

Replicable Entrepreneurship Ecosystems Utilizing Change Management Models
and Social Innovation Approaches

by

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A thesis submitted in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS
in
INTERDISCIPLINARY STUDIES

We accept this thesis as conforming to the required standard

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Abstract

This thesis examines the evolution from theoretical construct to practice implementation of the Edmonton Entrepreneurship and Enterprise Ecosystem, with specific concentration on the alignment of the transition from theory into practice within a change management model and social innovation process. Because an entrepreneurship ecosystem focuses on generating a solution to an opportunity or problem and getting people engaged in generating that solution, an action research approach was used for the research, which included focus groups, consultations and collaborations and an extensive literature review.

Self-realization by decision makers, who do not necessarily stay long in positions of decision-making, is one of the major impediments to sustainability of the entrepreneurship ecosystem. Success is thus determined not only by the initial change agents and processes employed to affect successful change, but also by the monitoring and recalibration of changes that are necessary to survive, maintain position and achieve fast-paced, successful and sustainable growth.

KEYWORDS: entrepreneurship ecosystem, change management, social innovation, economic diversification, business growth, business scale up

SUBJECT: Entrepreneurship

Background and Introduction

Northern Alberta is heavily dependent on the oil and gas industry for its economic prosperity. Although, in the short term, the level of economic prosperity is high by world standards (OECD, 2012 data), the heavy reliance on a single-source industry is fraught with long-term uncertainty. Alberta's economic past, over the last 40 years, has seen several economic booms and busts. A broader economic base is necessary to mitigate the risk of overreliance on a single-source industry; in effect, risk mitigation strategies could promote successful economic diversification. To grow stronger with time, Northern Alberta will need to strengthen and grow its current and new businesses within the oil and gas sector and other sectors of the economy such as manufacturing and agriculture. There is growing evidence that too much dependence on natural resources tends to slow down economic growth. Gylfason (2004) states that "nations that depend heavily on their natural resources tend to have (a) less trade and foreign investment, (b) more corruption, (c) less equality, (d) less political liberty, (e) less education, (f) less domestic investment, and (g) less financial depth than other nations" (p.3). The establishment of an entrepreneurship and enterprise ecosystem that has, as its intended outcome, the positive promotion of business growth and economic diversification is one way of attempting to grow current and new business and to diversify Northern Alberta's economy.

Since 1973, Edmonton has had no more than 26 large companies ("large" is defined as companies that have revenues of \$25 million or more, or employ 300 or more employees), implying relative stability within the area when there are no external interventions. My hypothesis is that with the intervention of an entrepreneurship and enterprise ecosystem in

Edmonton and area, there should be a noticeable increase in large-sized companies by 2018 that would be directly attributable to the ecosystem.

This thesis examines the evolution from theoretical construct to practice implementation of the Edmonton Entrepreneurship and Enterprise Ecosystem. It also examines the extent to which an interdisciplinary change management model and social innovation process have contributed to the successful transition from theoretical construct to practice model and how social innovation is a key part of that strategy.

Business growth and economic diversification should lead to sustainable development so that new development “meets the needs of the present without compromising the ability of future generations to meet their own needs” (Wills-Johnson, 2010, p. 909). Based on initial research, I believe an ecosystem has the possibility of being one of the surest interventions we can implement to grow business and diversify the economy to ensure that coming generations have a more sustainable future.

Research Question

For this thesis, I explore the following question: “Can a successful entrepreneurship and enterprise ecosystem be built and replicated using change management and social innovation approaches and strategies?”

Limitations of Study

Although the research attained its goals, there are limitations to the study. First, the time span from the inception of this research to the present is not long enough to determine whether business growth and economic diversification within the Edmonton region has had measureable improvement. Also, this research was conducted utilizing a small sampling of the population. To

gain a better understanding, I would have benefited from involving a higher proportion of participants within the Edmonton region. Finally, there is no commonly accepted definition of what constitutes a small business; therefore, the participants' responses in the focus groups have been distorted by their own definitions of what is a small business.

Methodology

In 2011, the Edmonton Chamber of Commerce commissioned a Task Force on Business Growth and Economic Diversification. The mandate of the task force was to determine the best possible strategies both to grow the success of the private sector in the Edmonton region as well as to promote the diversification of the economy of that region.

From 2011 to 2013, the Edmonton Chamber of Commerce task force consulted, interviewed, and collaborated with a number of provincial, national, and international experts in the fields of business growth and economic diversification.

A group of business experts in the Edmonton region conducted extensive research about best practices associated with successful business growth and economic diversification. Based on these discussions, the Edmonton Entrepreneurship and Enterprise Ecosystem (4E) was founded.

Because an entrepreneurship ecosystem focuses on generating a solution to an opportunity or problem and getting people engaged in generating that solution, I used an action research approach in this study. Part of this research involved eight focus groups held in November 2012. As well, I consulted and collaborated with many individuals in the public, private, and non-profit sectors. The focus has been not only on the entrepreneurs but also on all stakeholders involved in the system in which entrepreneurs operate. I did an in-depth literature review in an effort to capture new approaches and frameworks by leaders in these fields.

Focus Groups

In 2012, Dr. Dan Isenberg, Founding Executive Director of the Babson Entrepreneurship Ecosystem Project in Babson College, Wellesley, Mass., hosted and led eight focus groups, approximately 90 individuals in total, made up of local business leaders, government officials from all three levels of government (municipal, provincial, and federal), organizations such as the Entrepreneurs' Organization, and many entrepreneurs. I was an observer at all eight focus groups and drew on these observations throughout the research.

The questions that were asked by Dr. Isenberg of all eight focus groups and their common answers were as follows:

- Do you believe public leaders in the Edmonton region act as advocates of entrepreneurs and entrepreneurship?
 - The majority of the focus group participants felt that the Edmonton region did advocate for entrepreneurs and entrepreneurship.
- Do you believe that all three levels of government (Municipal, Provincial and Federal) create effective institutions directly associated with entrepreneurship, such as research institutes, overseas liaisons, and forums for public and private dialogue?
 - The majority of the responses were that government did not do enough to encourage entrepreneurship in the region.
- Do you believe that all three levels of government (Municipal, Provincial and Federal) remove structural barriers to entrepreneurship, such as time-consuming bankruptcy legislation?

- Similar to the question before, the majority of participants felt there were too many barriers in place which inhibited entrepreneurship.
- Do you believe that the culture within Edmonton tolerates risk taking and honorable failure when dealing with the entrepreneurial community?
 - The views of the focus groups were that when an entrepreneur sold his/her business or was unsuccessful in his/her entrepreneurial attempt that this was viewed as detrimental to the region. They also noted that even when there were entrepreneurial successes they were not celebrated in the Edmonton region.
- Do you believe that the culture within Edmonton respects entrepreneurship as a worthy occupation and, if not, do you believe that the culture can be changed to support entrepreneurship?
 - The participants did feel that the culture in Edmonton could be changed to view entrepreneurship as a worthy occupation if the educational systems in place encouraged an entrepreneurial attitude within their students and modified the curriculum to reflect and encourage that attitude.
- Do you believe that there are enough individuals in Edmonton who have experience in creating and growing organizations to act as mentors for companies that want to scale up?
 - The participants within the focus groups felt that Edmonton had individuals who would be more than willing to help mentor other entrepreneurs to scale up their companies.

- Do you believe that there are capital sources available to provide equity capital for companies at a pre-sales stage?
 - It was identified by many participants that there were many venture capital funds available for entrepreneurs, but they could be difficult to access.
- Do you believe that there are capital sources available that add nonmonetary value, such as mentorship and contacts?
 - The lack of ability to contact and network with others within the region was identified as one of the main difficulties for entrepreneurs in the Edmonton region.
- Do you think that Edmonton has nonprofits and industry associations that help investors and entrepreneurs network and learn from one another?
 - The participants were aware of a few nonprofits and industry associations, but they felt that there needed to be many more to attract and retain entrepreneurs in the area.
- Do the educational institutions teach entrepreneurship to high school and postsecondary students and if so, is the education that they are receiving appropriate to help them become entrepreneurs?
 - As identified in an earlier question, the educational institutions in the Edmonton region do not teach entrepreneurship to high school and post secondary students at the current time. There are initiatives under way to start developing curriculum at the post secondary level to encourage students to become more entrepreneurial.

- Do you believe that the Edmonton area has sufficient public infrastructure in place to support transportation needs like roads, airports, railways and container shipping?
 - The participants felt that more public transportation infrastructure was needed in the Edmonton area, including the Edmonton International Airport becoming more of a hub for international travel with more direct flights to other major cities around the world.
- Are you aware of any specific locations within the Edmonton region that have a concentration of high-potential and high-growth ventures?
 - The participants identified that there were high potential and high growth ventures in the oil and gas industry to the south of the Edmonton region.
- Do you believe that a concerted effort in creating an entrepreneurship ecosystem within the Edmonton region would encourage more entrepreneurial activity, including entrepreneurs moving to Edmonton from other locations?
 - The majority of the focus group participants felt that if efforts from government, business and associations were focused on developing and supporting entrepreneurial activity, Edmonton would have a much better opportunity to grow and sustain its entrepreneurial culture and be able to support high growth ventures and big employing companies, more so than the region has been able to do to date.

Survey

Initially, a survey was to be completed and an ethics review was submitted for approval for the questionnaire which aimed to identify the readiness of change and ability to move toward

setting up an entrepreneurship and enterprise ecosystem within the City of Edmonton.

Unfortunately, the response rate was too low to draw any observations to help determine the readiness and ability to change to an ecosystem model.

Consultation and Collaboration

I consulted one-on-one with many of the focus group participants, as well as with individuals identified by those participants as persons who should be included in the consultations. One of the greatest challenges became apparent through these discussions: the challenge of entrepreneurs to grow their business past a certain stage without support. A secondary challenge identified through the consultations was the ability for entrepreneurs to overcome some of the regulatory, bureaucratic, and cultural hurdles in the growth stage.

As a result of the focus groups, consultations, and collaborations, a change model and social innovation framework was proposed for helping to establish an Edmonton Entrepreneurship and Enterprise Ecosystem. The hope is that this model can be replicated in other cities.

The Change Management Model

The design and development of an entrepreneurship and enterprise ecosystem is the evolution of both thought and action. Early in 2010, the Edmonton Chamber of Commerce established economic diversification as one of its key five strategic goals for the 2010/2011 Chamber fiscal year. The business community of Edmonton realized that successful business growth would require a comprehensive strategy that would broaden and diversify the Edmonton, and consequently, the Alberta economy.

At that time there was no evidence that an entrepreneurship and enterprise ecosystem was the way to move forward. What did exist were strong relationships amongst a variety of agencies and organizations that could contribute knowledge and skills related to the fields of analytics, business strategy, social innovation, corporate level strategy, and entrepreneurship.

The Edmonton Chamber of Commerce commissioned a broad-based Task Force on Business Growth and Economic Diversification. I am part of the leadership team of the task force. We utilized a combination of a number of change management models in determining the right model for moving towards an entrepreneurship and enterprise ecosystem (see Appendix 1).

Determining the Urgency of the Need for Change

John Kotter (1996) states that the number one error in change is “allowing too much complacency” (p. 4). He notes that “by far the biggest mistake people make when trying to change organizations is to plunge ahead without establishing a high enough sense of urgency in fellow managers and employees” (p.4).

In researching the urgency of the need for change in Edmonton and region, I found that from 1985 to 2008, manufacturing increased by more than 20% as a percentage of GDP; construction grew from 6.7% to 8.3%, and business and commercial services grew from 5.5% to 8.5%. Reliance on energy actually declined from 36.1% in 1985 to 30.8%. However, total exports were less than a quarter of total GDP. According to the Government of Alberta, in 2009 of the export total of \$69.1 billion, less than \$25 billion was derived from exports other than crude oil and gas/gas liquids (see Appendices 2 and 3).

Unlike in the past, there are some external factors that are affecting the urgency and the readiness for change. Increasingly, disruptive innovation, which “describes a process by which a

product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors” (Christensen, 2013), is changing entire industries in very short periods of time. The information technology and newspaper industries represent but two of many examples.

A report prepared by Pricewaterhouse Coopers for the Ministry of Alberta Finance and Enterprise in May 2009 entitled “Alberta Industry Sector Performance and Prospects” speaks clearly to the current economic successes but also to the future economic and environmental challenges. The report suggests that the best way to improve labour productivity is through innovation, which may occur in a number of ways including education and training, research and development (R&D), or by acquiring technologies in newly purchased machinery and equipment (M&E). Currently, Alberta businesses rank last in Canada on spending on R&D and sit well below the national average, although Alberta’s M&E investment remains the highest in Canada due to the province’s oil and gas industry (PricewaterhouseCoopers, 2009).

The report also notes that “Alberta’s economic growth has had significant impact on the environment. Due to the strong presence of the energy sector and the province’s reliance on coal-fired electricity generation, Alberta now leads the country in greenhouse gas (GHG) emissions” (PricewaterhouseCoopers, 2009, p. 16). Potentially, a range of opportunities in environmental technology will exist as Alberta looks for a way to lower its GHG emissions.

Recently, Alberta has also been diversifying its non-energy export base; the U.S. share of non-energy exports fell from 73% in 2000 to 63% in 2008. High energy prices, on the other hand, “have led to a record number of oil and gas shipments to the U.S., keeping the U.S. share

of total exports at around 85% - 89% over the 2000–2008 period” (PricewaterhouseCoopers, 2009, p.16).

Some of the strengths identified in the “Alberta Industry Sector Performance and Prospects” report are:

- Alberta’s oil sands contain the world’s second largest reserves of crude oil after Saudi Arabia. These reserves are proven and can be recovered with today’s technologies. In addition, the province has proven unconventional natural gas reserves of coal-bed methane, shale, and tight gas.
- Alberta has a very favourable investment climate. Unlike many other petroleum-producing jurisdictions, oil and gas companies in Alberta operate in a certain and stable environment and face little political risk.
- Oil and gas companies have access to one of the world’s most extensive networks of pipelines. These pipelines may help attract northern gas to Alberta, which would increase the supply of natural gas and natural gas liquids.
- Alberta’s oil and gas sector is highly innovative, employing the latest extraction and procession technologies and equipment. Industry works closely with government, through organizations like Alberta Energy Research Institute (AERI), to advance energy technology (PricewaterhouseCoopers, 2009, p. 28).

Some of the weaknesses identified in the report are:

- Alberta’s oil and gas sector is very dependent on the U.S. market, subjecting the sector to a high degree of market risk. U.S.-imposed restrictions on the importation of

Alberta's energy resources in response to environmental concerns would have a major impact on the sector.

- Conventional oil and natural gas production is on a downward trend. The industry is becoming highly dependent on Alberta's non-conventional resources of bitumen and coal-bed methane, which are generally more costly to extract with today's technologies.
- The oil sands are highly reliant on natural gas for both mining and, especially, in situ operations. Operating costs are therefore highly sensitive to the price of natural gas. Moreover, natural gas production is declining, raising the need to find alternate methods of producing heat, such as the gasification of bitumen.
- Large amounts of water are required to create the steam for steam-assisted gravity drainage methods of extraction (SAGD). Ongoing development of the oil sands will continue to drain water resources from the North Saskatchewan and Athabasca rivers (PricewaterhouseCoopers, 2009, p.29).

(The overall export picture for Alberta, as of 2008, is presented in Appendix 4.)

In summary, there have been some successes in the economic diversification of the Alberta economy. However, the successes, both in terms of percentages and in terms of gross exports, are very modest.

The Alberta economy remains highly tied to the fortunes of the oil and gas industry. The challenge ahead is to grow the Alberta economy on the basis of the existing strengths, including oil from conventional and non-conventional sources and natural gas, while at the same time correctly identifying and then innovatively diversifying to new and emergent industries. No

province in Canada is better situated to undertake such a challenge than Alberta and, specifically, Northern Alberta.

One of the most influential works on the structure and content of this paper is a report commissioned by the National Minister of Industry in Canada and prepared by a Blue Ribbon Panel called “Innovation and Business Strategy: Why Canada Falls Short.” The report suggests that innovation is an overarching construct for competitiveness and, thereby, economic diversification that needs proactive public policies, and it makes several recommendations:

- Encourage investment in advanced M&E, in general, and in information and communication technology (ICT), in particular. Such incentives should be designed only in light of a more thorough understanding of the reasons for the relatively slow adoption of ICT in Canada to date;
- Sharpen the incentive for innovation-oriented business strategies by increasing exposure to competition and by promoting a stronger export orientation on the part of Canadian firms, particularly in goods and services that are downstream in the value chain and thus close to end-users;
- Improve the climate for new ventures so as to better translate opportunities arising from Canada’s university research excellence into viable Canadian-based growth businesses, bearing in mind that better early-stage financing and experienced mentorship hold the key; and
- Support areas of particular Canadian strength and opportunity through focused, sector-oriented strategies, such as was done in the past in, for example, in the

automotive, aerospace, and ICT industries (Council of Canadian Academies, 2009, p.11-12).

Paul Krugman (1990), the winner of the 2008 Nobel Prize in economics puts it this way: “Productivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise output per worker” (p. 9).

Innovation — which is, directly or indirectly, the principal engine of productivity growth — is the most important and fundamental source of economic progress and prosperity.

European Innovation Scoreboard. The European Innovation Scoreboard (EIS) is a comparative assessment of the innovation performance of EU members which includes innovation indicators and trend analyses for Canada (among 37 countries). The EIS uses five dimensions to capture the innovation process, as follows:

- “Innovation drivers” measures the structural conditions required for innovation potential.
- “Knowledge creation” measures the investments in R&D activities.
- “Innovation and entrepreneurship” measures the efforts toward innovation at the firm level.
- “Applications” measures the performance expressed in terms of labour and business activities and their value added in innovative sectors.
- “Intellectual property” measures the achieved results in terms of successful know-how. (Council of Canadian Academies, 2009, p. 77).

The EIS Summary Innovation Index (SII) totals national innovation performance to a single number, but in some cases, including the Canadian example, the number is based on a more limited set of sub-indicators. Therefore, Canada's 17th place ranking is difficult to compare with the ranking of the EU countries (Council of Canadian Academies, 2009). The countries that are ranked on all five dimensions and identified as the best performers are Sweden, Switzerland, Finland, Israel, Denmark, Japan, Germany, the United Kingdom, and the United States.

Stimulating innovation: Insights from a decade of OECD research. In 2007, the Organisation for Economic Co-operation and Development (OECD) launched concerted work on innovation strategy for presentation to its ministerial council in 2010. The "OECD Work on Innovation – A Stocktaking of Existing Work," released in February 2009 by S. Box, provides a broad overview of OECD research over the past decade on good policy practices for innovation. Policy conditions that generally create a favourable environment for innovation include:

- Macroeconomic stability, openness to trade and investment, and deep financial systems (Box, 2009).
- Competitive markets and regulation that is proportionate and appropriate; flatter, lower and more predictable taxes; labour markets that allow mobility and adjustment; and assistance for workers to retrain and allow firms to undertake organizational change (Box, 2009).

OECD research supports the following general propositions of relevance for policies to foster innovation:

- Young firms can benefit from access to secondary "high risk" capital markets, as well as deep financial markets (Box, 2009).

- Intellectual property rights require a balance between rewarding risk-takers and diffusing new knowledge (Box, 2009).
- Management training needs to be supported (Box, 2009).
- The role of government in clusters is mainly as a catalyst and broker for strengthening their formation (Box, 2009).

The following areas are noted by Box as in particular need of further investigation:

- More research is needed to appropriately measure human capital as an input to innovation. Especially important is a better understanding of “soft skills” such as teamwork (Box, 2009).
- Tax subsidies are increasingly used (relative to direct grants) to support firms. More evaluation is needed to determine the efficiency and effectiveness of this support since it is unclear whether the social benefits outweigh the costs (Box, 2009).
- . More work is needed to better understand the linkages and policy responses to support innovation through procurement, since innovation is closely linked to demand from users, and government, as a large-scale purchaser, can promote innovation by being a demanding buyer (Box, 2009).
- Evaluation is sparse in many areas of innovation policy and much more work is needed to assess the return on government investment in the innovation activities of firms (Box, 2009).
- Understanding service sector innovation and capturing international innovation activity measurements will likely yield benefits (Box, 2009).

- “Indicator and related econometric research must move forward from innovation inputs and activities to include the outputs and impacts” (Box, 2009, p. 42).
- “A marked improvement in the policy relevance of innovation research is required in order to create a science of science policy” (Box, 2009, p. 42).

My research identified ten ingredients for economic diversification success which were presented to the Edmonton Task Force on Business Growth and Economic Diversification (see Appendix 5). The ten ingredients are as follows:

- Innovation in business strategy.
- Federal, provincial, and local government – public policy (investment, taxation, the environment, and innovation in the formation of public policy).
- Inculcation of innovation as a culture and core competency.
- The importance of research and development – university-based research and research in practice experts, for example, technology transfer.
- Communication and engagement expertise – creating and building public will through informed citizenship.
- Economic diversification – strategic selection of emergent industry sectors based on returns and risks
- Large pools of investment capital and highly skilled entrepreneurship
- Strong professional practice management skills built on the basis of a strong, knowledge-based economy and society
- Concentration of industry leaders in pre-determined, targeted, emergent industries

- Most important of all – concentration of business, organizational, government, community, and academic leaders in the Edmonton region that join together to lead the conceptualization, incubation, development, and sustained growth of an emerging industry that will very positively impact the region, the province, and the country.

When measuring success, we need to consider:

- Long-term economic sustainability
- Increased value-added employment throughout the region
- Strong and positive impact on small and medium-sized businesses that support the growth caused by the development and sustainability of a major new industry cluster
- Social capital and social responsibility as a significant decision factor in all major economic, environmental, and societal impacts.
- High support and brand reputational scores from the global community for both the outputs of the emerging industry sector as well as the level of innovation demonstrated by the Northern Alberta region, specifically, and Canada, in general.
- A model for emergent industry incubation and development that is highly globally competitive, through innovation and economic diversification that is sustainable over the long term.

By late 2010, Edmonton was recognizing a strong urgency for change from the traditional reliance on the oil and gas and energy sectors, which accounted for more than 73% of the total economy of the Province of Alberta, and the need to examine other strategies that would help mitigate risk against the boom and bust economy of Alberta. The urgency for change was further exacerbated by the overreliance on one principal customer for oil and gas and related energy

products, that being the United States of America. More than 87% of all liquid energy and bitumen exported from Alberta was to the United States in 2009–2010 (See Appendices 6 and 7).

By early 2011, some measure of general consensus was being achieved within the business community in the Edmonton region around targets for successfully diversifying the economy.

Appraising the Readiness for Change

Traditionally, in the Province of Alberta, as in the rest of Canada, major strategic change initiatives are government-led. In the case of the Edmonton Chamber of Commerce and, in fact, the Alberta Chambers of Commerce, the chamber provides commentary on policy, initiates policy ideas, and engages in policy advocacy. The impetus for change, however, resides in the hands of government, primarily at the local and provincial levels.

To measure the success of economic diversification as a provincial strategy within the Province of Alberta is simple enough. Within the context of the last 50 years, the most successful attempt to diversify the Alberta economy was made by the Peter Lougheed government in the early 1970s. Since that time, there has been a steady and increasing reliance on the energy sector to drive business growth and economic prosperity in Alberta; the period of the National Energy Policy had a significant and severe negative impact on the Alberta economy in the early 1990s.

The economic diversification of the Alberta economy is exceedingly challenging. Radical change, which may negatively impact re-election prospects, is generally not in the interest of the government in power. The dominance of the oil and gas sector in Alberta creates a climate where concentration on strategies other than oil and gas as the engines of economic growth represents,

in the eyes of many, a distraction at best and a lack of focus at worst, on the factors that truly drive economic prosperity in Alberta.

Government, at the provincial level, in Alberta is not a likely driver of the social innovation necessary to lead significant economic diversification. In a provincial budget of more than \$41 billion in 2013, less than one-tenth of one per cent would be deemed to be true research and development that could lead to real economic diversification.

In much the same way, but for different reasons, local governments in Alberta are unlikely to be the agents of change. In the case of local governments, there has been a great deal of devolution of responsibility from the provincial government without the attendant resources necessary to affect significant and sustainable change that would lead to successful economic diversification. In short, local governments have few resources to significantly promote successful and sustainable economic diversification projects and initiatives.

In Alberta, a significant amount of resources is invested in economic development. There are more than 300 separate economic development operations and organizations in the province, including one that is localized in the City of Edmonton. However, these economic development initiatives are highly fragmented. As one example, in the capital region of Edmonton, there are 24 communities within the region, each with its own economic development agency. Coming together on some form of consensus for a large-scale economic diversification initiative is highly unlikely, as evidenced by the history of the capital region — no concentrated or consolidated economic development initiatives have occurred that resulted in successful economic diversification.

In the case of the private sector, there are four industries in particular that dominate the landscape: energy, financial services, commodities, and construction. The remaining industry sectors are highly fragmented and lack the size, scope, and economies of scale to be significant players within the economy and, consequently, they are not strong political voices.

Unfortunately, all industries in the regional economy are dwarfed by the public sector organizations.

There are individuals within the industries identified above who can be, and are, important voices that contribute to the readiness for change. One of the most important contributions these community leaders offer to readiness for change is their ability to bring like-minded others together for common and collective purpose. The Task Force for Economic Diversification of the Edmonton Chamber of Commerce is one example of a group of leaders from the private sector coming together to initiate a common understanding of collective purpose and then advocate for policy to affect change (See Appendix 8).

There is a generalized understanding amongst these leaders of the importance of being able to diversify the Alberta economy from its reliance on the energy sector and its reliance on the United States as its primary customer. Strategies on how to effectively achieve economic diversification without negatively impacting sectors that are already well established and successful are as diverse as the concept of economic diversification itself.

A common axiom heard in regard to the Alberta economy is “if it’s not broken, don’t fix it.” However, there is a growing voice that says the Alberta economy is only one disruptive innovation away from significant challenge. In reality, disruptive innovation is not only an Alberta problem; it is a Canadian problem. Depending on how “have” provinces are measured,

Alberta is but one of two provinces in Canada (Saskatchewan being the other) that are defined under the equalization formula as being “have” provinces. In the case of the Province of Alberta, almost one-third of its total revenues are net negative transfers out of the province to the federal treasury for redistribution in the form of equalization payments to other provinces. A significant downturn in the Alberta economy will also have significant impact throughout the rest of the country.

Arguably, at least in terms of the Government of Alberta’s impact as a block of power, the provincial government has the capacity to play a major role in leading economic diversification efforts in the province. However, politically, it is not in the best interest of government leaders to take risks associated with the reallocating of funds from popular programs to invest in uncertain economic diversification initiatives. Reallocating money from the energy sector into other areas with unproven economic track records certainly will not be politically advantageous. In essence, one of the most significant decision-makers, in terms of the need for change, is not politically positioned to affect change.

Whereas the public sector has limited interests in investing significant sums to affect the kind of change necessary for successful and sustainable economic diversification, the “invisible hand” (Smith, 2009, p. 319) of commerce is finding some new niches within the entrepreneurial landscape. There are some short-term wins to be gained by government investing in small and medium-size entrepreneurial ventures that have some potential to appreciably diversify the economy. However and historically, at least within the City of Edmonton, these initiatives have produced negligible results in converting small and medium-size enterprises into companies that employ many people. In fact, since 1970, Edmonton has consistently had only between 20 and

30 locally-founded and successful large employing companies (defined as having 300 or more full-time equivalent employees).

Overall, the reality in Alberta is that if successful economic diversification of the economy is to be achieved, the key driver and leader for economic diversification success is the Government of Alberta. However, the Government of Alberta is unlikely to be the agent of change due to several factors:

- There is not, as of yet, an overwhelming electoral mood to support higher taxation or for taking chances with the economy in such a way as to promote the research and development necessary to affect economic diversification.
- The leadership of the provincial government is mindful that its position in public opinion is tenuous.
- The risks to rewards, for the senior leadership of the Government of Alberta, is decidedly more on the risk side when it comes to taking chances with specific allocations targeted for economic diversification, research, and development activities.
- There is also not an effective block of party contributors outside energy that can sway priorities of elected officials. The financial impact of energy lobbying is estimated to be about \$100 million.
- The track record within the Government of Alberta for major change initiatives that are successful is mixed. Alberta is not seen as a leader within the context of social innovation as noted by members of the Ash Institute for Social Innovation at Harvard Kennedy School, Harvard University. For example, major change efforts in the field

of health care have gone from highly centralized to highly decentralized and back again within the span of 10 years, with limited, targeted achievement and significant cost realities.

- There is a lack of common and collective understanding of what constitutes successful economic diversification in areas outside of the capital region.
- Regardless of jurisdiction, there are always conflicts of personality for a host of reasons. One of the primary ways of overcoming conflicts of personality is to have a commonly accepted and commonly understood urgency for change.

The Degree of Readiness for Change

Top management among the key decision-makers in Edmonton realizes there is a need to change in order to be able to achieve economic diversification in business growth. Within the context of an ecosystem, there is a loosely built coalition. The leadership model is not well defined. Some of the would-be leaders have positional authority. Others have resource authority. And other leaders bring thought leadership to the endeavour.

Force Field Analysis

The experience of building an entrepreneurial ecosystem revealed that the major point of disconnect is not ideological, but rather is based on power, influence, and authority. As the ecosystem begins to attract interest and build traction, those who have been on the periphery, but hold political power, decide it is in their best interests to become involved. The result is a growing divide that occurs on the basis of interest: a smaller but highly influential group which tends to be more interested in who earns the credit and gains the benefits versus a larger but less influential group that has a more altruistic perspective in the design and development of the

overall ecosystem. In short, a major hurdle to overcome is the variance of voice of broad interest versus the voice of self-interest.

The key change agent must be able to accurately identify individual motives and to structure political strategy accordingly. The change agent strategy I employed was to meet with each individual with a role to play within the ecosystem, identify primary motivation and then to build enough of a political base of support to mitigate against the interests of the few.

Under what conditions would the naysayers become supporters? Understanding the true motivations for members of the ecosystem was essential to being able to build a viable ecosystem. There were instances in which having some members of the ecosystem remain in areas of direct influence was not viable. Redirecting their interests and efforts into other endeavours became much more effective. Proxies for their influence and resource base were identified and then added to the ecosystem in a seamless and integrated fashion.

There were additional factors in determining the degree of readiness for change:

- Peer pressure. Evidence indicated that as one leader within a peer group was identified, others were interested in joining the coalition. If the perception is one of success, more people want to belong.
- Timing. The factor of timing was underestimated. As economic conditions in Alberta deteriorated due to a variety of factors — including flood costs, being able to extract and then transport bitumen out of the province, cost overruns on projects, overgenerous wage settlements and other factors — the need for a strong strategy for economic diversification increased. At the same time, the ability to resource the

- implementation of a strategy to achieve effective economic diversification was decreased.
- **Lack of understanding and awareness.** The very concept of entrepreneurship and enterprise ecosystems is not self-evident. Working together, within a broad and overarching strategy that includes international expertise able to achieve preferred outcomes, people take a significant amount of time to understand the scales of increase associated with the power and impact of various agencies and communities. Working within a coalition is a significantly different form of leadership into action and much more complex. Change also takes a great deal more time, but when all the elements of the ecosystem are in place, change occurs, or at least can occur, much more quickly and with a much higher degree of sustainability.
 - **Personality conflicts.** In the construction of the overall ecosystem, evidence indicated that having like-minded others as part of the coalition was essential to success, but philosophical differences were welcomed. In fact, philosophical differences are encouraged if they are based on evidence. What is not encouraged and becomes the most destructive element to the success of the ecosystem is blatant self-interest on the part of one or more individuals. Once such self-interest prevails, the very life of the ecosystem itself is in jeopardy and it becomes essential that those who seek to serve only themselves be encouraged to find preferred futures that are outside of the ecosystem. The encouragement must be done in such a way as to not antagonize those that leave, but rather encourage them to bring their talents and capabilities to fruition far away from the ecosystem.

- Change history. One of the most difficult obstacles to overcome is the lack of a successful history of change within large-scale enterprises, such as the design and development and ultimate operation of a highly effective entrepreneurial and enterprise ecosystem. In the case of Edmonton, Alberta, there is a strong history of individual leadership or strong leadership by one entity that could comprise a wide-ranging, multifaceted enterprise ecosystem. The question then becomes why we need to have an ecosystem when we have achieved great success, especially from the vantage point of the provincial government, by simply decreeing that something happen, resourcing that something to happen, and then making something happen. In that successful models of ecosystems in the realm of entrepreneurship, at least, are business-led rather than government-led, the history of successful change almost becomes a pre-emptive condition preventing the change from occurring at all.
- Within the context of an ecosystem, the ability to affect change becomes the central question of success. Not only is a target group required to embrace a change philosophy but also a real-life situation in which the only pathway to success is through a shared and participatory leadership model. Ultimately, the primary measurement of entrepreneurship and enterprise ecosystem success will be in the ability of the target group to affect the needed change.
- The power of the ecosystem itself, as an entity, to affect the change. The ultimate power of the ecosystem is embedded in its attractiveness and its effectiveness in promoting better solutions that are able to be accessed quickly and that result in less cost and less risk. The only way such solutions can be achieved is through direct

experience and evidence from those companies and organizations that are actually a part of a functioning ecosystem. As success stories grow and overall net return increases, the power of the ecosystem to affect change correspondingly increases in direct proportion.

Adoption of the New Behaviours

The adoption of new behaviours requires that those who need to change see success in small, incremental, and not necessarily sequential steps. One success begets another success. The strategies and subsequent actions and operational level activities to support the success of the strategies must be analyzed and then incrementally improved. As part of the knowledge management structure and system within the overall ecosystem, the strategies that form parts of the incremental steps are recorded and then used as examples that can be redeployed in other circumstances. A very important lesson learned in this research is that no two situations are the same, and new behavior does not result from simply recording a knowledge management protocol for an action and then redeploying that action to different circumstances. The ability to see new losses that require subtle and perceptive management adjustments is essential and a factor of ecosystem leadership that is only acquired through wisdom and experience.

First Steps in the Action Plan for Change

Emphasis must be placed on how important it is to create awareness of the need for change. In the case of Edmonton, the need for economic diversification that also promotes business growth is substantial. Overall, in the Alberta economy, 87% of the \$95 billion in foreign trade goes to the United States. Of all products exported outside of Alberta and outside of Canada, 73% of the product exported is in the oil and gas industry. That is a substantial

overreliance on both one market and one product. Alberta has experienced the pain and suffering associated with overreliance on single markets and single products.

For many years, the Province of Alberta has talked about economic diversification, but not since the early days of the Lougheed administration has the Government of Alberta designed concrete plans, strategies, and actions to promote successful economic diversification. One such plan designed to work in conjunction with the entrepreneurship and enterprise ecosystem is the announcement in 2013 by the Minister of Enterprise and Advanced Education, Thomas Lukaszuk, of an Alberta Research Institute.

Another important part of the initial first steps in the action plan for change is obtaining the commitment of those involved to stay throughout the process, both through the exciting parts of the change process that advantage people, including those who are participating, as well as the challenging parts that discourage and stress participants. Within the context of an ecosystem where membership is by invitation, but also realizing that participants are volunteers, identifying those individuals who are prepared to struggle through the valleys of change as well as celebrate the peaks of success is not only challenging, but fragile.

Determining the Level of Education and Development Necessary to Implement the Change

Within the context of an ecosystem which, as discussed above, is made up of volunteers, leadership within an ecosystem has had to be very sensitive to the question of what personal development is necessary in establishing and sustaining a high-impact ecosystem. Of even more delicacy is then suggesting, in the most positive manner possible and with the most adroit positioning, ways of becoming more knowledgeable and capable in overall ecosystem development, evolution, and functionality.

One of the components of the ecosystem itself is access to expertise in ecosystem structure and sustainability. In the case of the Edmonton Entrepreneurship and Enterprise Ecosystem, that level of expertise, at a world-class level, is resident in people such as Dan Isenberg of the Babson Entrepreneurship Ecosystem Project (see Appendix 9). Access to expertise, however, does require resources. The acquisition of resources is one element of providing educational and learning experience to members of the ecosystem. The more difficult challenge is in someone having the authority to make decisions as to who should receive priority in accessing educational opportunities and then the subsequent resourcing necessary to achieve that effect. That kind of learning opportunity can cost several thousands of dollars per person.

Characteristics of the Change Agent

The single most important consideration in creating the vision and, ultimately, being able to put into action a highly effective, efficient, and seen-to-be-relevant Edmonton Entrepreneurship and Enterprise Ecosystem are the characteristics of the central change agent or agents. Through the experience of working with the 4E, several essential characteristics in change agents became highly evident. These include:

- Degree of formal power
- Self-motivation and the ability to motivate others
- Communication skills, including written communication, individual communication, small group communication and large audience communication
- Level of established expertise, not only in the area being examined by the ecosystem, which in the case of Edmonton is scale-up entrepreneurship, but also credibility as a leader

- An unerring sense of timing
- A strong inner sense of sensitivity toward the motivations and feelings of others
- Strong and established analytical skills and overall leadership capability

Key change agent responsibilities. Through the trial and error of establishing the Edmonton ecosystem and the subsequent development and evolution of it as an entity of impact, a growing awareness occurred as to the key responsibilities of the central change agent:

- Act as a catalyst and be able to overcome inertia
- Be a solution provider with a strong sense of timing and with a great sense of sensitivity
- Be able to tie the overall ecosystem initiative and effort into the real needs and interests of others
- Be a process helper who is able to affect clear and coherent project plans
- Be skilled in working through complex group dynamics
- Be a resource linker skilled in both interpersonal skills and in technical skills
- Be able to broker power, including being able to get resources and then use resources, not only to achieve ends but to act as a motivation for others attracted to leaders who are able to acquire resources

Top management support. An entrepreneurship and enterprise ecosystem, in that it is made up of volunteers, is not accountable to any one entity, manager, or overseer. However, for the ecosystem's existence to be sustainable and ultimately successful, it has to be able to engender the trust and the support of all of the key stakeholders, which in the case of Edmonton includes the Government of Alberta, the City of Edmonton, key educators, community leaders,

links to external experts, significant resource providers and sponsors, and the support of groups that, although they may not be of direct significant value to the overall success of the ecosystem, can be roadblocks to ultimate ecosystem success.

Overcoming Resistance to Change

One of the most successful strategies within the context of the 4E to overcome resistance to change was the successful demonstration that current practice was not leading to the preferred outcomes. The demonstration included the use of evidence-based research, knowledge-informed practice, competitive intelligence, benchmarking, and other techniques to highlight why the change was not only desirable but, literally, essential.

An overall ecosystem is very large and very broad. The ecosystem requires a steering committee that is highly representative of the constituents and stakeholders but is not so large as to make the ecosystem unmanageable and ungovernable. Determining who should represent and constitute a steering committee is one of the most important considerations in overcoming resistance to change. Each member of the steering committee has to be aligned completely with the goals and interests of the ecosystem. Those entertaining self-interest cannot be a part of the ecosystem, especially at the steering committee level.

At times, feelings-centric meetings become more important than traditional business meetings. The feelings-centric meetings are intended to build understanding and to develop bonds of trust in which the different constituents who require different communication approaches and strategies to overcome anxiety and potential resistance will feel enabled to express their concerns in a safe environment. Each individual requires and deserves a personalized approach and touch. Judging incorrectly what the preferred and successful

communication approach should be, on an individual-by-individual basis, will result in both challenges and, ultimately, overall ecosystem failure.

Another area of skill and expertise required by the central change agent or agents is the ability to effectively negotiate to achieve both short-term and longer-term change targets. Negotiation is one of the most evolved of all of the leadership skills necessary for the change agent. Often the power of the change agent is leveraged power rather than resource influence such as money. The skill to be able to leverage relationships, in particular, is essential in the absence of significant positional and resource authority. Finding change agents with this level of sophistication is one of the pre-emptive conditions to forming and sustaining a highly effective entrepreneurship and enterprise ecosystem.

One factor we do not have to deal with in Edmonton, within the resistance to change model in the ecosystem, is identifying support activities, including access to professional services, which are needed to help those who had a low resistance for change. By the very nature of the ecosystem itself being volunteer, if individuals are not able to show a tolerance for change, it is a matter of carefully and with great sensitivity suggesting to them that the stress of involvement in an ecosystem is not in their long-term best interest. They need to seek other opportunities for community engagement and contribution.

Re-conceptualizing the Social Innovation Approach

The commonly held assumption in Alberta is that successful economic diversification must be achieved through government-led, public sector leadership. Successful diversification would take, literally, what would be tantamount to a revolution in thought and subsequent action.

To shift the paradigm, rather than being public sector-led with the support of the private sector, what if the ecosystem became a private sector-led and public sector-enabled strategy for successful economic diversification? In fact, in conversation with colleagues at Harvard University, Babson College, Northwestern University, Stanford University and a range of other institutions and organizations, the Edmonton task force learned that successful business growth and the resultant economic diversification that resulted from significant, entrepreneurship-led business growth was derived when highly capable scale-up entrepreneurs designed, developed, and brought to market products and/or services that were in significant demand within the market.

In the private sector-led model, the role of government is to enable the best circumstances and situations possible, while maintaining the public interest within the context of the overall social good, to encourage successful scale-up entrepreneurship.

Entrepreneurs are invaluable within a region because they are able to envision needs and wants and find successful ways, within the context of the market, to fulfill those needs and wants. They are also able to initiate or assume business opportunities and grow businesses to a level of high economic impact. The greatest level of economic development occurs around a concentration of highly successful entrepreneurs and that has been the case throughout history.

Entrepreneurship, as a direction, is in alignment with the provincial direction and supported by the recent mandate (June 2012) put forward by Alberta Premier Alison Redford in the area of education and entrepreneurship. She stated that education and entrepreneurship “are the cornerstones of a dynamic economy, which Albertans build through knowledge, adaptability, and an entrepreneurial spirit.” Redford noted that the province needs to “increase business

startups and the commercialization of technology.” To further the premier’s mandate, we need to create an entrepreneurial capacity within the Edmonton region so we are able to have as many entrepreneurs and intrapreneurs (those who work within organizations entrepreneurially) as possible.

A large number of highly successful entrepreneurs create stronger opportunities for others by association and by adjacent market opportunities through support services and secondary industries. Successful entrepreneurs not only become major employers, but they create a number of spinoffs, which lead to aggregation of interest. That is how market clusters form, not by creating an artificial market and hoping people come to the party who are, in fact, real entrepreneurs. (The “real entrepreneurs” will generally go to other regions where they have the ability to grow as they need to grow.)

There is a very clear delineation between being an entrepreneur and being a business owner who is not interested and/or able to grow his or her business. Entrepreneurs exemplify strong leadership attributes and become strong influencers in a community for social and quality of life change. Creating the right environment for entrepreneurship (an ecosystem) lowers risks and increases opportunity in a region, thereby attracting entrepreneurs from elsewhere and making entrepreneurship both a career and a profession of choice. Entrepreneurship within the context of Edmonton and Alberta should be seen increasingly as an emerging profession in its own right.

The principal finding of the Edmonton Chamber of Commerce Task Force on Economic Diversification in the Province of Alberta was that economic diversification was not in itself a strategy, but rather an outcome of a set of strategies. The general conclusion of task force

members was that the most important and overarching of these strategies was to “scale-up entrepreneurship.”

In its research and through consultations with a number of experts in the field of business growth and economic diversification, the task force heard consistent reference to a growing awareness of the previously underestimated and understated impact of scale-up entrepreneurship to drive business and economic growth and prosperity. For the purposes of this paper, “scale-up entrepreneurship and enterprise ecosystem” are defined as developing entrepreneurial capacity in delineated localities by bringing together the policies, structures, programs, and climate that foster big employing company (BEC) entrepreneurship (companies employing more than 300 full-time-equivalent employees).

In its extensive national and international consultation and research, including reviewing reports by organizations such as the World Bank, the Global Economic Forum within the World Economic Forum, the OECD and articles in the Harvard Business Review, among a number of other sources, the task force kept hearing the name of a global intellectual and practice leader in the field of scale-up entrepreneurship, Dr. Dan Isenberg of Babson College. I was most fortunate to have the opportunity to meet with Dr. Isenberg in early 2012 to determine if he would be willing, as part of his work in leading a number of scale-up entrepreneurship ecosystems around the world, to come to Edmonton.

In November 2012, hosted by the Alberta Enterprise Group, the Edmonton Chamber of Commerce, the City of Edmonton, the Government of Alberta and the University of Alberta, Dr. Isenberg facilitated a series of roundtables with 90 business and public sector leaders in Edmonton to determine the strategic approach that would best enable the Edmonton region to

become a scale-up entrepreneurship centre. At present, the ecosystem work continues, in consultations with the primary and secondary stakeholder communities about strategies and resourcing.

Like the Government of Alberta and its role as a major change agent to promote successful and sustainable economic diversification, the Government of Canada began to express interest, through conversation with elected officials, around the work that was occurring in Edmonton through the Edmonton Chamber of Commerce Task Force on Economic Diversification. Canada's relative economic standing within the G-8 and the G-20 is quite strong. However, Canada's relative economic strength is positioned in three major industry clusters: specifically, energy, financial services, and commodities. Much of that economic strength is located in the Province of Alberta.

In early 2013, individuals involved in part of the work in Edmonton became aware of national initiatives around the world in which coalitions and ecosystems are being formed with the intention of enabling scale-up entrepreneurs to lead business and economic growth and prosperity. As an example, the European Union has created the government-led European Institute of Innovation and Technology with headquarters in Budapest, Hungary. The institute's mission is based on the statement below:

Innovation is the key to growth, competitiveness and social well-being in the 21st century. The capacity of a society to innovate is crucial in an ever more knowledge-intensive economy. The European Institute of Innovation and Technology (EIT) aims to enhance Europe's ability to innovate, which translates into adapting quickly to

the fast pace of development, being one step ahead in providing solutions to rapidly emerging societal problems and developing products that meet the demands and desires of consumers.

Europe is facing a significant innovation challenge, where despite an excellent research base, dynamic companies and creative talent, good ideas are too rarely turned into new products or services. Europe needs a real change of mind-set towards the promotion of a more innovative and entrepreneurial culture (European Institute of Innovation and Technology website, 2013).

Consequently, in consultation with a variety of private and public sector leaders in Canada, the group that assembled in Edmonton for Dr. Isenberg's sessions realized that in addition to fostering a regional scale up entrepreneurship and enterprise ecosystem, it is essential to bring together a coalition of private- and public-sector leaders in Canada with the express purpose of formulating a private sector-led and public sector-enabled entrepreneurship and enterprise ecosystem. The ecosystem should have many of the same goals as the European Institute of Innovation and Technology, but as a private sector-led initiative, rather than a government-led initiative, most of the resources would be generated through private sector investment that left as small a footprint as possible for administrative overheads. These consultations are now leading to the creation of the Canadian Entrepreneurship and Enterprise Ecosystem (C3E). In this way, the C3E would serve as a national anchor for the creation of big employing companies (BECs) in Canada and would help actualize regional/provincial efforts across the country over time.

As a result of meetings conducted in 2013 with private and public sector leaders in Canada and with international experts in the field of scale-up entrepreneurship, a formal proposal was put forward that a C3E be established. The C3E will be manifested through a meeting of interested C3E constituents who will form the C3E Steering Committee. Specific details on Government of Canada elected official participation and private sector leadership will be made available to C3E constituents.

Foundational and central to a nation's economic growth and prosperity is its capacity and success in the creation of BECs. China, India, Brazil, Israel, and Denmark, among a growing number of others, are moving in the direction of creating entrepreneurship ecosystems that develop and support BECs. As do world leaders in any field — sports, the arts, science and technology, engineering, health care — the entrepreneurial ecosystem requires a coordinated national strategy and effort. The formation of the C3E is just such an effort and strategy. The consequences of failing to act and succeed are tantamount to forfeiting our economic future to one in which Canadians are largely employed in our country by companies owned from outside Canada. National support for entrepreneurial ecosystems can realize “great companies [that] raise a country up and make it a superpower” (Jianlin, 2013, p. 117).

Not universally, but generally, the public sector has enthusiastically embraced the misconception that startups and small business are the foundation of the economy. Not true. Startups and small business are important to the economy, but big business is the overwhelming driver of economic growth and national prosperity. Some countries are actively implementing the strategy of enabling the creation and success of large companies to build international influence and power. Canada is not yet one of them.

In embracing the idea that small business is the foundation of the economy, measures that have little to do with economic growth and prosperity are used in making that determination. For example, growth in the number of small enterprises is often cited as a positive measure of economic growth when, in fact, it may be opposite. Measures such as the growth in GDP and NDP, employment, exports, R&D private sector spending, average real wages, and global competitiveness, among other measures, provide a much clearer picture of the impact of enterprises of varying sizes on the overall economy (See Appendix 10).

To truly gain an understanding of the impact of small business on the economy and for the purpose of this research, small business needs to be defined. As a result, based on all the research I have accumulated (see Appendix 11), I have identified six different sizes of business:

- Microenterprises – 1 to 4 employees
- Small business – 5 to 19 employees
- Medium business – 20 to 49 employees
- Large business – 50 to 299 employees
- Very large business – 300 to 999 employees (BECs fall into this category as well as the next category)
- Largest business – 1000+ employees

The same holds true for more qualitative measurement of social impacts. The smaller the enterprise, the greater the risks to workers employed within those enterprises, for example, in job security, benefits, pension plans, career advancement, job portability, and other factors.

A Reassessment of the Urgency and Readiness for Change

Spurred on partly by the ability of the European Union to find commonality of interest that has resulted in almost €2 billion in initial investment in the European Institute of Innovation and Technology, the Government of Canada is embracing the role of enabling a private sector- led entrepreneurship and enterprise ecosystem that accomplishes more for considerably less investment. The Government of Canada also recognizes that it has a unique ability to bring both public and private sector parties together to move toward a collective purpose: in this case, helping to expand and diversify the Canadian economy through innovation, scale-up entrepreneurship, and other critical ingredients for success. The design, development, and implementation of a new strategy within Canada is an economic action plan policy framework for economic growth and national prosperity which is creating a broad awareness for the need for change and getting a commitment for change.

With regard to full-scale, scale-up entrepreneurship and enterprise deployment in a major urban region, the metric from Dan Isenberg and the Babson Entrepreneurship Ecosystem Project is that for every 100,000 population, at least one new BEC will be created within five years. The number of Canadians employed in BECs will increase by 10% or more by 2018 and there will be a measurable increase in the contribution to Canada's balance of trade position by BECs that are a part of this program by the year 2018, if not before.

The Final Phase – Stabilization

The Edmonton Entrepreneurship and Enterprise Ecosystem is just beginning to enter the phase of stabilization of new behaviours that transition from government led endeavours to the preferred future of private sector led scale-up entrepreneurship in the Edmonton region.

Based on all that has been learned to this point, the stabilization process will require an understanding on an individual-by-individual basis, of what the payoffs are that are necessary to affect and sustain the change overall. For example, in economic diversification there is need for the input of significant levels of resources to successfully diversify the Alberta economy. Identifying the motivating factors for each of the key players to recognize the payoff for that investment and affect new behaviours is a continuous and ongoing requirement. Changes will need to be introduced in increments for stabilization to occur. Success will be company-by-company, organization-by-organization, and agent-by-agent. Small incremental wins and successes become the building blocks for larger wins and successes.

Conclusion

Self-realization by decision makers, who, at least in the case of government, often change, will be one of the major impediments to sustainability of the entrepreneurship ecosystem. The recognition of the viability of such ecosystems needs to be ingrained into the structure and context of the overall framework for decision-making in the Province of Alberta as it relates to resource management and resource change, especially when it comes to taking advantage of research that not only informs practice but influences practice. The 4E is now seen as a companion to the new Alberta Research Institute; a member of the organizing panel for the new Alberta Research Institute also sits on the steering committee of the 4E.

Although the entrepreneurship ecosystem is outside the existing political framework and structure of power, the ecosystem is slowly being integrated within the overall fabric of strategy and decision-making. Part of the success of the 4E will result from related projects that occur across the country and stimulate a sense of competition. Ironically, an ecosystem built on strong

local and regional collaboration does need the incentive of success of like-minded initiatives in other parts of the country, which challenge its early, first-adopter advantage. The role of fear — healthy fear, that is — has a rightful place within the context of any change initiative. As controversial a conclusion as that is to put in a thesis, fear does not necessarily imply being destructive. The right kind of fear is a motivational factor in being able to achieve the right things when used in balance. Some individuals are more motivated by the fear of failure than they are by the experience of success.

To answer the question posed by this thesis as to whether or not a successful entrepreneurship and enterprise ecosystem can be built and replicated using change management and social innovation approaches and strategies, the answer ultimately will be determined not only by the initial change agents and processes employed to affect successful change, but also by the constant monitoring and recalibration of change that are necessary to be able not only to achieve survival, but also to maintain position and ultimately achieve fast-paced, successful and sustainable growth. More than a hypothesis, it is my conclusion.

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Appendices

Appendix 1:

Strategic Change Management Process*

1. Determining the Urgency for the Need for Change

- 1.1. Is there a pre-emptive problem that must be dealt with first?
 - 1.1.1. What are the cost-benefit factors if no change is made?
 - 1.1.2. Determine the degree of awareness for the need for change.
 - 1.1.3. Assessment of the target groups capacity to address the change.

2. Appraising the Readiness for Change

- 2.1. As a result of the change, what will the new behaviours look like?
 - 2.1.1. What is the ideal state? What are the necessary goals to support the ideal state?
 - 2.1.2. Goals: (Systems) – Budgeting, Rewarding, Planning, Training, Other

3. Degree of Readiness for Change

- 3.1. What is the degree of readiness for change? (Situation Analysis) (Appraising the target groups' readiness for change.)
 - 3.1.1. Where does top management sit on the need for change?
 - 3.1.2. Who is with us and who is against us? Why?
 - 3.1.3. Under what conditions will they be supporters?
 - 3.1.4. What are the positive and negative internal factors affecting change?
 - 3.1.5. What are the positive and negative external factors affecting change?
 - 3.1.6. Assess: Peer pressure, timing, loss of job status, profitability, lack of training, lack of understanding, personality conflicts, change history in the organization, compatibility of the management style, does the target group have the ability to perform new behaviours, is there a crisis in visibility (top management visibility), and what is the group's power to effect change?
- 3.2. What are the results of the "force field analysis"?

4. Adoption of the New Behaviours

- 4.1. Ensure that the action plan is consistent with the analysis.
- 4.2. Accurately identify the target group (the person or group whose behaviour we are attempting to change).
- 4.3. Create awareness for the need for change.
- 4.4. Get commitment to the change.
- 4.5. What is the level of training and development necessary to implement the change?
 - 4.5.1. Can the people benefit from training? Will that be necessary to effect change?
 - 4.5.2. Should the people be replaced?

5. Designating a Capable Change Agent

- 5.1. What is the level of competence of the "key" change agent?
 - 5.1.1. Analytical skills and ability?
 - 5.1.2. Formal power?
 - 5.1.3. Motivation?
 - 5.1.4. Communication skills?
 - 5.1.5. Credibility?
 - 5.1.6. Sense of timing?
 - 5.1.7. Sensitivity to others?
- 5.2. Key change agent responsibilities:
 - 5.2.1. Act as a catalyst – overcome inertia; highlight dissatisfactions
 - 5.2.2. Solution provider – timing; tie in with the needs of others
 - 5.2.3. Process helper – planning; group dynamics

5.2.4. Resource linker – skills, including interpersonal and technical skills; power and money

6. Develop Top Management Support

6.1. Demonstrate that present behaviour is costly. Use action research, competitive intelligence, benchmarking and other techniques to highlight why change is needed.

7. Resistance to Change

7.1. The analysis of the “readiness for change” in section 3 identified the key points that would result in the resistance to the change. How will these points of resistance be overcome?

7.2. Who should be involved in the planning for change?

7.3. Should “feelings meetings” be conducted to help build trust?

7.4. What level of communication is necessary to overcome resistance?

7.5. Is the proper approach being taken in dealing with people?

7.6. Where are the points of negotiation going to be to achieve short-term and long-term change agents?

7.7. What kinds of support activities are needed to help those who have a low tolerance for change?

7.8. What kinds of professional services are available for those who are overwhelmed by too many changes, some of which may be personal?

8. Stabilizing the New Behaviour

8.1. Assess the “pay-offs” necessary, by individual, to affect the change (i.e., what will motivate the key players to affect the new behaviours? Match the expected pay-offs with the actual pay-offs.).

8.2. Is the change being introduced in stages?

8.3. Is the new behaviour congruent with the existing structure system and power groups?

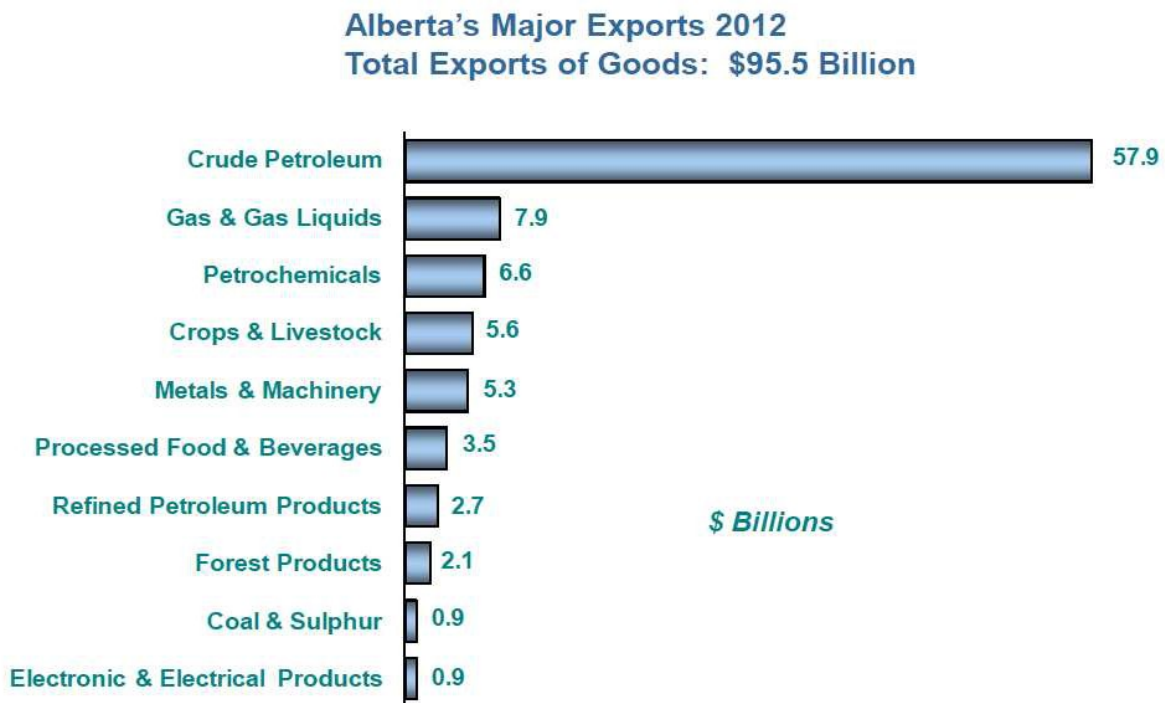
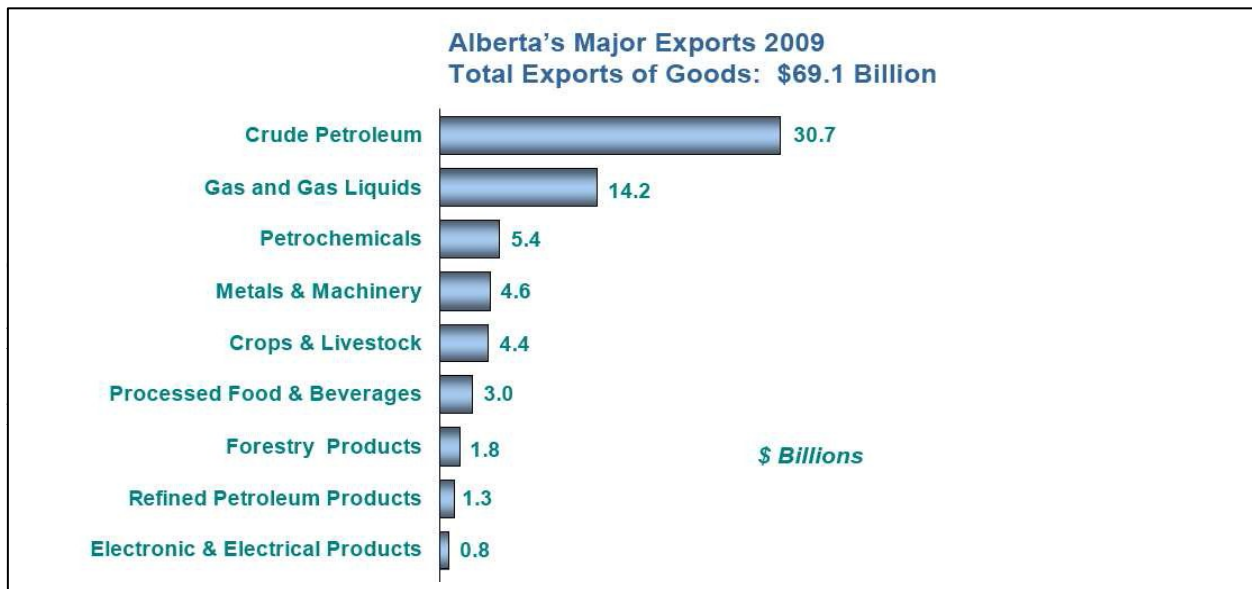
8.4. Are the benefits of the change being shared with others?

8.5. Is there ongoing overall and target group involvement in monitoring results relating to the change?

8.6. Ensure that the change will allow the organization to achieve its goals (survival, maintain position, growth).

*This process has been created from the actual method that has been used to work towards developing an entrepreneurship ecosystem.

Appendix 2:

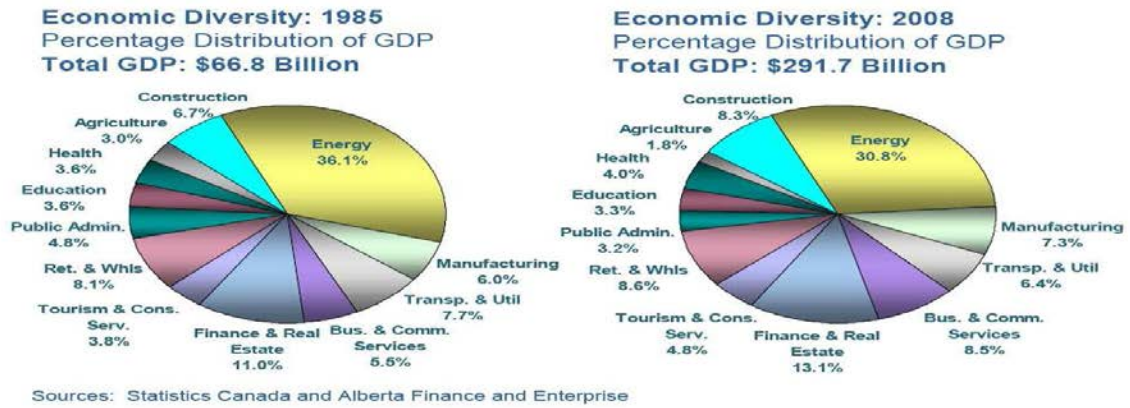


Sources: Statistics Canada and Alberta Enterprise and Advanced Education

Note. From “Alberta’s International Exports by Industry a 10-Year Review,” by Government of Alberta, 2012, p. 2. Copyright 2012 by Government of Alberta. Reprinted with permission.

http://www.albertacanada.com/files/albertacanada/SP-EH_AIME-10-year-review.pdf

Appendix 3:



Appendix 4:

Alberta's Exports by Industry in 2008 (\$CDN, Millions)

Industry	2004	2005	2006	2007	2008	% Change 2007-2008
Primary Agriculture	\$2,018.5	\$2,132.2	\$3,114.3	\$3,696.0	\$4,913.3	32.9%
Crops	\$1,891.0	\$1,722.6	\$2,291.7	\$2,858.2	\$4,239.9	48.3%
Livestock	\$127.5	\$409.5	\$822.6	\$837.7	\$673.4	-19.6%
Primary Forestry, Fishing & Trapping	\$8.9	\$4.0	\$3.7	\$3.7	\$4.3	16.6%
Mining & Energy	\$42,425.7	\$53,652.3	\$53,204.1	\$55,462.4	\$80,616.1	45.4%
Oil	\$17,106.9	\$20,710.0	\$26,934.4	\$28,208.1	\$47,798.0	69.4%
Gas & Natural Gas Liquids	\$24,898.4	\$32,200.9	\$25,492.7	\$26,283.2	\$30,168.0	14.8%
Sulphur	\$256.0	\$437.1	\$390.0	\$466.8	\$1,896.6	306.3%
Coal	\$116.8	\$201.3	\$319.5	\$404.3	\$660.2	63.3%
Other Mining & Energy	\$47.6	\$103.0	\$67.5	\$100.0	\$93.3	-6.7%
Manufacturing	\$18,411.5	\$19,717.7	\$20,491.6	\$21,850.6	\$23,424.8	7.2%
Chemicals	\$5,426.6	\$6,607.4	\$7,073.0	\$7,177.9	\$8,003.7	11.5%
Food, Feed & Beverage	\$3,181.2	\$3,143.8	\$2,636.5	\$2,719.6	\$3,155.4	16.0%
Machinery	\$1,414.6	\$1,618.1	\$2,035.1	\$2,692.5	\$3,506.8	30.2%
Primary Metal Products	\$996.3	\$1,088.3	\$1,513.5	\$2,310.1	\$1,824.0	-21.0%
Paper Products & Wood Pulp	\$1,442.1	\$1,388.0	\$1,415.4	\$1,351.3	\$1,579.9	16.9%
Petroleum & Coal Products	\$734.3	\$983.1	\$1,132.3	\$1,308.8	\$1,426.7	9.0%
Computer & Electronics	\$1,313.9	\$1,163.7	\$1,320.6	\$1,086.7	\$914.2	-15.9%
Wood Products	\$1,999.7	\$1,880.3	\$1,244.0	\$886.3	\$615.0	-30.6%
Fabricated Metal Products	\$432.4	\$489.9	\$598.3	\$794.6	\$791.8	-0.4%
Transportation Equipment	\$392.1	\$515.3	\$514.5	\$507.2	\$536.3	5.7%
Electrical Equipment	\$284.4	\$255.5	\$235.5	\$292.5	\$295.7	1.1%
Plastics & Rubber Products	\$226.6	\$239.0	\$212.2	\$234.5	\$273.8	16.7%
Furniture & Related Products	\$259.3	\$225.5	\$214.8	\$200.6	\$185.1	-7.7%
Non-Metallic Mineral Products	\$159.4	\$166.4	\$140.3	\$101.7	\$103.1	1.4%
Other Manufacturing	\$148.4	\$173.6	\$205.7	\$186.2	\$213.3	14.6%
Other Exports	\$822.9	\$773.5	\$930.3	\$860.3	\$931.9	8.3%
Total Goods Exports	\$63,687.6	\$76,279.7	\$77,744.0	\$81,873.0	\$109,890.4	34.2%
Total Services Exports	\$7,820.4	\$8,283.0	\$8,413.2	\$8,600.4	\$8,581.4	-0.2%
Total Exports	\$71,508.0	\$84,562.6	\$86,157.2	\$90,473.4	\$118,471.8	30.9%

(Source: 2008 International Trade Review)

Appendix 5

Paradigm Concept Model: Successful Economic Growth and Diversification

Foundational Pillars

Innovation

- Creativity
- Imagination
- Insight

Productivity

- Analytics
- Workforce Development

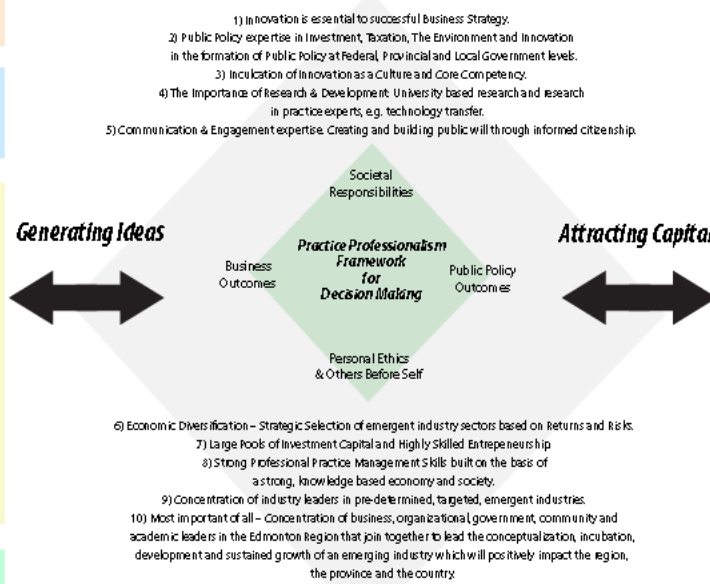
Leadership

- Socially Responsible & Community Engaged
- Ethical
- Passionate & Compassionate
- Analytical & Research Informed
- Excellent at Problem Solving & Decision Making
- Strategic with a broad understanding of the values and needs of all stakeholders
- Skilled at Management, Organization, and Alignment
- Endurance and ability to deal with Challenges
- Resilient and Persistent
- Professional Presence
- An expert in a field of Professional Practice
- Innovative & Creative
- Excellent at Communicating & Negotiating
- Culturally Sensitive, Empathic, and Emotionally Intelligent
- Coach & Mentor

Engagement

- Networks
- Collaboration
- Teamwork

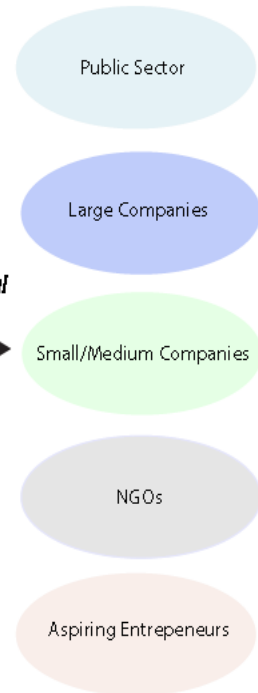
Ten Key Strategic Factors That Promote Successful Economic Growth, Sustainability and Diversification



- 1) Innovation is essential to successful Business Strategy.
- 2) Public Policy expertise in Investment, Taxation, The Environment and Innovation in the formation of Public Policy at Federal, Provincial and Local Government levels.
- 3) Incubation of Innovation as a Culture and Core Competency.
- 4) The Importance of Research & Development: University based research and research in practice experts, e.g. technology transfer.
- 5) Communication & Engagement expertise. Creating and building public will through informed citizenship.
- 6) Economic Diversification – Strategic Selection of emergent industry sectors based on Returns and Risks.
- 7) Large Pools of Investment Capital and Highly Skilled Entrepreneurship
- 8) Strong Professional Practice Management Skills: built on the basis of a strong, knowledge based economy and society.
- 9) Concentration of industry leaders in pre-determined, targeted, emergent industries.
- 10) Most important of all – Concentration of business, organizational government, community and academic leaders in the Edmonton Region that join together to lead the conceptualization, incubation, development and sustained growth of an emerging industry which will positively impact the region, the province and the country.

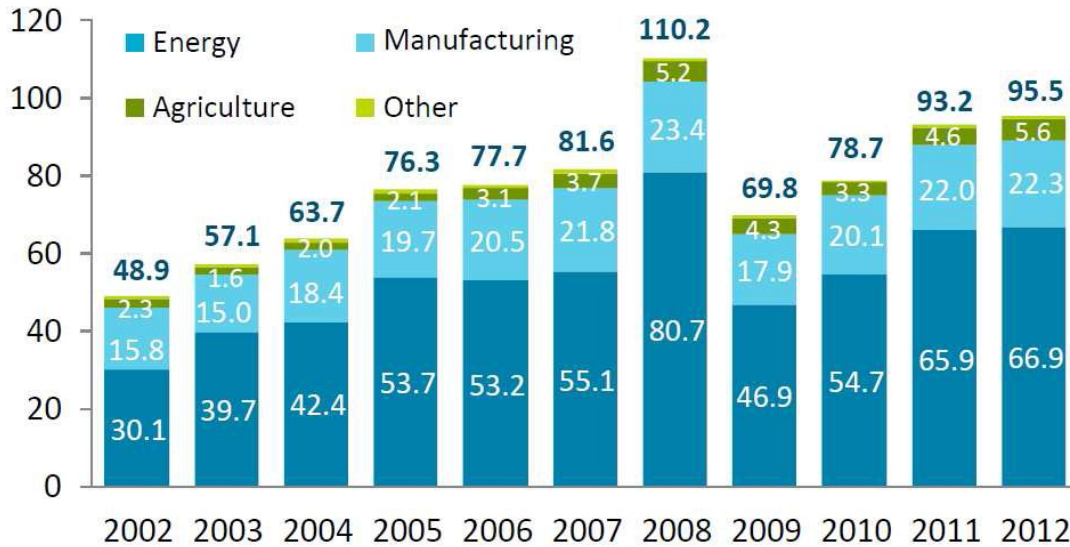
Research Hypothesis:
Great People, Great Complementary Skills, Great Things Happen

Economic Sectors



Appendix 6

Alberta's Goods Exports between 2002 and 2012
(\$ Billions)



Sources: Statistics Canada and Alberta Enterprise and Advanced Education

Note. From “Alberta’s International Exports by Industry a 10-Year Review,” by Government of Alberta, 2012, p. 2. Copyright 2012 by Government of Alberta. Reprinted with permission.

http://www.albertacanada.com/files/albertacanada/SP-EH_AIME-10-year-review.pdf

Appendix 7

Table 228-0060111
 Merchandise domestic exports, customs-based, by North American Product Classification System (NAPCS), Canada, provinces and territories
 monthly (dollars x 1,000,000)

Geography = Alberta

*Trade = Domestic exports

North American Product Classification System (NAPCS)*	2012												2013						
	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July
Total of all merchandise	6,627.6	7,882.4	8,561.2	8,307.1	7,564.1	7,704.2	8,000.3	7,680.9	7,200.6	8,107.9	7,611.5	7,565.4	8,873.2	8,135.8	8,686.9	8,321.4	8,559.6	7,757.8	9,094.5
Farm, fishing and intermediate food products [C11]	555.7	535.0	612.2	627.4	568.4	416.0	416.7	496.9	583.9	731.1	603.6	647.4	576.9	570.6	645.0	567.4	608.9	349.6	440.7
Energy products [C12]	6,420.7	5,628.2	6,102.5	5,953.5	6,328.4	5,545.2	5,664.8	5,426.3	4,941.4	5,730.2	5,407.0	5,306.0	6,614.1	5,946.7	6,123.1	5,904.5	6,075.5	5,656.1	6,691.3
Metal ores and non-metallic minerals [C13]	26.2	21.8	15.6	12.9	27.5	23.9	15.3	23.1	19.1	22.4	26.4	18.8	20.3	24.4	30.1	28.4	18.9	26.7	22.6
Metal and non-metallic mineral products [C14]	152.7	148.7	167.4	151.3	158.3	169.6	178.8	144.0	117.4	137.9	119.9	129.0	137.2	138.5	131.6	130.8	143.6	114.7	107.7
Basic and industrial chemical, plastic and rubber products [C15]	620.2	647.5	745.2	631.9	542.9	566.5	689.0	639.8	644.6	594.6	629.9	693.8	736.4	665.5	762.2	752.6	727.5	729.7	722.5
Forestry products and building and packaging materials [C16]	220.2	240.9	249.3	260.3	247.4	264.6	224.3	265.5	222.3	246.4	226.6	220.6	212.0	238.7	270.0	264.1	234.6	247.4	251.0
Industrial machinery, equipment and parts [C17]	291.9	299.9	292.4	302.6	294.1	312.7	280.4	274.4	292.8	284.6	270.0	232.1	233.1	233.7	269.3	239.5	291.7	249.7	244.9
Electronic and electrical equipment and parts [C18]	62.6	66.4	87.5	75.2	91.4	81.2	69.4	67.5	76.1	72.0	77.9	66.6	76.0	61.3	91.9	79.5	110.0	83.5	77.6
Motor vehicles and parts [C19]	16.3	28.6	20.4	27.2	23.8	25.1	24.1	22.9	21.1	26.1	17.0	16.5	12.5	15.5	22.5	22.4	24.2	14.3	19.1
Aircraft and other transportable equipment and parts [C21]	18.9	21.4	23.1	21.1	30.9	23.0	22.9	30.4	25.9	23.2	23.0	32.2	32.5	33.4	27.6	37.7	36.6	37.1	51.4
Consumer goods [C22]	222.5	219.8	244.0	214.2	246.1	247.3	224.3	260.8	233.8	216.3	189.1	198.0	194.6	165.2	271.6	239.9	261.0	222.0	231.2
Special transactions trade [C23]	20.6	22.1	21.5	29.4	25.0	29.1	30.5	27.1	22.3	23.1	20.9	22.4	27.6	22.2	21.9	34.6	26.9	22.9	34.2

[Back to original table](#)

The data below is a part of CANSIM table 228-0060
<http://www5.statcan.gc.ca/cansim/a261/eng/Feng6/retr/LangFeng6/d=22800606peSer=6&stBy=1&1p1=1&2=1&tab=table&id=6>
<http://www5.statcan.gc.ca/cansim/a47>

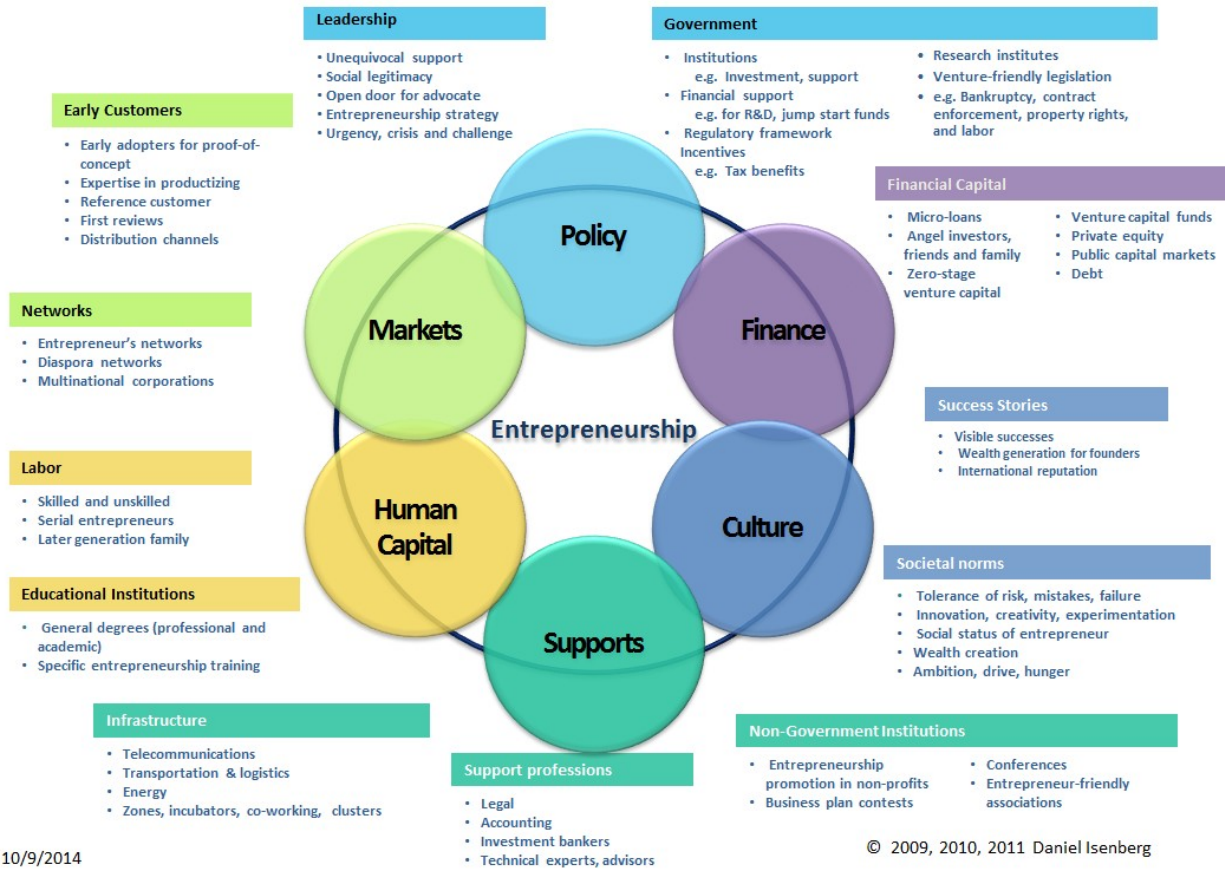
Appendix 8

Qualitative Assessment of the Readiness for Change by Constituency

Change constituency	Ability to impact on change	Readiness to impact on change
The Government of Alberta	Medium	Low
The City of Edmonton	Low	High
The Government of Canada	Low	Medium
The overall private sector in the Edmonton capital region	High	Medium
The 24 municipal governments that make up the greater capital region	Medium	Very low
The Edmonton Chamber of Commerce and other private sector organizations	Medium	High
Post-secondary institutions, NGOs and related	Medium	Low

Appendix 9

Domains of the Entrepreneurship Ecosystem



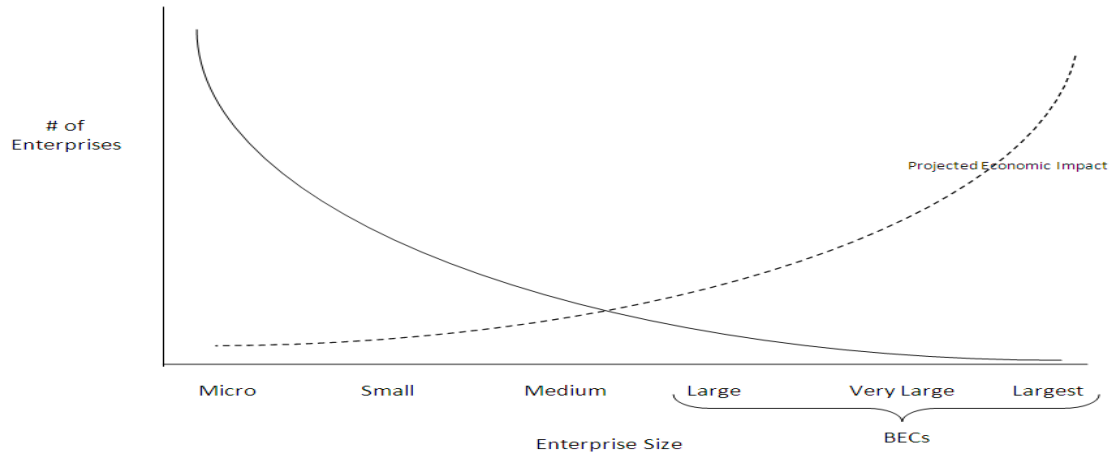
10/9/2014

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Appendix 10

Sharp & Inverse Correlation between Enterprise Size and Economic Impact



Appendix 11

SELECTED ECONOMIC AND SOCIETAL IMPACTS SMALL ENTERPRISES AS MEASURED AGAINST MEDIUM/LARGE ENTERPRISES COMPARISON CHART

Category	Explanation	Small Enterprises	Medium / Large Enterprises
Number of Companies (Alberta)	2012 Statistics Canada data (Canadian Business Patterns)	151,005 (96%)	6,880 (4%)
Number of Employees	62% of small enterprises have 4 employees or less.	573,498 (30.5%)	1,303,369 (69.5%)
Wages (average / week)	Wages for employees of medium/large enterprises is more than 20% higher than for small businesses.	\$917.63	Medium = \$1,038.38 Large = \$1,179.40
Exports (Canada data)	Assumption – Almost all small enterprises are less than \$30M in annualized revenues.	\$93M (2007)	\$413,655B (2007)
Business-sector nominal gross domestic product (GDP) for small, medium-sized, and large businesses, Canada, 2008	The data represents all of Canada. Important to note that Statistics Canada defines a small enterprise as up to 49 employees. In the Province of Alberta, 62% of enterprises have 4 or fewer employees. The implication is that the actual GDP for the vast majority of enterprises in Alberta is a much smaller percentage of the contribution to the Province of Alberta GDP. Factor in government incentive programs for startups and small business, with failure rates, then Net Domestic Product (NDP) contribution, from small business is considerably less than what the GDP figure for small business suggests.	\$469,518M	Medium = \$133,040M Large = \$554,192M
Philanthropy	Although definitive information is not available medium and large enterprises have much greater capacity for philanthropic contributions that promote societal needs and interests.		√
Research & Development	Sources: Statistics Canada, CANSIM, table 358-0001 and Catalogue no. 88-221-X http://www.researchinfosource.com/media/Top%20100%20LR-2012.pdf	Negligible	13,674M out of 30,048M All of Canada
Employee safeguards	Company pension plans, benefit plans, business lifecycle of the company, job portability, expanded experiences.		√

Category	Explanation	Small Enterprises	Medium / Large Enterprises
Impact on Competitiveness	Canada's economic competitiveness is almost solely determined by the strength and vitality of its medium to large enterprises. The gross number of small enterprises has marginal impact on national competitiveness.		√
Career Advancement	Medium and large companies provide for much greater employee opportunity for career advancement		√
Scale Up Entrepreneurship & Spin-offs	Story of Silicon Valley, among other ecosystems, is that the greatest opportunities for scale up success exist with midcareer professionals who have gained significant industry experience, have established networks, have an above average level of financial security and have access to expertise that leads to spinoffs that scale.		√
Taxes	Further information is required – the hypothesis is that small enterprise tax contribution is less than 10% of the total tax contribution paid by medium and large sized enterprises.		√
Public Sector Support in the Form of Grants, incentives, information and resources	In the Province of Alberta and in Canada overall, there are a significant number of government support programs available to stimulate Start Up Entrepreneurship. In almost all cases, these Start Ups will be small enterprises. This stimulus to the creation of Start Ups may represent a negative contribution to the overall economy based on the survival rates of Start Ups. This is a direct contradiction to the wide held belief that small enterprise is the backbone of the economy.	√	
Estimated Survival Curve by Enterprise Size	62% of enterprises in the Province of Alberta have been 1 and 4 employees. Based on the information in Appendix 5, the estimated survival rate (based on the 2002 longitudinal study) is 44%. Enterprises which are able to Scale Up quickly have a significantly higher survival rate – 66%. The survival rate differential between small versus medium and large enterprises is 50% .	44% survival rate	66% survival rate
Societal and Social Impacts	Employees in small enterprises receive lower wages, have less opportunity for career advancement, have less job security and overall face uncertain job prospects as compared to employees in medium and large-sized enterprises.		√

MICRO ENTERPRISES (1- 4 Employees) / **SMALL** (5 – 19 Employees) / **MEDIUM** (20 – 49 Employees) / **LARGE** (50 – 299 Employees) / **VERY LARGE** (300 – 999 Employees) / **LARGEST** (1000+ Employees)

BIG EMPLOYING COMPANIES (BECs) = 300 + Employees

Alberta

Enterprise size of employment⁸	2008	2009	2010	2011	2012
All sizes ⁸	1,768,819	1,710,037 ^A	1,719,628 ^A	1,783,744 ^A	1,876,867 ^A
0 to 4 employees ⁸	139,432	134,931 ^A	135,866 ^A	134,591 ^A	136,619 ^A
5 to 19 employees ⁸	243,816	237,276 ^A	237,678 ^A	239,040 ^A	243,943 ^A
20 to 49 employees ⁸	184,698	176,125 ^A	174,464 ^A	181,630 ^A	192,936 ^A
50 to 99 employees ⁸	142,207	132,397 ^A	131,690 ^A	140,412 ^A	148,630 ^A
100 to 299 employees ⁸	190,781	177,649 ^A	179,037 ^A	190,734 ^A	203,197 ^A
300 to 499 employees ⁸	83,992	74,991 ^A	75,537 ^A	78,351 ^A	85,005 ^A
500 and more employees ⁸	783,893	776,669 ^A	785,355 ^A	818,986 ^A	866,537 ^A

Canada

Enterprise size of employment⁸	2008	2009	2010	2011	2012
All sizes ⁸	14,668,655	14,357,849 ^A	14,414,168 ^A	14,603,312 ^A	14,834,292 ^A
0 to 4 employees ⁸	991,676	973,441 ^A	971,255 ^A	956,674 ^A	956,757 ^A
5 to 19 employees ⁸	2,008,782	1,967,153 ^A	1,974,323 ^A	1,966,820 ^A	1,966,065 ^A
20 to 49 employees ⁸	1,576,031	1,542,388 ^A	1,547,309 ^A	1,573,901 ^A	1,608,623 ^A
50 to 99 employees ⁸	1,202,369	1,151,849 ^A	1,162,233 ^A	1,185,701 ^A	1,226,408 ^A
100 to 299 employees ⁸	1,564,847	1,510,050 ^A	1,519,227 ^A	1,571,862 ^A	1,608,349 ^A
300 to 499 employees ⁸	636,908	604,502 ^A	603,821 ^A	617,167 ^A	629,804 ^A
500 and more employees ⁸	6,688,042	6,608,466 ^A	6,636,001 ^A	6,731,186 ^A	6,838,286 ^A

<http://www5.statcan.gc.ca/cansim/pick-choisir?lang=eng&p2=33&id=2810042>

**Earnings, average weekly, by enterprise size, by province and territory
(Alberta)**

	2008	2009	2010	2011	2012
	All industries excluding unclassified enterprises				
	current dollars				
Alta.					
All sizes	922.56	948.98	991.96	1,035.75	1,072.98
0 to 49 employees	838.87	851.49	860.45	891.06	917.63
0 to 4 employees	910.40	909.01	921.94	948.75	991.36
5 to 19 employees	792.97	809.18	820.04	847.34	863.77
20 to 49 employees	845.46	864.42	867.60	905.86	933.52
50 to 299 employees	913.25	942.10	988.92	1,026.51	1,038.38
50 to 99 employees	876.93	883.07	925.25	981.60	985.35
100 to 299 employees	940.31	986.10	1,035.76	1,059.56	1,077.18
300 and more employees	980.90	1,014.25	1,076.78	1,128.69	1,179.40
300 to 499 employees	1,016.37	1,011.89	1,050.70	1,102.73	1,134.78
500 and more employees	977.10	1,014.48	1,079.29	1,131.17	1,183.78

Notes:
 - Data include overtime.
 - North American Industry Classification System (NAICS), 2007.
 Source: Statistics Canada, CANSIM, table 281-0044 and Catalogue no. 72-002-X.
 Last modified: 2013-03-27.

**Earnings, average weekly, by enterprise size, by province and territory
(Canada)**

	2008	2009	2010	2011	2012
	All industries excluding unclassified enterprises				
	current dollars				
Canada					
All sizes	810.47	823.16	852.95	874.31	896.82
0 to 49 employees	720.82	718.68	730.53	748.67	759.60
0 to 4 employees	770.65	759.81	766.58	786.38	803.54
5 to 19 employees	692.43	691.51	703.10	719.95	729.13
20 to 49 employees	725.66	727.37	742.92	761.63	770.70
50 to 299 employees	774.13	778.09	805.58	824.36	834.59
50 to 99 employees	743.73	741.19	766.32	787.54	795.79
100 to 299 employees	797.48	806.24	835.61	852.14	864.17
300 and more employees	880.21	904.73	946.47	969.94	1,003.70
300 to 499 employees	860.33	869.93	906.32	921.66	935.38
500 and more employees	882.10	907.91	950.12	974.37	1,009.99

Notes:
 - Data include overtime.
 - North American Industry Classification System (NAICS), 2007.
 Source: Statistics Canada, CANSIM, table 281-0044 and Catalogue no. 72-002-X.
 Last modified: 2013-03-27.

Value of domestic exports, by exporter size

	Less than \$30,000	\$30,000 to \$99,999	\$100,000 to \$999,999	\$1,000,000 to \$4,999,999	\$5,000,000 to \$24,999,999	\$25,000,000 and over	Total
millions of dollars							
2007	93	569	5,575	16,591	43,937	346,983	413,748
2006	115	602	5,681	16,704	43,935	337,336	404,373
2005	121	614	5,746	17,373	43,901	333,773	401,528
2004	124	615	5,712	16,918	43,024	312,124	378,517
2003	127	593	5,626	16,757	41,115	283,919	348,136
2002	118	602	5,741	16,716	42,549	293,423	359,148
2001	117	591	5,577	16,444	42,422	302,088	367,239
2000	111	587	5,465	16,068	41,144	314,982	378,356
1999	111	552	5,371	15,526	37,911	266,295	325,766
1998	104	510	5,182	14,767	35,459	237,863	293,885
1997	103	507	4,877	13,683	33,793	225,996	278,960
1996	96	480	4,631	12,518	31,440	207,994	257,158
1995	89	473	4,360	11,929	28,298	199,159	244,310
1994	84	435	4,002	10,303	25,495	170,829	211,148
1993	77	414	3,520	9,416	21,585	141,418	176,429

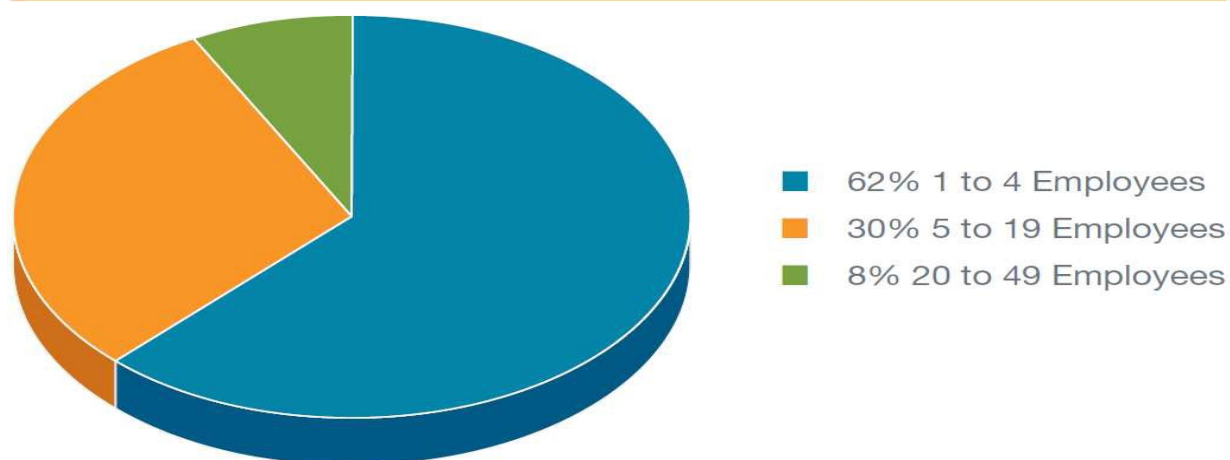
Note: Due to rounding, components may not add to the total.

Source: Statistics Canada, International Trade Division, Exporter Register Database.

Business size class	2001	2002	2003	2004	2005	2006	2007	2008	Average annual growth, 2001 to 2008
	millions of dollars								percent
GDP									
Small	331,740	344,372	359,107	381,643	401,415	416,928	443,801	469,518	5.1
Medium-sized	104,244	108,969	109,248	114,346	121,663	127,750	134,648	133,040	3.5
Large	356,615	362,354	393,341	427,653	465,362	498,784	522,128	554,192	6.5
Total	792,600	815,695	861,696	923,642	988,441	1,043,462	1,100,576	1,156,750	5.5

<http://www.statcan.gc.ca/pub/11f0027m/2012082/t037-eng.htm>

Share of Number of Small Businesses, by Employee Size



Source: Statistics Canada (Canadian Business Patterns)

Survival curve estimates by size category, 2002 cohort

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	Survival probability						
	1 year	2 years	3 years	4 years	5 years	6 years	7 years
Size categories	probability						
Greater than 0, and less than or equal to 1 ALU	0.74	0.57	0.47	0.40	0.35	0.30	0.27
Greater than 1, and less than or equal to 5 ALUs	0.89	0.76	0.66	0.59	0.53	0.48	0.44
Greater than 5, and less than or equal to 10 ALUs	0.93	0.83	0.74	0.66	0.61	0.56	0.52
Greater than 10, and less than or equal to 20 ALUs	0.94	0.85	0.78	0.70	0.65	0.60	0.56
Greater than 20, and less than or equal to 50 ALUs	0.95	0.88	0.81	0.74	0.68	0.63	0.60
Greater than 50, and less than or equal to 100 ALUs	0.96	0.88	0.83	0.78	0.75	0.72	0.67
Greater than 100 ALUs	0.99	0.91	0.86	0.80	0.74	0.69	0.66
Firm-class moments							
Average	0.92	0.81	0.74	0.67	0.62	0.57	0.53
Standard deviation	0.08	0.12	0.13	0.14	0.14	0.14	0.14

Note(s): ALU: average labour unit.

Source(s): Statistics Canada, authors' calculations.

Date modified: 2012-12-19