced entrepreneurs, accelerators presented a chance to refine business models, gain valuable feedback, and gain introductions to potential customers or strategic partners. The programs were also a platform for some to pivot their business approaches, especially in response to challenges like the COVID-19 pandemic.

The process of learning about these programs varied, with many participants finding out through personal contacts, events, other founders, or organizations like Alberta Innovates. For some, participation was about exposure and credibility in the market, especially for those targeting growth or expansion into new markets like the United States.

Overall, it was clear that the accelerator programs were seen as valuable stepping stones for businesses at various stages, providing the resources, knowledge, and networks necessary to grow and succeed.

Chapter Four: The mechanisms and activities provided by accelerators to close the scaleup gap

Key questions:

- What were the activities that the accelerator established, supported or sponsored (and over what timeline)?
- What is common and unique across accelerators?
- How were accelerators used within a systems approach?
- What strategies are used to foster and strengthen different networks (e.g., mentor-participant, company-to-company, etc.)
- Have these activities evolved over time? If so, what were the reasons for change?
- In Alberta, which accelerator model and component parts appear to have the best fit with the Alberta government-funded innovation ecosystem?

Key insights:

6. There is a need for a greater focus on embedding the accelerator program and the fellowship pillar into the entrepreneurial ecosystem in Alberta.
7. There is an opportunity for the Scaleup and Growth Accelerator Program to further extend support for under-represented groups.
8. There is a need to think creatively about alternative routes to scaling.

The Alberta Scaleup and Growth Accelerator Program follows international best practice

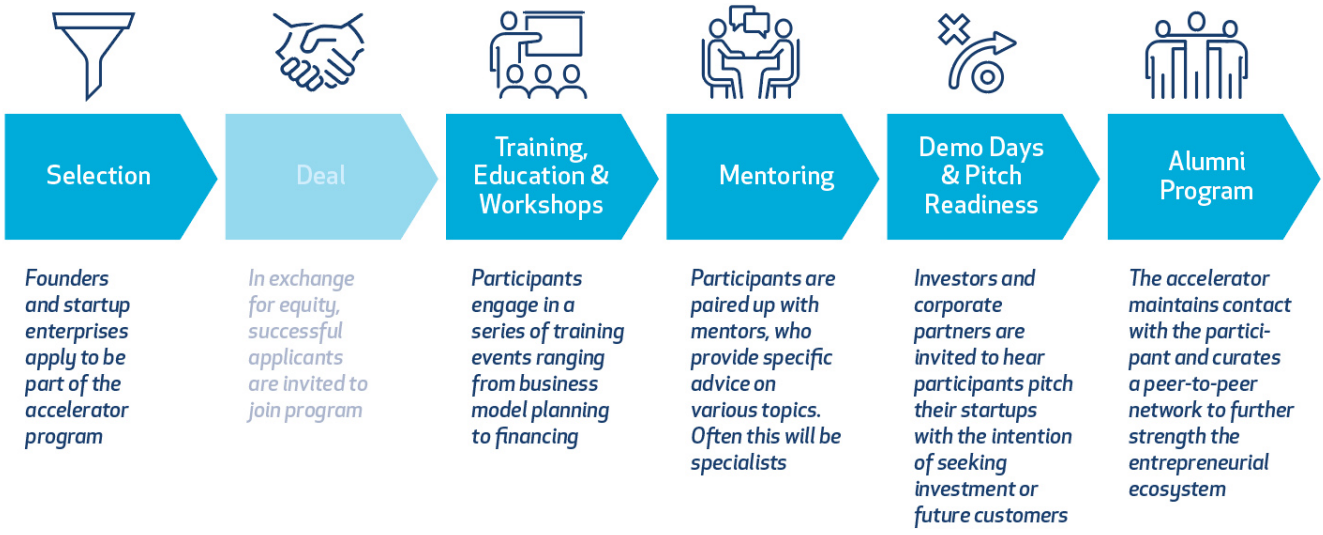
Globally, accelerators follow a standard model of providing training, mentorship, access to networks and access to funding. This was confirmed by the Alberta Innovates team who, as part of the PIMS approach, shadowed each accelerator in its early days to gain an in-depth understanding of the different models and approaches to programming. At its core the classic accelerator has six stages, as illustrated in Figure 15, typically delivered over three months. Or as one accelerator staff member put it:

- *"I would say the big key pillars of how we deliver this are around founder focus, how can we support them where they're at, connect them to resources that they need, and give them an opportunity to talk to people, to work through some of the barriers, some of the challenges, and connect them to resources to overcome them." – Accelerator Staff*

However, the Alberta Scaleup and Growth Accelerator Program, like many publicly-funded accelerators does not have a 'deal' stage, where equity is exchanged for participation and/or cash. This, as discussed in the previous chapter, has implications on the selection phase with some evidence from the interviews and data analysis that Alberta accelerators are recruiting companies that in a commercial setting would not be accepted on the program. Partly as a result global accelerators had to customize their programs for the provincial need of Alberta which, in practice, led to a number of iterations to make fit for purpose as noted by a number of accelerator staff:

- *"So, through an iterative process of gathering, like our NPS surveys, our founder feedback surveys that [Accelerator] gathers, as well as the surveys that Alberta innovates puts out for founders, after each program we take that feedback and implement it into the following batch."*
- *"So, what we found over that time is that the programming in this last year is actually way more frequent and intense than what we would have forecast over a three-year period."*
- *"We made some changes to the length of the different streams."*

Figure 15:
Generic accelerator program



Training, education and workshops

After the selection and deal phases, the next four steps of the journey are broadly similar across public and private sectors. Accelerator programs will typically provide education, training and workshops, mentorship, access to networks and investors. As illustrated in Table 6, the training and education programs have a lot of similarities across the pre-accelerators and accelerators that made up the Scaleup and Growth Accelerator Program, but each with their different characteristics. For example, Plug and Play – which is focused on connecting startups to corporate partners – is very focused on pitching, while the TELUS Community Safety & Wellness Accelerator powered by Alchemist includes social impact. While the majority of programs adopted a hybrid model of in-person and online delivery, the early-stage interventions were typically only online due to starting the program during the latter stages of the COVID-19 pandemic. Different programs also had different approaches to participant accountability, with some requiring 100 per cent attendance to training activities and others making it optional.

Overall, while the accelerator training and education programs were generally seen as beneficial, entrepreneurs identified room for improvement in terms of tailoring content to the participants' specific needs, balancing the sophistication level, managing time commitment, and ensuring practical application. For example, and as illustrated in the quotes in Box 8, a number of participants found that the effectiveness of workshops varied greatly – with some workshops being highly practical and others less so. This was partly reflected in the level the workshops were pitched at, with entrepreneurs commenting that the level of sophistication in some workshops was more than would have been necessary at their stage of business. That said, other entrepreneurs appreciated the hands-on nature of the workshop, especially when they could provide practical skills that could be immediately applied to their business. Finally, another theme that came out of the interviews were concerns about the time commitment which some interviewees noted was overwhelming.

Box 8:

Illustrative feedback from entrepreneurs on training, education and workshops

- *"The workshops by [Accelerator] were out of this world, like, extremely relevant, hands on, practical…"*
- *"I thought they were exceptionally done compared to other lectures I've attended. The right length of time, the experts coming in from around the world were exceptional and it was highly interactive (versus a one-way presentation)."*
- *"I would question the level of sophistication in terms of it maybe being more than what would be needed."*
- *"They had sometimes three sessions a week, and for a lot of people, we just had a hard time finding the time."*
- *"Honestly, it was a ton of information that, don't ask me any of it. Two weeks later, I wouldn't remember any of it…"*

Table 6:

Curriculum overview

Accelerator	Program (mode)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Alberta Catalyzer *Mandatory Attendance	Engage (online)	Ideal customer discovery	Solution prototyping	Minimum viable production (MPV) creation	Testing and validating business models								
	Traction (online)	Tell your story	Strategic sales & marketing plan: foundations	Sales process, tracking metrics	Marketing channels, Call to action	Media & PR, live pitch							
	Velocity (in person)	Organizing your company, data room, business models and team	Discovery, interview scripts, prospecting and networking	Buyer's journey, mapping, pipeline and customer qualification	Pricing and development road map	Financial management, investment and funding	Presentation and demos	Closing a deal	Pitching				
TELUS CSW *Mandatory Attendance	Hybrid	Startup methods Alberta 101	Customer value hypothesis	Customer discovery I Local social impact 1	Customer discovery 2 Local social impact 2	Uncover/ expand opportunities Local social impact 3	Customer creation 1 Accessing Alberta industry	Customer creation II	Business modelling I	Business modelling II: Pricing	Final experiments	Lessons learned and way forward	Presentation
500 *Mandatory Attendance	Hybrid	Foundations of growth & marketing: Company one liners; Growth mindset; ICE prioritization; Jobs to be done; Customer profiles; customer journey; Key metrics		Growth: Customer interviews; growth experiments						Legal, Finance, Fundraising and pitch preparation and demo day			
Plug and Play *Optional Attendance	Hybrid	"Shape": Introduction, best practices; Design thinking; Intake pitch capture & two rounds of pitches; Business model canvas; Storytelling; Metrics and KPIs			"Build": Lean startup method; Public pitch opportunity; Pitch practice (4 and 5); Co-marketing; legal.			"Sell": External corporate visits; Pitch practice (6, 7, 8, 9 and 10); Customer acquisition; Media training; final pitches.					
SVG Thrive	Studio (online)	Intro to Entrepre-neurship	Meet Cohort & Review Problem Statements	Customer Discovery	Business Concepts	Business model, MVP, Prototypes	Pitch & Storytelling	Closed Pitch					
*Mandatory Attendance	Academy (Hybrid)	Onboarding	Market Sizing	Pitching Skills	IP Strategy	Customer Development & Sales	Industry Perspectives	Go to Market Strategy	Investment Readiness	Alberta Week	Mentorship & Peer to Peers	Mentorship & Peer to Peers	Wrap-up
	Accelerator (Hybrid)	Introduction: Alumni stories; VC behind the curtain; Peer networking.		Fundamentals: Startup law; Lean canvas; Protecting IP; Cohort case studies.			Business development: Mentor networking; Canada opportunities; Global opportunities; Marketing.			Revenue: Human capital; introduction to venture debt; Distribution & channel partners; Founder resilience.		Investment readiness: Corporate pitch sessions; Corporate M&A; Investor Pitch sessions	

Mentorship

The overall sentiment from participating entrepreneurs toward the mentorship and coaching provided in the various programs was mixed, with some participants finding significant value in the mentorship received, while others expressed that the mentorship could have been more effective or was lacking (again, see Box 9 for illustrative quotes).

Positive experiences were noted by those who were paired with mentors that were well-aligned with their industry, business stage, or personal entrepreneurial style. Many appreciated the practical advice, the opportunity for ongoing relationships, and the targeted assistance that some mentors provided. The high level of expertise and the applicability of the mentorship to immediate business needs were seen as particularly valuable. There was a sense that good mentorship offered not just advice but accountability, and some mentors were commended for their readiness to support participants beyond the duration of the program.

Conversely, other participants felt that the mentorship was too generic, lacked depth, or did not adequately match the needs of their specific business. Some pointed out the difficulty in deriving substantial value from short, infrequent sessions with mentors who had a limited understanding of their business. There was also mention of challenges in maintaining connections with mentors after program completion, indicating a possible area for improvement in post-program support. A few participants did not recall having a mentor or did not feel that the mentorship was a standout aspect of their accelerator experience.

In summary, while there are examples of effective and valuable mentorships, the findings suggest a need for more consistency in the quality and alignment of mentors with the entrepreneurs' specific contexts. Additionally, establishing a system that supports sustained mentor relationships post-program could enhance the long-term impact of mentorship coaching.

It also seemed that participants had varied experiences with the access to business experts during the accelerator programs. While they were provided with opportunities to connect with experts, the effectiveness and lasting impacts of these interactions varied amongst participants. Some felt the need for a more structured follow-up or a tailored approach that aligned with their specific industry needs, whereas others were able to establish and maintain useful connections.

Box 9:

Illustrative feedback from entrepreneurs on mentorship

- *"[This] was one of the best experiences, at least for us because we could match with very good mentors actually. And I'm still connected with XXX … basically whenever I need some high-level advice, I reach out to him."*
- *"We have WhatsApp group with the batch. With mentors we can share, we can ask questions. And as many as I wanted to have a meeting with both of our mentors, they were open to have that. I took their time and get their feedback."*
- *"The mentor looked under the hood and really worked alongside to review everything we did. That's more beneficial than giving generic theories. The mentors understand my business deeply and helped solving my issues hands on."*
- *"It was okay. It's kind of hard. The mentors were, you get like a half an hour or 45 minutes with someone who has a one per cent knowledge of your company and some knowledge of your space. So, it wasn't super helpful…"*
- *"They had no experience in startups … Very lovely person, but XXX … doesn't come from a business background, so very little to relate with her."*
- *"I just didn't find the mentorships very useful … there was just no follow-up. Honestly, they were not committed mentors. There was really just one meeting with the mentor. Like, you can't mentor people a single meeting."*

In the focus group with mentors, a number of interesting observations were also made.[37] For example, the key motivations for engaging as mentors in the accelerator program include bridging knowledge gaps, contributing to ecosystem development, fostering personal and entrepreneurial growth, and driving economic opportunities within Alberta and beyond. There was an expressed need for mentorship to help navigate the intricacies of investment and procurement, with a strong sense of giving back to the community and contributing to the future prosperity of the region:

- *"So, it's important for us to really contribute as mentors because we need to help build the ecosystem."*
- *"Often the real benefit of mentorship is in making people successful."*
- *"It's on the altruism side, how I want to help our community and our service protect that community even better."*

[37] It is important to note that the mentors who volunteered to participate in the workshop are more likely to be committed to the program thus resulting potentially different views than those less committed mentors.

Mentors confirmed that most accelerator participants were very early stage to secure commercial investments, although a number acknowledged that they had made a small number of investments themselves, including angel investments. This would suggest there being an advantage to the mentor in spotting potential investment opportunities due to being 'closer' to an entrepreneur thereby gaining more insight than a third-party investor at a demo day. The second observation was that, with one exception, none of the mentors acknowledged that they had received training from the accelerator despite this being an expectation of Alberta Innovates. This is an important component for Alberta Innovates theory of change, as the strengthening of the capacity and capabilities of a network mentor would have legacy impact on the Alberta entrepreneurial ecosystem. Finally, mentors in the focus group also drew out the distinction between mentoring, coaching and advice, saying that these different activities were often conflated by both funders, accelerators and entrepreneurs. (See Box 10, for summary of differences).

Box 10:

Difference between mentor, coach and advisor[38]

A mentor creates a relationship with a mentee that provides a long-term benefit to both parties from knowing one another deeply. A mentor-mentee relationship a personal one – or becomes so because of the time spent together and mutual care for each other. It is safe to be vulnerable with a mentor, who looks to develop a mentee and has no agenda. They are passing along their knowledge and experience.

A coach works with an entrepreneur to help improve their performance. Not unlike the coaching of an athlete or entertainer, the coach's focus is on unlocking the client's potential.

An advisor has specific expertise, experience or connections that can help you in a very particular way – a 'sharpshooter' of sorts.

[38] *https://www.linkedin.com/pulse/difference-between-coaches-mentors-advisors-mike-krupit/*

Pitch readiness and demo days

The cumulation of most accelerators is the 'demo day', where participant entrepreneurs pitch their companies to investors or corporate partners with the intention of raising funding or revenues. The pitch is a critical part of the curriculum of all the accelerators that were part of the Scaleup and Growth Accelerator Program. As discussed in the next chapter on outcomes and impacts, the amount of secured investment for Alberta companies was impressive when compared to the cost of the program ($C282.7 million vs. $35.2 million – a $1 to $8 return on capital to date).

Prior to the actual demo day, and as captured in Table 6, the accelerators provide pitch training and advice on how to be 'investor-ready'. The emphasis on being able to effectively communicate the core purpose of your enterprise, in a language that is not overly technical nor glib, is a difficult skill to master especially for those entrepreneurs who come from a technical background such as research academics.[39] The overall sentiment towards the investor readiness and pitch support provided by the program again varied among participants. Many found the pitch preparation and investor materials development aspects to be helpful, with several individuals noting marked improvements in their pitching skills and materials as a result of the program. Some praised the practicality of the training, the in-depth workshops, and the one-on-one support received, particularly highlighting the value of personalized feedback.

However, there were also critiques about the timing, structure, and execution of pitch support events. A few participants suggested more frequent and better-tailored opportunities for pitch practice, as well as a desire for a more diverse range of experts to address different industry needs and investment stages. The need for more detailed preparation for specific investor meetings was also mentioned.

Additionally, there was a recognition that while pitch support was strong in some areas, it could be overly focused on the program's perspective rather than individual company needs. It was mentioned that the approach to training did not always align with the expectations of all founders, and some companies that were not in a fundraising phase found the investor-focused aspects less relevant to their current goals.

[39] Oliver et al (2014).

The overall sentiment regarding Demo Day experiences also varied among respondents but was broadly positive (see Box 11 for illustrative quotes). For the four accelerators, overall satisfaction with the Demo Day was 81 per cent, ranging from 56 per cent to 100 per cent. For some, the Demo Day was a positive experience that allowed for significant exposure to potential investors and customers. They appreciated the structured and intensive preparation process which often resulted in beneficial networking opportunities and, in some cases, led to investment and long-term connections.

In contrast, there were participants who felt that the events did not meet their expectations, especially regarding investor engagement. Some felt that the promise of investor presence and potential funding was not fulfilled, indicating that although the events were well-attended, the actual number of serious investors ready to commit was lower than anticipated. This sentiment was echoed by others who noted a lack of follow-through on potential leads and investments post-event.

A few participants highlighted the variance in quality and effectiveness between different cohorts and events, with the first cohorts seemingly having a less impactful experience compared to later ones. Some respondents suggested improvements, such as more focused and dedicated time for startups to connect with investors and partners, rather than mingling with a general audience. Furthermore, the modality of the event (virtual versus in-person) also influenced participants' experiences. Some enjoyed the convenience and broader reach of virtual events, while others appreciated the depth of interaction and the ability to make more meaningful connections in person. It was also noted by the program team that non-Albertan companies were more assertive and confident in their pitches which led to a wider discussion in one of the lessons learned sessions as to why this may be the case and what to do about it. As a result, accelerators were asked to reflect on this, with one shifting modality from a demo day to an investors dinner.

Box 11:

Illustrative feedback from entrepreneurs on pitch readiness and demo days

- *"I enjoyed the demo day … I thought it was really interesting, really valuable."*
- *"Great opportunity to practice what we learned, make new contacts while celebrating with our cohort."*
- *"I was really impressed … I pitched, and I was actually very pleasantly surprised at how well it was run and the turnout they got."*
- *"I didn't bomb on stage so that's a win! It was a great night. A celebration of the 12 weeks of work and there was a great turnout."*
- *"More curated matches with investors. It was by chance to run into investors at dinner or once at the dinner."*
- *"Very few investors, and very few follow up meetings."*
- *"There were no opportunities to schedule meetings in advance. I met no one there. I flew to Calgary, spent two nights in a hotel, for a three-minute pitch."*

Alumni including the Fund and Fellowship

The term Fund and Fellowship was coined as the opposite of 'Fund and Forget'. Fellowship marshals the collective efforts of the ecosystem to wrap around the entrepreneur to achieve sustainable impact. It is part of the systems approach that uses enhanced program and impact management processes to:

- Partner with accelerators and support them to maximize performance through lesson learned cycles;
- Support companies in navigating the client journey and achieving maximum scaleup potential;
- Convene and engage ecosystem players to become part of a network of networks to maximize ecosystem performance; and
- Integrate impact assessment to learn what works, what doesn't and who to improve outcomes.

This was captured in the flyer developed for the concept illustrated in Figure 16. In practice, the fellowship approach applies three strategic tactics. The first was to use evaluation and network analysis to capacity building. This involved collaboratively integrating qualitative and quantitative evaluations process and techniques to share lessons learned, improve outcomes and demonstrate program return on investments. The second was ecosystem

collaboration. The idea here was to accelerate impact investment and management by Alberta Innovates acting as a system optimizer for a higher performing ecosystem. The third and final tactic was to create an alumni network to support graduates of the Scaleup and Growth Accelerator Program in achieving their goals by providing ongoing navigation and support and in creating a community of practice.

Figure 16:

Flyer for the Fund and Fellowship

During year one of the program focus was almost exclusively on setting up the accelerator programs (pillar one) with the fellowship only starting recently, in year two, after the first cohorts were graduated. Nevertheless, entrepreneurs reported benefiting from the events organized following accelerator completion, specifically highlighting the proactive communication, ongoing opportunities, and accessible mentorship that continued post-program. For example, Fund and Fellowship programs, such as two SXSW delegations and attendance at Inventure$, offered unprecedented networking opportunities for some entrepreneurs, expanding their connections within and beyond the Alberta ecosystem (as illustrated by the quotes in Box 12).

Others indicated that the follow-up was not as robust or structured as they had hoped, suggesting a need for more consistent and tailored engagement after completion of the program. Some entrepreneurs mentioned that after graduating from the accelerator, there

was a sense of being left on their own, with a need for further guidance or support that was not always available or clear. Indeed, there was limited name recognition of the 'Fund and Fellowship' approach with only three interviewees mentioning it (and these were from accelerator staff and funders).

Box 12:

Illustrative feedback from entrepreneurs on alumni support, including Fund and Fellowship

- *"So, we're just a part of the alumni network right now, so we get lots of opportunities … So just a really strong network keeping us well connected to ecosystem partners."*
- *"Making connections to grow my business and the fellowship is invaluable."*
- *"Networking, support, advice, fellowship, learning from others that have gone before you, legitimizing our efforts in the view of our partners (i.e., we are one of the Top 50 startups from Alberta)."*
- *"The value of learning from others' experiences and mistakes."*
- *"One thing is after cohort follow up. Okay, well, it's like alumni relations, right. In our universities. Like, hey, how are you guys doing? What's happening? Do you need any support? Are you stuck somewhere? I think that piece is missing in both to an extent."*
- *"I think there's been indications that it might be happening. So, for example, I'd let one of the people know that we're raising … So I'm just kind of like, okay, maybe that means that no one was interested."*
- *"There's always room to improve but overall, I think the fellowship is a terrific way to bring more Alberta founders together and will help expedite learning/success throughout our ecosystem."*

A common theme was the desire for more post-program engagement that could assist with practical next steps, such as grant applications, strategic advice, or direct introductions to investors and potential partners. There was also a sense that more could be done to leverage the collective network of accelerator alumni, suggesting a potential area for improvement could be in fostering cross-cohort connections and support systems.

Some accelerators also cited they would be well-placed to provide follow-up support, but this fell outside of the remit of the Scaleup and Growth Accelerator Program Request for Proposals. Nevertheless, there were example of where financial support was available including CSW Scale Good fund[40] and SVG's Pioneer Fund.[41] That said other accelerators,

[40] https://www.telus.com/en/about/news-and-events/media-releases/new-10-million-edmonton-based-scalegood-fund-powered-by-telus-announced-with-first-investment-in-areto-labs
[41] https://thriveagrifood.com/pioneer-fund/

notwithstanding that they lack equity in the companies that they support, have continued to support program alumni to access services and make connections. This is notable as the accelerators do not receive a direct benefit for this service. However, not all entrepreneurs have fully realized that they can use this support.

The leading practice review identified examples such as Gener8tor that also applied a fellowship approach and used accelerators as a tool to contribute to the systemic growth of an ecosystem as outlined in Box 13 below.

Box 13:

Gener8tor Economic Gardening Example

gener8tor

Context: Capitalizing on the high concentration of technological corporations, higher education and research institutions in Texas, Houston municipality has long tried to attract national and international high-growth startups to strengthen their entrepreneurial ecosystem and economic growth.

Challenge: The objective of attracting talents coming from outside faced two main problems. On the one hand, it concentrated the resources of the accelerator programs towards external startups to the detriment of local entrepreneurs. On the other hand, it did not bring the expected outcome, as accelerated companies did not remain in the city because of a lack of significant incentives to stay.

Interesting practice: In 2019, the Municipality of Houston opted for an 'economic gardening principle' and focus on supporting their own entrepreneurs and people with interest in developing the community, while fostering a business-friendly environment for them to thrive. For this purpose, they successfully managed to bring the Wisconsin-based gener8tor to the city with a specific program (gBeta) specifically targeted to local entrepreneurs. Among the eight cohorts run so far, almost all founders are still in Houston and contributing to the community.

Inspirational value or lesson: Accelerators are increasingly seen as an important instrument contributing to the systemic growth of an ecosystem. To succeed in their missions, accelerators need to align with the wider economic, social and policy context in which they sit. Besides being a tool for a successful policy mix, accelerators can also be important contributors in shaping future policies, by identifying a valuable target niche with a temporal stability that goes beyond the transitory political priorities.

International comparisons

In comparison to the other accelerators reviewed as part of the leading practice review, the Scaleup and Growth Accelerator Program shares a number of similarities with some interesting exceptions. For example, as summarized in Table 7, three of the international programs reviewed (e.g., Gener8tor, Capital Factory and Sigma Lab) had similar durations of around three months, but two were significantly longer at 12 months (Bpifrance and West Midlands Innovation Programme). As noted in the previous chapter, the length for the Scaleup and Growth Accelerator Program accelerators are typically three months.

Table 7:

Key design characteristics of acceleration programs from leading practice review

Accelerator Type	Accelerator name	Program length	Cohort size	Mode of delivery
Investor-led accelerator	Capital Innovators	3 months	6-7	In person
	GROW Agrifoodtech Accelerator	6 months (startup); 7 months (scaleup); 5 months (late stage)	12 (startup); 10 (scaleup); 7-11 (late stage)	In person (startup); Hybrid: Virtual + 2 in person week (scaleup); Virtual and possibility of in-market visit (late stage)
	SigmaLabs	3 months	6-8	In Person
	Startuplab	3 months	9 (but variable)	Full remote participation possible
Investor-led accelerator + Entrepreneurship networking and services provider	365x Scaleup	6 months	11-20 per batch	Hybrid
	Accelerace	7 weeks	5 (approx.)	Hybrid
	Capital Factory	3 months	N/A	In Person
	Gener8tor	3 months	5-6	In person
	Sparklabs Group	4 months	8-12	Information not available
Investor-led + Public accelerator	Capital Innovators - NGA Accelerator	4 months	6-7	In person
Investor-led + Philanthropic accelerator	Skydeck Europe	5 months	10 per batch (2 batches/year)	1 month in-person in Berkley + 3 months remotely + 1 month in-person in Milan
Public accelerator	BeyondBeta	5-12 months	40	Accelerator: In-person; Pre-accelerator: online tutorial and courses
	Bpifrance	12 to 24 months	15 to 30	Information not available
	Deep Tech Accelerator from Business Finland	Two phases: 12-18 months up to 24 months	N/A	Information not available
	German Accelerator	Kickstart: 5 days; Market Discovery: 5-7 weeks; Market Access: 3 months	N/A	Kickstart Program: Hybrid; Market Discovery Program: Virtual; Market Access Program: Virtual
	Global Digital Innovation Network - Korea	1 year min., possibility to reapply	Does not follow a cohort logic	Information not available

Accelerator Type	Accelerator name	Program length	Cohort size	Mode of delivery
	Innovation Works	6 months	4-6	In person
	Startup Chile	4 months (Build, Ignite); 8 months (Growth)	40-50 (Build); 30-40 (Ignite); 15-18 (Growth); Values per batch. 2 batches/year	In person
Philanthropic accelerator	DESAI Accelerator	7 months	4-6	In person
	Nordic Mentor Network for Entrepreneurship (NOME)	18-24 months	< 5	Not specifically mentioned, but most probably in person
	Pipeline Entrepreneurs	12 months	10-20	Information not available
	ScaleupSCOTLAND	5, 18, 12 months	N/A	In person

Source: Leading practice review

The leading practice review identified an understandable trade-off between intensity of course and cohort size. For example, very tailored programs, for a mix of companies in terms of development stage and technology area generally featured small cohorts of 5-15 enterprises (such as Accelerace and Gener8tor). In contrast, less customized programs, such as Startup Chile, feature large cohorts, sometimes as large as 50 enterprises. Importantly there is a correlation between investor-led accelerators that tend to have smaller cohorts and public accelerators that tend to have larger cohorts. The mean cohort size was 15 entrepreneurs for the Scaleup and Growth Accelerator Program, and this follows international practice.

The delivery of the majority of programs was hybrid, with a shift towards online stimulated by the COVID-19 pandemic. Indeed, as the leading practice review observed there is an interesting tension between in person and online approaches when it comes to innovation, entrepreneurship support and acceleration. On the one hand, economic and urban policy efforts, in the form of Innovation Districts/Corridors, try to create attractive areas that concentrate talent, infrastructures and investments. These physical spaces are thought to significantly boost research, technological development, and entrepreneurial activity by fostering collaborations and cross-fertilization. They are popular in several cities and regions around the world, as is covered on the leading practice review. For example, the Berkeley Skydeck Europe based in the Milano Innovation District (MIND), is a public-private partnership that physically unites university campuses, research institutes, hospitals, third sector entities and a network of private entities. Similarly, the MassChallenge accelerator and the Houston Impact Hub are situated in the Innovation Corridor in Houston. This four-

mile-long corridor connects any given point by light-rail, bike lanes, and pedestrian thoroughfares to key industry and innovation key players.

On the other hand, all accelerators recognize virtual delivery, platforms and resources as an outstanding opportunity to allow their services to reach a wider and more distant public, lowering access barriers, while reducing costs. From an Equity, Diversity and Inclusion (EDI) perspective virtual offerings are therefore potentially more inclusive. For example, River City Labs has developed a digital platform with the aim of connecting investors, entrepreneurs, mentors and professionals from across Australia. By doing so, River City Labs intends to grant more flexibility and easier access to the users in following networking events, courses and workshops; and better match mentees' needs to mentor expertise and industrial sector knowledge by leveraging the whole Australian ecosystem. Another interesting example is Accelerace, a top accelerator in the European Nordic countries that has turned the post-pandemic changes into an opportunity. Already in development pre-COVID, lockdowns forced Accelerace to speed-up the development of an online platform as described in Box 14.

For the Alberta Scaleup and Growth Accelerator Program, participants reported that the in-person aspect of accelerator programs fostered connections among cohorts and facilitated networking opportunities. As noted above, entrepreneurs found in-person meetings useful, and alumni networks and fellow peers were frequently cited as part of their networks. They also appreciated virtual components for their extra flexibility to attend 'teaching-style' modules. However, with Calgary and Edmonton as the largest startup hubs in Alberta, additional focus is needed to ensure more rural entrepreneurs gain similar access to events.

Box 14:

The Accelerace program online delivery

ACCELERACE

The Accelerace program in the Nordic countries has implemented a very advanced digital platform with several interesting characteristics:

- Streamlining and formalizing the content and quality of the materials and delivery;
- Lowering the barriers for startup participation and reducing the need for a physical presence (very relevant since Accelerace supports companies across eight countries and several localities in the Nordics, Baltics and Germany);
- Reducing the costs of running the programme (from €15,000-€20,000 per company to €5,000);
- Increasing the quality of interaction between founders and mentors, which enabled these latter ones to improve the focus on their interventions on the most critical aspects for the founders;
- Making most of the content available for free as the 'Knowledge toolkit', which has increased the reach of Accelerace and the opportunity to screen companies for investment (from around 1,000 to 10,000 per year);
- Training AI models to better select, better support and better benchmark their portfolio and accelerated companies.

Source: Leading practice review

Overall, it is fair to conclude that the Alberta Scaleup and Growth Accelerator Program followed international best practice in providing education and training, mentorship and access to networks. That said, there were a number of lessons that can be identified in the implementation of the program as described below.

Accelerators' 'drag and drop' approach initially had mixed results

By design the global accelerators only tailored their programs in a limited way. This has had mixed benefits. The major benefits concern Alberta Innovates' goals of experimentation and maturing the province's innovation ecosystem. Applying (a version of) what has succeeded in other markets provides a valuable evidence base to understand the nuances of the Alberta market. It also 'buys in' maturity from other markets, signalling internationally Alberta's intent in becoming a centre for innovation in Canada and globally. This creates a shortcut to ecosystem maturity, and this responds to stakeholders' view that Alberta lacks the experience across the innovation lifecycle that is available in more established innovation hubs. However, as captured in a number of the quotes from interviews above,

accelerators did experience challenges implementing their established programs. For example, the highly rural characteristics of the province meant cohorts needed to be run in different locations with different elements made available online. Securing local industry partners, mentors and investors was also made more challenging due to the level of maturity of these groups within Alberta, relative to other locations the accelerators operated in.

Lower thresholds for company selection and application of a slightly different model cumulatively resulted in cohort design 'growing pains' at the outset of the program. For example, interviews with entrepreneurs highlighted that in many instances, the cohorts comprised of entrepreneurs with a range of different experiences, maturity levels and needs. That said, it is important to acknowledge that accelerators successfully shifted their program designs to suit the participating cohort. In the health sector there is a lot of debate on the adaptability of different health interventions to different contexts. There may be lessons to be learned from the practice of implementation science that could be applied to innovation policy. For example, distinguishing between function and form allows a focus on purpose (function) and model of delivery (form), resulting in a more strategic approach to implementation.[42]

An example of designing for purpose is the Global Digital Innovation Network (GDIN) in Korea whose whole program design is aligned with their mission as outlined in Box 15.

[42] *https://thecenterforimplementation.com/toolbox/innovative-way-to-address-the-fidelity-adaptation-debate-forms-and-functions*

Box 15:

The GDIN Mission Driven Model

GDIN GLOBAL DIGITAL INNOVATION NETWORK

Context: This agency supports Korean startups in global expansion, offering mentoring, legal and patent strategy consulting, and access to global markets.

Challenge: Getting South Korean companies to enter international markets.

Interesting practice: This governmental program specifically tackles globalization needs of South Korean tech companies. The whole program design is aligned with the following mission:

The selection process is completely outsourced to venture capitalists around the world, which select the companies that can best benefit from the program (criteria: What is the product-global market fit? Is there a commitment to go global? Is there a global demand?). As the most extreme example of this alignment, potential unicorns oriented to domestic markets would not be accepted in the program.

Once the company has been selected and during its participation in the program, GDIN operates as part of the company team, offering consulting for legal, patent, accounting, investment and marketing, and curated support in improving the market entry strategy.

The accompaniment has a minimum duration of one year. After this period, companies can reapply. GDIN supports around 150 companies simultaneously.

Inspirational value or lesson: Domestic growth and global acceleration aim at different milestones (i.e., growing a customer base versus establishing international presence) and therefore GDIN believes it cannot be achieved through the same tools and support systems. Their selection and provided support are therefore very carefully designed towards its goal, and the relationship with supported companies is long-term (min. one year). Furthermore, the agency is committed to sustain the multi-annual commitment required for achieving significant results, advocating for their mission within public institutions.

Source: Leading practice review

Entrepreneurs, especially new entrepreneurs, find the ecosystem complex to navigate and need help in 'wayfinding'

Navigating both the Scaleup and Growth Accelerator Program and its place within the broader ecosystem in Alberta is not sufficiently clear for accelerators nor startups. This is a point that has been made in previous Alberta Innovates' commissioned reports where Raby et al (2022) note, "stakeholders reported there being limited time and resource to develop local wayfinding solutions."[43] and set out a number of actionable insights to help entrepreneurs navigate the ecosystem (as summarized in Box 16).

Box 16:

Identified priorities in helping entrepreneurs navigate the Alberta entrepreneurial ecosystem

Priority 1: Accelerate the Navigator Learning Curve. Provide resource and individuals to support entrepreneurs in navigating (or wayfinding) their path through the Alberta entrepreneurial ecosystem.

Priority 2: Enhance communication and transparency. Align and explain common language and simplify terminology.

Priority 3: Design a common needs assessment. A common needs assessment tool would support the navigator learning curve (Priority 1), champion accessible services (Priority 4) and integrate the entrepreneurs' data profile (Priority 3).

Priority 4: Make services more accessible. It cannot be assumed that all entrepreneurs are equal in their ability to access resources in the ecosystem, with many needing to overcome systemic barriers to participate.

Priority 5: Build an entrepreneurial data profile. If integrated well, this could provide significant benefits to accelerate the entrepreneurial journey through greater service provider integration.

Source: Raby et al 2023

For example, and as discussed in Chapter Three, the Scaleup and Growth Accelerator Program's entry process for startups was fluid and decentralized, which resulted in some mismatches between startups and accelerators. Startups applied directly to accelerators, rather than being triaged by the program. The lowering of thresholds for entry into accelerator programs, in response to lower maturity levels, meant a wide range of entrepreneurs were able to participate in the same accelerator cohort. Additionally,

[43] Raby et al 2022; Raby et al 2023.

participating in an accelerator that is pitched at a level other than the one you are in reduces the potential value of the program for entrepreneurs.

The wayfinding challenge could be treated as growing pains, but something that the evidence amassed in this realist impact assessment suggests this is a systemic gap that requires a targeted mitigation strategy to address. It is right to acknowledge that the Alberta innovation ecosystem has grown significantly in the last few years and plans to grow further in the coming years. While the responsibility to map an ecosystem does not lie with the Scaleup and Growth Accelerator Program, the introduction of the program also did not improve navigation. Many interviewed entrepreneurs reported struggling to understand their next steps after completing cohorts, as well as how to move between accelerators. This is despite Alberta Innovates staff presenting three times to each cohort on broader ecosystem support, including the existence the other Scaleup and Growth Accelerator Program accelerators, the Regional Innovations Networks (RINS) and how to access navigation support through Alberta Innovates Technology Development Advisors (TDAs).

Nevertheless, one entrepreneur reported that they were only made aware of the availability of the 500 Global accelerator, which may have been more suitable, when they were already halfway through Plug and Play. Another mentioned they had to independently research and find Plug and Play after finishing a 500 Global cohort. This lack of clarity leads to a trial-and-error approach for founders seeking the best-suited accelerator. Four participants attended two Scaleup and Growth accelerators, reporting diminishing returns after the initial experience.

As noted, the Alberta Innovates team met with cohorts across the accelerators at the outset of the program and in these workshops explained the different pathway between pre-accelerators and accelerators and the characteristics of each accelerator. The fact that some entrepreneurs were still unaware of the differing pathways further emphasizes the need for wayfinding.

There is an opportunity for the Scaleup and Growth Accelerator Program to further extend support for under-represented groups

The participants shared varied experiences regarding their identification as under-represented entrepreneurs as summarized by the illustrative quotes in Box 17. For example, a woman founder, felt a shift in perspective when seeking venture funding and noticed a lack of diversity in the groups she was part of. Similarly, a number of entrepreneurs from different ethnic backgrounds noted that they did not feel left out, but recognized their under-representation. When asked, others experienced a respectful and supportive environment, highlighting a good mix of diversity in the programs. Across the board, the experiences shared reflect a general consensus that the program was supportive, but there is room for improvement in diversity and representation, especially from a gender and cultural standpoint.

Box 17:

Illustrative feedback from entrepreneurs who identify as under-represented

- *"And then it really became a factor. … You definitely do feel like the minority in the groups. … It would be great to see more women represented."*
- *"I think I am under-represented quite a bit. But no, I'm a firm believer regardless of where you come from and what you identify as, as long as you do the work, whatever you put in there, you get out."*
- *"I do identify as an under-represented entrepreneur. I think the stats speak for themselves when it comes to the investment readiness and the investment velocity towards black founders."*
- *"I felt very supported. I felt that there was a range, whether that's ethnicity, background, skill level, experience."*
- *"Yeah, well, there definitely was a lack of female founders. That's just, how do you say, a symptom of something larger?"*

These sentiments are, in part, reflected by the demographic data Table 8, where the self-reported identity of applicants to the Scaleup and Growth Accelerator Program and those who were successfully accepted on the program and graduated are tabulated. As can be seen in this, the women, youth and newcomer groups were under-represented in the graduate population. When compared to the applicant one, ethnicity was overrepresented and indigenous was about the same. At the outset of the Scaleup and Growth Accelerator

Program, Alberta Innovates articulated the principle that the entrepreneurial ecosystem is stronger and more sustainable when it is broadly representative of the overall diversity of the community. This ethos was embedded in the Scaleup and Growth Accelerator Program with the requirement for accelerators to provide EDI plans and to expand access to rural and underserved communities. Alberta Innovates supported the development of the EDI plans by coordinating workshops from EDI experts and inviting guest speakers from several under-represented groups to participate in fellowship meetings including from the local BIPOC Small Business Accelerator Program. Despite this, there was limited evidence that Accelerators altered their programs significantly to increase access or support under-represented populations.

Table 8:

Self-reported identifies of applicants and graduates of the Scaleup and Growth Accelerator Program

	Applicants		Graduates (Alberta companies)	
	Total number by group	% by Group	Total number by group	% by Group
Women	507	21%	133	23%
Youth	297	12%	42	7%
Newcomers	246	10%	46	8%
Ethnic	829	34%	223	39%
Indigenous	70	3%	16	3%

Note: individuals may appear in more than one category

Looking to the future, it is worth noting that the leading practice review highlighted significant efforts to level up the playing field for women entrepreneurs. Among other measures, this has included the active engagement with women mentors and female investor communities as summarized in Box 18.

Box 18:

Initiatives supporting women entrepreneurs identified in the leading practice review

Startup Chile introduced several initiatives specifically designed to empower and support women founders. For example, in the past years, Startup Chile launched '*The S Factory*', a pre-acceleration program, tailored for startups led by female founders. Upon its dismissal[44], Startup Chile has developed a more transversal approach to support female founders, branded '*The Female Founder Factor - F³*'. Under this umbrella, there is a set of interventions intended to ensure a balanced representation of women, promote their visibility in the entrepreneurial ecosystem, foster their networking opportunities for peer learning and investment. Although all these initiatives are important, they are addressed to women already participating in the program. To increase women applications to the program, Startup Chile has developed an active scouting approach by which they search for women-founded startups and encourage them to apply to the accelerator's selection.

RiverCity Labs is a not-for-profit accelerator serving Queensland's (Australia) tech entrepreneurial system. They developed an eight-month program *Elevate Female Founders* that targets women entrepreneurs. The main feature of the program is the matching between women founders and women mentors. This coupling is intended to facilitate the overcoming of specific challenges through the sharing of experience, knowledge and skills. The specific perspective that women can bring to these challenges and their inspirational role have been recognized as the success factors of the program.

Gener8tor is a nationally ranked venture capital firm and accelerator that brings together startup founders, investors, corporations, job seekers, universities, musicians and artists. Gener8tor features 75 programs spanning startup accelerators, corporate programming, speaker series, conferences, skills accelerators and fellowships.

Challenge: Gener8tor puts considerable emphasis on equitable access and opportunity, as a key element for the development of local communities and hence for the dynamism of the entrepreneurial ecosystems.

Interesting practice: Across its locations, Gener8tor has developed multiple programs specifically supporting under-represented founders such as women, black and brown entrepreneurs. This 'portfolio approach', which combines accelerators focused on specific industrial sectors with others targeting diverse categories of founders, results in a

[44] After the 2016 evaluation, Startup Chile realized that the participation of women to their 'seed program' did not increase thanks to the S-Factory. What happened was that women were mostly used by companies as 'front men' to obtain funding, but they were rarely in management positions of the companies, but rather commercial profiles.

significant diversity of founders and executives supported by the accelerators: 48 per cent of gener8tor companies have a CEO who identifies as Black, Indigenous, and People of Colour (BIPOC) and 39 per cent of gener8tor companies have at least one woman founder.

Inspirational value or lesson: These achievements are the results of an intentional strategy targeting equitable access and opportunities to accelerators featuring multiple key elements: 1) the design of specific programs targeting under-represented communities, often in partnership with specialized actors closer to those realities; 2) an equal treatment for all companies that join the accelerator (same access to network and same quality of support); 3) highly tailored programs addressing specific needs of BIPOC founders; 4) active and intentional communication towards the under-represented groups to stimulate their participation into accelerator programs.

Source: Leading practice review

The Alberta Scaleup and Growth Accelerator Program is part of a broader entrepreneurial ecosystem, with evidence of some friction between different elements of that ecosystem

There is an apparent disconnect between the Scaleup and Growth Accelerator Program and Regional Innovation Networks (RINS), which is another signature initiative supported by Alberta Innovates. The RINS are "community-based providers who work closely with Alberta Innovates Technology Development Advisors (TDAs) to provide access to programs and services tailored to help people start a business, innovate a solution, or accelerate growth of an existing technology."[45] Three networks were initially launched in 2011, with a further five subsequently established making up a 'network of networks', known as the Alberta Innovation Network (AIN). Among other things, the RINs are intended to:

- Create a collaborative framework involving key players and stakeholders in the regional innovation ecosystem to help support and grow the entrepreneurial culture in Alberta;
- Identify gaps and trends in the innovation ecosystem for entrepreneurs and adapt service delivery and programs to fill those gaps;
- Deliver a collaborative and coordinated network approach to serving the region's innovation ecosystem; and
- Share and leverage opportunities for learning across the Alberta Innovation Network.

[45] https://albertainnovates.ca/programs/regional-innovation-networks/.

Technology Development Advisors (TDAs) who are employed by Alberta Innovates are strategically located throughout the province to work within each of the RINs as senior business advisors. The TDAs provide a range of services related to coaching, capital, and technology for knowledge-based SMEs in collaboration with Alberta's RINs. TDAs are senior business advisors who provide one-on-one guidance, community connections, and assist with identifying non-dilutive capital to support entrepreneurs and SMEs in technology or knowledge-based industries developing innovative technology.[46]

As noted in a number of the quotes above, in focus groups with the RINS there was concern that they were not aware of which enterprises had applied and been successful in securing a place on the pre-accelerators and accelerators nor had been informed of those who successfully graduated.[47] This was despite significant engagement with the RINS including workshops, road-trips and one-to-one meetings, suggesting some level of misunderstanding and misalignment of respective objectives. Whatever the cause, in practice this is a missed opportunity as the RINS can make referrals to the accelerators and assist in post-accelerator support. As discussed in the Executive Summary, one idea arising from this assessment is that Alberta Innovates provides centralized triaging to the Scaleup and Growth Accelerator Program which would involve seeking referrals from the RINS, TDA and others.

There is an opportunity to further support enterprises through de-risking investments through public procurement to support revenue generation

One of the key insights from this realist impact assessment is that many graduating enterprises form the Scaleup and Growth Accelerator Program are not 'investor ready'. This point is further developed in the next chapter which focuses on outcomes and impact. But as already examined, one of the reasons for this is the lowering of admission thresholds by the global accelerators, driven by the relative early stage of many startups in Alberta.[48] Given this situation there may be an opportunity to support enterprises through other mechanisms such as public procurement. There is a body of literature on the use of public procurement for innovation defined as 'purchasing activities carried out by public agencies

[46] https://albertainnovates.ca/programs/technology-development-advisors/.
[47] It should be noted that this in part is a regulator issue. Under the Alberta Freedom of Information and Protection of Privacy (FOIP) individuals must give consent to have information shared. Accelerators sought permission to share referral information with RINs, but the vast majority of companies declined.
[48] As noted in Chapter Two, it was not a contractual obligation but more an exception that the accelerators included Albertan companies.

that lead to innovation'.[49] In recent years, many governments have started to incorporate the 'innovation' dimension in procurement based on the rationale that public procurement can act as a lead user in the market, taking on the 'first mover' risk of the initial use of a product or service. A variant of this policy instrument is pre-commercial procurement that encourages innovation by offering a guarantee of purchase if a set of predefined outcomes are met. A recent example of this is the rapid development of vaccinations for COVID-19.[50] Innovative Solutions Canada[51] is an example of this type of intervention but has recently been closed following perceived failure.[52] This should not mean that this type of policy no longer be adopted, but to learn of successful implementation from international example of these policies include the U.S. Small Business Innovation Research Program (SBIR),[53] its British[54] and Dutch[55] equivalents. For government and other public sector organizations to take on the role of a 'first buyer' not only channels revenues into enterprises but sends signals to the broader market of the viability of the product.

There could also be other policies worth exploring with the aim of incentivising investments such a public (or public-private) venture capital funds and tax credit to early-stage investors. For example, the U.K. is establishing a Long-Term Investments for Science and Technology (LIFTS) which is a state backed investment vehicle aimed at attracting pension fund assets.[56] Irrespective of the policy instrument, given characteristics of the entrepreneurial ecosystem in Alberta there is a need to think creatively about how to ensure enterprises that graduate from the Scaleup and Growth Accelerator Program are 'investor ready' (or near-investor ready).

In other words, there is arguably an over expectation of accelerators to secure funding, with investment raised being the holy grail of Key Performance Indicators. This is possibly an artefact of the traditional investor-led model of accelerators. However, it is important to remember that for some enterprises it is possible to scale through revenue growth and is preferable to giving up equity stakes through investment pathways.

[49] Edler et al (2016); Grant and Ribeiro (2023); Denney et al (2023).
[50] Hanney et al (2020).
[51] https://ised-isde.canada.ca/site/innovative-solutions-canada/en/about-us
[52] https://www.canadianinnovators.org/content/buying-ideas-procuring-public-sector-innovation-in-canada
[53] https://www.sbir.gov/about
[54] https://www.gov.uk/government/collections/sbri-the-small-business-research-initiative#an-overview-of-sbri
[55] https://business.gov.nl/subsidy/small-business-innovation-research/
[56] https://www.british-business-bank.co.uk/ourpartners/long-term-investment-technology-science/

Chapter Five: The outcomes and impacts of the Scaleup and Growth Accelerator Program

Key assessment questions:

- What were the economic and societal benefits of the accelerator?
- What activities did/did not work? What were the likely reasons those activities did/did not work? How could they be changed to get a different outcome? What were the unintended impacts, positive and negative?
- How was progress to impact measured and what were the feedback mechanisms to adapt and learn across the lifecycle (provide illustrative examples)?
- How did the interrelationship between the context and activities help or hinder the impact of the accelerator?
- How did the accelerator program address equity, diversity and inclusion in each of the regions?
- In Alberta, which accelerator components appear to have the highest impact to the Alberta innovation ecosystem?
- What are the lessons learned and actionable insights for other accelerators?
- In Alberta, what is the optimal number of companies that would benefit from an Accelerator model on a yearly basis in Alberta (projection out)?

Key insights:

- The Scaleup and Growth Accelerator Program has increased the 'entrepreneurial capital' in Alberta.
- The Performance Impact and Management System (PIMS) used by Alberta Innovates is a novel approach to build entrepreneurial capital as part of the strategic curation of the entrepreneurial ecosystem in Alberta.

Overall conclusion:

- ***The Scaleup and Growth Accelerator Program is contributing to the impact and evolution of a strengthened and vibrant entrepreneurial ecosystem in Alberta.***

As discussed below, there are broader economic impacts attributable to the Scaleup and Growth Accelerator Program – jobs have been created, investments raised, and a positive return on investment for the Alberta economy can be demonstrated. However, while all these achievements should be celebrated, it is important to acknowledge the counterfactual – that is whether these impacts could have occurred without the accelerator program. This is a very difficult question to answer but one that should be kept in mind in when forming a judgement on the overall impact of the Scaleup and Growth Accelerator Program.[57]

There is a measurable economic impact of the Scaleup and Growth Accelerator Program on jobs and the economy

In 2022, Alberta Innovates projected the potential economic contribution of Alberta Scaleup and Growth Accelerator Program using the Statistics Canada Input Output model (See Box 17 for a summary of the approach and the methods Annex for more detail). As noted in Chapter One, while this is the standard approach for measuring economic impact of programs, there are a number of concerns when applied to the assessment of regional economic interventions such as accelerators and innovation networks. For example, one of the assumptions of an Input Output model is that there is no technological change.[58] Clearly, in the context of innovation this is an illogical assumption to make, but one that is often overlooked in such analysis. For this reason, as part of this realist impact assessment and with sight on the opportunity for a broader international comparative study, a review of economic methods was commissioned as summarized in Box 19.

Despite these potential limitations, the Statistics Canada Input Output model estimates that the Scaleup and Growth Accelerator Program would contribute $22.2 million in GDP to Alberta's economy and create or sustain 202 person-year jobs (FTEs) across Alberta over the funding period (2021-2024). At the national level, these programs are projected to contribute $27.8 million to Canada's GDP and create or sustain 244 jobs (this impact includes Alberta). Overall, the model simulates that:

[57] The academic literature addresses this question through a number of different methodological approaches (Bone et al 2023). For example, Christensen (2014) assessed the 'willingness to pay' (via equity exchange) to determine the value of an accelerator program. Roberts et al (2016) compared firm outcome between those who were accepted on a program or and Hallen et al (2016) compared with those 'almost accepted'.
[58] Kulshreshtha (2004).

- For every dollar invested in the Scaleup and Growth Accelerator Program in Alberta contributes an additional $0.91 to the provincial GDP or $1.14 to the national GDP.
- For every million dollars invested in the Scaleup and Growth Accelerator Program, the funded programs create or sustain eight jobs in Alberta or 10 jobs in Canada.

While it is not feasible to validate these projections against economic growth, it is possible to compare them to the actual number of new jobs created by enterprises participating in the Scaleup and Growth Accelerator Program. As of December 1, 2023, 249 new jobs were created in Alberta. This is greater than the forecast of 202 from the Input Output model, giving some confidence on the overall GDP projections.

Box 19:

Assessing the economic impact of the Scaleup and Growth Accelerator Program using an Input Output model[59]

Input Output models, developed by Wassily Leontief in the 1930s, offer a comprehensive framework to analyze interdependencies among different sectors of an economy. These models portray economic activities through a system of equations, depicting the flow of goods and services between sectors. The essence lies in understanding how changes in one sector affect others and the overall economy. They are particularly useful in assessing the ripple effects of policy changes, investments, or shocks. Input Output models categorize economic transactions into two types: inputs and outputs. Inputs refer to the goods and services required by a sector to produce its output, while outputs are the final products or services generated. By quantifying these relationships, analysts can predict the indirect effects of changes in production, consumption, or investment across various sectors. Input Output models are employed in diverse fields such as regional economics, environmental studies, and urban planning to inform decision-making processes and anticipate potential economic impacts. Despite their simplifications and assumptions, they remain invaluable tools for policymakers, economists, and researchers seeking to comprehend the complexities of modern economies and devise strategies for sustainable growth.

It is worth noting, however, that the projected GDP return in Alberta ($22 million) is less than the C$35 million investment by Alberta Innovates and its partners. This is not to suggest a negative return. As described in the following sections, there are other (tangible and intangible) returns that are not factored into the model including investments raised, the strengthening of networks, the value of mentorship and the symbolism of Alberta positioning itself as a place for innovation and entrepreneurship.

[59] ChatGPT, March 17, 2024.

Box 20:

Alternative approaches for measuring regional economic impact

A systematic search of alternative models to the Input Output (I-O) Model identified:

Computable General Equilibrium (CGE) Model[60]

CGE models are based on the economic theory of general equilibrium; they consider how the supply and demand for goods, services and factors of production in the economy are balanced (get back to an equilibrium) *after* a policy shock. By doing that, they determine how firms and households respond to these changes.

Their main difference with the I-O models is that they consider not only the demand side of the economy, but also the supply. They consider the role of agents, such as households and firms and their inter-institutional linkages. In comparison to input-output models, they provide a more sophisticated way of capturing the inter-sectoral linkages, i.e., how a tax on a given sector cascades to other sectors. CGE models can capture the effect of policy changes not only on regional employment (which I-O models also do) but also on wage rates, broken down by type of household, labour and capital source.

Dynamic stochastic general equilibrium (DSGE) model[61]

DSGE models are dynamic macroeconomic models of business cycle behaviour of an economy and are characterized by their focus on optimizing agents, dynamic behaviour, and stochastic shocks. They are very similar to CGE models in that they are derived from microeconomic foundations.

The main difference with CGE models is that they try to capture fluctuations in business cycles. They are particularly useful for analyzing how economic agents respond to changes in their environment in a dynamic and stochastic (uncertain) context, though tend to have less detailed representation of firms and households than CGE models. They are also helpful in allowing for variations to account for uncertainty and are less deterministic than CGE models.

Social Accounting Matrix (SAM)[62]

A SAM is a square matrix that captures all economic transactions within a region in a single year. It shows how money flows between different sectors (industries, households, government) and factors of production (labor, capital). Imagine it as a detailed map of the regional economy.

SAM expands the I-O models, in that the later considers only the industry-to-industry interactions, while SAM considers in addition industry-to-institution, and institution-institution transactions and transfers. That makes SAM a more comprehensive model that encompasses all market and non-market monetary flows in a region for a given period of time.

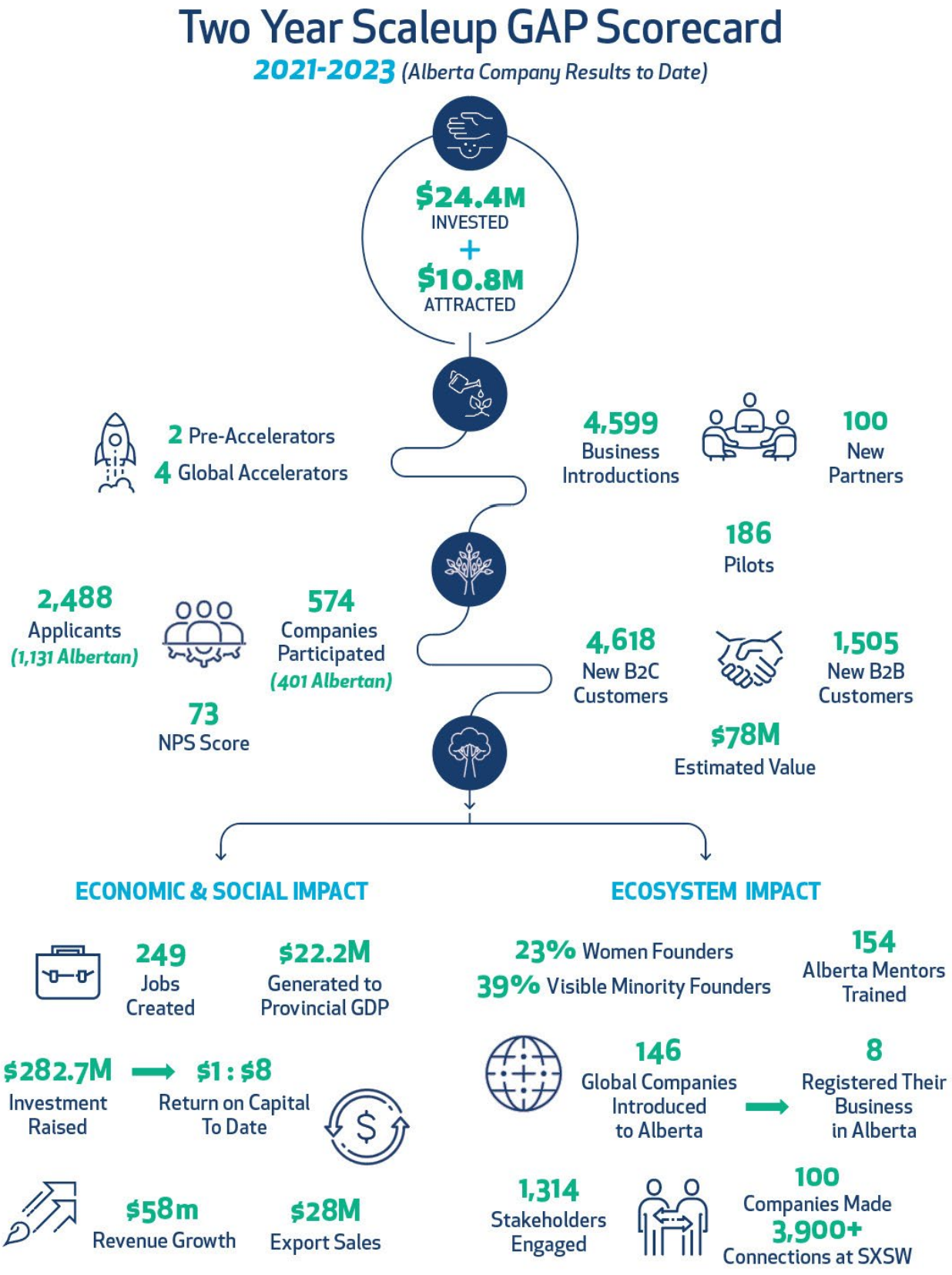
[60] *https://www.sciencedirect.com/topics/social-sciences/computable-general-equilibrium-model*; *https://www.deloitte.com/au/en/services/economics/services/cge-modelling.html*.
[61] Slanicay (2014); *https://assets.publishing.service.gov.uk/media/5a7b869e40f0b645ba3c4e35/CGE_model_doc_131204_new.pdf.*
[62] Jeffery (2003).

Albertan companies participating in the Scaleup and Growth Accelerator have attracted investments, founded new ventures, expanded their customer base and increased revenues

As illustrated in Figure 17, participating enterprises in the Scaleup and Growth Accelerator Program reported an impressive $282.7 million worth of investments raised to date, equivalent to a $1 to $8 return on capital from the initial C$35 million investment. It is interesting to note that these statistics somewhat challenge the perception of investors and entrepreneurs described in the previous chapters who suggested that the Alberta ecosystem was too immature for sustained investment given the early-stage nature of many businesses. It should also be noted that the follow-up period is still very early with only one cohort having reached two years post-accelerator graduation

Figure 17:

Summary of key outcomes from the Scaleup and Growth Accelerator Program



From a leading indicator perspective, companies reported 100 new partners, 186 new pilots and a total of 6,123 customers gained equating to an estimated $78 million dollar contract value.

In addition to investment raised, Alberta companies are also reporting initial economic impact of 249 jobs created, $58 million in revenue growth and $28 million in export sales. From an ecosystem impact perspective, the scaleup and growth accelerator program exposed 146 global companies to Alberta through program participation with eight companies registering to do business in Alberta after graduating. In addition, one participating entrepreneur formed a new venture and one went public after participating in the program.

The Scaleup and Growth Accelerator Program has strengthened the entrepreneurial ecosystem in Alberta

Overall, the Scaleup and Growth Accelerator Program has directly engaged over 1,300 people, whether as entrepreneurs, mentors, accelerator staff or other stakeholders, as illustrated in Table 9. Through this engagement the pilot program has resulted in additional collaborations between partners, with many accelerators reporting engaging with local organizations and other networks, such as Platform Calgary. This suggests a strengthening of the ecosystem, which is aligned with the program's initial goals as further evidenced by the network review.

Table 9:

Number of people engaged in the Scaleup and Growth Accelerator Program[63]

Stakeholder group	Number of Alberta people engaged
Entrepreneurs	401
Mentors	303
Accelerator staff	17
Industry stakeholders	182
Investor stakeholders	239
Ecosystem stakeholders • **Post-secondary institutions, other service providers, community groups**	172
Total	1,314

[63] As of December 1, 2023.

Interviewees were asked about the network effects of the Scaleup and Growth Accelerator Program, and this was supplemented by a survey of entrepreneurs who were not interviewed (see methodological annex). Almost all entrepreneurs indicated that other businesses – small, medium, and large – in Alberta are part of their network, while few indicated that businesses in other regions are part of their network. The survey reveals similar results, whereby 92 per cent of respondents (54 out of 59) indicated that other businesses – small, medium, and large – in Alberta are part of their network.

In addition, almost all interviewees indicated that actual and potential investors, locally and globally, are part of their network. Less than half indicated that academia, researchers, or laboratories are part of their network, and this varied according to the nature of their businesses (e.g., technology development, etc.). Few entrepreneurs indicated that the following are part of their network:

- Alberta service providers and associations
- Alberta mentors
- accelerator alumni
- accelerator corporate and PSE partners, locally and globally

The survey respondents were more likely to indicate that accelerator alumni as well as Alberta service providers and associations were part of their network (Table 10). In terms of the importance of the different components of the network to entrepreneurs, they rated highest actual and potential investors (Table 11).

Table 10:

Network components of participant entrepreneurs
(Survey question E1. Please describe your network and its components.)

Components	n=59	%
Industry: in Alberta (i.e., other entrepreneurs and businesses – small, medium, large)	54	91.5
Accelerator alumni	32	54.2
Alberta service providers and associations	26	44.1
Industry: in other regions (i.e., other entrepreneurs and businesses – small, medium, large)	23	39.0
Alberta mentors	17	28.8
Actual and potential investors, locally and globally	15	25.4
Academia/researchers/labs	15	25.4
Accelerator corporate and PSE partners, locally and globally	10	16.9
Other	5	8.5

Note: Respondents could provide more than one answer; totals may sum to more than 100 per cent.

Table 11:

Relative importance of the network component to the growth of the participant's business, weighted average of survey and interview responses

Components	Weighted average
Actual and potential investors, locally and globally	7.6
Government entities (other than those funding the accelerator)	7.4
Other entrepreneurs and businesses – small, medium, large – in Alberta, in other regions	7.1
Accelerator corporate and PSE partners, locally and globally	6.5
Alberta mentors	6.4
Alberta service providers and associations	6.2
Other accelerator alumni	6.0
Academia/researchers	5.7

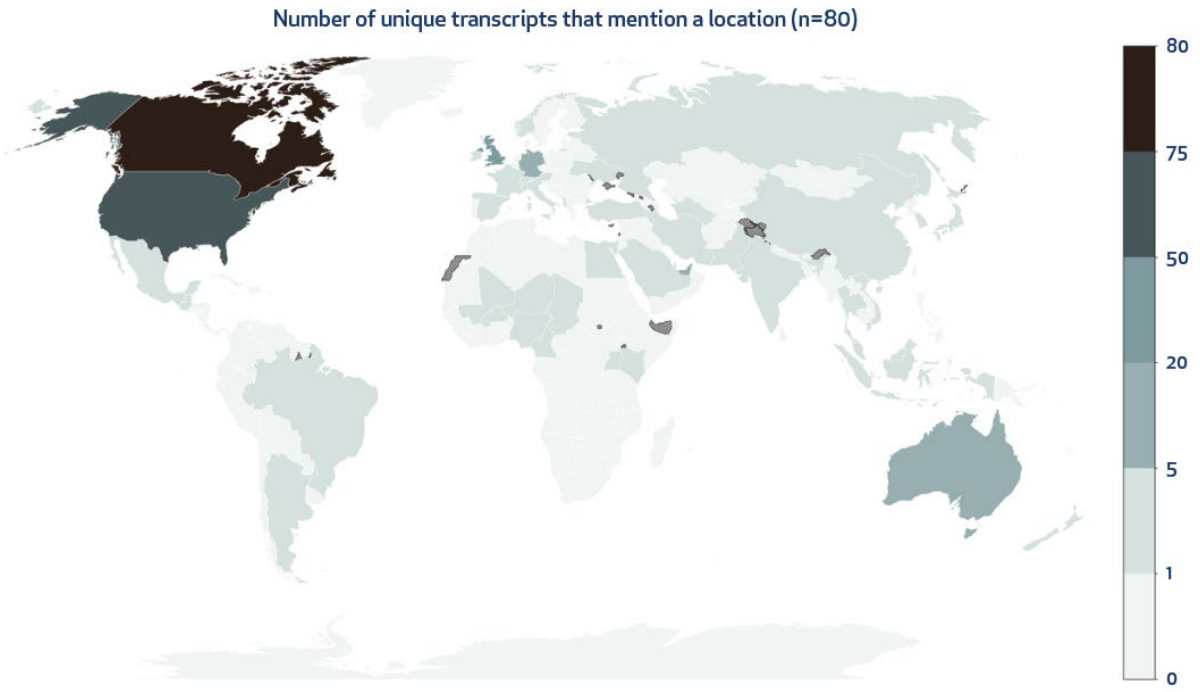
Finally, through the survey of mentors, the focus groups with RINs and mentors, as well as the interviews with various stakeholders, with very few exceptions, they consistently ranked the importance of the following relationships among the top four:

- Participant and mentor
- Participant and potential investors
- Participant and accelerator staff
- Participant and accelerator corporate and PSE partners

In addition to reviewing the network of the Scaleup and Growth Accelerator Program through interview and survey data, geoparsing of the interview transcripts illustrated its global reach. Figure 18 maps the number of times a unique location is mentioned in the transcripts. In total there were 80 unique locations. Not surprisingly Canadian and U.S. locations are the most common, but outside North America the U.K. is mentioned 21 times in 12 transcripts, Dubai 14 times in four transcripts, Australia eight times in eight transcripts, and Japan eight times in four transcripts. Clearly, given the nature of text mining, we do not know the context of these mentions, but the analysis provides a crude illustration of the global network of stakeholders participating in the Scaleup and Growth Accelerator Program.

Figure 18:

Number of times interview transcriptions mention a location



Entrepreneurs are satisfied with the Alberta Scaleup and Growth Accelerator Program, identifying a number of 'hidden impacts' as well as areas for improvement and future innovations

Entrepreneurs who took part in the Scaleup and Growth Accelerator Program commenced at unique starting points in terms of startup maturity and expectations. Those who reported greater benefits tended to be better matched with the type of accelerator, whether that was agnostic or industry-specific, and the focus of the content. Many entrepreneurs were grateful for the opportunity to participate in a cost-free capacity-building program, as highlighted by high satisfaction rating and high net promoter scores.[64] Across the two pre-accelerators, 96 per cent of participant were 'satisfied' or 'very satisfied' with a net promoter score of 80.

Across the four accelerators, 95 per cent of participants were 'satisfied' or 'very satisfied' with the accelerator. The net promoter score averaged at 67 (which is generally interpreted as being very good) but showed greater variability with scores ranging from 51 to 86.

[64] Net promoter score (or NPS) is a customer experience metric. In this case, entrepreneurs are asked to rate their experience from 0 to 10. The net promoter score is the percentage of respondents rating the service as 9 or 10 (promoters) minus the percentage of respondents rating the service as 0 to 6 (detractors). It can therefore vary from 100 (all respondents are promoters) to -100 (all respondents are detractors).

In addition to self-reported levels of satisfaction, the sentiment of interviewees was analyzed based on their transcripts. The sentiment analysis is derived from the text mining where a large dictionary of words and their word sense are used to classify adjectives on a scale from -1 (negative) to 1 (positive).[65] So anything to the right of zero indicates a positive sentiment and to the left a negative sentiment. As can be seen in Figure 19, all the different stakeholder groups expressed a positive sentiment in the interviews.

Entrepreneurs were asked about the 'benefits' of participation versus areas that were 'least rewarding', as summarized in Box 21. Here the salient themes identified in response to these two questions are listed. To a degree, some of the issues are 'different sides of the same coin'.

Many entrepreneurs were well placed within their selected accelerator and were provided the opportunity for their unique questions to be answered. Many reported impacts that were 'hidden' such as: enhanced essential business skills and a broadened business acumen; improved self-confidence and pitching skills; perceived improved startup reputation, as a result of their inclusion in well-known, reputable accelerator programs; and, expanded networks as described by these entrepreneurs:

- *"So, I think one of the biggest ones was out of the X program, which was really validating our customer needs, ensuring that we weren't just trying to fit a product into an assumed hole, really making sure that there was a hole that we needed to fill […]."*
- *"I think that my ability to tell our story has improved. I think that my pitch deck and the way that I put together presentations for prospects and as a member of our leadership team has definitely benefited from the program […]."*
- *"[…] the peer group, the network, the Friends, all that stuff matters because you're not alone in this startup journey."*
- *"Network, Community and knowledge."*
- *"This might sound a little shallow, but just to say that you have been part of X accelerator, that's something that is highly respected."*

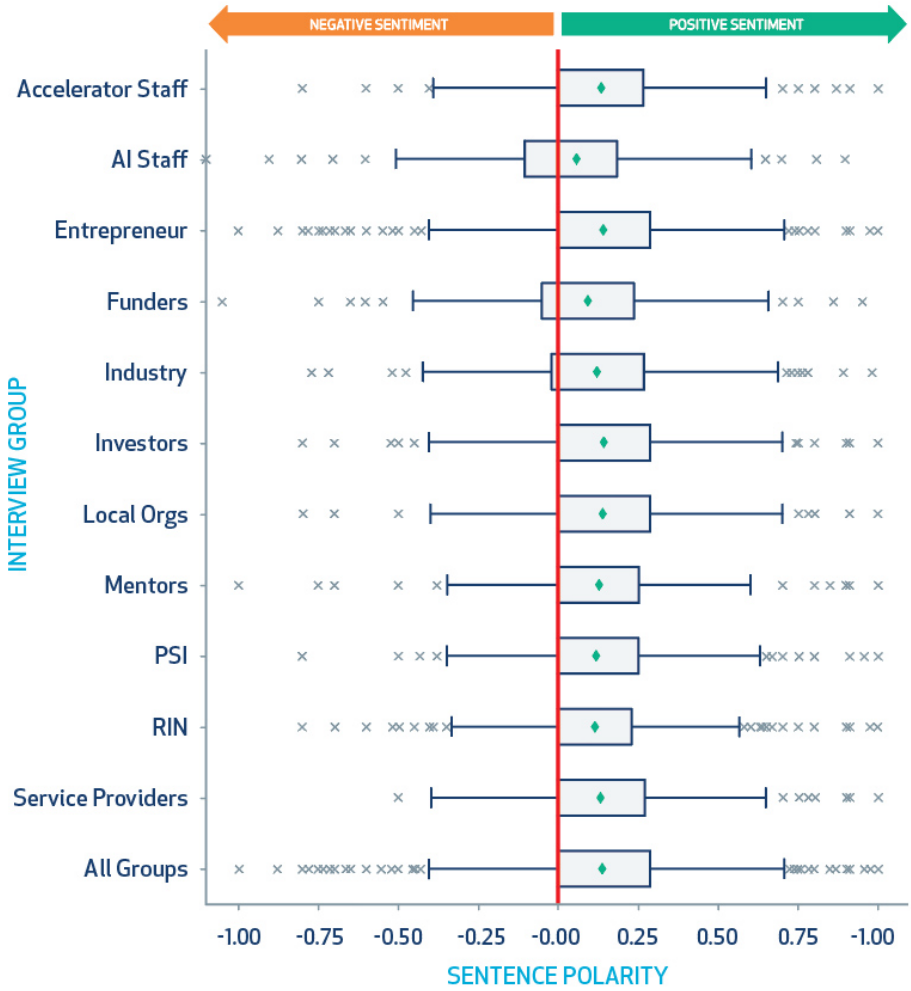
Some entrepreneurs, such as those on the more advanced side of the spectrum, or those who had been not well matched with an accelerator, reported finding elements of the program redundant or too far advanced. Other entrepreneurs reported finding the program time-consuming, indicating the lack of value derived from attending:

[65] De Smedt and Daelemans (2012).

- *"I think some use the carrot of promise of funding as a potential. I think it should be described as a bonus."*
- *"Probably my only complaint was the lack of corporate partners, and we knew we were going to hit that going in because it was the first cohort."*
- *"Maybe the only thing I would say would be, like, the time commitment in the beginning, the twice a week, two hours was a kind of a lot."*
- *"I mean, probably this is very similar to the echo chamber that exists in social media, but I think when we are participating, we sometimes get the impression that we aren't doing as good as other organizations."*

Figure 19:

Sentiment of different interview/focus groups participants



Note the orange line indicates the median values, the green diamonds the mean values, the boxes the inter-quartile range. The 'whiskers' extend from the box to the farthest datapoint lying with 1.5x of the IQR and the points beyond that ('fliers') are those that are outliers.

One of the Scaleup and Growth Accelerator Program's most notable outcomes was the fostering of a strong community among Alberta entrepreneurs, enabled by the Fund and Fellowship. Many alumni built lasting connections and reportedly continue to support each other. This represents an important enhancement of Alberta's innovation ecosystem as illustration by the following comments:

- *"I've been on several organized trips, such as this, in the past. And the connections and friendships made are simply the most important and enduring benefit. Being an entrepreneur is an incredibly difficult and often lonely pursuit. Building relationships takes the time that a multi-day event, such as this, offers. These relationships not only lead to a critical support system for our entrepreneur community in Alberta, but the advice and insights lead to shortcuts on the way to success. This trip laid the foundation for friendships that will persist for years and set the foundation for future entrepreneurs in the province."*
- *"I was beyond impressed by the diversity, wealth of experience and steadfast determination in the community that attended the fellowship. The opportunity to spend focused time together in this sort of retreat created a powerful bonding experience that may be one of the most valuable outcomes of this experience."*
- *"Yeah, I think it was the network and the peer group of startups that we see that we hang out with […] That kind of stuff is pretty magical, right?"*

Box 21:

Strengths and weaknesses of participating in the Scaleup and Growth Accelerator Program as perceived by entrepreneurs

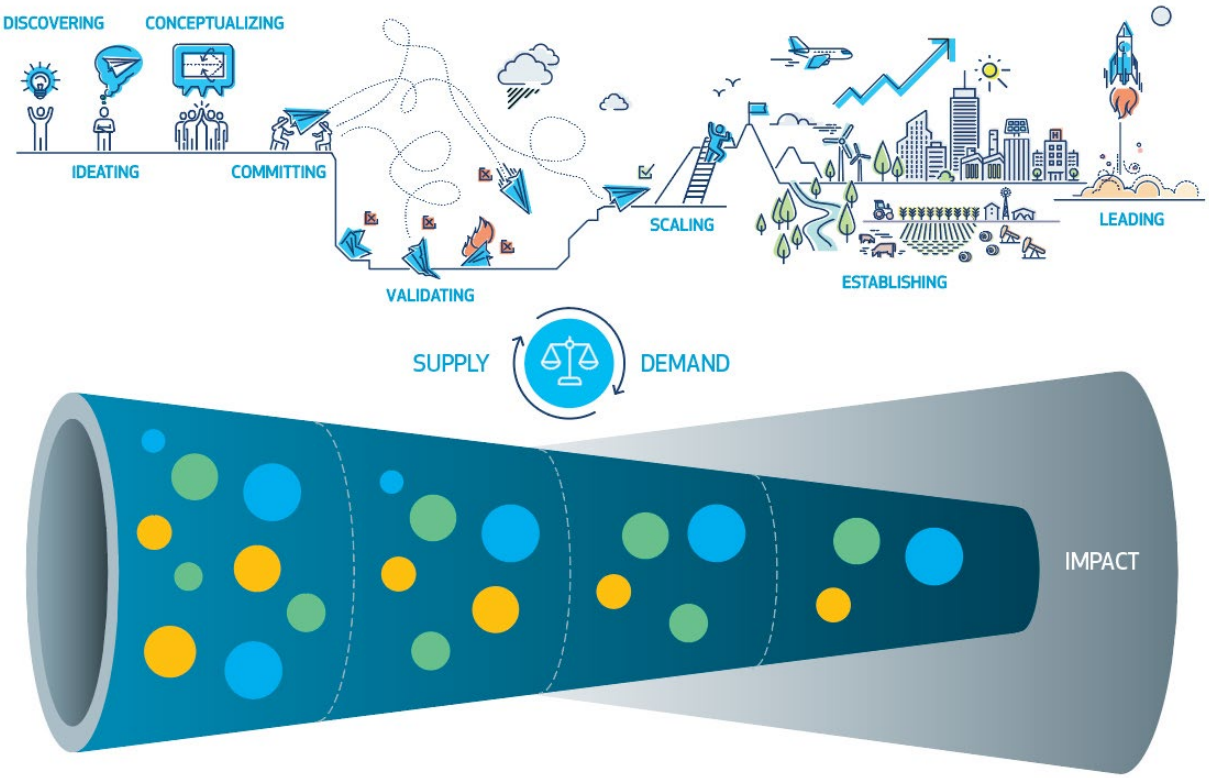
What benefits you received from participating in the program?	What were the least rewarding aspects/negative outcomes of the program?
• **Networking and Community Building**: Many participants appreciated the opportunities to meet new people, establish connections in the industry, and build a sense of community with other startups. This networking extended to gaining visibility with corporate partners and becoming part of an alumni network. • **Mentorship and Knowledge**: Access to unique mentors and the knowledge imparted by them was frequently mentioned. This included learning about running a business, developing pitch decks, and gaining a clearer understanding of business processes. • **Market Exposure and Client Connections**: Participants noted that the program helped in gaining exposure to new markets, including trips to Silicon Valley and other regions, which in some cases led to direct business outcomes like increased revenue. • **Skill Development and Pitch Preparation**: There was a consensus on the value of the program in refining pitching skills and business knowledge. The rigorous practice and preparation were seen as crucial in improving their business presentations and strategies. • **Credibility and Prestige**: Being associated with the Accelerator added credibility to the businesses and was seen as prestigious, which could aid in attracting future investors or customers. • **Program Structure and Funding**: Some highlighted the structure of the program, including sessions on non-dilutive funding, and the necessity of being present on-site for parts of the program, which was viewed as highly beneficial. • **Enhanced Business Practices**: The program was recognized for helping startups in building better business models, understanding customer needs, and aligning products accordingly. • **Cultural and Operational Insights**: The program also offered cultural insights, between private and governmental approaches to startups and the 'push' provided by certain programs that mimicked private-sector urgency. • **Product and Market Validation**: Participants also valued the program for the opportunity to validate their products and market strategies.	• **Limited Interaction with Potential Customers**: Participants felt there was a need for better engagement with potential customers, with some feeling that opportunities for such interactions were too few. • **Unfulfilled Funding Expectations**: Some participants were under the impression that there was a possibility of funding which was described as an unmet expectation, affecting their perception of the program's value. • **Mismatched Educational Content**: A few participants found that the educational aspect of the program was either too basic or not sufficiently tailored to their advanced level of business acumen. • **Insufficient Corporate Partnerships**: There was a sentiment that the lack of corporate partners limited the effectiveness of the programs. • **Ineffective Tools and Networks**: The tools provided for connecting with investors, such as a specific app, were criticized for being ineffective, and the process of introducing participants to venture capital groups was seen as limited. • **Time Commitment**: The intensive time commitment, especially in the early stages of the program, was mentioned as a significant negative aspect. • **Lack of Investment Arm**: Some founders expressed disappointment that the accelerator did not have an investment arm or direct investment opportunities. • **Unclear Value of Conference Attendance**: Attending certain conferences was seen as less valuable than expected. • **Disappointment in Post-Program Outcomes**: A few participants expressed a general disappointment with the outcomes post-program, such as limited success in securing investments or connections through the program's network. • **Feeling of Inadequacy**: The competitive atmosphere sometimes led to feelings of inadequacy among participants when comparing themselves to others. • **Need for Customization**: The generic approach of some sessions was seen as less beneficial due to the diverse needs and industries of the startups. • **Suggestions for Improvement**: Suggestions included more focused attention to individual company needs, improved program structure to minimize unnecessary commitments, and a desire for more hands-on investment and mentorship opportunities.

There is a potential risk of 'oversupply' of accelerators for the existing demand of enterprises in the future, given that any latent demand has now been exhausted

Forecasting future demand for acceleration services in Alberta is difficult to estimate and there is no 'correct' approach to doing this, complicated by data limitations. It is a balance of having enough companies in the pipeline (knowing they will incrementally decline as they progress along the client journey) with the supply and demand of the ecosystem as outlined in Figure 20 below.

Figure 20:

Alberta Innovates Client Journey Pipeline



The overarching question of how many businesses would benefit from acceleration services (now and in the future) has several sub-questions:

- How many businesses are in Alberta?
- How many Alberta-based businesses are at an appropriate scale to go through an accelerator?

- How many appropriately sized Albertan businesses are in a sector where acceleration is appropriate?
- How many founders of appropriately sized sector-matched Albertan businesses are willing to invest time (or, for private accelerators, equity) in taking part in an acceleration program?
- How many of these businesses have the other fundamentals in place to make them appropriate candidates?
- What ratio of Alberta and non-Alberta businesses should Alberta-based accelerators support?

The first two questions are addressed in Table 12, based on data from Statistics Canada. As seen in this table there were 175,383 businesses registered in Alberta in 2023 and this is forecast to rise to 177,574 in 2026. Just under 10 per cent of these businesses are in technology sectors, with (in 2023) 1,956 having 10 to 49 employees. It is this cohort of business that are assumed to be the focus of accelerator programs. In Table 12, it is assumed that 6.5 per cent of them are likely to scaleup and 50 per cent of that 6.5 per cent are likely to engage with accelerator programs. Based on these assumptions (which could easily be challenged) in 2023 there are 64 business that could be eligible for the Scaleup and Growth Accelerator Program, rising to a forecast of 70 in 2026.

Table 12:

Estimates of the demand for accelerators in Alberta

	2023	2024f	2025f	2026f
Number of registered businesses in Alberta	175,383	175,402	176,084	177,574
Number of registered technology businesses in Alberta	13,480	13,357	13,243	13,225
Number of registered technology businesses in Alberta with 10 to 49 employees	1,956	2,011	2,068	2,142
Estimated technology businesses more likely to scale up	127	131	134	139
Estimated technology businesses more likely to engage with an accelerator	64	65	67	

Estimate Notes: To estimate the technology company scaleup demand in Alberta, the number of technology businesses by employment published by Statistics Canada was collected. As these stats are currently available up to 2023, a four-year average growth rate based on past trends were used to forecast the number of technology businesses from 2024 to 2026. An empirical study conducted by Innovation, Science and Economic Development found that the vast majority of Canadian firms, around 87 per cent, remain within their size category during the observation period without scaling up or scaling down to other size categories. This finding implies that only 13 per cent of the Canadian firms scale up or scale down. Building on this literature, this technology scaleup demand estimation assumes that: 1. Nearly 87 per cent of tech businesses in Alberta remain within their size category without scaling up or down. This implies that 13 per cent of tech businesses

in the province scale up or scale down. 2. An assumption was made that half of the 13 per cent (6.5 per cent) of tech businesses will scale up while the other half will scale down. 3. A further assumption was made that 50 per cent of this volume will choose to engage with an accelerator.

However, this analysis of current demand used the stock of Alberta businesses as its basis. The flow of new businesses may be a more appropriate metric for future demand. For example, approximately 27,500 Alberta businesses gained their first-ever employee in 2023.[66] Assuming, as with overall businesses, that approximately three per cent of businesses are tech businesses, this leaves approximately 800 businesses as potentially appropriate for acceleration at a later stage. Many of these businesses will never scale sufficiently to make acceleration appropriate, so the true figure is likely to be between these estimates i.e., 60-800 companies a year would benefit from accelerator support.

As noted in Chapter Three (Table 5), 292 Alberta companies have participated in the pre-accelerator portion and 109 companies in the accelerator portion of the Scaleup and Growth program over the past two years, equating to around 50 per year for accelerators. Alberta Innovates identified an additional six other pre-accelerators and 18 other accelerators in Alberta. Combined with the four Scaleup and Growth Accelerators, and assuming a minimal projection of 15 companies per cohort, and one cohort a year from the combined total of 22 (18 other, four Scaleup Growth and Accelerator Program) accelerators in Alberta, this equates to a very conservative capacity to service of about 330 companies a year.

This suggests that there is a marginal risk of oversupply of accelerators in Alberta. Clearly there are a number of assumptions made in this analysis, but it does suggest a need to plan for accelerator supply and demand at a provincial level.

Participants in the Scaleup and Growth Accelerator Program identified a number of helpful lessons for the future

Accelerator staff and entrepreneurs (and other key stakeholders) interviewed were all asked about lessons learned and advice they would offer Alberta Innovates. As illustrated in Box 21, the responses highlight the dynamic nature of startup progression, the importance of

[66] StatCan, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted, updated March 22, 2024 (accessed April 1, 2024), https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3310027001.

adaptability, and the need for ongoing collaboration between program stakeholders to effectively support the growth of companies within the ecosystem. Entrepreneurs highlighted the importance of community, accountability, readiness, adaptability, networking, and understanding market dynamics for success in such programs and the broader startup ecosystem. They also express a desire for continued support, networking opportunities, and more tailored programs to meet the diverse needs of startups.

Overall, the feedback highlights the importance of addressing gaps in support at various stages of the startup journey, streamlining data reporting processes, improving coordination among stakeholders, and providing clarity on program evolution to better meet the needs of the startup ecosystem in Alberta. In summary, while many participants express a general satisfaction with the support provided by Alberta Innovates, they also provide constructive feedback on areas such as tailored support, funding opportunities, community building, clearer post-program paths, and simplifying processes. These insights aim at refining Alberta Innovates' approach to better serve startups and contribute to a thriving innovation ecosystem.

Box 22:

Lessons learned by entrepreneurs, accelerator staff and Alberta ecosystem partners participating in/engaging in the Scaleup and Growth Accelerator Program

Entrepreneurs:

Community Element: Participants emphasized the importance of building a strong community within the ecosystem. They suggest that post-program initiatives for ongoing networking and support would be valuable.

Accountability and Focus: There's a call for increased accountability for all the Accelerator programs, akin to what was experienced in the 500 Global program. This entails a clear understanding of commitments and objectives, ensuring that participants can derive meaningful value from their time and energy investments.

Pitch Readiness and Market Awareness: The program helped participants refine their pitching skills and gain a better understanding of their market. This readiness is crucial, especially in environments where securing investment is challenging.

Networking and Connections: Networking opportunities and connections made during the program are highly valued. Participants stress the importance of these connections in facilitating business growth and learning.

Adaptation and Learning: Participants acknowledge that participation in such programs involves a learning curve. They emphasize the need to adapt, learn fast, and capitalize on failures to iterate and improve.

Tailoring Story and Ask for Different Audiences: Understanding how to tailor their story and pitch for different audiences is crucial for success. This adaptability ensures better engagement and resonance with potential investors or partners.

Understanding Economic Landscape: Insight into the economic landscape and investor appetite in a particular region is essential. It helps startups make informed decisions about where to focus their efforts and potentially relocate if necessary.

Accelerator staff:

Variability in Company Progress: Participants observed that the number of companies transitioning from one stage to another within the program is relatively low. Many companies tend to remain at the early stages (engage or traction) rather than advancing quickly to the accelerators.

Time Between Program Stages: There's recognition of the time it takes for companies to progress from one stage to another within the program. The period between the end of one stage (e.g., Velocity) and entry into an accelerator can vary significantly, ranging from several months to a year or more.

Diverse Paths to Success: Companies may not always follow a linear path from one program to the next. Success can take different forms, including entry into other programs or pivoting to new ventures. The success of a company may not always align with the original intentions of the Scaleup and Growth Accelerator Program.

Alignment with Accelerator Theses: The fit between companies exiting the Scaleup and Growth Accelerator Program and the investment theses of accelerators varies. Some companies may align well with the focus areas of certain accelerators, while others may not, affecting their acceptance into those programs.

Serial Entrepreneurship: There's recognition of the importance of fostering serial entrepreneurship within the ecosystem. While some ventures may not succeed initially, the experience gained can lead entrepreneurs to subsequent ventures with greater chances of success.

Two-Way Communication with Funders: Clear and continuous communication with funders, such as Alberta Innovates, is crucial for addressing challenges and adapting to changes throughout the program.

Alberta-Specific Challenges: Participants noted challenges in ensuring a sufficient number of Alberta-based companies in the program cohorts. While there was no formal quota initially, there's an expectation to strive for at least half of the cohort being from Alberta.

Government Program Funders:

Long-Term Investment Perspective: There is a consensus among funders that these programs represent a long-term investment with outcomes that will support economic benefits for the cities and provinces involved. Trust in the model and recognition of the need for patience and persistence are highlighted.

Focus on Key Success Factors: Funders emphasize the importance of focusing on key elements that are proven to succeed rather than spreading resources thinly across various initiatives. They advocate for concentrating efforts on areas that show promise and replicating successful models.

Positive Impact of Programs: Despite some challenges and areas for improvement, there is a recognition of the positive impact of programs like Alberta Catalyzer and accelerators. These initiatives are seen as valuable contributors to the startup ecosystem, although there may be room for better integration and coordination between different stages of the acceleration process.

Challenges in Transition between Pre-Accelerator and Accelerator: There have been noted challenges in the transition process between pre-acceleration and acceleration programs. Startups may not always be adequately prepared for the next stage, indicating a need for smoother transitions and closer alignment between these phases.

Coordination and Communication: Funders emphasize the importance of better coordination and communication between innovation networks, pre-accelerators, and accelerators. Strengthening these relationships and facilitating data exchange could enhance the overall effectiveness of the programs.

Domestic Funding Dynamics: There have been discussions regarding the allocation of funding, with some concerns raised about the balance between supporting domestic organizations versus international accelerators. The perception of funding dynamics and their impact on the ecosystem is a point of interest for stakeholders.

Program Mentors:

Accountability and Commitment: Participants highlighted a need for greater accountability among entrepreneurs participating in the program. There were concerns about some entrepreneurs not fully committing to the program and expecting results without putting in the necessary effort. Suggestions were made to introduce consequences for entrepreneurs who fail to meet program requirements, including the possibility of being removed from the program if they do not perform.

Support for Non-Tech Businesses: There was recognition of the need for more support for businesses outside of the tech sector, particularly small businesses in areas like food and other traditional industries. Some participants felt that there was a lack of support for non-tech small businesses in the wider Alberta community.

End-to-End Mentorship and Networking: Concerns were raised about the mentorship lifecycle within the program, with suggestions for more comprehensive mentorship that covers the entire journey of entrepreneurship, including introductions to relevant networks and leaders in the industry.

Incentivizing Buyer Engagement: Participants discussed the idea of incentivizing larger companies within Alberta to engage with startups and adopt their products or services. This was seen as a way to support startups in making the transition from development to implementation.

Critical Thinking and Ownership: There were observations about a lack of critical thinking skills and ownership among some entrepreneurs, particularly younger individuals. The educational system was cited as potentially contributing to this issue, with calls for greater emphasis on accountability and ownership.

Evaluation of Funding Allocation: Questions were raised about the allocation of funding, particularly in relation to international companies. Participants discussed the need to ensure that funding recipients have a genuine commitment to the program and are willing to invest their own resources into their ventures.

Regional Innovation Networks:

Intentionality: Entrepreneurs need to approach accelerators with a clear intent and specific goals to gain the most value from these programs. Success stories often involve multiple accelerator experiences, each with a distinct purpose.

Concerns about "Badge Collecting": There's a concern that some entrepreneurs might be joining accelerators mainly for the prestige or 'badge' rather than the intrinsic value they provide.

Inclusivity and Diversity Challenges: Introverted entrepreneurs or those from under-represented groups may not benefit equally from accelerator programs due to networking dynamics that favor extroverts or those who fit a certain profile.

Effectiveness of Accelerator Programs: There's skepticism about the value for money of accelerators, especially publicly-funded ones that don't take equity stakes, hence lacking 'skin in the game.' There's also mention of programs that offer generic advice rather than tailored support.

Overlap and Redundancy: The ecosystem might suffer from confusion due to the multiplicity of programs without clear differentiation or understanding of who should go where and when.

Rural and Local Context: Global accelerators may not understand or support local contexts, especially in rural areas. There's a call for a better balance between global reach and nurturing the local ecosystem.

Post-Accelerator Support and Feedback Loop: There's an identified gap in tracking and supporting entrepreneur's post-accelerator. A more robust Alberta wide data system is needed for follow-ups and continued support.

Collaboration vs. Competition: The current environment is competitive rather than collaborative, with resources being stretched thin. This hinders the building of a supportive community.

Connecting with VCs and Revenue Focus: Accelerators that are closely linked to venture capital and focus on revenue generation are seen as more effective. There's an opportunity to create more structured pathways for entrepreneurs within the ecosystem, reflecting venture capital models.

Adapting to Needs: Service providers should tailor their support to the needs of companies at different stages, whether pre- or post-acceleration, without rigid program structures.

Resource Allocation: Rural areas are perceived as under-resourced compared to urban centres, leading to efficiency but also limitations in capacity.

Strategic Direction and Funding: There's an implicit question about the overall strategic direction of Alberta Innovates and how it structures its support and funding, with suggestions for improvement in alignment with objectives and needs.

Other stakeholders:

Post-secondary Institutions, Service Providers, Industry, Local Organizations, Investors

Positive Networking and Partnerships: Appreciated the networking and corporate partnerships facilitated by accelerators, leading to valuable relationships and opportunities across different industries.

Iterative Collaboration: Iterative improvements in working relationships with accelerators, specifically in defining criteria for engagement with startups.

Investment and Ecosystem Dynamics: Challenges faced by consumer-driven companies in raising pre-seed money, suggesting a need for better alignment between the types of companies accelerators bring in and what local investors are interested in funding.

Community Engagement: The importance of community engagement and the need for technology communities to work more closely together, an area they are actively trying to improve.

Founder Education: Lack of understanding many founders have regarding venture capital and suggested that there's a significant gap in education around capital raising.

Cultural Fit and Local Impact: Long-term commitment of accelerators to the local community and whether they would remain once funding ends, highlighting cultural considerations and the fit with Alberta's business climate.

Focus on Local vs. International Startups: Emphasized the need to recalibrate the focus towards serving local entrepreneurs rather than an excessive influx of international startups.

In-Person Value and Community Building: Identified the irreplaceable value of in-person engagement facilitated by accelerators, which helps form tight-knit communities and deeper connections.

Engagement of Mentor Investors: Observations suggest that mentor investors, who are actively engaged in supporting startups, often exhibit more positivity and commitment compared to other investors. This highlights the importance of fostering a supportive ecosystem where investors are personally involved in the success of startups.

Overall, the Scaleup and Growth Accelerator Program is contributing to the 'entrepreneurial capital' in Alberta

The art of any assessment is to weave the various threads of quantitative and qualitative evidence into a coherent 'fabric' that allows a judgement to be reached on a program's effectiveness. With this in mind, the overall judgement arising from this formative realist impact assessment is that the Scaleup and Growth Accelerator Program is meeting its stated objectives (Box 23). But in reaching this headline conclusion two caveats are worth stressing. First, as noted, the program is still in its infancy and that mid- and longer-term impacts have yet to occur (if they are to materialize). Second, again as noted above, the nature of a realist evaluation is there is no counterfactual and thus we do not know if these outcomes would have occurred without the Scaleup and Growth Accelerator Program, or if the C$35 million was invested in alternative programs whether they would have resulted in a greater impact. For this reason, the primary conclusion of this assessment is that there is no evidence to support closing the program, there is good evidence to support its continuation but that in its second phase there are a number of evolutionary changes to the program design that could be adopted or experimented with in order to further increase its efficacy.

Box 23:

Overall objective of the Scaleup and Growth Accelerator Program

- Increase entrepreneurial scaleup capacity and knowledge in Alberta
- Improved business maturity
- Increase the number of Alberta new scalable junior technology companies
- Create Alberta jobs
- Increase new Alberta technology company revenue
- Increase follow on investment (investment attraction)
- Accelerator sustainability.

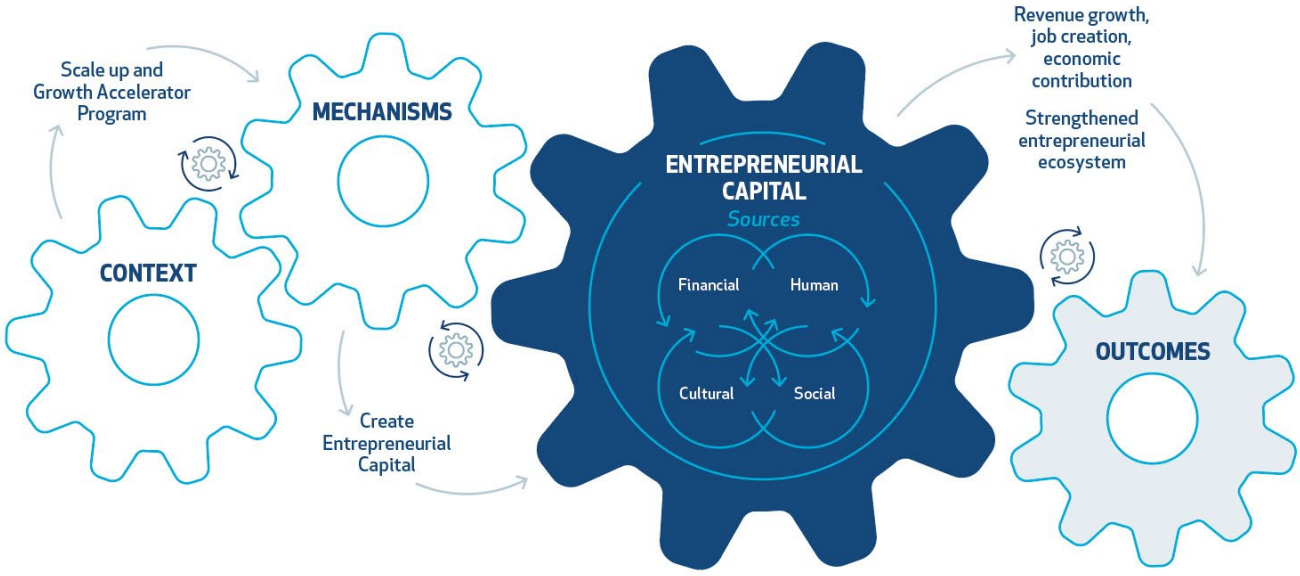
Source: Alberta Scaleup and Growth Program, Requestion for Proposals.

The basis for reaching this conclusion, is that the Scaleup and Growth Accelerator Program has its contribution to the entrepreneurial capital of the province's startup ecosystem. The concept of entrepreneurial capital has been debated for some time in the academic literature and captures entrepreneurial competence and commitment (human capital), networks (social capital), prestige, symbols and signals (cultural capital) and investments,

funding, revenues etc (financial capital).[67] In the context of the current assessment, it is perhaps useful to conceptualize entrepreneurial capital as the amalgamation of financial, social, cultural and human capital, as illustrated in Figure 21. In this framework this mix of capitals influences the entrepreneurial journey in both positive and negative ways. In keeping with the realist approach adopted for this assessment, the capital mix is likely to be different for different enterprises – implying that it is not the size of the capitals that only matter, but also their combination. While this theory may feel somewhat removed, it does provide a frame for understanding how the Scaleup and Growth Accelerator Program works in practice and synthesising the overall impact of the program as summarized in Table 13. It should also be noted that this conceptual model can be applied to other strategic initiatives, such as the Regional Innovation Networks (RINs), with the context and mechanisms being initiative-specific but coming all such programs contributing to the entrepreneurial capital and the shared outcomes.

Figure 21:

The creation of entrepreneurial capital



Inspired by Stringfellow and Shaw (2009)

[67] Erikson (2002); Zorn (2004); Stringfellow and Shaw (2009); Westlund et al (2014); Korang Adjei (2021); Aljalahma and Slof (2024).

Table 13:

Summary of the overall entrepreneurial capital by its constituent parts

		Evidence from realist evaluation
Entrepreneurial capital	**Financial capital**	• $35 million investment in the Scaleup and Growth Accelerator program • Forecast $22.2 million contribution to GDP in Alberta • Forecast (202) and actual job creation (249) in Alberta • $282.7 million of investments made into participating companies from Alberta • $58 million of revenue growth generate by participating companies
	Human capital	• Around 1,300 people engaged in the Scaleup and Growth Accelerator Program in different ways • 401 Alberta companies who participated in the Scaleup and Growth Accelerator Program, including 223 individuals from under-represented communities • 303 mentors who participated in the Scaleup and Growth Accelerator Program (154 received training)
	Cultural capital	• Symbolic effect of focusing on global accelerators for the Alberta entrepreneurial ecosystem • Signalling effect for entrepreneurs participating in a global accelerator program
	Social capital	• The expansion of entrepreneurial, provincial, national and international networks including with Alumni • 6,123 new customers • 100 new partnerships identified

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Annex: Methodology

The objective of this realist impact assessment was to assess the context, mechanisms and outcomes of innovation accelerators funded through the Scaleup and Growth Accelerator Program. A realist approach is traditionally focused on C+M=O framework, where C is context, M is Mechanism and O is outcome.[68] The key idea with this approach is that, when thinking about entrepreneurship and innovation, outcomes will be an interaction between context and mechanism that is likely to be dynamic, time and place dependent, and iterative, i.e., process of learning and relearning. This framing moves away from the simple question as to whether a specific intervention worked (or not) to a more nuanced one that elucidates: What works (or doesn't work)? For whom (and to what extent)? In which circumstances does it work? How and why does it work? In short, a realist approach seeks to understand *how* a program *causes or contributes to* the desired outcome and critically issues such as relational power, trust and community effects.

Table 3 (Chapter One) specifies a set of key questions that were identified at the outset and explored in the realist assessment, underpinned an overarching governing question:

> ***In what ways has the Scaleup and Growth Accelerator Program contributed to the impact and evolution of a strengthened and vibrant entrepreneurial ecosystems in Alberta?***

To address this governing question and the questions in Table 3 (Chapter One), the study had a number of different evidence streams as illustrated in Figure 1 (Chapter One):

- A series of **interviews** and **focus groups** with key stakeholders including entrepreneurs, mentors, investors, funders, accelerator staff and Alberta Innovates staff;
- **Key document and data review** of the Scaleup and Growth Accelerator Program, including the initial RFP, successful proposals, key background papers, annual report, data submissions, etc.;
- A **market landscape** of Albertan entrepreneurs to see how the existing accelerator program offering is meeting existing and future needs for startups;

[68] Pawson and Tilley (1997). *An introduction to scientific realist evaluation.* In Chelimsky & Shadish (Eds.), *Evaluation for the 21st century: A handbook* (p. 405–418). Sage.

- A **leading practice review**, with a focus on best and innovative scaleup and growth practices from around the world. Use this as a mechanism to initiate an international collaboration and learning network;
- A **network review** of the Alberta Scaleup and Growth Accelerator Program with the aim of building out an enhanced network effect evaluation methodology with quantifiable metrics.

In addition to and running in parallel with the realist impact assessment of the Scaleup and Growth Accelerator, a methodological review on **assessing the economic impact of accelerators** with a focus on understanding local and regional impacts was commissioned. This is one of the lessons from the previous RINSA assessment[69], where it was felt that existing approaches of economic evaluation, which relied on Input Output models and multipliers, were not appropriate for evaluating the local economic impacts arising from innovation interventions.

Projects for a number of these evidence steams were subcontracted to different suppliers given the ambitious timescale, as summarized in Table A1. The reports from each of these supplies are provided as appendices to this report and a description of the respective approach are provided below.

Interviews and focus groups

Key stakeholders were invited to participate in either one-to-one interviews or a focus group, as summarized in Table A2. Interview and focus group protocols were developed by the assessment team. The protocol for the entrepreneurs is provided at the end of this annex with variants of that developed for the other stakeholder groups. The majority of questions were semi-structured and explored issues around the primary questions (Table 1, Chapter One). However, at the end of each interview or focus group a series of structured questions were asked to inform the network review (described in more detail below).

In total 117 people engaged in either interviews or focus groups (Table A2). The interviews were conducted by Zoom and with the permission of the participant(s) were recorded. All participants were assured of their anonymity, and none refused to be recorded. The recordings were automatically transcribed using Assembly AI, reviewed and where needed corrected. (This was especially the case for the focus groups with multiple speakers).

[69] Grant (2022)

The transcripts were then used as the primary source for two analyses. The first was a conventional coding using the software package NVivo, with codes structures around the interview protocols. Salient themes and quotes were identified by question and incorporated into this final report. The second approach relied on text mining, looking for word patterns in the text. This included the analysis of sentiment and place names as summarized in Box A1.

Table A2:

Number of people engaging with the realist impact assessment of the Scaleup and Growth Accelerator Program

Stakeholder group	Interview or focus group	Number of people engaged
Entrepreneurs	Interviews	46
Mentors	Focus group (n=1)	7
Investors	Interviews	8
Funders	Interviews	5
Accelerator staff	Interviews	15
Regional Innovation Networks (RINs)	Focus groups (n=3)	18
Others[70]	Interviews	18
Total		117

[70] Alberta Innovates staff, Post-Secondary Institutions, Service Providers, Other organisations

Table A1:

Summary of outsourced tasks

Task	Supplier
Design, synthesis and report writing **Key document and data review**	**Different Angles** is a consultancy that focuses on the social impact of universities and research. Its Director is Jonathan Grant whose main interests are in biomedical and health R&D policy, research impact assessment, use of research and evidence in policy and decision-taking, and the social purpose of universities in the 21st century. (See: *https://www.differentangles.co.uk*)
Market landscape **Interviews**	**Nous Group (Nous)** is an international management consultancy with over 750 people working across Canada, Australia, New Zealand, the United Kingdom, and Ireland. Nous' broad consulting capability spans strategy, organizational performance, leadership and capability, transformation and implementation, economics, public policy, data and analytics, digital and design. Nous' work in this space includes tailored market analyses that draw on diverse public and proprietary data and which cover the range of factors which our clients value. (See: *https://nousgroup.com*).
Leading Practice Review **Interviews**	**SIRIS Academic** is a consulting firm, born in 2010 and based in Barcelona, Spain. The company is since 2023 fully owned by the SIRIS Foundation to support research, education and innovation as fundamental actions for the common good; promote open science and open government; and support the use of scientific evidence for decision-making and public investment. SIRIS Academic is specialized in supporting the development and implementation of strategy and policy solutions for higher education, research and innovation. With 14 years of experience in the European context and abroad, SIRIS Academic works with university boards, policy makers and research funding agencies, to provide informed support for strategic decision and data-based analysis. (See: *https://www.sirisacademic.com*)
Interviews, Interview and focus group analysis and Social Network Review	For over 30 years, PRA Inc. has provided client focused research services, including program evaluation, for both long- and short-term research projects. Since 1988 PRA has provided services nation-wide to all levels of government as well as the non-profit sector. PRA is an independent research firm with strong roots in Winnipeg and Ottawa and has a professional and technical team of experienced specialists, including 30 full-time and 75 part-time, casual staff. PRA offers clients a team with advanced post-graduate training in social sciences, statistics, data analysis, management and market research. PRA also has a roster of consulting associates, all professional or academic researchers with subject matter expertise in a variety of areas, such as advanced statistics, criminology, health, agriculture and challenges faced by Indigenous Canadians. The company's quality assurance and project management system has aligned with ISO-9001 standards since 1998, reflecting PRA's commitment to the highest levels of research and client service. PRA is a member of the Canadian Research Insights Council (CRIC). In addition, many of the firm's members are Credentialed Evaluators (CEs) with the Canadian Evaluation Society (CES). Members of PRA's staff teach university-level courses, publish research literature and offer professional development courses to the market research and evaluation communities. Learn more at PRA's website: *https://pra.ca/*
Economic methods review	The Centre for Health and Care Innovation Research (CHIR) at City University of London, is a unique interdisciplinary venture, jointly set up in March 2019 by *Bayes Business School (formerly Cass)* and the *School of Health and Psychological Sciences* at *City, University of London*. The aim of the Centre is to do research on the challenges of spreading innovation in health and care to reach those who need it. Ultimately, our research aims to supports practitioners and policymakers to implement healthcare innovations sustainably and at scale.
Text mining	Electric Data Solutions is a research analytics consultancy providing private, public and third sector organizations with valuable insights into how research is created and used effectively. (See: *https://electricdata.solutions*)

Box A1:

Summary of text mining methods

Text mining extracts insights from unstructured textual data using natural language processing. Using computational linguistics and machine learning techniques, it sifts through text to uncover patterns, sentiments and trends. From sentiment analysis to topic modelling, text mining powers applications across industries, from customer feedback analysis to medical research. Its interdisciplinary nature draws from linguistics, statistics, and computer science, offering a powerful toolset for unlocking the knowledge buried within textual data, revolutionizing decision-making processes worldwide.

For the purpose of the current assessment transcripts from 80 interviews or focus groups were mined. For each transcript, text was extracted using regular expression matching and categorized as being interviewer text, or participant text. Stop words* were excluded from the analysis leaving 409,690 non-stop words for analysis as illustrated in the word cloud for the most frequently used words.

For each transcript, participant responses were processed using the python library textstat to produce a range of metrics. Sentence level sentiment analysis was applied to participant text in each transcript using the Python library textblob via the Spacy text processing framework (see Figure 19 for results). Details on the sentiment analyzer used are available in Smedt and Daelmans (2012). Essentially, a large dictionary of words and their word sense (context) are used to classify adjectives on a scale from -1 (negative) to 1 (positive).

Transcripts were also processed using the Edinburg Geoparsing library to search for mentions of locations (cities, regions, countries, features) allowing for the generation of the global map (Figure 18) showing the number of interviews that mention a location in each country.

Finally, transcript texts were run through the entity extraction tool DBPedia Spotlight. Each of the entities discovered was manually curated and classified according to a simple typology: Accelerator (e.g., Plug and Play, SVG); Geography; organization; Technology (e.g., Zoom, WhatsApp, LinkedIn); Concept (e.g., Venture Capital, Artificial Intelligence, Digital Health). Additional rules were manually implemented to identify accelerator names and to recognize mentions of Alberta Innovates. The results of this analysis are included in the commentary in the preceding chapters.

**Stop words are common words that are often filtered out during text preprocessing in natural language processing tasks such as text mining and information retrieval. These words typically hold little semantic value and occur frequently across documents, thus offering limited insights. Examples include articles (e.g., "the", "a", "an"), prepositions (e.g., "in", "on", "at"), conjunctions (e.g., "and", "but", "or"), and pronouns (e.g., "I", "you", "he", "she").*

Key document and data review

A summary of the key documents and data sources is provided in Box A2. Each of these documents were reviewed and contributed to the analysis and the synthesis set out in this final report. Those documents that are not in the public domain are asterisked in Box A2.

Box A2:

Overview of key documents reviewed

Background documents

- ***500 Global Rise Report*** (*500 Global, 2023*): A collection of data, insights and perspectives from the accelerator (and provider for the Scaleup and Growth Accelerator Program) 500 Global informed by its investments in over 80 countries worldwide.
- ***A compendium of tools, instruments and policies to support and stimulate innovation*** (*Grant and Ribeiro, 2022*): A review of current and emerging tools used by policy makers and funders to help foster strong and vibrant research and innovation ecosystems.
- ***A portrait of small business in Canada. Adaption, Agility, All at once***: (*Business Data Lab Research Publication, 2024*).This report explores the role small businesses play in Canada's economy and sheds light on how these businesses can thrive despite major economic forces working against them – including the rising cost of doing business, the highest borrowing costs in over two decades and increased pandemic debt loads.
- ***Alberta Innovates Local Startup Accelerator Evaluation. Final Report.*** (RSM, 2021): Evaluation of the impacts of seven local technology business accelerator pilot programs providing insights on the pathway to develop scaleup support in Alberta, inclusivity of under-represented groups and comparisons between rural and urban entrepreneurs.*
- ***Alberta Technology Deal Flow Study*** (*Alberta Enterprise Corporation, 2021*): The Alberta Enterprise Corporation periodically produces an Alberta Deal Flow Study. The objective is to provide stakeholders with a shared understanding on the strengths and make-up of technology deal flow across sectors, stages and regions in Alberta.
- ***An emerging entrepreneurial ecosystem – impact ripple effects: A retrospective realist impact case study of the Regional Innovation Network of Southern Alberta (RINSIA), 2011-2021*** (*Grant, 2022*): Used a realist evaluation framework to assess the contribution of RINSA to the local economy, highlighting a number of insights for the future.
- ***Barriers to commercialization study***, (Exergy Solutions Inc, 2023): Identifies and assesses barriers that hinder technology commercialization in Alberta and provides recommendations to Emissions Reduction Alberta and other stakeholders.*
- ***Canadian venture capital market overview*** *(CVCA, 2023*): Regular market overview reports providing analysis of the Canadian market, including private capital trends and investments, highlight performance indicators, emerging sectors, and strategic shifts.
- ***Cracking the Growth Code: Traits and strategies for high-growth firms in Europe*** (*ESI, 2023*): This report analyzes successful European firms, revealing key traits and strategies for high growth. It emphasizes innovation, adaptability, and a customer-centric approach. The report highlights the importance of leadership, fostering a culture of experimentation, and leveraging digital technologies.
- ***Data enhancement and analysis of the REF 2021 Impact Case Studies*** (*Stevenson et al 2023*): Provides an in-depth examination of the Impact Case Studies using a mixed-methods research approach that involved a range of quantitative and qualitative analyses such as topic modelling, geotagging, text searches, bibliometric analysis, infographics and deep dives.
- ***Driving wealth and creation and social development in Alberta. 2022/2023 GEM Alberta report***. (*Gregson and Saunders, 2023*): The GEM Alberta Report highlights how Alberta measures up regarding its entrepreneurial activity. The Report is based on 2022 data drawn from the GEM Adult Population Survey (APS) and collected at a time when economic recovery was well underway in response to the COVID-19 pandemic.
- ***Find your future project. Scale-Up and Growth Wayfinding. Prioritization*** (*Raby et al 2023*): Second of two reports, with this report focusing on wayfinding solutions required for technology-based startups.

- ***Find your future project. Scale-Up and Growth Wayfinding. Scan and Analysis*** (*Raby et al 2022*): Focuses on entrepreneurial ecosystem navigation or wayfinding as it is often called. First of two reports that identifies constraints that limit wayfinding across Alberta.
- ***How generative AI could close Canada's productivity gap and reshape the workplace***. (Conference Board of Canada). Canada, like many western democracies, has a long-standing issue with productivity. This report examines the potential of AI to increase the competitiveness of Canadian companies.*
- ***Innovation Report Card***. (Conference Board of Canada, nd): Regular reports summarize national indicators of Canada's innovation performance.*
- Invest Alberta Annual Report, 2022-23 (*Invest Alberta, 2023*). Invest Alberta provides support to companies, investors, and major new projects to break down barriers so businesses can start up, scale up, and succeed in Alberta.
- ***Key small business statistics, 2023***. (*Government of Canada, 2023*): Includes data on the number of businesses in Canada, private sector employment by business size, firm birth and survival rate, the share of high-growth firms, exports of goods by small and medium-sized enterprises and the contribution by business size to the gross domestic product.
- ***Leading to scale. The design, delivery and impact of SME Leadership and development programs***. (*Raby et al 2021*). This report explores how programs targeting leaders of small- and medium-sized enterprises (SMEs) operate, and the ways these programs positively influence the behaviour of these leaders.
- ***Meta-analysis of accelerators*** (*Gregson, 2021*): A review of accelerators from around the world, that draws out relevant insights for the Alberta entrepreneurial ecosystem.
- ***Recent trends in incubators and accelerators*** (*Gregson, 2019*): Report commission by Alberta Innovates on recent trends related to incubators and accelerators relevant to the Alberta entrepreneurial system
- ***The global startup ecosystem report*** (*GSER, 2023*): A comprehensive analysis of the current state of startup ecosystems worldwide. In its 11th year, the GSER provides insights into the world's leading startup ecosystems, emerging trends, and key challenges facing entrepreneurs. It is based on analysis of data from 3.5 million startups across 290 global ecosystems.
- ***The impact of business accelerators and incubators in the UK***. (*Bone et al 2019*): This study explores how incubators and accelerators impact the startups they support and investigates which type of support – provision of workshop, mentoring, funding or training – drive this impact.
- ***The Scaleup Report*** (*Startup Genome, 2023*): This report provides insights into the characteristics that separate startups that successfully scaled from those that failed and highlights actionable insights for entrepreneurs, enterprise support organizations, and policymakers seeking to increase the proportion of startups scaling to $50 million+ valuation.

Internal Alberta Innovates documents*

- Request for proposal (RFP) template for applicants
- Proposal and associated documents from the five successful vendors for each (pre-) accelerator
- Slide decks for merit review meeting
- Slide decks for Orientation Meetings for successful vendors, including data collection and reporting requirements*
- EDI and Sustainability plans submitted by the successful vendors for each (pre-) accelerator
- Agreements, annual reporting and annual lessons learned cycles for each accelerator
- Fund and Fellowship meeting notes
- Leading in Learning forum videos
- Alberta Scaleup and Growth Accelerator Program SXSW Event Review
- Annual report (and associated appendices) for the Scaleup and Growth Accelerator Program, 2022
- Annual report (and associated appendices) for the Scaleup and Growth Accelerator Program, 2023

** Not in public domain*

Alberta market landscape.

The market landscape summarized essential parts of the Alberta acceleration market. Namely it sought to:

- Summarize core elements of the Alberta innovation ecosystem as they relate to acceleration needs.
- Assess the provision of acceleration services in Alberta.
- Determine major gaps in the market relating to scaleup provision.
- Map barriers to innovation in Alberta.
- Provide an indicative assessment of future demand for acceleration support in Alberta. Each of the following sections engages with these ideas in turn.

To do this, a mix of data was collated from different data sources including:

- **Desktop review** – analysis of available public materials on the Alberta and global acceleration provision to understand and contextualize the strength of Alberta's innovation ecosystem.
- **Review of Alberta Innovates materials and data** – review of the breadth of data and reports that Alberta Innovates has made available for this analysis.
- **Qualitative interviews** – interviews were conducted with a sample of Alberta Scaleup and Growth Accelerator Program participants, accelerators and other engaged parties in the Alberta innovation ecosystem.
- **Statistical analysis** – analysis of Statistics Canada and the Government of Alberta data to provide a quantitative summary of Alberta's innovation ecosystem.

The main findings of the landscape analysis are provided in Box A3.

Box A3:

Summary of landscape analysis

Alberta Innovates commissioned Nous Group (Nous) to complete an Alberta landscape analysis to inform a broader realist assessment of the Alberta Scaleup and Growth Accelerator Program. The purpose of the landscape analysis was to contextualize the Scaleup and Growth Accelerator Program and its role within Alberta's innovation ecosystem, identifying key trends, opportunities and challenges. The analysis aims to help inform the focus of future interventions.

The landscape analysis was developed between March and April of 2024, and explored the following topics:

The Alberta entrepreneur landscape – Alberta has a strong entrepreneurial landscape but has not yet fully matured. Alberta has a strong economy though it has weaker medium-term net business births than other provinces. Alberta's economy is undergoing a significant shift, moving beyond its traditional reliance on primary industries and expanding into innovation. This is supported by Alberta's generally enabling regulation, tax, and socio-cultural environment. Alberta exhibits strong initial investment attraction, yet faces challenges in scaling up businesses, including securing venture capital investment.

Competitive landscape – Alberta's growing innovation ecosystem is still maturing and only recently gained access to global accelerators, largely through the Scaleup and Growth Accelerator Program. Most 'top' accelerators are in other provinces or countries. Of the accelerators that serve Alberta, these include a mix of mostly local accelerators, as well as other Canadian and some global accelerators.

Barriers and challenges to innovation in Alberta and scaleup and growth market gaps – Alberta's startup support environment overall is not as strong as other Canadian or North American competitors. Alberta faces challenges in commercializing innovation and research, including R&D spend and financial accessibility, perceptions of bureaucracy and policy, navigation of the innovation, risk aversion and geographic isolation. Challenges to achieving the targeted outcomes within the Scaleup and Growth Accelerator Program are also explored.

Future Demand Forecast – Forecasting future demand for acceleration services in Alberta is difficult – there is no 'correct' approach and data limitations further complicate efforts. We find that there are at most 50,000 businesses of an appropriate size in Alberta, and of these, 1,500 tech firms are likely to be the right size for acceleration. The flow of future businesses will determine longer-term demand.

Leading practice review (SIRIS Academic)

The development of the leading practice review was structured in two-phases. The aim of Phase 1 was to understand the context, establish the areas of interest and variables to analyze, and to identify a long list of potentially interesting practices in jurisdictions relevant for Alberta. This involved: background documentation review and preliminary identification of key dimensions and areas of interest for the review; discussions with Alberta Innovates about background elements of the Scaleup and Growth Accelerator Program and the realist assessment; and definition and validation of the criteria for the identification of leading practices, based on an ex-ante selection of relevant jurisdictions, and the codification of dimensions and points of interest to be reviewed.

Phase 2 focused on the Identification and selection of interesting acceleration practices per jurisdiction and involved: desk research review of leading practices (n=30) based on publicly available information; identification of most interesting practices; contact and execution of interviews with key institutions (n = 8); codification of key dimensions and variables per practice, analysis, insight gathering and synthesis.

In order to select interesting acceleration practices, attention was paid to three key elements: demographic characteristics (size, population density, relation between urban nuclei and rural areas; socioeconomic characteristics (prosperity, type of sectors driving the economy, economy diversification, presence of manufacturing); trending entrepreneurial jurisdiction (areas of the world with an emergent recognition for their startup culture).

Additionally specific accelerator management models and nation-wide interventions were researched, as well as referred specific practices or jurisdiction of interest. This was aligned with Alberta Innovates' interest in: Rustbelt and other U.S. Midwestern states addressing reindustrialization and entrepreneurship, regions with large extractive industries and/or agricultural sectors (codified as Similar regions or ecosystems), national/regional public acceleration programs, the Nordics and Global innovation hotspots.

Table A3 summaries the areas of interest and accelerators examined and Table A4 summarizes the characteristics examined and coded. A number of interesting practices have been highlighted in the report and the overall findings summarized in Box A5.

Table A3:

Areas of interest and jurisdictions researched

Codification of interest	Jurisdictions researched
Similar jurisdictions to Alberta	Minnesota and Texas (U.S.), Queensland (Australia), Scotland (U.K.), Norway.
The Rust Belt area and other U.S. jurisdictions in industrial transition	Kansas City (Kansas), Michigan, Southwestern Pennsylvania, St. Louis (Missouri), Wisconsin.
Innovation hotspots around the world	Israel, Singapore, South Korea and practices operating at the global level.
Nordic European countries	Denmark, Finland, Norway and practices spanning into the Baltic countries.
National public interventions	France, Germany, Finland, Chile, West Midlands (regional, U.K.)

Table A4:

Characteristics of accelerators coded

Type	Dimensions and variables
Descriptive	Jurisdiction, Geographical outreach and distribution, Specialization (descriptive), Business model (descriptive), Delivery model details, Direct investment (approx.), Cohort size, Temporal length
Categorical	Type, Mission, Specialization (codified), Management model, Income streams
Qualitative	Context: What were the drivers for establishing an accelerator program/policy? What was the original mandate and how has it evolved? Activities: When conceiving the program, what were the key elements and how have they evolved? Are there mechanisms that worked better or worse than anticipated? What would you say are the things that make this accelerator/initiative special? Impact: How would the impact of this program be described? How does the nature of the jurisdiction where it is implemented impact the development and outcomes of the program?

Box A4:

Summary of key findings for leading practice review

This box summarizes the findings of 30 interesting practices around the world. The geographical coverage included alike jurisdictions to Alberta and jurisdictions of interest. A diversity of practices in terms of nature of the leading entity, income and management model was intended to feed a richer discussion. The objective of the Leading Practice Review component was to provide reflection elements for future Albertan acceleration:

Common features, alternative models and basic design choices. The nature of the entity leading the accelerators (VC, public actors, philanthropy, corporates) affects their principles, business models and objectives. Still, most programs are similar in terms of nature of activities, with differences rather relying in the intensity and focus of the activities, the quality of the network and matching, the baseline vs. on-demand provision of services, and the level of tailoring. Additionally, to the activity offer, some programs provide funding, a workspace or in-kind corporate contributions.

Program length. Mainstream investor-led accelerators are generally shorter (three to six months), with a concentrated support to create a rapid step-change in startups. On the contrary, public- and philanthropic-led accelerators tend to be longer with support services spreading across several months (12-24). Many of these last organizations offer post-accelerators support such as topic-specific consulting and leadership development or networking with already existing industries.

Cohort size. We observed two macro-categories: a) very tailored programs with small batches (five to 15 companies) for potentially heterogeneous cohorts, in terms of development stage or sector, b) and less customized programs targeting more homogeneous company profiles in larger cohorts (30 to 50 companies). It must be noted that such programs do not necessarily feel “standard” for participating companies, if one-to-one mentoring and consulting opportunities are available.

Business model of accelerators and income streams. Investor-led accelerators are generally supported by return on investment, through equity fees. Public and philanthropic accelerators may be fully (four out of eight in this review) or only partially funded by their sponsors. Fees for participation tend to be higher when targeting later-stage businesses and/or for more heavyweight programs. Some accelerators diversify their income streams through donations, event tickets and corporate sponsorship.

Management model of publicly-funded acceleration initiatives. Public-funded acceleration initiatives feature different program management models, from full direct management (internal design and delivery of the programs) to various degrees of reliance on third parties for delivery.

Attraction of global startups and 'homegrown' approaches. These are different strategies to develop the entrepreneurial local ecosystem that require different program designs. Even so, the solutions implemented by the accelerators only go that far, and contextual factors (geographic and geopolitical situation, the higher education system, etc.) as well as policy choices typically out of reach (e.g., taxation, immigration) play crucial roles. Considering the context in which accelerators operate and evolving strategies the context evolves seems therefore crucial.

Connection of accelerators with the domestic industry and regional priorities. These initiatives generally aim at either supporting the competitiveness of a specific sector, or at helping startups grow by providing established early customers and piloting venues. The approaches to build such connections are diverse: some public-led programs remind of open innovation networking (e.g., West Midlands Innovation) or directly target established manufacture companies and operate in connection with corporate leaders (Food and Beverages Accelerator Queensland), while investor-led may use more 'directed' matchmaking tools (such as Accelerace's startup corporate matchmaking).

Support to under-represented communities in entrepreneurship. Globally, there is a well-established movement in supporting women entrepreneurship. In Australia, Canada and the U.S., there is additional attention paid in supporting BIPOC. While in more sparsely populated countries (e.g., Canada, Chile) we also observed specific strategies to attract entrepreneurs from rural areas. Specific support to all these under-represented groups takes different forms: from targeted sensibilization to counteract biases and self-censorship; to digital solutions for better access; dedicated accelerator programs; etc.

Measuring and communicating added value and impact. All accelerators use strong company growth and follow-up investment metrics to signal added value and attract participants, mentors and investors. Some for-profit, and most public and philanthropic also monitor and communicate the wider socioeconomic impact in terms of employment and aggregate added value. Metrics for accountability and internal evaluation differ according to the type of entity that runs the program.

Network review

The nature of relationships and connections between individual and groups were reviewed to understand how the Scaleup and Growth Accelerator Program is contributing to network development. The approach helps to understand who is working with whom and how relationships occur within a network. Data was collected through the interviews and via a survey of those entrepreneurs who did not participate in interviews. The questions focused on:

- A description of the network structure according to each type of stakeholder (entities, relationships).
- The degree of connectedness and importance.
- The degree of impact of the accelerator program on building/expanding networks.

There are a number of important limitations and constraints with this approach (especially when compared to a more formal social network analysis which was not feasible with the data and timescale of the assessment):

- The number of interviews (n=84) within the timeline for the study.
- The necessity to complement the interviews with a survey.
- The complexity of the interview questions and inconsistencies in the way in which data was collected implies that there is useable data from anywhere from 34 to 39 participant entrepreneurs across the three blocks of interview questions, out of a possible 46. This does not include expected elective non-response to certain elements of the multi-part questions that were posed.

Methodological review of economic assessment

The aim of economic methods review was to identify and synthesize the empirical evidence on models assessing the regional impact of innovations. The objectives were:

- to explore the use of input-output derived multipliers, their strengths and weaknesses and why/how they are in principle likely to vary between locations and at different scales of the economy being considered; and
- examine alternative approaches that could be used to measure regional economic impact, including their strengths and weaknesses and the practicalities of adopting such approaches for the international study.

To answer these Two research question, a rapid review of the literature was conducted. Rapid reviews are 'a form of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a timely manner'. [71] It is widely used to answer policy relevant questions and it has been endorsed by the WHO among other international organizations.[72] Although the methodologies for rapid reviews may vary, Haby and colleagues[73] summarize the best practice in conducting a rapid review. It is their methodology we will be following below. The review will adhere to the PRISMA statement.[74]

The criteria for inclusion/exclusion are shown on Table A5 below.

[71] Tricco et al (2015)
[72] Tricco et al (2017)
[73] Haby et al (2016)
[74] Page et al (2021)

Table A5:

Inclusion/exclusion criteria

	Inclusion criteria	Exclusion criteria
Concept/Phenomenon of interest	• The primary focus is on the *empirical* evidence	• Non-empirical evidence
Study Type	• Primary studies • Systematic reviews of empirical evidence • Grey literature (case reports, evaluations, policies, guidelines, policy briefs or service reviews)	• Opinion papers • Editorials • Conference presentations
Level of analysis	• Included studies may refer at the level of the individual, organization, system or geographical area	
Study Design	• Primarily quantitative though mixed methods may be considered	• Qualitative
Context	• International setting	• No restriction on country of origin
Intervention	• If relevant, comparisons will include no intervention, another intervention, or current practice.	
Outcome	• Impact on local economy	• Impact on individual innovators
Language	• English	
Time frame	• Studies will be limited to the last two decades to make it more relevant	• Studies prior to 2004

Search strategy

As per Haby et al (2016), the search strategy involved:

1. A search of the following databases will be conducted including: EconLit, Business Source Ultimate, Academic Search Ultimate, Business Source Alumni Edition, Political Science Complete, and Regional Business News. Two websites will also be searched: Google and Google Scholar.
2. Grey literature will be searched using Ethos (thesis database), OpenGrey, Centre for Economic Policy Research, Econ Papers, National Bureau of Economic Research, and CityLibrary search. Also, the websites of these companies will be searched: Frontier Economics, Technopolis, SQQ, RAND (Europe and U.S.), Research Consulting, McKinsey, and Deloitte.
3. Reference/citation checking of all identified papers from the previous two steps.

Initial key search terms included:

"innovation and competition" OR "input output" OR "input-output" OR "input-output models"] AND ["regional impact" AND "social accounting matrix" OR "measurement of productivity"] AND ["Outcome model" OR "outcome measure" OR "outcome" AND "innovate" OR "scale up" OR "start up"] AND ["Innovation" OR "technology"] AND ["Computable General Equilibrium" OR "CGE" OR "Dynamic stochastic general equilibrium" OR "DSGE" OR "Social Accounting Matrix" OR "SAM" OR "economic impact of accelerators" OR “economic zone”]

Initial screening was carried out by one reviewer during the database searches whereby titles and abstracts will be screened against the inclusion criteria. Full text screening was undertaken by a second researcher. Agreements for inclusion will be made by consensus. Where disagreements cannot be resolved, a third researcher reviewed the papers to make the final decision. As this is a rapid review, a quality appraisal was not carried out.

Data Extraction

The following information was extracted from each study: study aim, county of study, method, study design and population size, outcomes reported, and findings. Data extraction was performed by one reviewer and checked by a second reviewer. Disagreements resolved through discussion and consensus.

Input Output model methodology

While the Scaleup and Growth Accelerator Program was launched to help accelerate Alberta’s emerging companies to scale and to grow, its investments also provide additional economic benefits through economic stimulation, increasing Gross Domestic Product (GDP), and supporting new and existing jobs. Economic analysis of the five funded programs shows the contribution to the economic footprint in Alberta and Canada. The impact is established by looking at how the economy responds to increased investment in the ecosystem.

The analysis forecasts the economic impact of the Scaleup and Growth Accelerator Program investments by 2024 when the program funding is expected to be fully spent. Therefore, the results reflect the economic impact during the program duration (2021 to 2024). The quantification of impact is based on program spending in Alberta while overall impact on the Canadian economy is based on program spending in Canada. A proportion of the investment expenditures outside of Canada is not included since the model measures the impact of spending Scaleup Growth and Accelerator Program funding within Canada.

The Statistics Canada Input-Output (I-O) model was used for the analysis. The I-O model uses the provincial I-O tables to track and quantify the economic activity generated by changes in consumption or production. The I-O tables present one of the most complete and detailed accounting frameworks of the provincial economy available (the I-O table is a matrix of 236 industries by 496 commodities). As a result, the model captures the detailed flows of goods and services between industries and consumers.

The program spending is modelled as changes in industry output. Total investments are allocated to capital and operational spending categories based on the program-level information. The spending is then allocated among the 496 commodities based on the appropriate industry production profile to incorporate spending variations across industries.

The data inputs are then calculated by the model, which follows the inter-industry linkages of the I-O tables to track the supply chain production required to satisfy the increased demand from the change in output. The I-O model provides results for a variety of key indicators, including jobs, GDP, government revenues (taxes) and interprovincial trade flows. The model breaks down the results by direct, indirect, and induced level by industry (according to the North American Industry Classification System or NAICS) and province. Direct economic impacts come straight from the program, such as jobs required for the program. Indirect impacts come from demand created by the program investment, such as jobs at a firm that provides materials to Scaleup Growth and Accelerator Program participants. Induced impacts cover additional economic growth that results from increased household spending, driven by direct and indirect employment. The total economic impact is the sum of these direct, indirect, and induced impacts.

The Input-Output (I-O) model is subject to several general assumptions and limitations. The model reflects a simplified macroeconomic structure and does not include some variables of interest for macroeconomic analysis such as interest rates, unemployment rates, or income tax rates. The model assumes that the Canadian economy has the capacity to produce the goods and services stimulated by the economic spending.

The model is not able to forecast situations in which demand may outpace the capacity to produce the required goods and services, however it does estimate the portion of goods and services sourced from other provinces in Canada and internationally. The model makes

a basic underlying assumption that the number of jobs created or sustained maintains a linear relationship with short-term gross output. This approach can be considered sound if the value and quantity measures are for the same year and the analysis is focusing on the structure of the economy for that same year. When used for projecting beyond the I-O model year, the relationship between values and quantities may be impacted by price variations. It should also be noted that the I-O tables are based on the 2018 (most recent data available) structure of the economy and the economic climate today is likely different. This is not an issue as the structure of the Canadian economy does not significantly change year over year.

Interview protocol

Impact Assessment of the Scaleup and Growth Accelerator Program

Interview Questions - Entrepreneur

Thank you for agreeing to be interviewed.
We hope these questions will help you prepare for the session, which will be recorded to aid transcription. We will delete the recording afterwards.

Opening

0. Can you briefly tell us about your entrepreneurial journey?

1A. Can you tell us the reasons why you chose to participate in the (insert Accelerator name) program?

1B. Did you choose Accelerator (insert Accelerator name) specifically? If yes, why?

2. Have you participated in an Accelerator Program before or after (insert Accelerator name)?

3. Can you tell us about your overall experience with (insert Accelerator name)?

4. A. Can you tell us about your experience and how effective you felt each of the following program components were?
   - Application Process
   - Workshops Provided
   - Mentorship Coaching Provided
   - Access to Business Experts like
   - Investor Readiness/Pitch Support you received
   - Network Connections (e.g., Investors, Customers)
   - Demo/Expo Day
   - Follow-up Support
   - For Plug and Play
   - Access to Corporate Partners
   - For SVG THRIVE
   - Access to Smart Farm Trials

B. Were there any other program components that you received that we have not listed here?

C. Were their barriers that prevented you from participating in any of the program components?

5A. Describe your experience of the Accelerators staff (e.g., access, qualifications, expertise, relevant experience)?

5B. Describe your experience of the Accelerators mentors (e.g., access, qualifications, expertise, relevant experience)?

5C. Describe your experience of the Accelerators workshop presenters (e.g., access, qualifications, expertise).

6. What was your experience with the Alberta Innovates staff overseeing the program?

7. Describe what benefits you received from participating in (insert Accelerator name)?

8. Did you participate in any fellowship events (Winterfest, SXSW 2023 delegation, virtual panels)? If yes, describe what benefits you gained from participating in these?

9. What were the most unique aspects of the Scaleup Growth and Accelerator Program to your company (Accelerator, Alumni, AI support) that you have not received previously from other programs?

10. Given the outcomes achieved to date (positive, negative and surprise outcomes), what do you think the Scaleup Growth and Accelerator Program is missing which would better equip you to achieve your goals?

11. Do you identify as an under-represented entrepreneur (e.g., woman founder, BIPOC founder, new Canadian founder, rural founder)?

12. Given where you are now, what impact has the support provided by the Scaleup Growth and Accelerator Program had on your company's growth potential?

13A. What were the lessons learned from participating in the Scaleup Growth and Accelerator Program?

13B. What advice would you give Alberta Innovates to improve programming in the future?

Network Effects – Alberta, Canada, Global

14. How do you feel that the overall program helped you build a trusted network of advisors and support as an entrepreneur?

15. Please describe your network and its components (e.g., PSE institution/lab, other SMEs, other – often larger – businesses as partners, potential investors, etc.).
(Note: it can be a specific business, or lab, or a group, a cluster, an industry sector, etc.)

16. Did the accelerator program have a role in facilitating the development or expansion of your network?

17. On a scale of 0 to 10, for the growth of your business, what is the relative importance of your business' relationship with the following:

a. with Alberta mentors;
b. other accelerator alumni;
c. government entities (other than those funding the accelerator)
d. accelerator corporate and PSE partners, locally and globally;
e. other entrepreneurs and businesses – small, medium, large – in Alberta, in other regions;
f. actual and potential investors, locally and globally;
g. Alberta service providers and associations;
h. academia/researchers

Wrap Up

18. Are there any other comments you would like to make?

Thank you for taking the time to provide your feedback.

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