NOW OR NEVER:
AN URGENT CALL TO ACTION
FOR NOVA SCOTIANS
The Report of the Nova Scotia Commission on Building Our New Economy

February 2014
Acknowledgments

A project of this nature, which is intended to explore several complex questions, and to do so with a high degree of public consultation, is inherently challenging. The Nova Scotia Commission on Building Our New Economy was created as an independent body with a big mandate and a small staff. The volunteer commissioners therefore wish to express our deepest gratitude to Jo Ann Fewer who served as our Executive Director; Mark Austin, our Director of Research and Communications; and Carolyn Terry, our Administrative Assistant, for their creativity, commitment and tireless dedication to our work. Their professional talents contributed greatly to every aspect of this project and their cheerfulness in the face of unrelenting—and sometimes unrealistic—deadlines made the process more enjoyable for all.

The Commission toured the province in the winter/early spring and then again in the fall of 2013 as well as reaching out to Nova Scotians through the web and various social media platforms. We were supported in that work by the Public Engagement Support Unit of the Office of Policy and Priorities and we want to express our gratitude to Tyler Knowlton, Chief Strategist, and his team; Dan O’Rourke, Kelly Meagher and Rita Fraser. Commissioners also want to express a special thank you to Rick Williams — first, as our connecting point with the public service during the planning and start-up of the Commission and, more recently, for his advice and assistance in the final phases of our work.

The analytical base of our study required considerable research and, while we commissioned several pieces of work from think-tanks and private consultants, we also relied heavily on expertise within government departments. We want to thank the many dedicated public servants who contributed to the work of the Commission and make special mention of the following individuals who regularly responded to extensive requests for information and analysis: Thomas Storring, Director of Economics and Statistics Division, Department of Finance; Greg Landry, Director of Sector Development, and Shirley Hazen, Corporate Strategist, both in the Department of Economic and Rural Development and Tourism; and Jake Whalen, Corporate Strategist, Department of Communities, Culture and Heritage.

The Commission occasionally required writing, transcription and editorial support and we were ably supported by Nancy Watson from Communications Nova Scotia and Claire Moxon, Principal, Scribe Select. Early in our process the Commission assembled a team of economists to provide advice on exemplary economic development practices in other jurisdictions. We are most grateful for the advice of this group which was chaired by Fred Morley, Vice President at Greater Halifax Partnership, and included Dr. Lars Osberg, Dr. Brian VanBlarcom, Dr. Fred Wien, Dr. Catherine Leviten-Reid, and Dr. Phil Davison.

The Commissioners felt fortunate to have multi-party support throughout the course of this project. The Commission was announced by then-Premier Darrell Dexter in November, 2012 but, from the initial day of the launch, the aims and objectives were also supported by Mr. Stephen McNeil, Leader of the Liberal Party and Mr. Jamie Baillie, Leader of the Progressive Conservative Party. As a result of the October, 2013 election, the Liberal Party formed a majority government and we are both pleased and grateful that Premier McNeil has continued to be a champion of the Commission’s work. We sincerely hope this report will be worthy of the support of our political leaders.

All of the Commissioners participated in this project while continuing to fulfill their obligations to their respective businesses and organizations. We therefore want to thank both our employers for enabling us to volunteer our time to this project as well as our colleagues who inevitably had to take on additional responsibilities as we spent time away on Commission deliberations or meetings.

Finally, we want to express our gratitude to the people of Nova Scotia for participating in the work of the Commission. We heard a wide variety of ideas and perspectives on ways to improve our economy. In virtually every instance those views were borne out of a shared love of Nova Scotia and a desire to see a better and more prosperous future for the next generation. As Commissioners, we could not have asked for a richer wellspring of inspiration to pursue our work with vigour and integrity.
Commissioners’
Foreword

In drafting this, its final report, the Commissioners had some difficulty in finding the right voice and tone with which to talk to Nova Scotians about the seriousness of the challenges we now face and how we might as a province begin to overcome them.

As we explored current economic and population trends we became more and more alarmed. The evidence is convincing that Nova Scotia hovers now on the brink of an extended period of decline. Two interdependent factors — an aging and shrinking population and very low rates of economic growth — mean that our economy today is barely able to support our current standards of living and public services, and will be much less so going forward unless we can reverse current trends.

But this is not new news. In 1991 the provincial government mandated Nova Scotia Voluntary Planning to consult the public and advise on a new economic strategy. In the resulting report, Creating Our Own Future — A Nova Scotia Economic Strategy, the working group assessed the major changes impacting the province, including globalization of trade, technological change, environmental issues, shrinking federal fiscal transfers and the heavy indebtedness of the provincial government. It drew the following conclusion:

Those changes and others are making Nova Scotia weaker and more dependent economically. If we are to halt the slide, we must change — and quickly — the way we finance our standard of living. We are at a crossroads. The world is changing. We must change too or face the consequences. The only certainty is that the status quo is not an option.

The report laid out a vision for “halting the slide”, calling for change leadership from business and communities, significant improvements in export trade, value-added production, and a commitment to environmental sustainability.

“The only certainty is that
THE STATUS QUO IS NOT AN OPTION.”

Creating Our Own Future:
A NOVA SCOTIA ECONOMIC STRATEGY, 1991

The evidence gathered by our Commission over the past year would indicate that this wise advice was not fully understood and embraced and that the slide did not halt. Alarms continue to be sounded; almost every week there are additional voices in the media and other public forums expressing serious concerns about industry failures, slow business growth, faltering employment levels, the loss of young people and skilled workers to other provinces, and the shrinking viability of many rural communities. And there have been more reports and studies proposing new ideas and concerted action to turn the economy around ‘before it is too late’.

This brings to mind the image of the frog in the pan of water heating on the stove that purportedly does not react to the gradual increase in temperature until it is too late to jump. As economic conditions worsen, we all make adjustments: many people remain complacent because they live and work in situations that are less vulnerable than others, and many others leave the province to find better opportunities. But too many...
people, and too many communities, are left to make do with less, to set aside their hopes and aspirations for a better life in Nova Scotia. And the more time goes by, the more our past adjustments and compromises, and our growing discouragement and loss of confidence, impede new efforts to “halt the slide”.

And hence the difficulty for the Commission in framing the core messages in this report. It does not seem that dire warnings and calls for immediate and specific changes in policies and practices have been effective in drawing enough attention from enough people to make a difference. While governments have created new agencies, initiated new programs and tried different approaches over the years, neither public attitudes nor the wider economy have responded to these signals in ways that both matched the nature and scale of the challenge and energized the changes that are needed.

This realization led Commissioners to consider other aspects of our situation, and in this regard our extensive public engagement activities over the past year were extremely helpful. They made us aware of the importance of attitudes and values in this situation, and exposed significant fault lines in the public discourse on economic development.

We do not, as a province, share broad agreement on the need for economic growth, and we have divergent and often conflicting ideas about how best to achieve it. There is division between rural and urban perspectives, and a lack of public confidence in private sector leadership of the economy. While virtually everyone sees the need for population growth and greater wealth generation, most of the practical strategies to achieve these outcomes are controversial. This lack of solidarity as a province undermines constructive dialogue about our future and makes us a more difficult and risk averse place to do business and build communities. It seems apparent that if Nova Scotia is to find ways to meet its current challenges, there will need to be change on the cultural level as much as in economic structures and government policies and programs.

The Commission sees a profound need for Nova Scotians to come together around a shared vision for real change in the province, one in which the different regions, communities and economic sectors can all see a better future, and are willing to pursue it through dialogue, cooperation and collaboration rather than isolation, competition and conflict.

With this perspective, the Commission has shaped this report around three core messages:

1. Yes, there is a crisis, and it does threaten the basic economic and demographic viability of our province, most dramatically in our rural regions;

2. We are not doomed to permanent have-not status: in an improving macroeconomic climate, driven by expanding global trade, Nova Scotia has the assets, opportunities, institutional capacities and human capital to turn around its current outlook and build a much more positive future;

3. While the continuing retreat of the federal government from a regional development role and fiscal weakness at the provincial level are serious constraints, the single most significant impediment to change and renewal is the lack of a shared vision and commitment to economic growth and renewal across our province and among our key institutions and stakeholder communities.

With these propositions in mind, the policy advice and strategic directions put forward in this report are directed not only to the government of Nova Scotia, but to leaders and decision-makers in all our key sectors — business and labour, municipal provincial and federal governments and First Nations, strategic institutions (universities, the community college, school boards, etc), voluntary sector organizations and communities. It is our conviction that
The active engagement of all of these stakeholders is required if we are to achieve meaningful economic and demographic improvements.

Building on this foundation, the report proposes significant changes in direction on three levels.

**Future Vision**

With the participation, ideas and commitments of all of the leadership levels listed above, this province needs to undertake a *projet national*, a concerted collective effort, to transform ourselves into a more unified, progressive, creative, and change-oriented society.

Small states and regions around the globe have taken this approach with great success. They faced up to the need to adjust to a changing world and went about it with passion, confidence, and discipline. They identified their assets, strengths and opportunities, respected their culture and history, and built new economies to generate the most value from all these resources.

Nova Scotia has the assets and opportunities, and the global economy is reshaping to our advantage. As a small province with sophisticated institutional capacities we can come together within a shared project of mutual advancement.

But most importantly, such a province-building project is not dependent on federal government policies or the state of the world economy. It is about us — our courage, our imagination and our determination to do better. *We can do it ourselves.*

**Goals for Growth and Renewal**

To get started on the project of transforming our province, the Commission proposes a series of ‘stretch goals’ as concrete, measurable outcomes that leadership groups can focus on and use to construct their own roadmaps. We do not present these goals as absolute targets and we expect that they will be further refined through consultation, research and formal decision-making. The critical point, however, is that they convey the need for a quantum leap rather than tentative half steps and continued muddling through. Such profound change will, by its nature, require participation from all sectors, which is why it is appropriate to describe it as a *projet national*.

A critical characteristic of these goals is that their achievement will mean that a significant transformation has in fact been accomplished. The goals for population growth, when realized, will mean that Nova Scotia is back on track with regard to demographic and community stability. The proposed goals for business and trade expansion, research and development, labour force development and revitalization of traditional rural industries, once attained, will mean that the Nova Scotia economy has turned around and is primed for long-term and sustainable growth. And achievement of the goals for improved governance and fiscal strength will mean that our government structures at all levels are more efficient, productive and financially robust, and are all working within a common plan to build the new Nova Scotia economy.

**Game Changer Strategies**

By their very nature the transformative goals proposed in this report cannot be achieved through ‘business as usual’ across the public, private and community sectors. And they are not things that depend on massive increases in government expenditure: even if such new investment was possible in the foreseeable future (which the Commission doubts), there is little evidence from past experience that, in and of itself, this would dramatically improve our economic performance.

Instead, the successful pursuit of the proposed goals will require much more effective and efficient deployment of current resources combined with changes in attitudes, policies, and practices across all business, government, and community sectors. The Commission identified 12 “game changers” for transformative change and renewal. There will be other change areas to be explored, but these provide critical starting points for the actions Nova Scotians need to undertake.
The first area identified is political leadership. The transformative goals for Nova Scotia are set out on a 10-year planning horizon. It is difficult to imagine how these longer-term initiatives can be successfully implemented across two or more elections and possible changes in government and party leaders if we maintain ‘politics as usual’. The Commission believes that the leaders of the political parties now in the Legislature need to serve as role models for all Nova Scotians by putting aside partisan interests to build such a long-term strategy and, once it is agreed upon, working together to ensure its effective implementation over several years.

Other game changers address the need for a province-wide, multi-sector commitment to growing both the economy and the population. This implies a much stronger leadership role for the private sector, along with social enterprises and community economic development groups, and joint efforts to build a new culture of entrepreneurship among our youth. Community leaders must also play a more assertive role in making Nova Scotia a welcoming place for interprovincial migrants and new Canadians and reducing the attitudinal barriers facing First Nations, African Nova Scotians and other disadvantaged groups. The growth imperative also requires a more productive dialogue on balancing growth and environmental objectives, linking green economy perspectives to our plans for creating jobs and wealth creation. The research and development capacities of our post-secondary education system will need to be harnessed more effectively to drive innovation and business start-ups in leading edge sectors.

A third critical area is breaking down misunderstanding about the interdependence of our rural and urban regions and economies. The growth of our urban centres is generating new market and investment opportunities for rural industries and communities. At the same time, improving productivity and competitiveness in our foundational rural industries – tourism, agriculture, fisheries, forestry, mining and manufacturing – is essential if we are to build a stronger trade economy for the province as a whole. Embracing freer trade, and expanding the number of businesses that export to both traditional and emerging markets are additional priorities for changing the economic outlook for Nova Scotia.

With regard to government’s economic development policies and programs, the game changer here is not about new, different and bigger programs, but greater integration and better coordination to improve transparency for the public and accessibility for business. The report places priority on support for growth oriented enterprises, expanding exports and diversifying markets for traditional and new export products. More fundamentally, government needs to communicate the economic growth and business leadership imperatives to the public more effectively. One option for this purpose is to appoint a Minister of Business to provide a champion at the cabinet table, an effective contact point for the private sector and a strong voice in the wider community. Consideration might be given to having the Premier take on such a role to convey the government’s high-level commitment to business development.
And finally, it is difficult to imagine the achievement of a lasting turnaround in the Nova Scotia economy without a stronger partnership with the federal government and better alignment of federal and provincial policy objectives in critical areas including labour force development, immigration, fisheries and oceans management, energy development, and fiscal stability in the health and human services field.

The report concludes by conveying the Commission’s strong support for a number of key initiatives now underway in the province that are already contributing to the kinds of change and development we feel is necessary. The province is not starting from scratch. There is strong business and labour leadership in many sectors, and improving collaboration between the private sector, provincial and local governments, post-secondary education institutions, First Nations, communities and voluntary sectors organizations.

However, while those strong foundations are already in place or are being constructed today, there are too many leaders and decision-makers in key locations who have not yet signaled their understanding of the need for fundamental change. They do not yet share a vision of a finished edifice or an understanding of how they can contribute to its construction.

That is the challenge we call upon Nova Scotians to take up. Decide where we want to be 10 years from now. Set our goals. And start work on all the things we need to do to get there.

WE CAN DO IT.

The Nova Scotia Commission on Building Our New Economy

Ray Ivany, Chair
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The Report of the Nova Scotia Commission on Building Our New Economy

February 2014

SECTION I
Now or Never: An Urgent Call to Action for Nova Scotians

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Mandate

The Commission on Building Our New Economy began its work in November of 2012 with the following mandate from the Government of Nova Scotia:

- To engage and mobilize communities, local governments, and business and labour leaders across the province in public discussion and debate on the economic development opportunities and challenges facing the province;
- To raise awareness and deepen public understanding of the nature and scale of these opportunities and challenges;
- To promote practical understandings of how growth in one or more regions of the province generates opportunities for others;
- To enhance understanding of the unique circumstances and opportunities for the different regions, economic sectors and cultural communities across the province;
- To develop advice to government, business and community leaders on new directions to realize economic growth across economic sectors in all regions of the province.

To these ends the Commission engaged Nova Scotians extensively in 2013, travelling throughout the province to hear from individual citizens, stakeholder groups, community development organizations, local governments, and business and labour leaders.

IN ALL:

- 35 public meetings were held across the province
- Commissioners and staff made 13 formal public presentations
- Presentations were made at 17 days of meetings over the course of 2013 with business groups and municipal, provincial, federal, and First Nations government leaders;
- 1,730 citizens joined meetings and contributed to group discussions;
- The oneNS.ca website attracted 5,475 visits;
- 102 written submissions were received;
- 402 people participated in a telephone survey and 45 in an on-line survey;
- The ONE Facebook page recorded 16,660 ‘hits’;
- 516 people follow ONE on Twitter;
- Our November virtual town hall had a studio audience of 62 people and 1,089 LiveStream log-ins, and more than 200 comments were made in the real-time chat room.

It is hoped that these many activities, and the Commission’s Interim Report published in May 2013 after the first round of community meetings, have already helped generate a deeper and more widely shared understanding of the challenges and opportunities facing the province.
The Commission is deeply grateful to the many groups and individuals who participated in and contributed so much to its work. This input addressed every aspect of our economic circumstances, but also raised wider issues of poverty, health and social well being, public education, community development, the arts, cultural expression, environmental stewardship and human rights.

In preparing this, its final report, the Commission has of necessity returned to its specific mandate as set out above. The main focus must be the economy of the province, the foundation upon which so many other aspects of our lives together are built up and sustained. It is not practical within the timeframe and resources of the Commission to develop sound analyses and well thought-out policy advice in all of the areas of concern raised by participants in the process. The Commission wishes to affirm, however, that these many perspectives have been heard and considered, and that their underlying ideas and aspirations are hopefully reflected in the policy and strategic advice offered in this report.

**Defining Our Challenges**

As it set out in late 2012 the Commission anticipated that it its work would follow the well worn path of assembling up-to-date analyses on the state of the Nova Scotia economy, consulting citizens and stakeholder groups on policy options, and then developing specific policy recommendations aimed primarily at government. However the major findings from the research and public engagement work, presented in detail in this report, have led the Commission to consider a somewhat different approach than was anticipated at the outset. These findings can be briefly summarized as follows:

After a decade or more of slow economic growth, and with an aging and shrinking population, Nova Scotia is on the verge of a significant and prolonged decline in our standard of living, in the quality of our public services and amenities, and in our population base, most seriously in the rural regions of the province where more than two-fifths of our population now make their livings.

The Commission’s **core message** is this: **Nova Scotia is today in the early stages of what may be a prolonged period of accelerating population loss and economic decline.**

These negative prospects are **not**, however, **inevitable or irreversible**.

Over recent decades the underlying weaknesses in the economy were offset by a progressive expansion in the public sector, but we cannot assume that this will continue in the foreseeable future. In the absence of strong private sector growth the provincial government does not have the revenue base to keep generating new employment, investment and aggregate spending, and the federal government has been retreating from this role in our region.

However, there is little evidence to suggest that inadequate government spending and poor economic development programs are the root causes of Nova Scotia’s weak economic growth. Therefore we cannot confidently conclude that more government investment in economic development and some different mix of programs would, in and of themselves, solve the problem. There are no quick fixes or magic solutions. Our challenges are different and much deeper.

The need for a major change in approach is all the more compelling in light of the extraordinary opportunities and resources that we, as a province, have to work with: untapped potential for energy production; expanding global markets for our agricultural, forestry, seafood and manufacturing exports; the $25 billion ships contract; leading edge firms in IT, bio-tech, healthcare, aerospace, defense, and creative enterprise; a strong college and university system; an educated workforce; cities and towns that offer attractive lifestyles for immigrants; and more. The key question is whether we can steer the development of these assets to put in place new foundations for lasting prosperity and revitalized communities in all regions of the province. Or whether we will miss that opportunity again as has happened in Nova Scotia’s past.
To alter course towards a better economic future for Nova Scotia will require, first and foremost, basic changes in our shared attitudes and understandings. Without a stronger consensus across the population and among business, government and community leaders on the gravity of our circumstances and the necessity for economic renewal, there is little prospect of real improvement in the outlook.

Given our serious demographic challenges and weak performance across the economy, we need to focus as a province on three critical areas of change:

- We need business and community leadership in the pursuit of economic growth: these sectors need to pull the economy forward rather than it being pushed by government policies and investments.

- We need to achieve significantly higher rates of attraction and retention of both inter-provincial and international immigrants to grow the population overall, increase the number of entrepreneurs, and renew the labour force.

- We need greatly improved performance in the areas productivity, trade, innovation and value-added production. These are the essential drivers for renewal and expansion across all industry sectors and business types, whether small, medium or large. They are particularly important in the traditional rural industries — fisheries, agriculture, forestry and tourism — where too many enterprises have not kept pace with their competitive environments.

Influenced in its thinking by these general findings and the consequent need for major changes in attitudes and direction, the Commission has opted to direct its most important messages to the broad Nova Scotia public and to leaders in all sectors — business, labour, key institutions and communities — as well as government. This is because it will not be possible to make the changes that are needed without far-reaching buy-in and support from all these sectors.

And while detail is provided on specific economic development strategies and practices, the main messages have to do with issues of attitude, shared understanding, and capacities for leadership, collaboration and concerted action among different groups, across different economic sectors and regions, with differing interests. These are the critical factors, the Commission concludes, that will shape the future of our much-loved province.

Stated as sharply and succinctly as possible, the Commission’s core message is this: Nova Scotia is today in the early stages of what may be a prolonged period of accelerating population loss and economic decline. These negative prospects are not, however, inevitable or irreversible.

The Commission believes that Nova Scotia has the assets and opportunities with which to build a stronger, more dynamic economy to support higher living standards and population renewal. But governments cannot lead where the people do not want to go, and cannot make businesses grow and innovate if their owners, managers and employees are not committed to these outcomes.

If, as the Commission has come to believe, the critical first step is a shift in attitudes and a greater willingness and capacity on the part of business, key institutions and communities throughout Nova Scotia to join together in the pursuit of shared goals to benefit all, this should be seen as very good news. Such a collective effort does not require reliance on outside investors, shifts in federal government policies, or improved macro-economic conditions — we can do it ourselves.
The Nova Scotia Commission on Building Our New Economy was tasked with a somewhat broader mandate than many economic panels and studies. Public engagement through ‘world cafe’ style community sessions, stakeholder consultations, and social media interactions, was central to our pursuit of ideas from Nova Scotians for a better economy. While the Commission’s mandate culminates with this final report, it is imperative, and the advice of the Commissioners, that evidence-based authentic public engagement also be a central part of building our new economy over the coming years.

The Commission’s Interim Report (available online at onens.ca) is a reflection of what was heard in the initial six months of public engagement. It also set out a research agenda to inform further conversations in communities. From these activities, nine broad themes emerged:

**Attitude & Identity** – Throughout our discussions with Nova Scotians, we heard a frequent message that our province and our people need a ‘new attitude’ and a greater sense of being citizens of Nova Scotia and not just of their local area. There is an abundance of community spirit, but some negativity as well, stigmatizing success and resisting change. There is a clear need for Nova Scotians to come together and consider not only who gets what from our collective pie, but how we can make it bigger for all to share.

**Population and Demographics** – ‘Our greatest asset is our people’ was a common sentiment at every meeting. People were optimistic for many reasons including our well-educated population, our successful entrepreneurs and the skilled workforce. Youth leaving the community or the province for job opportunities was a recurring source of concern. Almost every meeting identified immigration and bringing Nova Scotians home as keys to increasing population and prosperity. Concern was expressed about those who have not completed high school and about a troubling decline in literacy and numeracy levels. It was also noted that Mi’kmaw communities are enjoying more positive population growth trends than the rest of the province.

**Entrepreneurship & Business Growth** – A strong entrepreneurial spirit was evident among those engaging with the Commission, but it would be optimistic to see it as a dominant trait of our provincial culture. We heard that our province needs to do more to help businesses grow, including more support for training and business retention and expansion, and greater emphasis on entrepreneurship in schools. Business development would also be helped by reducing red tape and making it easier for business owners to navigate their way through regulations and programs. ACOA and CBDCs were viewed positively for accessibility and impacts, while provincial departments and agencies, with the exception of Innovacorp, were consistently criticized for difficulty of access, slow and sometimes politicized decision-making, and lack of rural presence. Many participants called for a one-stop shop or merged agency model for the province.

**Infrastructure** – Nova Scotia’s electric power system, communications networks, transportation and other public services, were often identified by participants as needing improvements. Concerns vary in different areas of the province reflecting the limitations of the power grid, uneven highway access, lack of passenger air travel and issues related to ferry services. We also heard that broadband and cell phone services are not available to all Nova Scotians.

**Sustainability & Growth** – As anticipated, many participants voiced concern about environmental protection, as well as the overall sustainability of their communities. There were many viewpoints expressed on the topic of wealth generation, with frequent assertions of the principle that economic development must be socially, culturally, economically and environmentally sustainable. Success and growth can be measured in many ways beyond simply looking at GDP or other conventional indicators, and more consideration needs to be given to how communities envision their own success.

Compelling presentations were made to the Commission as well on the potential contributions of social enterprise and social innovation to building a new economy,
particularly with regard to ‘green economy’ as a source of employment, value added production, and enhancement of community strength and resilience.

**Strengths & Opportunities** – A consistent message heard in our community sessions was that, while there are lots of strengths, and many untapped opportunities, we need to be better as a province at finding them and realizing their potential. Our province has abundant beauty, strong communities, thriving creative spirit, and an excellent education system overall. Our natural resources could generate more added-value development – fisheries, forestry, mining and renewable energy, to name a few. There is a need to build on our strengths and seize opportunities as they arise.

**Governance Issues** – The need for improved governance was a message heard from all corners of the province, linked with calls for breaking down real or perceived barriers to prosperity. There were suggestions for innovations and solutions to address the challenges, and frequent complaints about multiple levels of government, each with different strategies and programs, and insufficient commitment to aligning policies.

**Divisive Issues** – There were some controversial issues where consensus will be difficult to achieve. These included open-pen fish aquaculture, school closings, ferry services, energy development, Maritime union, and taxation rates. While these issues can be polarizing, we also heard calls for improved understanding and efforts to resolve our differences through constructive dialogue and engagement.

Following the release of the Commission’s Interim Report, reflecting the findings from the first round of public engagement activities in early 2013, the Commission pursued the research agenda set out in that report. Written submissions continued to be received, and meetings took place with various citizen and sector groups as well as with policy-makers.

The Commission engaged the services of Corporate Research Associates to conduct a random sample survey of 402 Nova Scotians to assess attitudes and perceptions on economic development issues (see Section II, downloadable from onens.ca). Findings from the survey include:

- Satisfaction with quality of life in Nova Scotia is moderately high, but the level of optimism about the future is much lower;
- There is widespread recognition among Nova Scotians that economic growth is crucial to the province’s ability to maintain and improve essential public services;
- There is a relatively high level of recognition of the importance of increasing entrepreneurship in the province;
- There is general consensus on the importance of using Nova Scotia’s natural resources to generate greater wealth accompanied by significant concerns about environmental protection;
- There is a moderately high level of recognition that the population of Nova Scotia needs to increase as part of an improved economy, but slightly more than half of respondents do not see immigration as the preferred route to population growth.

In October of 2013, the Commission held a second round of sixteen community meetings to discuss these and other research findings and to solicit policy advice. Each session began with an interactive presentation of current economic and demographic indicators followed by discussion focused on three questions:

1. What are the factors that will cause people and businesses to choose Nova Scotia as their place?
2. How can we spark more entrepreneurial drive and innovation in Nova Scotia?
3. How can Nova Scotians find shared belief, desire, and agreement to shape our new economy together?
On the first question, the key factors were health, education, cultural and recreational services, a healthy natural environment and a strong sense of community. There were also concerns about affordability, employment opportunities and competitive wages and benefits.

Regarding entrepreneurship and innovation, participants emphasized the need to promote these throughout each phase of formal education, with programs like Junior Achievement in every school, and through workplace mentoring relationships and apprenticeship. Participants proposed new centres for business incubation and innovation throughout the province linked to post-secondary institutions. There was also support for an expanded role for social enterprises including co-operatives, non-profit businesses and community interest companies.

To build a more positive business environment participants called for less cumbersome regulations, more accessible and streamlined government services to business, and tax changes to reduce impediments to business development. There was mention of service hubs to foster networking and collaboration among entrepreneurs and expanded programming to help local businesses connect to global market opportunities.

A common theme in many sessions was the need to manage resources sustainably. Recognizing that the traditional fishing, forestry, and agriculture sectors will continue to be vital to our economy, many participants recommended more rigorous resource conservation and greater diversity in products and markets. The green economy and the local foods movement were described as offering important opportunities for business development to take advantage of the growing demand for sustainable products and services.

There was broad agreement in these sessions that international and inter-provincial immigration is needed to give Nova Scotia an economic boost through new business start-ups, expanded investment, and new ways of thinking, and majority support for policies to increase the attraction and retention of immigrants, especially in rural communities. Tourism and post-secondary institutions are seen as important entry points for immigrants and these impacts should be expanded.

Participants suggested that if local communities received more direct material benefits from new economic activity it would be much easier to foster buy-in. There was also frequent reference to the need for greater unity of purpose, and concerted efforts throughout communities, businesses, and the province as a whole. This shared vision should perhaps be expressed through a statement of shared values and goals constituting a new social contract for economic development.

There was broad agreement that the Commission’s work should serve as a catalyst for ongoing engagement and action, not just as advice to government.

The Commission wrapped up each community gathering with a call for examples of Nova Scotia’s excellence, assets, enterprise, and achievement. These are presented in Section II (available online at onens.ca).

There is a clear need for Nova Scotians to come together and consider not only who gets what from our collective pie, but how we can make it bigger for all to share.
Fault Lines

Along with shared outlooks and aspirations there were also areas of disagreement or tension that emerged from the research and public engagement activities carried out by the Commission, and some prevalent views on Nova Scotia’s economic circumstances are less well supported by the evidence than others.

For example, a number of participants seemed quite committed to the politics of scarcity expressed through parochial competition over the shares of a shrinking pie rather than increased collaboration and concerted effort to grow the pie.

And very importantly, some commentators described the prevalence of negative attitudes in their communities towards immigrants and visible minorities generally, while the former are often stigmatized as taking local jobs.

This speaks to an attitudinal environment that subtly discourages entrepreneurship and initiative at a time when it is badly needed to revitalize local economies ...

These and other attitudes constitute significant barriers to bringing people together around a shared vision for change and renewal.

Almost all participants called for wealth creation strategies that respect community values and protect our unique cultural attributes and the natural environment. But beyond that generic sentiment, points of solid consensus on economic renewal are much harder to identify. There are varying levels of tolerance for the risks associated with expansion of rural industries, divergent views on the capacities of government to manage economic development, and different ideas about the types of business models – big business vs. small, local vs. foreign owned, etc. — that might offer the best economic outcomes.

One clear fault line in these discussions centred on public versus private sector roles in economic development. A number of participants conveyed a clear preference for expanded public services and amenities — schools, universities, parklands, and major new highways — as sources of jobs and incomes in their communities. Conversely, other stakeholders wanted to see less government and a more “business friendly” regulatory and tax environment, but had less to say about how the wider community would benefit from and therefore buy into this approach.

A related undercurrent was the apparent reluctance of some participants to recognize and celebrate the contribution and value of private sector leadership in the economy in general. This attitude sometimes linked to a bias in favour of smaller, locally owned businesses with limited growth potential over more dynamic, growth-oriented enterprises that may or may not be locally owned. This speaks to an attitudinal environment that subtly discourages entrepreneurship and initiative at a time when it is badly needed to revitalize local economies.

A third area of contested ideas had to do with the environment and use of natural resources. Traditionally, rural economies have been built on resource extraction and the capacities of the land and sea to support agriculture, fisheries, mining and forestry production. Some participants emphasized the need to renew, modernize and in some cases expand these traditional sectors, while others described them as “sunset industries” or felt that there was little room to develop them without unacceptable damage to eco-systems.
Others asserted that maintaining a pristine environment may be more economically beneficial over the longer term than pursuing growth in the mining, forestry or energy fields. These participants often expressed doubts that business operators will employ responsible practices and that governments will regulate resource exploitation effectively.

Perhaps the most serious area where participating citizens seemed almost to occupy different worlds had to do with urban/rural differences, attitudes towards Halifax and the views of Haligonians regarding the rest of the province. Urban voices sometimes seem to be insensitive with regard to the economic challenges faced by rural communities. Blessed with many large public sector and private service industry employers, some people in Halifax may perhaps find it easy and even pleasant to imagine a Nova Scotia without pulp and paper and lumber mills, mines and quarries, fish plants and aquaculture operations. And industry leaders who work hard to implement sustainable harvesting practices in forestry and fisheries are not helped by lingering stereotypes of rural indifference toward environmental issues. There would appear to be a lack of understanding among some city dwellers of the contributions of the rural economy, and particularly of the dominance of rural industries in the province’s export sector.

By the same token, rural spokespersons are quite capable of exaggerating the extent to which “Halifax gets everything”, and often overlook the benefits that spread to rural regions from the dynamism of the region’s largest city. Parochial attitudes are still apparent in many areas of the province and inhibit serious consideration of important reforms such as restructuring of local government and the formation of the new Regional Enterprise Networks (RENs).

These and other attitudes constitute significant barriers to bringing people together around a shared vision for change and renewal.
The State of the Province, and How We Got Here

DRAWING LESSONS FROM NOVA SCOTIA'S HISTORY

The central concern of this report, and of the Commission’s work, is the interdependence of population and economy particularly as this applies to the rural regions of the province. It is therefore useful at the outset to examine how this relationship has evolved over time in Nova Scotia.

Chart I depicts the province’s population growth since 1851, with the projected trend to 2038. The red line describes Nova Scotia’s total population at the end of each decade, beginning with 277,000 people in 1851 and reaching 948,000 in 2011, with a possible decline to 926,000 by 2038. The blue vertical bars show the percentage change over each decade. The sizeable population increases in the mid to late 19th century were the result of large-scale immigration and a relatively robust economy, while similar trends from the 1940s through the 80s reflect the impacts of World War II, post-war immigration and the baby boom. Equally pronounced are the periods of slow or no growth indicative of a much weaker economy and high levels of out-migration in the first half of the 20th century, and similar trends combined with a declining birth rate since the 1980s.

Our current population challenge has two dimensions: a decline in the absolute number of people in the province but also the changing age group make-up. Nova Scotia now has the oldest age profile of any Canadian province except Newfoundland and Labrador, with more people retiring out of the labour force than young people entering. In 2011 the median age for our province was 43.6 compared to 40.6 for Canada and 39.9 for Halifax Regional Municipality. Of 54 municipalities in the province, only 8 had median ages that were lower than the provincial median age and 12 rural municipalities had median ages over 50. We are currently projected to have 100,000 fewer working age people by 2036 than we had in 2010, a nearly 20% decline in the available labour pool.

1 The age number where 50% of the people were younger and 50% older.
The pre-confederation global mercantile economy (up to 1879)

Riding a wave of immigration from the United States and the British Isles, entrepreneurs in numerous Nova Scotia communities took advantage of British trade preferences and the Reciprocity agreement with the United States to build up a vital mercantile trade supported by a world leading shipbuilding industry. A unique characteristic of this period was the accumulation of substantial pools of capital in local communities around the province.

Development of manufacturing and heavy industry (1879 — 1920)

After Confederation in 1867, and with tariff protection provided by the National Policy in 1879, entrepreneurs throughout Nova Scotia quickly shifted their investments to the manufacture of textiles, confectioneries, rope, furniture, refined sugar and many other products to feed a growing Canadian market. The provincial population was concentrated in larger towns with multiple factories (e.g., Truro, Amherst, Windsor,

We cannot take the continued stability of Nova Scotia’s population base for granted, with rural communities facing the most serious challenges.
Yarmouth) and in major industrial hubs in New Glasgow, Sydney and Halifax, with the latter emerging as the financial centre for the region.

By the end of this period, however, factories, iron foundries and steel plants throughout Nova Scotia were being battered by higher freight rates and ever-greater competition from industrial conglomerates in Central Canada and the United States. As the industrial economy faltered the major financial institutions transferred significant pools of capital to Montreal and Toronto, depriving local businesses of the resources needed to develop new products and pursue more accessible markets. The Maritime dream of industrial dominance in eastern North America was shattered by persistent disadvantages of capital scarcity and the high costs of accessing continental markets.

THE EMERGING RURAL ECONOMY (1920 — 1950)

The 1920s saw a net loss of population stemming from the near collapse of manufacturing in the province while boom conditions elsewhere in Canada and the U.S. drew thousands of workers away. Nova Scotia became a much more rural society sustained by small family enterprises engaged in seasonal farming, fishing and forestry work. Heavy industry – mainly coal mining and iron and steel production – continued in Cumberland, Pictou and Cape Breton counties, and new pulp and paper plants were built, but these were no longer major growth drivers for the province overall. Halifax remained an important government centre and a busy port but no longer a strong regional leader in industry and finance. Population growth was relatively strong in the 1930s as worker out-migration stalled during the Great Depression, and the 1940s saw more positive economic and population trends due to the impacts of World War II.

But overall it was during this 1920 to 1950 period that Nova Scotia found itself mired in the status of a “have not” province, predominantly rural, with an economy centred on the export of raw and semi-processed commodities mainly to North American markets. This period also saw the emergence of important social movements and concerted political action to improve the province’s prospects within the wider Canadian economy. These included the Antigonish Movement that brought co-ops and credit unions to rural communities, the development of labour unions in the industrial centres, and aggressive regional advocacy by business leaders through the Maritime Rights Movement.

THE GOVERNMENT-LED ECONOMY (1950 — 1995)

The major influences on economic and population trends after 1950 were the baby boom and the emergence of the modern welfare state in Canada. A new unemployment insurance system helped seasonal workers escape deep poverty and the federal government’s Equalization program provided the province with the revenues to modernize health, education and social services. The 1960s saw the introduction of the Canada Pension Plan, the Canada Assistance Program and the Canada Health Act (“Medicare”), all of which helped provide Nova Scotians with access to a Canadian standard of living.

On the economic development side the federal government launched new regional development agencies, infrastructure funds and community development programs. The Nova Scotia government set up its own economic development agencies leading to the current Nova Scotia Business Inc (NSBI) and Innovacorp. The two levels of government also invested heavily in public enterprises to offset major industrial failures, most notably the Cape Breton Development Corporation (DEVCO), Sydney Steel (SYSCO) and the heavy water plants in Glace Bay and the Strait area.

By the 1980s the public sector generally, including federal and provincial governments, contributed over 40% of GDP in Nova Scotia, the highest of any Canadian province. However with rising debt and deficits for all levels of government this pattern could not last. When the federal government undertook to balance its budget in the mid-90s Nova Scotia was especially hard hit by the closure of military bases and severe cuts in health and social transfers and unemployment insurance. Fiscal retrenchment in both levels of government hastened the closures of Sydney Steel and DEVCO with far-reaching impacts in Cape Breton.
The chart above compares the changing role of government in the Nova Scotia economy (total expenditures and capital investments as a percent of GDP) with that of private sector business, and also with government’s impact in all provinces in Canada, over five decades from 1961 to 2011. Government’s total impact in Nova Scotia (the blue line) rose sharply from the early 60s through to the early 80s before leveling off at or above 40% of GDP through to the mid-90s. Over that same period business investment declined slightly as a share of GDP. For Canada as a whole government did grow in influence, but more gradually and at a much lower level of overall impact.

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Today government is still the largest component of the provincial economy, but a smaller sector than a decade ago and no longer a major source of new growth in employment and wealth creation. It is also important to note that the government-led economy did not fully stabilize the population base. The 1971 to 2012 period saw a persistent trend to net out-migration as skilled workers and better-educated young people were drawn away to more attractive career opportunities elsewhere in Canada. In addition Nova Scotia has had a relatively poor record of attracting and retaining international immigrants.
THE CURRENT PICTURE

The role of government as the dominant growth driver in the Nova Scotia economy almost came to a crashing halt in the mid-1990s with cuts to federal health and social transfers, the restructuring of the Unemployment Insurance system to become the much leaner Employment Insurance program, the closure of several large military bases, and far-reaching cuts in civil service jobs. These factors combined with the fisheries collapse and later the closures of Sydney Steel and the DEVCO coal operations left many towns and rural communities across the province without their largest employers, and most of the jobs lost were in better paying and often unionized workplaces.

As the chart on the next page illustrates, without a dominant sector — whether public or private — driving new growth and stabilizing the population, the period since the mid-90s in Nova Scotia has been one of some turmoil with advances in a few areas and setbacks in others. Prior to 2005 tourism operators and exporters in the fisheries, pulp and paper and lumber sectors had banner years riding boom conditions in the U.S., but the Great Recession and the high Canadian dollar seriously curtailed export earnings resulting in business failures and lost rural jobs. The boom in offshore oil and gas came and went quickly, although the outlook is now more positive as it is for renewable energy production. There has been significant growth in some areas, most notably in private sector services, and new developments in new biotechnology, information and communications technology (ICT), aerospace/defense and oceans related research and development.

One other point of note about the recent decade and a half has been the influence of the community economic development (CED) movement in Nova Scotia. In response to widespread industrial collapse and major job losses in places like Cheticamp, Canso, Cornwallis, and industrial Cape Breton, community leaders formed new organizations to help set up training and adjustment programs for displaced workers, to advocate for greater government assistance and to create social enterprises to provide new jobs. The Coastal Communities Network brought industry and community groups together across the province to respond to plant closures and the loss of fishing opportunities. Pioneering organizations like New Dawn and Development Isle Madame attracted international attention for their entrepreneurship in assisting communities to recover from cataclysmic industrial closures. Throughout Nova Scotia CED became integral to the way community leaders thought about economic development generally, and both the federal and provincial governments provided resources and lent significant support to building capacity for “ground up” economic renewal.

However, despite these many efforts to turn around local economies, and the successes enjoyed by some industry sectors, the pattern of weak overall growth has persisted through the period, resulting in a continuing loss of skilled workers and educated youth to other regions and limited new investment and immigration. Nova Scotia, and particularly its rural regions, now hovers on the brink of serious economic and population decline unless macro-economic conditions improve and new growth drivers emerge in the near future.

![Economic Growth - Total Growth in Real GDP 1990 to 2009 (Per Cent)](chart)

Source: Nova Scotia Department of Finance
Changes in Contributions to GDP by Key Sectors of the NS Economy
1991 to 2012

-15.4%

2007–2012

2003–2007

1999–2003

1995–1999

1991–1995

1987–1991

Source: Nova Scotia Department of Finance, Statistics Canada
Lessons Learned

This brief historical overview shows the critical interdependence of economy and population. Given low birth rates, we cannot grow the population unless the economy is generating more jobs to stem out-migration and attract immigrants. We cannot sustain economic growth over time unless renewed population growth provides more workers, more entrepreneurs and more consumers. Nova Scotia has seen periods in its history in which economic and population trends came together to create significant growth, and other periods when the chemistry simply did not work for us. What can we learn from our past to help us cope with current challenges and opportunities? The following are a few points to consider in looking to change the future outlook.

THINGS CHANGE AND ATTITUDES MATTER

Nova Scotia’s story is not one of unbroken economic marginality and have-not status. We have had significant ups as well as downs, and developments inside the province and in the wider world have frequently transformed our circumstances and prospects. And Nova Scotia’s business and community leaders did not always think of themselves as disadvantaged competitors in a have-not province.

In the mid-19th century local entrepreneurs aggressively pursued opportunities around the world under conditions of global free trade, and when those conditions ended they set their sights on winning a dominant position in the expanding Canadian market. In numerous communities all around the province they rapidly established steel works, iron foundries, textile factories, sugar refineries and other industrial operations.

And when that economy no longer thrived workers and business operators shifted their energies to the development of resource-based exports. When the expansion of federal transfers in the post-World War II period provided Nova Scotia with new fiscal capacity local communities pooled their own resources to modernize schools, hospitals and social services. And municipal governments partnered with their federal and provincial partners to upgrade highways, water and sewage, waste management and public transportation systems.

We cannot sustain ECONOMIC GROWTH over time unless RENEWED POPULATION GROWTH provides more workers, more entrepreneurs and more consumers.

Today Nova Scotia faces new challenges as our dominant trading partner, the U.S., still struggles to recover from deep recession and as the centre of economic and political gravity in Canada shifts to the west. At the same time, however, free trade with Europe and expanding markets in Asia offer exciting opportunities to leverage our advantages as a global trader if we can shift to higher value products and build stronger trade linkages. Many established businesses around the province are thriving in this environment, and new start-ups are meeting success in software development, digital media, biotech and bio-fuels, medical technology, aerospace and defense, advanced materials, artistic production, and other highly competitive fields. What these entrepreneurs share in common, whether in traditional industries or new, “bleeding edge” sectors, is the confidence that our advantages and opportunities outweigh our deficits, and that with sound business strategies, hard work and creativity, Nova Scotia-based enterprises can succeed in the emerging global marketplace.

Societies are always dealing with changing circumstances, managing the factors they can control and adapting to conditions over which they have less influence. Nova Scotia’s story is no different except that we have not always been as quick as others perhaps to seize new opportunities and make needed adjustments. The past shapes but does not dictate our future. There are, as always, choices to be made and new opportunities to pursue.
SIZE AND LOCATION ARE A PROBLEM, AND A SOLUTION

Nova Scotia has a small economy and our resource industries and manufacturers will always face stiff competition from larger producers. Achieving greater success will depend on finding markets where we can get the highest value for our best and most unique products, and then continuously innovating and adjusting as market conditions change. It is also critical that we understand and take advantage of international value chains through which to combine our productive capacities and resources with partners in other places who can provide complementary inputs, new capital investment and improved market access.

The Nova Scotia economy has long been constrained by the high cost of land access to North American markets, but at times has had success in accessing wider markets via sea and, more recently, air transportation. Competing aggressively in world markets worked in the 19th century, and it is working today for progressive business operators in services as much as in goods production. Indeed, the lessons of history might indicate that the current trends to expanding global free trade offer economic opportunities for Nova Scotia that have been denied over a century or more by overdependence on national and U.S. markets. As well, many knowledge-based business activities are much less constrained by geography and location. Nova Scotia is well positioned to nurture such enterprises with our extensive post-secondary education system and up-to-date infrastructure for ICT.

GOVERNMENT CAN’T DO IT ALONE

The dramatic expansion of government’s role over the 1950 to 1995 period provided the strong foundations for a modern, self-reliant economy; but this in itself was not enough to bring such an economy fully into existence. A well-developed education system, high quality health care and effective income security programs, along with modern infrastructure for transportation and communications and a full suite of economic development programs, are widely seen as prerequisite to business growth and competitiveness in a modern economy. By and large Nova Scotia has met these preconditions, but the province still hasn’t seen the private sector

GEOGRAPHY AND ENVIRONMENT SHAPE ECONOMY

The pre-Confederation Nova Scotia economy was uniquely successful in linking local advantages to wider opportunities. Under free trade conditions skilled craftsmen built fast sailing ships to transport local commodities to markets all over the world. The manufacturing activities that emerged after 1867, while aggressively pursued, were less well suited to our location and resources, and many soon foundered in the face of competition from larger firms located closer to major markets. In the early 20th century, dispersed capital pools were brought together to support much larger investments in the coal and steel industries and certain manufacturing firms. These proved to be more sustainable because of proximity to critical resource supplies and reliance on sea transport.

In the 1920s the provincial economy shifted to resource industries where Nova Scotia again held competitive advantages. The challenge then became to realize greater value from the export of such commodities (e.g., newsprint, gypsum, lumber, seafood, apples, etc.) by improving productivity, adding value and diversifying markets. It is a challenge that many business operators in these sectors did not always manage well compared to competitors in other regions and countries.

Geographic and economic realities dictate that Nova Scotia’s rural communities, like rural areas everywhere, will continue to rely heavily on sectors like tourism, forestry, fisheries and agriculture, and on production from renewable and non-renewable natural resources. It is not a question of whether we will continue to depend on these industries – we have no choice — but rather, whether we can pursue them in new ways to add significant value to our products and reach higher value markets. Additionally, rural communities now understand that the environment is itself a valuable resource for tourism and for attracting people to live and locate businesses. Protecting vital eco-systems and promoting sustainable resource use will therefore be central to strategies to revitalize Nova Scotia’s rural economy.
growth needed to support such an economy, including its public sector, on a sustainable basis.

If the right foundations are in place in Nova Scotia, why hasn’t private sector growth “taken off”? Why hasn’t this province seen comparable levels of business growth and diversification over the period as Ontario, Manitoba or British Columbia, to say nothing of less advantaged regions such as South Korea, Singapore and Brazil? Why haven’t we had the positive population trends of similar-sized provinces like Manitoba and Saskatchewan?

In response, some stakeholders will argue that our economy suffers from “too much government” and that lower taxes and less regulation would create conditions for business investment to expand significantly. Those who support this view, however, may not take sufficient account of the many ways in which private enterprise benefits from government services and of the counter-stimulus impacts of steep cuts in government jobs and spending.

Other commentators assert that government can and should continue to be the dominant source of economic stability and growth in the province. They point to many public policy objectives – poverty reduction, affordable housing, environmental protection, inadequate educational outcomes – where improvements should be made and argue that solving these problems is the best way to turn the economy around. But these advocates often overlook the harsh reality that if government continuously grows its hiring, spending and capital investment faster than the overall economy, and therefore has to keep raising tax rates and borrowing more to sustain such stimulus spending, it eventually runs out of room to maneuver fiscally and politically.

Many taxpayers and business operators strongly resist such policies and higher debt servicing costs sharply erode spending capacity. (In 2012, the Nova Scotia government spent $843 million to service its debt, equivalent to 10% of total departmental spending). In the absence of significant growth in the wider economy to produce higher tax revenues without higher tax rates or more debt financing, major new spending is simply not sustainable.

[Auditor General] Jacques Lapointe said the province’s net debt increased to $13.9 billion. The province’s per capita debt is also up; as the population ages and declines, each Nova Scotian represents $14,832 of the debt. “The province must address its population problem and find ways to reduce overspending if the debt is to decrease,” he said.

[Lapointe] says both the immediate and longer outlooks are unfavourable on sustainability measures such as long-term market debt, net debt ... net debt per capita and annual deficits. The most worrisome mismatch is that net debt has been growing faster than the population, which is also aging (a harbinger of higher future health costs and less employment income) and on track to eventually shrink. So while our net debt relative to the size of the economy and compared to provincial revenues is stable right now, demographics make the longer trend less sustainable. The same is true of annual spending as a share of provincial gross domestic product and of federal transfers as a share of total revenue. Federal transfers are an indicator of our vulnerability to revenue risks beyond our control.

Doc Jacques’s check-up tells us we have to improve much more than public financial management. We also have to attract a younger demographic and improve provincial productivity to turn these trends around.

The Chronicle Herald, 1/24/14

<table>
<thead>
<tr>
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<th>Projected Net Debt to GDP Ratio Federal &amp; Provincial Governments 2013-14</th>
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<tbody>
<tr>
<td>British Columbia</td>
<td>17.0%</td>
</tr>
<tr>
<td>Alberta</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>5.1%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>28.1%</td>
</tr>
<tr>
<td>Ontario</td>
<td>39.3%</td>
</tr>
<tr>
<td>Quebec</td>
<td>49.8%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>35.9%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>35.8%</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>36.2%</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>25.1%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>33.1%</td>
</tr>
</tbody>
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A third view, shared by many historians and economists, defines the key problem for Nova Scotia as inadequate access to capital. The reluctance of dispersed community-based entrepreneurs to consolidate a financial “metropole” in the 1890s to rival Montreal and Boston meant that local businesses had difficulty financing larger investments to compete with rivals in other regions. By the 1920s most of the province’s larger banks and trust companies had shifted their funds to central Canada, and undercapitalized rural industries found themselves locked into the exportation of minimally processed commodities.
And there is significant room to streamline regulatory processes, to improve communications between business and government, and to integrate government services so that businesses don’t have to navigate multiple agencies with overlapping and sometimes competing mandates. Having a business champion or ombudsperson within government might be an effective way to encourage and facilitate private sector economic development leadership and initiative.

### Average Annual Per-Capita Venture Capital Investment Nationally and by Province (excluding PEI and N&L), 2007–2011

<table>
<thead>
<tr>
<th>Province</th>
<th>Average Annual Per-Capita Venture Capital Investment</th>
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<tbody>
<tr>
<td>Quebec</td>
<td>$59.70</td>
</tr>
<tr>
<td>British Columbia</td>
<td>$51.70</td>
</tr>
<tr>
<td>Ontario</td>
<td>$42.10</td>
</tr>
<tr>
<td>Canada</td>
<td>$41.10</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>$26.40</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>$24.80</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>$22.20</td>
</tr>
<tr>
<td>Alberta</td>
<td>$17.70</td>
</tr>
<tr>
<td>Manitoba</td>
<td>$11.30</td>
</tr>
</tbody>
</table>

Source: Canada’s Venture Capital and Private Equity Association

This pattern of weak private sector capital formation persists to this day with a consistent, and in some cases widening gap between Nova Scotia and most other Canadian provinces. A wide range of government programs has been in place to offer affordable credit and equity investments, and new venture capital funds have been set up, but to date we have not seen major improvements. Experts debate whether simply expanding the supply of affordable capital will make the difference, or whether there are deeper issues to be addressed first, key examples being the need to attract more immigrant investors and to promote entrepreneurship among youth.

While these different views all have merit, an extended debate about government versus private sector economic leadership may distract attention from the tough choices we now face in Nova Scotia. We can’t escape the fact that significant private sector growth and expanded trade are essential if the provincial economy is to generate new wealth, provide more and better jobs, and support renewal of rural communities over the longer-term.

Real leadership and new initiative needs to come from both the private and public sectors, from key institutions in the voluntary sector, and from citizens through their community organizations. Decision-makers in every sphere need to be asking themselves, how can we improve what we now do, and do new and different things, to generate better outcomes?
THE LIMITS OF BOTTOM-UP DEVELOPMENT

In June of 1998 the Coastal Communities Network held an important conference at White Point Beach with 170 community leaders and CED activists from around the province. The central theme of the gathering was that neither governments nor big business were likely to offer lasting solutions to the economic challenges facing rural communities, and that rural people would themselves have to lead in creating better futures through organization, creativity and cooperative effort. The conference report expressed the determination of the participants to help rural communities build a better future through ground-up activism:

Communities are surviving the crisis. We are moving past grief and denial to clearer understandings of realities and challenges. We are developing new leadership and moving past dependence on government to taking control. We are gaining a knowledge base, a new sense of power and openness to innovative approaches... We have strength and resilience, a strong sense of community, and are able to build on historical identities and traditions, openness to change on individual and community levels, pride in community, [and] creativity on a community level... We are committed to self-reliance [within] a strong co-operative tradition.3

Looking back from today’s vantage point, we very much celebrate the courage and commitment of these active citizens in taking responsibility for the state of their communities and in building the skills and capacities to lead them forward, but we also recognize that the CED movement has not achieved many of the advances that were hoped for. In situations where major industrial operations closed, often throwing hundreds of well-paid employees out of work, CED organizations had limited possibilities of creating similar numbers and types of new jobs although they often were effective in supporting small business start-ups and self-employment.

Another constraint on grass roots economic development is the dependence on government for core funding and working capital for CED programming. Many such organizations received good support initially but then were vulnerable to policy changes that replaced core funding with short-term project support, undermining capacities to address local priorities and to plan and implement longer-term change.

On the most basic level experience with CED in Nova Scotia and elsewhere suggests that, in situations where the wider macroeconomic environment is not conducive to business success generally, it is difficult for bottom-up efforts to turn around a local economy. In 2000 Dr. Donald Savoie undertook a study of the potential of CED as a possible alternative to traditional regional development policies and programs. He concluded that in many situations CED may be an important component of a local economic renewal process supported by government and perhaps new private sector activity, but it is not an adequate substitute for sound regional development policy and programming and for substantial new investment and more mainstream business expansion.

In spite of the promise that community economic development may present in certain circumstances and for certain communities, it will never be the complete answer for Atlantic Canada. Put differently, it can complement broader regional development efforts, but it can never replace them.4

In sum, while the energies, resilience and creativity of CED initiatives in rural communities will be valuable components of an effective provincial growth and renewal strategy, in most cases they are unlikely to provide the dominant components of such a strategy.

THE CHALLENGE OF LABOUR MOBILITY

People, and especially younger and more skilled people, will pursue opportunities to improve their situations and realize their aspirations. Labour markets are constantly reshaped by the ups and downs of regional economies, and significant numbers of workers will move with these shifts. In the 1920s, many workers left failing factory towns of the Maritimes to find better opportunities in the booming industrial areas of central Canada and the “Boston States”. Nova Scotia experienced a net loss of population and a sharp decline in its economy over that decade. Today we are seeing the same trends as rapid expansion in Western Canada pulls thousands of our young people away.
Businesses throughout the Nova Scotia economy face a new and growing challenge in attracting and retaining skilled labour and this can be more daunting in the rural regions of the province. New immigrants and our own young people will not stay and raise families in local communities when they have much more attractive career opportunities in other places. This chart shows the age profile of people who left Nova Scotia for other provinces during the 2006 to 2010 period. The great majority was in the 20 to 34-age category, young people beginning careers, starting families and perhaps creating new businesses. When they leave, to a serious extent, they take the future of their communities with them.

Subsidizing enterprises that offer low wages and marginal attachment is at best a stopgap measure: we cannot rebuild local economies with such jobs. Temporary foreign workers are an effective means to meet the labour needs of seasonal industries, but they again will not sustain communities. Wage levels are of course not the only thing that makes jobs attractive: non-wage benefits and career advancement prospects, cost of living and quality of life factors, and the quality of health and education services and community amenities are all very important. Local and provincial governments and community groups need to work with business leaders on strategies to make our rural communities more competitive in an increasingly borderless regional and national labour market.

INCLUSIVENESS GOES WITH GROWTH

The community of Whitney Pier grew up around the steel plant in Sydney in the early years of the 20th century and by the 1950s had become a melting pot for people from many places and backgrounds — Polish, Ukrainian, Croatian, Italian, West Indian and Jewish immigrants along with people from the U.K. and Ireland, Newfoundlanders and African Nova Scotians. Not even in Halifax would one have found such cultural richness and integration at that time. Diversity and inclusiveness are not exclusive to cities, but they do tend to be more evident when the economy is growing and labour is in higher demand.

In contrast, in the 1950s Nova Scotia’s more rural regions were characterized by much greater separation and isolation for people from different racial, ethnic and even religious backgrounds. The Acadians had built up strong communities with their own churches, educational institutions, co-operatives and credit unions, but discrimination in employment and isolation from the wider economy held back their economic progress. Living in even greater social isolation Aboriginal people and African Nova Scotians experienced overt racism when seeking employment and access to public services. The residential school is a sad part of that history for First Nations.

Since 2007 Oxford Frozen Foods has used an innovative housing loan initiative to help its home community while building a committed workforce. The company provides interest-free loans for employees to purchase houses within the Oxford school district. The loan is then forgiven in increments over ten years. This helps both to retain employees and to maintain enrolment in a new school built with assistance from the company.

Oxford’s unique housing initiative is an example of the creativity that is evident in the company’s decisions: local and regional re-investment, diversified business lines, a growth orientation, global marketing, energy efficiency, and commitment to place.
Real progress has been made, but much work remains to be done to build a more inclusive and just society. Business and community leaders increasingly recognize that the economic exclusion of minority and disadvantaged groups is a dysfunction that hurts everyone. The labour force participation rate for Nova Scotia in 2013 was 63.4%, second lowest in Canada after New Brunswick. This means that nearly 290,000 working age people in the province are not in the labour force (neither employed nor actively seeking a job). If Nova Scotia were to reach the average participation rate for Canada (66.4%), some 24,000 more people would become available to replace the thousands of older workers who will retire in the near future.

Minority communities account for disproportionate shares of the unemployed or underemployed people in Nova Scotia. In the 2006 Census the employment rate for First Nations people in the province was just over 53%, and for African Nova Scotians about 62%, compared with 68% for the total working age population. The birth rate for these communities is higher than in the general population so they represent an important potential source of young new entrants to the labour force.

Opening up our workplaces to greater participation by minority and disadvantaged people, and building job skills and entrepreneurship among these groups, are critical objectives for social and economic progress in Nova Scotia. The realization of these objectives will require active commitments by business and community leaders as well as government.

IMMIGRATION IS ESSENTIAL

Nova Scotia’s current immigration picture is improving, but not dramatically. In 2012, 2,370 new immigrants arrived in Nova Scotia, an 11% increase from the year before and up 47% from 2001.

The evidence confirms that immigrants to Nova Scotia are generally successful. 42% of immigrants have a university education, compared to 17% of the non-immigrant population, and the unemployment rate for immigrants is 7.4%, compared to 10.0% for immigrants across Canada. Immigrant retention rates in Nova Scotia have steadily improved as well, from 48% during the 1996-2001 census period to over 70% since then.

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5 Statistics Canada (statcan.gc.ca/tables-tableaux/sum-som/lot/stor/fsscota-eng.htm). The labour force participation rate is the percentage of working age people (aged 18 to 65) who are either employed or actively seeking employment.

6 Employment Nova Scotia (novascotia.ca/employmentnovascotia/lma-information/documents/NLSMPlan2010-11v5.pdf). The employment rate is the percentage of the working age population actually in jobs.

would have been if Nova Scotia had achieved the same growth rate as Canada over the 1972 to 2012.

While there is some discussion during periods of higher unemployment, one rarely hears serious arguments that higher rates of international immigration have been bad for Canada over the longer-term. Why would we think they might be damaging for Nova Scotia? The periods in Nova Scotia’s history when the economy grew most significantly correspond to waves of new immigrants – most notably in the early to mid-19th century and the post-WWII period. It is a chicken and egg argument as to which needs to come first: immigration and economic expansion are mutually reinforcing and both are necessary if the future outlook is to improve.

Survey research carried out by the Commission found that attitudes on this issue were mixed. Nova Scotians appear to be very positive about newcomers from other parts of Canada but somewhat less welcoming to immigrants. There is a segment of the population that believes that immigrants take away jobs from other Nova Scotians to Nova Scotia, 2012, by Class

<table>
<thead>
<tr>
<th>Economic Class</th>
<th>Federal Skilled Worker</th>
<th>549</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Canadian Experience</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Provincial Nominee</td>
<td>954</td>
</tr>
<tr>
<td></td>
<td>Business Immigrant</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Live-in Caregiver</td>
<td>20</td>
</tr>
<tr>
<td>Family Class</td>
<td></td>
<td>470</td>
</tr>
<tr>
<td>Refugee Class</td>
<td></td>
<td>195</td>
</tr>
<tr>
<td>Other Classes</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2370</td>
</tr>
</tbody>
</table>

Source: Nova Scotia Office of Immigration

In an average year between 1972 and 2012, Canada as a whole increased international immigration at a rate 3.3 times greater than that of Nova Scotia. Nova Scotia has 2.7% of Canada’s population, but we do not receive that share of immigrants to Canada. The chart below compares the actual number of immigrants to Nova Scotia (1972 to 2012) with what the proportionate share would have been if Nova Scotia had achieved the same growth rate as Canada over the 1972 to 2012.

Survey research carried out by the Commission found that attitudes on this issue were mixed. Nova Scotians appear to be very positive about newcomers from other parts of Canada but somewhat less welcoming to immigrants. There is a segment of the population that believes that immigrants take away jobs from other Nova Scotians.

Actual Immigrants to Nova Scotia Compared to Proportionate Share of Total Immigrants to Canada

Source: Statistics Canada, Cansim Tables 051-0004 and 051-0042
In today’s global economy success is no longer a function of individual companies and local communities competing against each other. Economic development requires the alignment of business activities with government policies and programs and with education, training and research and development capacities. Rather than pursue the proverbial race to the bottom by constantly pressing for advantage over each other, success-oriented business and community leaders seek out new ways to collaborate to develop value chains, pool capital and skills, and to support innovation and market expansion.

Around the world we see that it is often the smaller jurisdictions – the Scandinavian countries, Scotland, New Zealand, particular Australian and American states – that are benefiting most from globalization because they are able to build internal consensus and work across sectors and different levels of government to implement coherent development strategies. Nova Scotians need to study these approaches and find ways to make them work for us. The recent dialogue between the mayors of Halifax and the Cape Breton Regional Municipality is a good example of leaders from different regions seeking common ground on shared priorities. Similarly, tourism industry groups from around the province have actively supported the new convention centre in Halifax because they know that new and bigger “destinations”, no matter where they are located, will increase the pool of potential visitors for operators everywhere else. Cabot Links, the excellent new golf course in Inverness County, may well have the same impact. This is the kind of strategic thinking that needs to be pursued throughout the Nova Scotia economy.

More attention needs to be directed to the many ways in which new people in our communities create jobs. All of us can look around and see examples of how recent flows of immigrants have injected new life into local economies – Dutch farmers, foreign trained doctors, and entrepreneurs in the Greek, Lebanese and American Buddhist communities, to name just a few. It is particularly interesting to note the number of young people who come to the province to attend universities and stay on to start businesses, many of them in leading edge fields such as bio-tech, ICT and the creative sector.

However, the Commission’s meetings with immigrants themselves and with community agencies that support them provided convincing evidence that newcomers to Nova Scotia often have difficulty gaining a foothold in the province by having their professional credentials and experience recognized and accessing jobs in their chosen fields. This is partially a technical issue of assessing foreign education and training standards, and governments, post-secondary institutions and community agencies are building capacities to do this more effectively. But there clearly are additional barriers stemming from negative attitudes and even racism when it comes to welcoming new people into our communities and hiring people “from away”.

Our relatively low rates of attraction and retention for international immigrants, along with our negative inter-provincial migration trend, are factors that most clearly differentiate Nova Scotia from other Canadian provinces and contribute to our weaker economic growth over the past 30 years.

**WE HAVE TO PULL TOGETHER**

Nova Scotia is a small place, with less than a million people and a day’s drive from one end to the other. It should be easy for us to seek and find consensus on ways to meet our challenges and build a better future, and to align our government policies, institutional capacities and private sector initiatives to pursue these objectives in a concerted way. And yet we are divided in multiple ways: 54 municipalities, 13 First Nations, multiple school and health boards, small business pulling against big business, distrust of investors “from away”, and rural regions pitting themselves against the cities. We often appear to be a house divided.

Our relatively low rates of **attraction and retention for international immigrants**, along with our negative **inter-provincial migration trend**, are factors that most clearly differentiate Nova Scotia from other Canadian provinces and contribute to our weaker economic growth over the past 30 years.

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Nova Scotians need to study these approaches and find ways to make them work for us. The recent dialogue between the mayors of Halifax and the Cape Breton Regional Municipality is a good example of leaders from different regions seeking common ground on shared priorities. Similarly, tourism industry groups from around the province have actively supported the new convention centre in Halifax because they know that new and bigger “destinations”, no matter where they are located, will increase the pool of potential visitors for operators everywhere else. Cabot Links, the excellent new golf course in Inverness County, may well have the same impact. This is the kind of strategic thinking that needs to be pursued throughout the Nova Scotia economy.
There are, however, too many examples where just the opposite is occurring, such as the resistance to reform in municipal government structures and the slowness of local governments to come together to form the new Regional Enterprise Networks (RENs), preferring in some cases to use scarce resources to continue competing with each other for development opportunities.

Overcoming the psychological barriers of division, distrust and discouragement may be just as important as raising capital, producing more products or finding new markets. Indeed, we may need to accomplish the former transformation before we can make much more progress on the practical aspects of economic development.

ECONOMIES GROW AROUND CITIES

Modern day experts describe the world economy as progressively reorganizing around urban regions that draw in people and capital, generate creative synergies and cross collaboration, and push out investment and expanded trade linkages to their regions. The essential ingredients for success in advanced, knowledge driven economies — R&D capacities, available workers with specialized skills, high concentrations of entrepreneurs bumping into each other, and access to venture capital and other financial resources — tend to cluster around urban centres through networks originating in universities, government agencies and financial and business organizations. Expanding cities and towns also generate internal markets for a widening range of products and services produced in their surrounding rural regions.

Nova Scotia has been slow to adopt this pattern. Historians have observed that the failure of 19th century community and business leaders in the Maritimes to concentrate their assets and entrepreneurial capacities in a regional centre was a significant disadvantage for local businesses trying to compete in continental markets. For a brief period in the early 20th century Halifax and Pictou County interests did pool their capital to build one of the largest steel complexes in Canada, and manufacturers, including Stanfield’s in Truro and Dominion Textiles in Windsor, had ready access to affordable capital from Halifax banks to support modernization. But this proved to be too little and too late to help the overall economy keeps pace with competitor regions.

As the chart shows, between 1951 and 2011 Nova Scotia’s urban population, i.e., people living in communities of 1,000 or more, as a proportion of the total shifted marginally from 54% to 57%, while Canada’s went from 62% to 81%.

Today Halifax is emerging as the largest and most influential urban centre in the Atlantic region with new investment flowing into dynamic sectors such as aerospace and defense, ICT and financial services. If wisely planned and managed, this trend will generate positive linkages and spread effects for other areas of the province.

However the city of Sydney and many of our larger towns have challenges on the fiscal side because they function as service centres for larger populations widely dispersed across surrounding rural areas. This is one key reason to accelerate the municipal reform process.

These are not arguments to abandon rural regions and move everything to Halifax and Sydney. The key point is that a small province or region needs a few dynamic urban centres to consolidate the elements essential to growth and innovation across its whole economy. Cities that play this role do not have to be huge and constantly expanding – some of the most successful cities
These are not arguments to abandon rural regions and move everything to Halifax and Sydney. The key point is that a small province or region needs a few dynamic urban centres to consolidate the elements essential to growth and innovation across its whole economy.

Internationally are mid-sized or smaller and relatively stable in population (e.g., Oslo, Edinburgh, Kitchener-Waterloo, Seattle, Perth [Australia], and others).

It is time – perhaps well past time — for Nova Scotians in all regions of the province to set aside parochial attitudes and to address themselves to the task of building a stronger, more productive and competitive economy to lift the whole province. Such an economy will not take shape evenly and at the same pace across all sectors and all regions of the Province, but that is not a good reason to perpetuate a wholly inadequate status quo.

We need more entrepreneurs

Nova Scotia has a long history of ambitious and successful entrepreneurs and every community can identify the business leaders who laid the foundations for their local economies in the 19th and 20th centuries – names like Churchill, MacKay, Stairs, Stanfield, Moir, Robb, Comeau, Killam, Sobey, Schwartz, Theriault, Jodrey and many others.

And we have had great leaders in the field of social entrepreneurship – Fathers Coady and Topshee in the Antigonish movement, and other rural men and women who developed Farmer’s and Scotsburn dairies and many other successful credit unions and producer and consumer co-ops.

But today we are more ambivalent on almost a cultural level about the contributions of the business sector and the role of individual entrepreneurs. Findings from the research and public engagement carried out by the Commission suggest that Nova Scotians do not always promote entrepreneurship or celebrate business success. Many communities seem more comfortable looking to government to drive change and renewal in their economic condition.

This of course is not unique to Nova Scotia. Urbanization, the economic dominance of service sector industries and the shrinking role of smaller, locally owned businesses all contribute to a general shift away from the entrepreneurial spirit that was so prevalent in earlier times, particularly in rural communities. Nevertheless by standard measures such as business start-ups, business retention, profit growth and capital investment, Nova Scotia lags behind most other regions of Canada. We seem to have special challenges in terms of the current climate for risk taking and creative business development.

Rebuilding the Nova Scotia economy, particularly in rural regions, may need to begin with an attitude shift on the role of business and entrepreneurial initiative, promoting it more effectively through our educational system and through the contributions of business leaders as role models and mentors in their communities.

Largest Urban Areas in Canada by Population

<table>
<thead>
<tr>
<th>City</th>
<th>Population 2011</th>
<th>% Change 1996 to 2011</th>
<th>% of Provincial Population 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toronto</td>
<td>2,615,060</td>
<td>9.6%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Montreal</td>
<td>1,649,519</td>
<td>6.6%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Calgary</td>
<td>1,096,833</td>
<td>42.7%</td>
<td>29.0%</td>
</tr>
<tr>
<td>Edmonton</td>
<td>812,201</td>
<td>31.8%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Winnipeg</td>
<td>663,617</td>
<td>7.3%</td>
<td>53.0%</td>
</tr>
<tr>
<td>Vancouver</td>
<td>63,502</td>
<td>17.3%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Halifax RM</td>
<td>390,096</td>
<td>14.1%</td>
<td>41.1%</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>222,189</td>
<td>15.0%</td>
<td>21.0%</td>
</tr>
<tr>
<td>St. John’s</td>
<td>106,172</td>
<td>4.0%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Cape Breton RM</td>
<td>97,398</td>
<td>-15.2%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Saint John</td>
<td>70,063</td>
<td>-3.4%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Moncton</td>
<td>69,074</td>
<td>16.5%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Fredericton</td>
<td>56,224</td>
<td>20.9%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

Source: http://en.wikipedia.org/wiki/List_of_the_100_largest_urban_areas_in_Canada_by_population
WE HAVE TO TRADE TO GROW

Being a small province, and one with slow population growth, means that Nova Scotia has a small domestic market. For most businesses to grow significantly, whether goods producers or service providers, they have to access larger external markets through trade activities.

In 19th century Nova Scotia, business was all about exports. First within the British mercantile empire, and then increasingly with the United States and Central Canada, local entrepreneurs invested heavily in getting local commodities to the best available markets in other places. They evolved from minimally processed primary products to finished manufactured goods in aggressive pursuit of those external market opportunities. When those enterprises began to lose competitive ground, production shifted back to semi-processed primary products targeting wider international markets.

Through the middle part of the 20th century, up to the 1970s, Nova Scotia’s private sector economy was largely centred on export trade, with most of the production coming from rural regions and industrial Cape Breton. As the chart below shows, however, there then began a long period of decline in trade activity. From 1981 to 2010 the province’s balance of trade deficit almost doubled from about -$4.5 billion to -$7.9 billion. The trend continues: battered by pulp mill shutdowns, Nova Scotia’s merchandise exports fell by more than 14% in 2012, the weakest performance among Canadian provinces.

With the high Canadian dollar and recession in the U.S. the Canadian economy overall has seen weaker trade conditions in recent years. Total trade growth for Canada was only 1.5% in 2012. However, our difficulties in Nova Scotia on the trade side of the economy are much more substantial and persistent, indicative of deeper structural weaknesses. As evidenced by the table to the right, our province does not compare well with most others in terms of the number of firms that are participating in trade activity.

Deficit in Balance of International, Interprovincial and Total Trade – Nova Scotia
1981 to 2010

Source: Statistics Canada, Provincial Economic Accounts
The table depicted below provides insight into the export sectors that have been gaining or losing ground over the past decade.

### Value of Merchandise Exports from Nova Scotia, 2003 and 2012 ($millions)

<table>
<thead>
<tr>
<th>Export Sector</th>
<th>2003</th>
<th>2012</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>32621 - Tire Manufacturing</td>
<td>$686</td>
<td>$1,028</td>
<td>50%</td>
</tr>
<tr>
<td>31171 - Seafood Product Preparation and Packaging</td>
<td>$634</td>
<td>$489</td>
<td>-23%</td>
</tr>
<tr>
<td>11411 - Fishing</td>
<td>$560</td>
<td>$433</td>
<td>-23%</td>
</tr>
<tr>
<td>32211 - Pulp Mills</td>
<td>$191</td>
<td>$165</td>
<td>-14%</td>
</tr>
<tr>
<td>31141 - Frozen Food Manufacturing</td>
<td>$77</td>
<td>$121</td>
<td>57%</td>
</tr>
<tr>
<td>32212 - Paper Mills</td>
<td>$473</td>
<td>$112</td>
<td>-76%</td>
</tr>
<tr>
<td>32611 - Unsupported Plastic Film, Sheet and Bag Manufacturing</td>
<td>$69</td>
<td>$88</td>
<td>29%</td>
</tr>
<tr>
<td>32111 - Sawmills and Wood Preservation</td>
<td>$194</td>
<td>$81</td>
<td>-58%</td>
</tr>
<tr>
<td>41811 - Recyclable Metal Wholesaler-Distributors</td>
<td>$24</td>
<td>$76</td>
<td>218%</td>
</tr>
<tr>
<td>33451 - Navigational, Measuring, Medical and Control Instruments</td>
<td>$65</td>
<td>$66</td>
<td>2%</td>
</tr>
<tr>
<td>32629 - Other Rubber Product Manufacturing</td>
<td>$38</td>
<td>$66</td>
<td>72%</td>
</tr>
<tr>
<td>32411 - Petroleum Refineries</td>
<td>$84</td>
<td>$56</td>
<td>-34%</td>
</tr>
<tr>
<td>33392 - Material Handling Equipment Manufacturing</td>
<td>$14</td>
<td>$54</td>
<td>283%</td>
</tr>
<tr>
<td>33641 - Aerospace Product and Parts Manufacturing</td>
<td>$28</td>
<td>$51</td>
<td>79%</td>
</tr>
<tr>
<td>32599 - All Other Chemical Product Manufacturing</td>
<td>$10</td>
<td>$48</td>
<td>405%</td>
</tr>
<tr>
<td>33261 - Spring and Wire Product Manufacturing</td>
<td>$22</td>
<td>$43</td>
<td>97%</td>
</tr>
<tr>
<td>32613 - Laminated Plastic Plate, Sheet and Shape Manufacturing</td>
<td>$23</td>
<td>$42</td>
<td>80%</td>
</tr>
<tr>
<td>33322 - Rubber and Plastics Industry Machinery Manufacturing</td>
<td>$16</td>
<td>$37</td>
<td>129%</td>
</tr>
<tr>
<td>33422 - Radio and TV Communications Equipment</td>
<td>$22</td>
<td>$37</td>
<td>73%</td>
</tr>
<tr>
<td>21111 - Oil and Gas Extraction</td>
<td>$1,200</td>
<td>$29</td>
<td>-98%</td>
</tr>
<tr>
<td>31321 - Broad-Woven Fabric Mills</td>
<td>$29</td>
<td>$29</td>
<td>0%</td>
</tr>
<tr>
<td>11212 - Dairy Cattle and Milk Production</td>
<td>$7</td>
<td>$22</td>
<td>206%</td>
</tr>
<tr>
<td>32619 - Other Plastic Product Manufacturing</td>
<td>$21</td>
<td>$21</td>
<td>-2%</td>
</tr>
<tr>
<td>31411 - Carpet and Rug Mills</td>
<td>$12</td>
<td>$20</td>
<td>68%</td>
</tr>
<tr>
<td>21239 - Other Non-Metallic Mineral Mining and Quarrying</td>
<td>$76</td>
<td>$19</td>
<td>-75%</td>
</tr>
<tr>
<td>Sub-total</td>
<td>$4,574</td>
<td>$3,233</td>
<td>-29%</td>
</tr>
<tr>
<td>Others</td>
<td>$903</td>
<td>$579</td>
<td>-36%</td>
</tr>
<tr>
<td><strong>Total (All Industries)</strong></td>
<td><strong>$5,477</strong></td>
<td><strong>$3,812</strong></td>
<td><strong>-30%</strong></td>
</tr>
</tbody>
</table>
Nova Scotia’s exports doubled between 1992 and 2002, reflecting an expansion in paper production and the establishment of a new export industry, offshore natural gas. Together, these two industries contributed almost half of total export growth over this period. By the mid-2000s, export markets for Nova Scotia’s resource-based manufactured goods had eroded under continuing pressure from low-cost producers elsewhere in the globe. The rise in the dollar and the drop in US demand at the end of the decade exacerbated this trend. More recently, weak markets and the depletion of the province’s largest natural gas field, plus a shift towards domestic distribution have cut exports in this category to 4% of the peak achieved in 2002.

Nova Scotia’s merchandise exports in 2012 were $3.8 billion, down 14% over the previous year.

Atlantic Provinces Economic Council
Report to Nova Scotia ERDT, March 21, 2013

The fish and seafood group recorded an export value of $873 million in 2012, an increase of 4.3% over 2011. This represented 22.8% of total provincial exports [second only to rubber and tires at 27.5%] ... the United States remained the major export destination for the province’s fish and seafood exports, but its market share decreased to 58%, down from 62% in 2011. In contrast, China’s share almost doubled in 2012, from 5% to 9%.

From The State of Nova Scotia Trade 2012
Department of Economic and Rural Development and Tourism

With a 30% fall-off in the value of exports over the 2003 to 2012 period, the overall trend was clearly negative. Much of the loss in value is attributable to the shutdowns in the pulp and paper industry, reduced prices and falling production levels for natural gas, and low prices for seafood and lumber products. But we should also note some bright spots. Export of tires increased 50% despite deep recession and the high dollar, suggesting that the industry is relatively robust. A number of smaller sectors are showing distinct signs of life, including aerospace, materials handling, frozen food products, certain chemicals and rubber manufacturing.

It is important to note that in 2012 some 70% of Nova Scotia’s exports were generated from the key rural sectors of manufacturing (tires, plastics, textiles, etc.), fisheries, forestry (including pulp and paper) and agriculture. While some observers characterize these as “sunset industries”, they are still the dominant elements of our private sector, goods producing economy, and therefore vital to the interests of the entire province.

The most recent data suggests that 2013 saw a recovery in trade performance in the province with an almost 10% improvement in value of exports by the third quarter of the year. But the overall picture remains challenging. Again in a small economy, it is difficult to imagine how a lasting economic turnaround and renewal might be accomplished without a lot more businesses generating a lot more exports of goods and services than is currently the case.

Exporting Firms by Province (2009)

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of exporters</th>
<th>Per 100,000 population</th>
<th>% Change 1999-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>307</td>
<td>60.6</td>
<td>38%</td>
</tr>
<tr>
<td>PE</td>
<td>203</td>
<td>145.5</td>
<td>25%</td>
</tr>
<tr>
<td>NS</td>
<td>851</td>
<td>90.8</td>
<td>-10%</td>
</tr>
<tr>
<td>NB</td>
<td>728</td>
<td>97.5</td>
<td>-14%</td>
</tr>
<tr>
<td>QC</td>
<td>10,681</td>
<td>137.8</td>
<td>11%</td>
</tr>
<tr>
<td>ON</td>
<td>21,400</td>
<td>165.5</td>
<td>5%</td>
</tr>
<tr>
<td>MB</td>
<td>1,564</td>
<td>129.7</td>
<td>5%</td>
</tr>
<tr>
<td>SK</td>
<td>1,128</td>
<td>111.3</td>
<td>31%</td>
</tr>
<tr>
<td>AB</td>
<td>4,374</td>
<td>121.8</td>
<td>22%</td>
</tr>
<tr>
<td>BC</td>
<td>6,401</td>
<td>146.0</td>
<td>0%</td>
</tr>
<tr>
<td>CAN</td>
<td>47,637</td>
<td>143.0</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada, International Trade Division, Exporter Register Database
BIG OR SMALL, WE NEED BUSINESSES THAT GROW, AND MORE OF THEM

Most Nova Scotians can go back over many years to list off the mega projects that have never quite happened and the big business failures that left workers and communities high and dry. Such a list is often used to bolster arguments that governments should only support locally owned small and medium sized businesses. But the economy is never that simple.

Comparision: Small, Medium and Large Businesses

<table>
<thead>
<tr>
<th>Businesses by Number of Employees</th>
<th># of Businesses</th>
<th># of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>31,814</td>
<td>411</td>
</tr>
<tr>
<td>&lt; 5 Employees</td>
<td>17,759</td>
<td>34</td>
</tr>
<tr>
<td>5 to 49 Employees</td>
<td>9,406</td>
<td>95</td>
</tr>
<tr>
<td>50 to 99 Employees</td>
<td>847</td>
<td>30</td>
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<tr>
<td>100 to 499 Employees</td>
<td>1,008</td>
<td>50</td>
</tr>
<tr>
<td>500+ Employees</td>
<td>794</td>
<td>203</td>
</tr>
</tbody>
</table>


The above table compares the employment levels generated by different sized businesses in Nova Scotia. Some 92% of businesses in Nova Scotia fall into the small business category, i.e., have less than 50 employees. However the greater share of employment is generated in larger organizations, with better than two-thirds of all jobs located in entities with 50 or more employees.

And larger organizations often provide better paying jobs. In 2006 the 8% of all businesses that had 50 or more employees generated nearly three-quarters of total payroll income in the province, with average payroll per employee at $38,537 compared to $29,244 in smaller businesses.

The Chronicle Herald, January 10th 2014

Sean Murray, president and CEO of Advocate Printing & Publishing, said some of Canada’s productivity gap could be attributed to the country’s largely rural makeup. A small manufacturer in Pictou, for example, may not be as efficient as a company serving a larger market that can take advantage of economies of scale.

“Rural Nova Scotia certainly benefits significantly from some large businesses. But small businesses are the backbone of many rural communities, and what we have to do is to try to encourage those small businesses to export and grow.”

Colin Deacon, President and CEO of BlueLight Analytics

The Chronicle Herald, 10/04/2013

Nova Scotia has 29,179 “small businesses.” Only three percent of these are defined as being high-growth and fewer than five per cent generate meaningful revenue from export sales. So a ‘small business’ may be a fast growing high-tech exporter that invests heavily in research and has 50 full-time high-paid employees or it could be a corner store with five part-time minimum wage workers...

Exporters ... make money by selling Nova Scotian products and services to global customers. Exporters put the world’s money into our pockets. It is export revenue that will enable us to afford the improved government services that our politicians keep promising to deliver.

Our economy has been stalled for decades, in part because too many of our most capable citizens have sought opportunities else where. If we want to reverse this trend, we need to focus our attention on accelerating the success of the exporters that create the high paying and highly skilled jobs that inspire talented Nova Scotians and the new immigrants we so desperately need.

Colin Deacon, President and CEO of BlueLight Analytics

The Chronicle Herald 10/04/2013
A more basic issue arises when the focus is on economic growth. Nova Scotia and its rural communities in particular need more jobs and better incomes to attract and retain people. The category of “small business” includes many personal services (e.g., incorporated doctors, dentists and lawyers), retail stores and restaurants, dairy farmers, real estate firms and other types of businesses that depend to a large degree on other sectors of the economy to generate consumer buying power. Only a relatively small percentage of enterprises in the province is involved in business activity aimed at increasing export sales, expanding market shares and creating significant numbers of new jobs as they expand. While many such businesses start small, if they are successful they often don’t stay that way – they grow larger themselves, or form partnerships with other enterprises to pool capital and market access capacities, or they get bought out by bigger competitors.

Nova Scotia has many small and medium-sized businesses that are active in potentially high growth sectors — software development, advanced materials, bio-technology, pharmaceuticals, film and digital media production, ocean science, vineyards, green energy, etc. And we have larger companies that are well established in these and other fields and that often nurture or spin off smaller start-ups. To get the overall economy growing on a stable and sustainable basis we need many more such companies, big and small, and we need more of them to be successful and to keep expanding.

However, the recent performance of the Nova Scotia economy in terms of overall enterprise start-ups has not been positive. The graph to the left shows that the number of new firms registering to pay business taxes between 2002 and 2011 averaged 2,800 with ups and downs but no clear evidence of growth over the period.

In summary, the significant turnaround in the Nova Scotia economy that the Commission feels is necessary will require much stronger business growth than we are now seeing in the province. We need more start-ups and, in the larger scheme of things, it does not matter whether they are goods producers, service sector firms, or creative sector enterprises. And their size doesn’t matter or whether they are conventional private businesses, or co-operatives or social enterprise. We just need them to grow, employ more people and participate in out-of-province trade.

**While many such businesses **START SMALL, **if they are successful they often don’t stay that way — they grow larger themselves, or form **PARTNERSHIPS with other enterprises to pool capital and market access capacities, or they get bought out by bigger competitors.**

**To get the overall economy growing on a **STABLE and **SUSTAINABLE basis we need many more such companies, big and small, and we need more of them to be successful and to **KEEP EXPANDING.**
Concluding Comment

In reflecting on Nova Scotia’s history and current circumstances we might observe that the periods of population growth and economic dynamism in Nova Scotia shared certain characteristics — they were times when our business, government and community leaders pursued broadly shared goals, embraced change, welcomed new people, reached out to the world and took risks. Conversely, our periods of slower growth have been more often characterized by risk avoidance, isolation from the wider world and parochial competition. The same contrast might today apply to different sectors of the economy, different types of business enterprises and different communities: some embrace change, growth and collaboration while others are reluctant to risk what they have or to stray from the beaten path.

If Nova Scotia’s economy were performing well today in providing jobs, sustaining communities and supporting high quality public services, the wise advice would be to stay the course and avoid major changes. But this is not our situation, nor does the future outlook promise relief. The Commission has concluded that the economic and population challenges we now face in Nova Scotia, and dramatically so in our rural regions, demand new vision, innovative approaches, greater collaboration and a greater willingness to take on the risks associated with economic change and progress.
On the basis of the evidence the Commission concludes that over the next decade or more Nova Scotia will be significantly reshaped, for better or for worse, by what happens in two interdependent areas, population and economy. The current trends in both areas are challenging for the province as a whole but much more so in many of our rural regions. The current situation is not unlike the crisis in the 1920s when rapid de-industrialization in Nova Scotia, simultaneous with a booming economy in central Canada and the “Boston States”, led to large-scale out-migration of working age people and plunged the province into persistent have-not status.

While the current trends are largely negative, the future outcomes are not fully determined. If the province continues on its current path many communities will experience a declining standard of living as the economy shrinks and people, businesses and services increasingly concentrate in our central urban region. The scope for government to counter these trends, while grappling with expanding pressures on health and social services, will be progressively narrowed by weakening tax revenues and unsustainable levels of public debt.

If, however, the province is able to pursue a different path – one that embraces change and renewal, and builds on its assets and opportunities – it may be possible to stabilize economic and population trends and then, gradually, to start building a much more positive future.

These assets and opportunities are substantial and clearly sufficient to support a significant economic turnaround if developed or pursued effectively. Key examples are:

An improving macroeconomic outlook

After a decade of macroeconomic trends being generally negative for Nova Scotia – e.g., the high Canadian dollar, the Great Recession in the U.S., low natural gas prices, reduced tourism travel after 9/11 – Nova Scotia may now be entering a more positive period. The dollar has retreated to the 90-cent range with expectations of further shrinkage over the next year, and natural gas prices have recovered just as production from the offshore hits a modest upswing. With economic recovery gaining momentum in the U.S., continuing growth in Asian markets, and free trade with Europe on the horizon, the prospects for Nova Scotia’s export industries are more promising than they have been for some time. The challenge for Nova Scotia will be to exploit these opportunities to build the stronger economic foundations for stability and growth beyond this next up-cycle. Nova Scotia has a history of successful entrepreneurs who have seized such opportunities in the past to build world-leading businesses throughout the province. These capacities are evident today in our many high performing and innovative business enterprises. However there are just not enough of them at this point to turn the tide.

In terms of our financial, economic and employment stability, the rise of the global East and South .... is hugely beneficial to the West. Economist Homi Kharas predicts that the size of the global “middle class” — those earning $4,000 to $36,000 a year — will rise from 1.8 billion people now to 4.9 billion in 2030. Two-thirds of them will live in Asia, and only a fifth in the West.

This will mean greater consumer choice and a lower cost of living. But it also means huge new markets for Western businesses. Starting this year, for the first time China will be importing more goods than the United States does. More than half of the world’s exports are currently imported by the developing world.

Columnist Doug Saunders, Globe & Mail 1/18/14
The value chain for the [Nova Scotia] food industry moves well beyond direct goods production to encompass many other products and services that are generated as food products move through various stages of production to reach consumers. This includes distribution through wholesalers, distributors and retailers; infrastructure, transportation and storage systems; as well as marketing, research and other consultant services. Beyond its direct output, the food sector is estimated to contribute a further $1.1 billion in indirect and induced spending in the province’s economy, for a total contribution of $2.2 billion.

The rapid growth of emerging economies in Asia is expected to transform the global food industry over the next decade. ... It is estimated that the world will require 50% more food to meet the increase in demand.

Global Opportunities for Nova Scotia's Food Industries.
APEC Report for ONE Commission, January 2014

APEC’s 2013 Major Projects Inventory identified a record $115 billion worth of major investment projects in various stages of development across Atlantic Canada, with the total project value up 15% over last year’s MPI.

The 30th edition of the MPI, which was released in June 2013, catalogued 388 major investment projects in various stages of development across Atlantic Canada. New announcements in the past two years include an escalation in the estimated costs of several projects in Newfoundland and Labrador, along with the awarding of the national shipbuilding project to the Halifax Shipyard plus a proposed LNG export plant in Nova Scotia. An expansion in Nova Scotia’s offshore oil and gas exploration, new mining projects including an underground nickel mine in Labrador and the potential for an east-west oil pipeline into New Brunswick are also adding to the region’s pool of investment. In the past year, investment has strengthened in Atlantic Canada with current-year spending on major projects up about 5% to $14.3 billion... and in Nova Scotia, up 10% to $3 billion.

Major Projects in Atlantic Canada and their Impact on the Halifax Gateway,
Atlantic Provinces Economic Council
September 2013

Regional Capital Projects

The more than $100 billion in major capital projects now taking shape across the Atlantic region, including the $25 billion naval shipbuilding contract, the Muskrat Falls and Maritime Link energy projects and new offshore energy development, hold potential to generate higher value jobs and spin-off business growth and diversification in the region. Among other things, these developments taken together hold potential to draw skilled labour back to the province for full and rewarding careers.

An Excellent Post-secondary Education (PSE) System

The universities and the Nova Scotia Community College represent one of Nova Scotia’s greatest comparative advantages. These institutions are major employers in their communities, they generate the lion’s share of research and development activity in the province and they increasingly function as an export sector with growing numbers of out-of-province and international students. A 2011 report by Gardner-Pinfold Consulting Economists, The Export Value of Nova Scotia Universities, attributes $840 million in annual export revenue to Nova Scotia’s degree-granting institutions. Several new employers in financial services, ICT and other knowledge-driven industries have recently located in Nova Scotia specifically because of the capacities of the college and university system to supply necessary talent.

Nova Scotia is home to ten universities including some of the oldest in Canada – that are diverse in size, location and spanning missions that range from primarily undergraduate (Acadia University, Cape Breton University, Mount Saint Vincent University, Saint Francis Xavier University and Saint Mary’s University, and University of Kings College) to a medical/doctoral research university (Dalhousie) to more specialized institutions (Atlantic School of Theology, Nova Scotia College of Art and Design University, and Université Sainte-Anne). Nova Scotia is also home to the multi-campus Nova Scotia Community College (NSCC) that has recently transformed itself into one of Canada’s leading applied and technical colleges. The Commission believes that Nova Scotia, not unlike Massachusetts, should view its high concentration of universities and colleges as a fundamental asset in growing our economy. There are two important dimensions to this perspective that warrant particular attention.

Firstly, it is essential that our PSE institutions maintain a competitive position that is primarily driven by quality. Over the past several decades, Canadian higher education has
become increasingly competitive and qualified students have an unprecedented level of choice for their college or university education. Nova Scotian universities have fared well in this environment and currently rank first in Canada in terms of the percentage of students who come to the province from other parts of Canada. Our province also needs NSCC to continue its strong results — 86% employment six months after graduation, 94% in Nova Scotia - in delivering on its legislated mandate to address current and future labour market needs.

In addition, international student enrolment increased by 122% from 2002-03 until 2012-13. While the shrinking population of young people in the province is a challenge in the near-term, our universities have had considerable success in attracting highly talented men and women from around the world to come to study in Nova Scotia. These students not only build the academic vitality of their respective institutions but they also live in, and contribute to, communities throughout our province. Many of these out-of-province and international students represent a potential pool of talent for Nova Scotian businesses and, given our pressing demographic challenge, a potential source of significant population growth.

The second major contribution of our PSE sector occurs through research and development where there is potential for expanded collaboration and partnership among institutions and with government and the business sector. In 2012, the universities together generated $170 million in research funding, more than four-fifths of it at Dalhousie, the leading research university in Atlantic Canada. In fact, university research in Nova Scotia forms a disproportionate percentage of the total provincial R&D as compared to the Canadian average. In 2011 our higher education system accounted for 74% of all R&D expenditures in Nova Scotia versus 38% for Canada as a whole. Private business generates more than half of this spending in Canada but accounts for only 15% in this province.

If Nova Scotia is to expand its business base and be more productive and competitive, we need more private sector investment in R&D and we need to improve the mechanisms to allow university-based research to contribute to new venture creation. There are signs of progress on this front. Springboard Atlantic has been effective at increasing research commercialization and the provincial innovation voucher program has grown to 255 partnerships between business and universities and NSCC. However, given Nova Scotia’s peculiar R&D landscape with its heavy reliance on university-based research, it is imperative that we optimize our technology transfer and commercialization processes.

**Untapped Potential for Resource Development and Renewable Energy**

Canada’s economy has fared relatively well since the Great Recession in 2008/09 due to two key factors: our sound banking system and growing global demand for energy and mineral resources and agricultural commodities. Nova Scotia has not benefitted as much from this strong trade environment due to our over-reliance on the one U.S. market for our exports in forestry, pulp and paper, fisheries and other sectors. As the recovery gathers momentum in the U.S. and Europe, and as access to Asian markets continues to improve, there will be significant opportunities for Nova Scotia firms to boost exports and to add greater value to our primary products. In particular, the free trade agreement with Europe offers new opportunities for fisheries and other sectors.

On the energy side, France, Scotland and Korea, among other countries, are well down the road in incorporating marine tidal energy into their electricity generation systems, and they have a head start on many aspects of this emerging industry. However they lack one major advantage that Nova Scotia has – the Bay of Fundy. While the immense potential for Fundy tidal
energy is attracting outside investor interest, the key issue is whether Nova Scotia manages the process in such a way as to assure industrial spin-offs and optimal long-term wealth generation for the province. With our substantial capacities in the province for research and development, advanced manufacturing and shipbuilding, there is potential not just to earn royalties from another foreign controlled resource extraction operation, as has happened so often in the past, but to build a new, locally based industrial sector to export technology and intellectual property that has been developed here. And with wind projects and expanding hydro-electrical power from Newfoundland & Labrador, supported by an upgraded regional grid, there is potential for Atlantic Canada and Quebec to become the green energy powerhouse for the continent.

A Skilled Workforce

While there are concerns about the aging population, and about out-migration of educated youth and skilled workers, it is nevertheless the case that Nova Scotia compares well with other Canadian provinces in terms of workforce education and training levels. Over half the workforce has a trade certificate or college or university qualification, slightly better than for Canada overall. The labour force in the traditional rural industries tends to have less formal training but maintains a repertoire of specialized competencies required by seasonal primary production activities. There is substantial anecdotal evidence to suggest that many skilled workers who have migrated to other provinces still maintain strong family and community ties here and will return when the employment opportunities improve.

Progress for Disadvantaged Groups

Minority communities and disadvantaged groups are themselves providing new leadership and significant initiative to address Nova Scotia’s economic and demographic challenges. Some of the most exciting economic development successes in rural Nova Scotia and industrial Cape Breton are being generated by First Nations as they leverage their land and resources to build new enterprises and provide employment opportunities for their youth. These projects often involve innovative partnerships and collaboration with surrounding communities, non-First Nations businesses and wider industry groups in sectors such as tourism and hospitality, fisheries and commercial real
significant progress on innovation

Despite lower per capita investment in business-led research and development in Nova Scotia compared to other parts of Canada, there has been real progress in recent years in building capacities for innovation and trade competitiveness. To take one key example, strong partnerships between business, universities and government have facilitated the emergence of a highly innovative and export-driven oceans sector that participates in an estimated $3 trillion annual global trade in ocean-related goods and services, a market that has more than doubled in the past decade.

With over 450 PhDs, 200 companies, one-third of research and development in the province and some $500 million in annual revenues, the ocean technologies sector employs significant numbers of highly skilled workers, develops and exports proprietary technology globally, and attracts investment from the US, Europe, and increasingly from Asia. Similarly, Nova Scotia’s burgeoning information and communications technology (ICT) and digital media sector now employs over 19,000 people working in 600 companies. With global ICT spending expected to grow at 4% annually to $3.7 trillion by 2017, there are significant growth opportunities in a sector where the wages are 50% higher than the provincial average. Nova Scotia’s biotechnology and health informatics sector is also built on R&D, innovation and entrepreneurship, with some 3,000 people working for more than 50 companies, marketing 500 products globally and with another 300 products in development.

Our most significant innovation gap is in resource industries such as seafood, agrifood, forestry products and clean technology where we should have competitive advantages, but where R&D activities are still primarily supported by government with insufficient industry participation.

expanding creative enterprise

Recent studies link the arts, culture and the creative sectors to positive impacts in employment, community development and social inclusion and well-being. Nova Scotia’s creative industries — film and television, music, publishing, fine art, production craft, interactive media and performance for the purposes of exporting — have grown significantly in recent years. In 2009, they and the broader culture sector contributed $871 million to the provincial economy, a 66% increase from 2001. These numbers reflect the dynamism and breadth of the sector, as well as the depth of the local creative industry supply chain. The creation of Film and Creative Industries Nova Scotia in 2012 reflects the acknowledged and growing importance of creative industries to the province, and the need for a more strategic approach to grow the sector.

Great Places to Live

The loss of workers to other provinces is continuously offset to some extent by an inflow of people coming to Nova Scotia simply because they want to live and often to locate businesses here. With greater flexibility in federal government immigration policies, and a willingness of communities to embrace new residents no matter where they come from, we have real potential to increase that inflow. Many
business enterprises today can locate any place where they have good transportation and communications infrastructure. With these attributes, combined with relatively low housing costs, stable communities, quality public services, and an attractive and accessible natural environment, it should be possible to attract substantially more entrepreneurs and other new residents from other parts of Canada and beyond.

**Trade and Transportation infrastructure**

With its strategic location on world trade routes, its existing port infrastructure, and potential to diversify activities in excellent but underutilized natural harbours in Shelburne, the Strait area and Sydney, there are opportunities to expand Nova Scotia’s marine transportation economy to keep pace with the recovery of global trade volumes. In the context of shifting federal government policies on management of major ports, the development of effective governance for harbours in Sydney and the Strait would assist in leveraging these valuable assets. The Halifax Stanfield International Airport and the Port of Halifax represent major assets with potential to add significant value to wider economic development and trade expansion strategies.

**Proven Capacities for Community Leadership and Collaboration**

While parochialism, disorganization and sectoral division continue to be challenges, there are many good examples where communities and competing groups have set aside differences and collaborated in pursuit of mutual goals.

The many significant achievements of community economic development and social enterprise groups across the province are indicative of what can be done when leaders in different sectors put their heads together to change attitudes and build better future from the ground up. From New Dawn and Development Isle Madame in Cape Breton, to active employment support agencies and non-profit housing groups in Halifax, to the Flower Cart in the Valley, to the All Hands on Deck initiative in Yarmouth, and many, many others — Nova Scotia has a strong base of leadership organizations that can contribute significantly to wider economic development strategies. At the provincial level we have the exemplary Community Economic Development Investment Fund (CEDIF) and ongoing collaboration between the Department of Economic and Rural
In 2012, Truro was the third top immigrant destination in Nova Scotia, behind only Halifax and Dartmouth.

The key lesson here is that communities, businesses and other local interest groups will respond to the challenge of change and development in situations where there is strong leadership, a clear vision and effective planning that links collaborative actions to larger goals for mutual benefit.

**Spreading Impacts of Growth of Halifax**

Halifax is emerging as the largest and most influential urban centre in the Atlantic region with new investment flowing into creative enterprises, financial services, ICT firms, oceans science and other key sectors. If wisely planned and managed, this growth will generate positive linkages and spread effects for other areas of the province. Adding impetus to Halifax’s economic dynamism, the shipbuilding project promises an infusion of jobs and business activity over its 25-year lifespan. The project will generate business opportunities along the supply chains for research and development, and represents an opportunity for Nova Scotia to become a world leader in shipbuilding, aerospace and defense, oceans technologies and related industries. Equally importantly, private sector expansion in the city may over time generate pools of local capital available for other investments in the region, helping to overcome the longstanding challenge of inadequate capital formation.

Another area of effective community leadership and collaboration is the Welcoming Communities initiative. Truro and Colchester County have enjoyed one to two percent population growth over the past decade but local employers were still having difficulty meeting their workforce needs. For over a decade the Colchester Regional Development Agency (CORDA) has been working to attract newcomers from the rest of Canada and the world. Connections made at international immigration fairs were actively followed up and CORDA helped potential new residents make connections with local employers, schools and real estate agents while on exploratory visits. Once they arrived newcomers received assistance with moving in, introductions to neighbours, and guidance with job search. The results were a win-win for both the immigrants and employers and many newcomers cited this support as the main reason for their location decision.
In 2012, Halifax’s real GDP was over $15 billion for the first time, accounting for 54.6% of the total value of goods and services produced in Nova Scotia.

_The Greater Halifax Partnership — The Halifax Index 2013_

**Economic Development Services**

The Nova Scotia government spends over $170 million annually on direct economic development programs and services, and manages loans and investment portfolios totaling some $800 million.

The federal government, through ACOA, invests approximately $70 million annually in Nova Scotia businesses and communities, of which some $15 million goes to research and development through the Atlantic Innovation Fund (AIF). The Three levels of government funded the Regional Development Authorities (RDAs) for many years, and after the withdrawal of federal funding, the province and the municipalities are now working to establish Regional Enterprise Networks (RENs) with a greater focus on business start-ups, retention and growth.

There is no question that improvements can and should be made in policies and programs, and that the activities of the many agencies should be better coordinated and aligned. But clearly the poor performance overall of the private sector economy in Nova Scotia is not caused by inadequate government supports for growth. When investors come forward with solid proposals and business plans the support is very likely there. And when businesses succeed, the capacities of the Jobs Fund, Innovacorp, Nova Scotia Business Inc and many other agencies to support new enterprises grows with them.

**NS Government Spending, Investment & Lending in Economic Development, Workforce Development and Resources Fields — 2012-13**

(In $ Millions)

<table>
<thead>
<tr>
<th></th>
<th>Departmental Spending</th>
<th>Loans Portfolio</th>
<th>Investment Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>$64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic, Rural Development &amp; Tourism</td>
<td>$172</td>
<td></td>
<td></td>
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<tr>
<td>Energy</td>
<td>$29</td>
<td></td>
<td></td>
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<tr>
<td>Fisheries &amp; Aquaculture</td>
<td>$9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour &amp; Advanced Education</td>
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<td></td>
</tr>
<tr>
<td>Assistance to Universities</td>
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</tr>
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<td>Natural Resources</td>
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<tr>
<td>Agricultural &amp; Rural Credit</td>
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<tr>
<td>Fisheries Development</td>
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<tr>
<td>Nova Scotia Business Inc. (NSBI)</td>
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<tr>
<td>Innovacorp</td>
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<td>Jobs Fund</td>
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</tr>
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<td>Strategic Opportunities Fund</td>
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<td>Perennia Food &amp; Agriculture Inc</td>
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<td><strong>$1,099</strong></td>
<td><strong>$693</strong></td>
<td><strong>$104</strong></td>
</tr>
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</table>

Source: Nova Scotia Public Accounts 2012—13
In summary, we have more than sufficient assets, resources and capabilities to turn things around in Nova Scotia, but will we succeed? The Commission believes that a passive, unfocussed and uncoordinated response to these opportunities will not be sufficient to reverse current trends and to improve significantly Nova Scotia’s economic and population prospects. A concerted, province-wide and sector inclusive commitment to economic growth is required.

The states and nations that have had greater success in navigating the globalized economy – the Scandinavia countries, Scotland, Australia, to name a few – are generally characterized by traditions of social solidarity and broad societal consensus on the goals and strategies for ongoing economic innovation. They are able, in effect, to undertake national projects to restructure their economies, reallocate resources to new priorities, and implement broadly shared agendas for change and renewal. The different regions and stakeholder groups actively commit to pursuing their sectoral interests through advances at the level of the whole society.

But we are not a nation state with our own currency. As a smaller jurisdiction there are many things that impact on our economy that we in Nova Scotia simply cannot control – currency values, international trade agreements, world energy prices, or American demand for lobster and two-by-fours. These are all factors that require continuous adaptation and innovation. But if we are to advance, our best option is to focus our main energies on the things we can control, to shape them to our purposes.

First among these are our attitudes and our relationships with each other. Change in a society begins with leaders who are confident about the future, provide vision and new ideas, and demonstrate the choices and behaviours that bring better outcomes. Being respectful of each other, expressing trust in our institutions and in our fellow leaders in different fields, and avoiding parochial and unduly partisan considerations, are crucial starting points.

**We are not a nation state with our own currency. As a smaller jurisdiction there are many things that impact on our economy that we in Nova Scotia simply cannot control — but if we are to advance, our best option is to focus our main energies on the things we can shape to our purposes: our attitudes and relationships, our governance structures and resources, and our decision-making in pursuit of economic growth.**

A second thing over which we have significant control is our own governance structures and the allocation of our own resources for economic development. We can do better at planning and decision-making on our investments of money, time and expertise in pursuit of economic growth.

Such efforts will require an attitude shift and greater discipline and focus by leaders in all sectors. That is the starting point. For those who are prepared to reshape their actions to serve the interests of the entire province — not just their firm, their institution, their organization or their community — this is the time to come together to build a vision for a better future, and to work together to achieve it.
A Shared Vision for Our New Economy

The essential message to be drawn from the analysis set out above is summed up in the well-worn cliché, “the status quo is not an option”. Nova Scotians need to find agreement on a different path if we are to avoid accelerating population decline and deepening economic stagnation. We have the assets and opportunities to succeed, but we must first, as a province, commit to the project.

How does a province, with its complex social make-up and diverse regions and sectoral interests, go about choosing a different path? What follows are proposals for goals and new policy directions to accomplish such a change. They are addressed to the Nova Scotia public and its leaders from all sectors.

The most basic and essential transformation that the Commission proposes is that we in Nova Scotia reinvent ourselves. The goals and policy advice set out below anticipate a near future — within a decade — when we will have come to know ourselves, and be known in Canada and beyond, as a progressive and dynamic province that embraces change and renewal — a province that is prepared to take risks with the confidence that it can manage them wisely, and that is eager to collaborate and partner among ourselves and with others in the Atlantic region and beyond to compete in global markets.

We will have learned to manage change through trust, collaboration and authentic engagement. We will have harnessed our significant capacities for learning and problem solving through dialogue, research and expanding cooperation among our diverse communities and economic and institutional interests.

We will have become a province that is energized by the enthusiasm and creativity of our youth in schools and on college and university campuses, and by the determination and entrepreneurship of new immigrants, First Nations and disadvantaged communities who are finding in Nova Scotia the freedom, resources and community support to realize their aspirations.

We will have re-discovered the best of our entrepreneurial and trade-oriented history to create an attitudinal climate where enterprise creation is valued and promoted as an achievable goal for Nova Scotians. Our entrepreneurs and their employees will share a competitive spirit that relishes taking on the world in their individual firms and contributing to shaping a Nova Scotia brand that is bold, confident and driven by excellence.

Our governments, our strategic institutions in education, health and social services, and our community organizations will be efficiently structured and aligned to shared goals for economic growth, social and cultural advancement and environmental sustainability. Our business and industry organizations will be providing leadership across sectors and in the wider community to build the rising tide that lifts all boats.

We will have become a province that our own skilled and ambitious people feel no necessity to leave, that people who have left in the past are able to return to, and that other Canadians and international immigrants will want to come to for the excellent quality of life and economic opportunities.

This is our vision for our new economy in Nova Scotia.
If, in the depths of the Great Recession in 2008, someone had predicted that by 2013 two young Cape Bretoners would have sold their software product to a California company for $70 million, that a local shipyard would have won a $25 billion contract, that Nova Scotia vineyards would have increased production by 50%, that the province would be home to the world’s largest processors of seafood and of blueberries, that a higher proportion of out-of-province university students would be studying in Nova Scotia than in any other province, and that Inverness would have the 42nd best golf course in the world, would most Nova Scotians have believed them? Quite possibly not. Fortunately, the people who made all these things happen did not think that way.

Goals for Transformation

In the simplest terms, to build a better future Nova Scotia has to reverse current population trends and generate higher levels of economic growth than we have achieved over the past decade or more.

In facing a challenge of this scale it is often difficult to know where to start. Such discussions often generate a lot of abstract language about innovation, productivity and competitiveness without identifying what these things might actually look like in practical terms in our specific situation. And efforts to design strategies can get bogged down in complex processes to sort out the timelines, resource needs, sequencing of tasks and the allocation of responsibilities among the many institutions, groups and individual who have to contribute.

One way to get past these initial hurdles is to set a limited number of ambitious but concrete targets that everyone can understand and orient their decision-making and behavior towards. Such goals need to be sufficiently challenging to convey the necessity for concerted efforts and new approaches. To motivate and generate buy-in, the goals should also promise outcomes that clearly benefit all sectors and regions. It should be possible to track progress towards these goals using concrete and unambiguous measures. And the time horizon should be long enough to accomplish significant transformations, but still be achievable in a foreseeable future.

To set the process in motion the Commission is proposing the following goals to guide the development of a ten-year action plan for economic transformation and renewal in Nova Scotia. It is assumed that more in-depth analysis, consultation and refinement will be required before they are formally adopted. The core assertion here is that goals of this challenging nature are needed to orient and motivate leaders and lead organizations in business, labour, government, strategic institutions. First nations and communities across Nova Scotia to join in a province-wide effort build a better future for the province.

POPULATION GOALS

It is a simple fact: unless Nova Scotia first stabilizes it population base and then begins to increase the population of working age people, it will not be possible to sustain current levels of economic well-being across the province, let alone improve them.

In practical terms, there are only two ways to grow the population significantly over the medium term: expanded international immigration and substantial net inflows from inter-provincial migration. The following are measurable goals for the achievement of these two outcomes by 2024.

GOAL 1: INTER-PROVINCIAL MIGRATION

Nova Scotia will be averaging a net gain of 1,000 working age persons per year. (Over the past 10 years the province has lost an average of 800 persons per year because of net outmigration).
GOAL 2: INTERNATIONAL IMMIGRATION

With the cooperation of the federal government, Nova Scotia will be receiving annually its proportionate share (2.7%) of all new international immigrants to Canada, i.e., approximately 7,000 new permanent residents per year. (The current 5-year average is 2,400 per year).

GOAL 3: RETENTION OF INTERNATIONAL STUDENTS

An annual average of 10% of foreign students graduating from Nova Scotia universities, the Nova Scotia Community College and other education and training bodies will be making choices to become permanent residents of the province (i.e., roughly double the current rate).

ECONOMIC DEVELOPMENT GOALS

There are clear indications that the macro-economic climate in Canada and internationally will improve over the next few years. In addition, capital investment is expected to surge in the province with the naval ships contract and large-scale investments in commercial construction and energy projects, generating more high-value jobs. The challenge is not just to ride the cyclical upswing but to take advantage of these conditions to correct deeper structural problems including the shrinking value of trade, the low number of businesses generating exports, an uncompetitive labour market, inadequate commercialization of research and development, and insufficient labour force training.

The following are goals to be achieved by 2024 to meet these economic development challenges.

GOAL 4: BUSINESS START-UPs

The Nova Scotia economy will be generating 4,200 new business start-ups per year, a 50% increase over the current 10 year average.

GOAL 5: VALUE OF EXPORTS

Nova Scotia will have increased the total annual value of exports (international and inter-provincial), currently in the $14 billion range, by 50% to exceed $20 billion.

GOAL 6: FIRMS PARTICIPATING IN EXPORT TRADE

The number of Nova Scotia firms participating in export trade will have increased by 50% over the current level of 850.

GOAL 7: LABOUR FORCE PARTICIPATION RATE – NOVA SCOTIA

Nova Scotia will have a labour force participation rate at least as high as the Canadian rate, bringing more than 25,000 Nova Scotians into permanent attachment to the labour market. (The Nova Scotia rate is currently 63.4% compared to the Canadian rate of 66.4%).

GOAL 8: EMPLOYMENT RATE – FIRST NATIONS AND AFRICAN NOVA SCOTIANS

The employment rate (i.e., percent of the working age population currently employed or “officially unemployed”) for First Nations and African Nova Scotians will be equal to the provincial average. (The rate is currently 62% for African Nova Scotians and 53% for First Nations people, compared to the provincial rate of 68%).

GOAL 9: YOUTH EMPLOYMENT

Nova Scotia’s youth unemployment rate (currently 19.5%) will be at or better than the national rate in that year (currently 14.0%)

GOAL 10: POST-SECONDARY EDUCATION AND TRAINING

The proportion of Nova Scotia’s working age population with a post-secondary certificate, diploma or degree, including apprenticeship completion, will have increased from the current 55% to 65%

GOAL 11: UNIVERSITIES RESEARCH AND DEVELOPMENT

Through both individual initiative and expanded collaboration, and with support from government, Nova Scotia’s universities and the Nova Scotia Community College will have doubled research funding to total $360 million.
GOVERNANCE AND FISCAL GOALS

The Commission believes that the ambitious goals set out above are justified by the serious economic and population challenges that threaten our standards of living and public services and the near-future viability of many of our rural and urban communities. Extraordinary measures are called for.

Leadership in pursuing extraordinary measures, and in developing such clear vision, unity of purpose and capacity for action, is first and foremost the role and responsibility of the province’s institutions of governance. Significant changes may be needed in how those institutions are structured, and in how they operate, if they are to provide such leadership.

GOAL 17: A PROVINCE-WIDE PLAN TO ACHIEVE NOVA SCOTIA’S NEW GOALS FOR SUSTAINABLE ECONOMIC GROWTH AND POPULATION RENEWAL

By the end of calendar year 2015 the Nova Scotia government, in collaboration with the municipal units, will have put in place, with appropriate legislative supports, a comprehensive development plan with practical strategies to meet the 2024 population and economic renewal goals set out above. Development of the plan will be guided by the following considerations:

- It should be supported by appropriate public and stakeholder engagement.
- Support for the plan from business and labour organizations, strategic institutions, First Nations, lead voluntary sector and community organizations and other levels of government should be formalized in memoranda of understanding and other declarations of partnership and collaboration.
- The plan must recognize that progressive land development can both strengthen our economy and reduce our negative impact on the environment. With the right strategic investments and standards for sustainability, we can optimize benefits for other regions of the province arising from the growth of Halifax, including improved public transportation and development of supply chains and satellite commercial and industrial centres.
GOAL 18: REFORM OF MUNICIPAL GOVERNMENT AND REGIONAL SERVICE STRUCTURES

Once the development plan described above is in place, the provincial government will immediately initiate a comprehensive review of current municipal government structures and of federal and provincial regional service delivery systems, improving efficiency, cost effectiveness and community engagement. This work will be guided by the following considerations:

- Development of the strategy should be supported by appropriate public and stakeholder engagement.

- The review should build on the analyses and advice generated by previous studies and panels, ranging from the Graham Commission through to the recent Towns Task Force, the review panel on Regional Development Authorities (RDAs), the Schools Review Process and the provincial government’s consideration of shared services options.

- Prime objectives for restructuring should include:
  - Greater service efficiency and improved “value for money” for taxpayers,
  - A critical evaluation of the fairness, effectiveness and sustainability of the current distribution of service responsibilities between the provincial and municipal levels,
  - Greater engagement of communities with regard to economic development planning,
  - Improved incentives for entrepreneurship,
  - The integration and streamlining of services to business,
  - Reductions in regulatory burden, and
  - The better alignment of tax policies with economic growth objectives.

GOAL 19: FISCAL HEALTH

By 2024, the Province of Nova Scotia’s net debt to GDP ratio, which was 36.7% for the year ending March 31st, 2013, will be 30% or less.

It is important to note that all of these proposed new goals for Nova Scotia share two important characteristics:

- They hold real, measurable potential to transform the province’s demographic and economic status; and,

- Their achievement demands the commitment and active participation of all sectors of Nova Scotia society — including key leadership groups in business, labour, strategic institutions and communities — and not just government. The goals are formulated to encourage lead groups to identify their roles and potential contributions to the successful pursuit of particular objectives and to come forward with public commitments and practical strategies to do so.

It is clearly government’s role to lead and facilitate transformations of this nature, but it can only do so if it has a mandate from the wider public to proceed, and is held accountable to that mandate.

Government, after consultations with lead groups and institutional partners, may choose to revise these goals or add new ones. What should not be lost, however, is the definitive understanding and determination that for any such goal, success will require truly significant (and measurable) progress towards economic and population renewal. Conversely, failure will mean that the province still faces serious risk of continuing decline and instability.
Based on findings from its research and public engagement activities, the Commission has identified 12 new strategic directions, or “game changers”, that will be needed to achieve the proposed new goals for Nova Scotia set out above. They again reflect the seriousness of the challenges and the significance of the positive opportunities that now confront us.

Although some action steps are suggested, these are not presented as detailed recommendations for policy implementation. Rather, they are meant to identify different ways of thinking that will be required if the ambitious goals are to be achieved. They speak to the need for significant changes in attitudes and outlooks across the province, and for innovative policy and programmatic approaches to be adopted by government, business, labour and industry organizations, and lead institutions and agencies. They are not just directed at government, but need to be seriously considered by all other sectors and the general public.

I. A New Politics

The Commission is acutely aware that the overall approach it is advocating represents a significant departure from traditional ways of thinking about economic development in Nova Scotia. It takes this approach out of a firm conviction that the economic and population challenges facing the province call for a sharp change of course.

The achievement of the ambitious goals and targets set out above will clearly require extraordinary effort and a much higher level of coordination and collaboration among business, government and community sectors than has been typical for Nova Scotia. This clearly is not business as usual. Which begs the question: can a transformation of this nature and scale be achieved through politics as usual?

While the active participation of leaders from the private and community sectors and from the other levels of government is essential, the primary responsibility for leadership and initiative rests with the provincial government. However with 2024 as the planning horizon there could be two or more provincial elections over the period. “Politics as usual” holds the risk that the goals and targets, and indeed the basic commitment to the overall project, could become grist for the mill of partisan competition and electoral swings.

This risk would be heightened to the extent that needed changes generate controversy and division among interest groups. When elected governments make the tough decisions they see as necessary, opposition parties, and also the media, may choose to champion the easier way out even if they don’t have a better option to solve the problem. And to the extent that the general public remains disengaged and risk averse, the easier path may offer short-term political advantages.

The Commission is concerned that continuation of this divided leadership will not serve the province well in its current circumstances. Both the problems we face, and the significant opportunities we need to pursue to overcome them, demand too much innovation and concerted action to be managed by conventional measures and continued muddling through.

Some societies are characterized by relatively high levels of unified purpose and vision and, for them, leadership for long-term, transformative change is expected of the elected government – reference has been made in this report to the recent examples of Scotland, the Scandinavian countries, Australia and others. While the Commission proposes that Nova Scotia work to become this kind of dynamic and purpose-driven province, this is not now our current political culture and we must therefore start from a different place.

There are also examples where, in times of war or other national emergency, democratic states have
suspended the normal processes of partisan politics and sectoral competition to empower coalitions or unity governments to focus all available energies and resources on overcoming the “crisis”. And the business sector has supported such commitments: during World War II a number of senior business leaders volunteered to serve as “dollar a year” advisors to the national government to help plan and coordinate the war effort. Some variation on this option might serve well in the collective effort to turn around our current prospects in Nova Scotia.

The Commission believes that mobilizing an all-party, multi-partite effort to develop a comprehensive economic development plan and to accelerate the restructuring of regional government services and municipal government is essential if we are to achieve long-term economic growth and renewal in Nova Scotia. The chances of success in these initiatives are much diminished if the different political parties, in government and opposition, and the major regional interests and sector groups are all pulling in different directions and not supporting a unified project to turn around our future prospects as a province.

One way to initiate a different politics on economic development would be to establish an all-party committee of the Legislature to put into legislation the new goals and targets for economic and population growth for Nova Scotia. Building on the experience with the Environmental Goals and Sustainable Prosperity Act (EGSPA) in 2007, every effort should be made to achieve unanimity among all parties represented in the Legislature. Such legislation would ideally include requirements for reports to the public on progress made towards each goal or target.

II. Attitude Shift — A Shared Commitment to Growing Nova Scotia’s One Economy

A better future for Nova Scotia, and most emphatically for its rural regions, is not possible unless ways are found to grow the economy at a greater rate than has been the case for the past 20 years or more. And if we are to sustain rural communities and grow the provincial economy as a whole, the province will need more businesses of all types — predominantly private sector but including social enterprises and innovative voluntary sector organizations — to employ more people and generate more wealth.

With federal transfers leveling or shrinking, a heavy debt burden, and very little room to increase taxation rates, the increased revenues our municipal and provincial governments need if they are to maintain and improve economic infrastructure and public services will have to be generated to a much greater degree than in the recent past by growing the economy. The wider public needs to understand and support this imperative by openly addressing current attitudinal barriers to business development and entrepreneurship. Leaders in business, labour, government, communities and strategic institutions need to embrace this challenge and take responsibility for making it happen within their own activities and through expanded collaboration across their different fields of influence and activity.

A new, more dynamic Nova Scotia economy needs growing urban centres that draw in people and capital and push development out to their surrounding regions. It needs well-managed and expanding linkages between cities, adjacent towns and rural regions. To provide impetus and a focus for resolving our urban/rural tensions in Nova Scotia, government and community leaders in rural regions need to pursue greater understanding and more positive attitudes toward the growth of our cities and larger towns, and their urban colleagues need to recognize their dependence on rural regions and economic sectors, and embrace new responsibilities for the development of the overall economy across the province.

Municipal reform is of course an important vehicle for more effectively linking urban communities to their surrounding regions and sharing both the costs and benefits of economic development more equitably. Similarly the Regional Enterprise Network model provides and new and potentially powerful vehicle for coordinating the development efforts of different jurisdictions and generating greater cooperation and policy alignment across the province. An immediate task for rural leaders is to accelerate both areas of development and to become willing partners in building a more focused and unified governance for the province.

For their parts, urban leaders need to undertake to develop and actively support wider planning processes to manage the pace of urban expansion and to optimize economic development, quality of life and environmental impacts on surrounding regions and communities.
III. Strategic Priority on Business Start-ups and Growth-Oriented Enterprises

The logic is inescapable: if the economy is to grow, there must be more enterprises and the rates of business success and expansion have to improve significantly.

To achieve these outcomes, greater priority must be placed on supporting organizations and enterprises that can deliver them. Business leaders and the wider community need to accept that not all businesses are equal in their economic impacts, and that just because an enterprise is small and locally-owned does not mean that it is a more deserving recipient of government support than other firms that hold greater potential to generate more wealth and employ more people over time. By the same token, just because a business or non-profit organization is large and employs a lot of people does not mean that it is significant contributor to innovation and growth in the Nova Scotia economy.

Government and public support should therefore focus to a greater extent on new start-ups and retention/expansion of existing enterprises that hold measurable potential to increase employment and investment and that are aimed at export markets. In a policy context where major growth in government’s spending on economic development is unlikely for some time, this approach may require changes in the targeting and eligibility criteria for existing programs and services. For example, the significant funding gap for Nova Scotia companies engaged in new product design and commercialization could be addressed through changes in program design and resource allocation.

The provincial government, in consultation with its economic development partners in the federal and municipal levels of government, the universities, the Nova Scotia Community College, and the business community, could come together around a strategy to increase start-ups of new businesses, and retention and expansion of existing enterprises, whose business models centre on growth, innovation, research and development, and external trade. The elements of such a strategy might include:

- Consideration of new tax measures: the province currently provides an equity tax credit for investments in qualified Nova Scotia small and medium-sized enterprises (SMEs), cooperatives and Community Economic Development Investment Funds (CEDIFs). The Commission strongly supports Dr. Savoie’s recommendation in his 2010 report that the limit be increased from the current $50,000 maximum to $250,000.

- The new Start-up NY model could also be evaluated as a way to leverage the substantial R&D capacities of our post-secondary institutions. New York State recently announced a plan to stimulate partnerships between private firms and universities and colleges. Start-up companies locating in incubator sites operated by post-secondary institutions will not pay state or local taxes of any sort for ten years if they create net new jobs.

- Better access to venture capital and other financial instruments is needed to address the current gap in support for late stage commercialization activities of SMEs (e.g. clinical trials, demonstration projects, market testing etc.). Increased funding for the Innovation and Productivity Vouchers program could also be considered.

- The European Union’s Rural Innovation and Business Systems program could be reviewed as a way to address challenges for rural enterprises including appropriate business premises, Internet connectivity and development of business networks. It could support local enterprise hubs based on successful models now in place in Lunenburg County, Sydney and Halifax.

- There might also be value in more innovation and entrepreneurship hubs at universities and colleges, including “sandboxes” to support professors and students in developing investor-ready ventures, seed funding, incubator space and classes to support market development, investor readiness and funding, and managing growth.

IV. Renewing Rural Industries

In future, as in the past, the traditional rural industries – tourism, manufacturing, mining, fisheries, forestry and agriculture – will provide the essential foundations for Nova Scotia’s rural economy. The basic viability of many of our rural communities hinges on whether these sectors can create more and better jobs and generate more wealth. Some 43% of Nova Scotians live in rural regions and they are in many
ways an underutilized human resource. Government, industry and community leaders need to come together to declare, in the most unequivocal terms, that our traditional rural sectors are essential foundations for the new Nova Scotia economy, now and in the future, while acknowledging that all of these sectors need to be more productive, more innovative and more competitive.

For many years the highest public policy priority for these sectors has been simply to maintain jobs in rural communities. But today we find that many business operators are insufficiently profitable to support the investments in product quality, plant productivity, worker training, and market expansion that are needed to maintain and grow market share. In some sectors it is increasingly difficult to find local workers to take the low-wage and seasonal jobs many employers offer. As a result, young people are leaving rural communities, other countries are out-competing us in the marketplace, and the province is not realizing the full value of our asset base. These business models need to be revised if the province and our rural communities are to escape the current pattern of weak economic growth and population decline.

On the “upside”, globalization is creating significant opportunities if we can bring higher value products to expanding markets. We still have the crucial ingredients: an attractive environment, valuable natural resources and advanced capacities to manage them sustainably. We also have a highly developed education and training system and the R&D capacities with which to transform our traditional rural industries into knowledge driven, innovation-intensive sectors.

An immediate opportunity to improve the performance of a critically important rural economic sector is the recent report of the Maritime Lobster Panel, a study initiated by the three Maritime Provinces in the spring of 2013 in response to growing industry conflict over low lobster prices. This report provides an in-depth look at the single most important sector within the Atlantic fishery, and identifies three critical problem areas:

- **Industry Operations** – the disorganization and poor product quality resulting from the ways harvesters, buyers, shippers and processors currently conduct their activities; and,

- **Industry Structure** – “how the industry is set up and where the gaps exist that are contributing to value loss”.

The report makes 33 recommendations that together comprise a “Value Recovery Strategy” aimed at capturing and fairly distributing the wealth that lobster can and should generate in the global marketplace.

The Commission believes that this strategy deserves the support of industry, government and the wider community not just as an antidote to current problems in the lobster fishery, but as a model to be adapted to other primary production sectors that hold potential to generate greater wealth if they can become better structured and more competitive.

**V. A Shared Commitment to Sustainable Development and Regulatory Excellence**

As a provincial community, Nova Scotia appears at times to be seriously ambivalent, if not divided, on the benefits and risks associated with economic development. On the one hand, most commentators agree that our towns, cities and rural regions are in serious need of new investment, improved infrastructure and population growth. On the other, almost all new investment opportunities face significant criticism and at times active opposition from citizens concerned about negative impacts on neighbouring communities, on existing businesses and on the environment.

There appear to be two key areas of concern: **Regulatory Issues** and **Attitudes**.

With regard to the former, critics of economic development projects can point to serious regulatory failures and poor business practices to justify their concerns about future risks. From the Westray mine disaster to the recent tragedy at Lac Mégantic, there clearly have been situations where the rules were lacking or were inadequately enforced. Nova Scotians can also point to examples where, after considerable wealth was extracted, communities have been left with contaminated land and water, depleted resources, and abandoned industrial sites. Citizens are justified in calling for more
responsible behaviour by resource users and more effective resource and environmental management by governments.

In the area of attitudes, participants in debates on economic development issues can sometimes express narrow views. Business operators and people who need jobs can seem cavalier about environmental risks and impacts on neighbouring communities. By the same token, urban dwellers with stable service sector jobs can sound indifferent to the need for more and better employment in rural resource industries. To escape this impasse, opinion leaders in different sectors will need to develop a more constructive dialogue on the twin necessities – economic growth and industrial expansion on the one hand, and responsible and effective environmental practices and risk management on the other.

There are good reasons to improve and expedite the regulatory processes for businesses and industrial activities. A consistent, well-enforced and efficient regulatory framework is essential if we are to bridge the gap between sound resource and environmental management and the ability to realize the economic potential of our assets. Currently there is a lack of trust in the regulatory and enforcement system by both those who have to abide by it to create a business or start a new resource use activity, and those who expect that system to protect both citizens and the environment to ensure economic, social and environmental sustainability.

On the positive side, today’s progressive business operators often go beyond the regulatory system to improve their practices, particularly where there are market incentives for such improvements. Environmental certification programs are being actively developed by the fishing, forestry and agriculture industries. The growing consumer demand, on both the local and global levels, for products that are certified as responsibly and sustainably produced represents a significant opportunity to add value in Nova Scotia’s primary production industries.

The Environmental Goals and Sustainable Prosperity Act (EGSPA) provides a framework for innovation, particularly for renewable energy and energy efficiency. With goals of 40% renewable energy by 2025, we are enabling development of new technologies, exploration of tidal and hydroelectric power, and innovation at the municipal level with leading edge composting and solid waste management systems, community feed-in tariffs (COMFITS) and the Solar City program in Halifax. Strategic investments in energy efficiency through demand side management initiatives are lowering operating costs for residents as well as businesses and public institutions. Many of these innovations have set us apart from other provinces in Canada and are part of what makes it exciting to be in Nova Scotia.

The development of the comprehensive economic development plan that the Commission has recommended should be guided by broad stakeholder commitment to the following considerations:

- Continuing commitment to the objectives and targets of the Environmental Goals and Sustainable Prosperity Act;
- Consistent use of the most effective, transparent and inclusive public engagement processes and methods to support decision-making on expansion of resource industries and management of renewable and non-renewable resources;
- Excellence in regulatory systems and procedures, measured in terms of efficiency, cost-effectiveness, timeliness, fairness and transparency;
- Adoption of the most effective and widely accepted certification standards for sustainable resource use, conservation and responsible harvesting practices;
- Recognition of the rights of local communities to receive direct benefits from ongoing resource extraction activities, and to be protected from the burden of post-extraction environmental remediation costs and consequences.

VI. Rebuilding our Trade Economy

As in our past history, Nova Scotia has good reasons today to pursue trade growth and to embrace a free trade policy outlook. Many of the most significant economic opportunities on the Nova Scotia horizon – selling more renewable energy, seafood and manufactured products to the U.S., expanded fisheries, forestry and agricultural exports to Europe, and fisheries and agricultural trade with Asia – rely on improved access to international markets. With our gateway location, and excellent ports and airports, we stand to benefit with the expansion of the global trade between the U.S., Europe and Asia.
Rather than fear more open borders, there are compelling reasons why Nova Scotia should embrace a **FREE TRADE ORIENTATION** and **BECOME A CHAMPION** among provinces for the reduction of both internal and external trade barriers. We have much more to win than we have to lose.

By the same token, further reductions in regulatory barriers to movements of goods, services and people within Canada could provide access to new markets for agricultural producers and our increasingly competitive microbreweries and wineries, among other sectors. Nova Scotia now educates many out-of-province students, and so reduced regulatory barriers to occupational mobility could create even more opportunities to grow enrollment for our colleges and universities.

Of course the development of new international trade agreements and further reductions in internal barriers to trade and mobility within Canada will involve trades-offs and some degree of risk. But to the extent that we in Nova Scotia maintain a risk-averse and not very entrepreneurial culture, we forgo important opportunities to break out of our entrenched pattern of marginal economic growth.

Some observers fear that if European companies can compete for government procurement opportunities in Nova Scotia under the new Canada Europe Trade Agreement (CETA), public sector jobs may be lost or local companies may be displaced. Those are possible risks, but such competition may also bring new energy and innovation to our service sectors, and Nova Scotia companies may gain access to wider markets and be well positioned to partner with European firms to mutual benefit. There could be new partnerships between Nova Scotian and European colleges and universities to do language training and research and development, or collaboration among ICT firms to develop multi-lingual products and services.

In short, rather than fear more open borders, there are compelling reasons why Nova Scotia should embrace a free trade orientation and become a champion among provinces for the reduction of both internal and external trade barriers. We have much more to win than we have to lose.

Nova Scotia has a significant negative trade balance, which means that the province has both a pressing need and real opportunities to grow the economy through increasing exports and enhanced participation in global supply chains. Increased trade enables firms to optimize economies of scale, become more productive and stimulate innovation and investment. Firms that operate in international markets are more likely to grow, to create employment, and to engage in R&D.

However, Nova Scotia currently has relatively few export-focused firms, with the majority of exports generated by a few international firms producing primary products (e.g. natural gas) and manufactured goods (e.g., tires and plastic products). While the new Canada-Europe Trade Agreement (CETA) offers the promise of lower tariff and non-tariff barriers and reduced cost to access European markets it is mainly such larger companies that are well positioned to overcome the logistical obstacles to delivering more products and services to Europe. Special efforts are therefore needed to build the capacity and confidence of Nova Scotia SMEs to pursue new opportunities in this market of over 500 million people. Nova Scotia government agencies and their partners in other levels of government, the universities and the Nova Scotia Community College need to work with locally based SMEs to increase their capacities to become more export-oriented.

The Commission encourages the provincial government, in consultation with its economic development partners in the federal and municipal levels of government, the universities, the Nova Scotia Community College, and the business community, to work together on strategies to increase the number of Nova Scotia SMEs that are exporting and participating in global supply chains. Areas for more concerted action might include:

- Targeted support to Nova Scotia-based SMEs to increase the scale of their operations in terms of capacity to export, including education and training programs to build export-related management and workforce skills and to promote lean management, productivity practices and export readiness;
we will have the courage to set a high bar and then hold ourselves accountable for reaching our goals.

This will not be an easy task and, following a central theme of this report, demography will figure prominently in our list of challenges. Over the past forty years, P-12 enrolment in Nova Scotia has fallen by nearly 40%. The current school system no longer enjoys economies of scale advantages. In both rural and inner-city areas, we have too many schools operating below optimal enrolments and the cost of maintaining this infrastructure drains resources away from improvements in quality. Rural communities particularly struggle with the stresses of school closing and longer bussing routes. The Commission hopes that current efforts to improve the school review process will result in an enhanced willingness and capacity across the province to find the right balance between community needs and the efficient use of resources to deliver high quality learning opportunities. There won’t be a “one size fits all” solution, and we acknowledge the special role schools play in how communities see themselves, particularly at the lower grade levels. The Commission would also encourage more extensive and creative use of distance delivery and asynchronous learning technologies.

On a broader level, the Commission applauds the work of the Workforce of the Future Table led by the Department of Labour and Advanced Education. It has been very effective in drawing out key priorities that link our education system to the labour market, and has identified five key areas that the Commission strongly supports:

1. Expanding employer engagement in apprenticeship;
2. Linking Nova Scotians to jobs in growth sectors;
3. Pursuing excellence in math and science;
4. Improving youth retention; and,
5. Promoting entrepreneurship.

We are particularly enthusiastic about the emphasis placed on improving mathematics and science education in our schools to prepare young people for the kinds of jobs the Nova Scotia economy should be generating. Further innovations in curricula and teaching methods should be explored, including the

VII. Excellence in Education and Training

One of the most notable aspects of the Commission’s public engagement activities was the consistency with which business and community spokespersons called for improvements in public education to better prepare our youth for transition from school to work in a knowledge-driven economy.

The Commission agrees that, just as Nova Scotia businesses must compete in a global marketplace, so too must the educational outcomes for our students be measured against a world standard. This does not imply less emphasis on broader developmental goals for public education, including preparation for citizenship, but embraces the emerging global perspective on learning as a driver of economic, cultural and social progress. Arguably this has always been the case, although the sharp increase in knowledge-intensive enterprises has attached a premium to the highest levels of literacy, numeracy and creativity. It is now widely accepted that schooling at the elementary, junior high and high school levels provides the crucial foundations for all further learning, and the jurisdictions that develop the best public education systems essentially give their citizens a head-start on “learning a living”.

Of course, the cornerstone of any education system is the curriculum and the Commission heartily endorses the curriculum review process recently announced by the provincial government. It is our hope that this review is rigorous and thorough and guided by the fundamental objectives of the system as a whole. If we believe in ourselves, in the quality of teachers and most importantly in the potential of our sons and daughters,
Nova Scotians need to demonstrate that we are an **open and welcoming society** so that our tourists, new immigrants and international students will communicate this Nova Scotia “brand” **throughout the world**.

introduction of computer programming skills as a core competency at the junior high level.

With regard to human resources development, our traditional rural industries have inherent and unique labour force characteristics including seasonality and the need for specialized knowledge, skills and aptitudes. Many people in rural communities do well by becoming multi-skilled and moving from one sector to another as the seasons dictate. But some of these sectors are not currently supported by effective education and training programs for lifelong skills upgrading to support productivity and product quality gains and improved health and safety. Too many rural businesses have gotten by with minimal investments in training and in attracting and retaining skilled workers, a business model that may no longer make sense in today’s labour market. Governments, employers, worker organizations and the major institutional partners need to work together on new ways to provide rural industries with needed workers while improving the quality and attractiveness of such employment.

And finally, the province has already made significant advances in developing new processes and tools to support foreign credential recognition and recognition of prior learning for adult participants in education and training. It is important that government and employer, employee and community-based organizations press forward in these areas to improve the integration of international immigrants and to support the successful transition of marginalized and disadvantaged populations into the labour force.

Much has been said already in this report about the universities and the Nova Scotia Community College as foundations for future economic growth in the province. The Commission believes there is even greater potential for these vitally important institutions to bring their immense institutional capacities to bear on the economic, social and cultural development needs of the province. In doing so, we believe the post-secondary system can model - and potentially be a catalyst for – the kind of change required more broadly throughout the province.

VIII. Becoming A More Inclusive and Welcoming Province

Citizens across the province have divided views on efforts to attract new Canadians to their communities. Most people support this way to grow the population, but some fear that new immigrants will take jobs away from local people in areas of persistently high unemployment.

This conflict has to be resolved: new immigrants bring specialized skills and entrepreneurial energies to their new lives in Canada. But too many who come to Nova Scotia do not stay because their professional or trade credentials are not recognized or they do not find our employers and communities very welcoming. It will take a concerted effort to overcome these obstacles.

Welcoming programs have been highly successful in some communities, but need to be enthusiastically embraced throughout the province. When an immigrant family settles in a place successfully they often encourage other family members and friends to come. Having clusters of people with shared cultural backgrounds helps with attraction and retention for future immigration.

Welcoming workplaces are also important. Employer organizations need to be more active in encouraging their members to make use of available tools for international credential recognition, assessment of occupational competencies and recognition of prior learning. Having effective employee engagement programs and implementing harassment free workplace policies are also essential steps.

Changes to immigration rules have made it easier for international students to stay in Canada after their studies if they have gained work experience and have employment options. Hiring international students so that they can gain Canadian experience and build networks of support will encourage more skilled young immigrants to stay. The communities around our universities also have a role to play in creating a welcoming social environment for youth from other countries and cultures.
schools, government and third-party delivery agents are working towards the same outcomes.

There are a growing number of entrepreneurship initiatives occurring at the post-secondary level in Nova Scotia. These are being developed and delivered by the institutions through curricula and on campus business development centres, often in partnership with external organizations. The post-secondary education system is responding to the growing demands from students, businesses, communities and government to build entrepreneurial knowledge, skills and attitude. But much more can and should be done at this level in the educational system.

Beyond educational programming, there is a need for more effective encouragement and support for operators of small and medium-sized enterprises in the province who may want to grow their enterprises and for people in the workforce who might want to start their own businesses. Many of the program tools and resources are already in place, most notably the small business loan program operated through credit union system and the Community Economic Development Investment Fund (CEDIF) program. The challenge is to market these programs more effectively to improve uptake and success rates and to nurture and support entrepreneurs in rural communities not just to start businesses but to be more innovative and ambitious in doing so.

IX. Promoting Entrepreneurship

If we are to grow more businesses, and have them be more successful, Nova Scotia needs more entrepreneurs. More young people need to come out of their education and training programs not just looking for a job, but with the knowledge, skills and confidence to create jobs for themselves and others. More owner-operators of small businesses need to push themselves to become bigger businesses, and need to be supported in, and recognized for, their efforts.

Entrepreneurship programs delivered to Nova Scotia students by non-profit entrepreneurship organizations — e.g., Junior Achievement — receive significant funding from various levels of government and corporate contributors. But these activities are voluntary add-ons rather than integral components of the school experience for everyone. If creating an entrepreneurial culture is a priority, we need to ensure

Nova Scotians everywhere – in their communities, educational settings and workplaces – need to demonstrate that we are an open and welcoming society so that our tourists, new immigrants and international students will communicate this Nova Scotia ‘brand’ throughout the world. By the same measures, we need to be more inclusive in our responses to the needs and aspirations of our own citizens in visible minority communities – Mi’kmaq and African Nova Scotians – and people with disabilities. They are key contributors to local economic development, entrepreneurship and workforce renewal. They too need to experience welcoming communities and welcoming workplaces.

Quite a lot is known in the wider world about how to build a business and policy ecosystem to foster entrepreneurship. A recent Harvard Business Review report identified strategic approaches that helped several countries, some of them very poor, to dramatically increase business growth\(^\text{10}\). The following are points of advice from the report that may have relevance for Nova Scotia:

- Ecosystems need to be built around local conditions, assets and strengths. Some countries focused on local industries that had proven potential for development while other resource-poor “islands” far from major markets, like Taiwan, Iceland, and New Zealand, all centred their strategies on human capital. (Nova Scotia is in the perhaps enviable position of being well positioned to leverage underutilized resources, underperforming industries and significant capacity to build human capital).

The private sector needs to be engaged and to lead from the start. Government can support, but “only the private sector has the motivation and perspective to develop self sustaining, profit-driven markets”. It needs to have “a significant stake in the ecosystem’s success”.

- Ecosystem development should be concentrated on the areas of the economy with the greatest growth potential. “If resources are limited, programs should try to focus first on ambitious, growth-oriented entrepreneurs who address large potential markets”.

- Successes should be “over-celebrated” in the media, with awards and in every way possible. “Governments should be bold about celebrating thriving entrepreneurial ventures.”

- Legal, bureaucratic, and regulatory systems should be reformed to remove impediments to, and enhance incentives for, business success.

**X. Integrating Economic Development Services**

Nova Scotia has a long, and somewhat checkered, history when it comes to attracting and sustaining businesses. For every success story like a Michelin, our economic development initiatives seem to have produced multiple examples where companies have either left the Province or went out of business after the subsidies ran out. Debates about the relative merits of government support to individual businesses continue today whether that assistance is delivered by the arms-length Nova Scotia Business Inc, Innovacorp, the Department of Economic and Rural Development and Tourism, various government loan boards or the Cabinet-controlled Jobs Fund.

In his 2010 report on Nova Scotia’s economic development agencies, noted policy expert, Dr. Donald Savoie urged government to rationalize and integrate business development services so that Nova Scotia would become “the most business friendly jurisdiction in Canada in terms of accessing government programs and services”. The Commission believes that Dr. Savoie’s recommendation should remain as the key objective.

The Commission acknowledges that there has been some progress towards this goal but in our view, not nearly enough - particularly when the parallel activities of federal and municipal levels of government are considered. The goal clearly is to have a ‘no wrong door’ approach in which investment and credit tools, education and training services, trade development and R&D capacities can all be made available seamlessly to new or existing enterprises that seek to grow in the province. We need economic development to become a “Team Nova Scotia” endeavor and we need much greater clarity on roles and expectations of the various players.

We also need to extract the maximum potential from our departments and economic development agencies: NSBI with its private-sector orientation, international reach and independent board; Innovacorp with its focus on technology, innovation and start-ups; Film and Creative Industries Nova Scotia with it special expertise in film and digital media; and others in the energy, fisheries, agriculture and natural resources fields.

The Commission urges consideration of three initiatives that it sees as potential “game changers”:

- Improvements can, and should, be made to the coordination and alignment of the multiple economic development agencies, programs and services. For a small jurisdiction we have a lot of programming housed in multiple departments and agencies, and the occurrence of overlaps, competition and turf protection is almost inevitable. Within the wider frame of a Team Nova Scotia approach, senior leaders and staff in all of these agencies should implement an action plan to build and maintain a collaborative operational culture. Additionally, with dedicated leadership and secretariat support, ministerial and deputy ministers’ committees are also effective in bringing all the departments and agencies with economic development responsibilities together for intensive information sharing, planning and coordination work.

- The Commission believes that the voice of business needs to be more present in the work of government and particularly at the cabinet table. We believe there is significant value in re-organizing business-related programming within a new department with a new minister and a crystal clear mandate to support all aspects of business expansion in Nova Scotia. We believe this clarity should extend to the actual title – the Minister of Business. The Minister should be an activist and a champion who will communicate
and problem-solve with business enterprises and organizations and provide strong leadership in developing public awareness of the need for, and potential benefits of, business growth. The Minister could also function as a business ombudsman and focus on issues related to the business environment, regulatory burdens and service response times. In the 1960s, Premier Stanfield sent a clear unambiguous message about the priority his government placed on educational reform when he also served as Minister of Education. Commissioners discussed the idea of having the Premier also carry the Minister of Business portfolio to signal the significance of building the Nova Scotia economy. Whichever model is chosen, the Commission is strongly of the view that government should more tangibly demonstrate its commitment to creating an environment that supports business success.

The Commission received tremendous support from staff in the Nova Scotia Department of Finance and in Economic and Rural Development and Tourism in accessing data and analytical resources to complete this report. The Nova Scotia Community Counts web-based data resource also provides excellent community profiles and demographic information. However, there were important instances where up-to-date and in-depth data on critical issues such as business start-ups, research and development activities and immigration trends was not available or had to be purchased at considerable time and cost from federal agencies. The Commission believes that having such information on economic performance, and making it available, is essential if we are to draw the general public and leaders in key sectors into the project of building a stronger Nova Scotia economy. Stakeholders need to know the baselines and be able to track progress over time on key indicators for economic growth, social development and environmental issues if they are to feel part of the process. The provincial government should examine current systems of goals, targets and change indicators that are up and running in other jurisdictions such as Maine (www.mainepolicy.org/maine-by-the-numbers/) and Scotland (http://www.scotland.gov.uk/About/Performance/scotPerforms).

XI. Better Management of Economic Development Investment Funds

Government’s economic development programming and investments are constantly pulled in different directions – to support new start-ups, to help existing enterprises to expand, and to assist firms that need to restructure or rebuild after business failures. Significant government investment also goes to relatively strong and financially healthy companies simply as incentives for them to locate or expand in Nova Scotia rather than somewhere else. While all of these kinds of investments of public money can be controversial at times, in most cases there are sound business case arguments for them, and governments are often drawn into making such commitments in spite of heavy criticism from certain quarters.

In addition, recent Auditor General’s reports have raised concerns about transparency and accountability factors regarding expenditures of economic development funds. There is a widening discussion about whether decisions can or should be de-politicized by taking the cabinet out of the process and deferring to arms-length bodies that will adjudicate purely on the basis of business case evidence.

In his 2010 report on Nova Scotia’s economic development agency structures Dr. Donald Savoie considered this very issue with regard to the then existing Industrial Expansion Fund (IEF). In response to pressures to transfer the IEF to Nova Scotia Business Inc (NSBI) to reduce political influence Dr. Savoie offered the following advice:

... [the Department of Economic and Rural Development] will not be able to be a pure policy department and one only has to look to IEF to accept this reality. I can think of no better home for IEF than ERD. I also accept the logic of a leading private sector representative when he observed that even if one were to kill the IEF, it would resurface several months later in some form. Governments, the argument goes, need a flexible instrument to respond to economic opportunities or to challenging economic circumstances confronting a community or a region. Provincial government officials, meanwhile, insist that the Fund has met with considerable success over the years and the perception of being a political fund is far more myth than reality. They can make the case that IEF has authorized over $500 million in transactions and that many of the initiatives were turned down by NSBI. They can also add that the government has incurred ‘no significant losses from these transactions’.

Rather than a paternalistic sponsor, Nova Scotia needs a partner in economic transformation to build a stronger and more resilient place within the Canadian economy.

While acknowledging the value and need for optimal transparency and accountability, the Commission again agrees with Dr. Savoie’s observations. It is the elected government that is ultimately held to account for all economic development investments and their outcomes. And governments are elected both to develop and implement longer-term policies and strategies to improve the economy, and to be responsive to local situations and needs. The Commission has observed that the most problematic cases often involve government efforts to support one-industry communities by shoring up weak companies rather than more conventional business development. Again, the Commission recognizes that these kinds of investments fall appropriately within the purview of Cabinet and our primary recommendation is that government be more completely transparent in communicating the rationale for such decisions.

In between these two levels of intervention—the broad strategic and the local community based—there are many conventional business-to-government transactions that can be efficiently and effectively managed on a business-case basis by arms-length agencies like the farm and fisheries loan boards, Innovacorp and NSBI.

In suggesting this overall approach, the Commission supports the continued role of the current Business Advisory Committee to provide advice drawn from evidence and business case analysis to the ERDT Minister and Cabinet on all decision-making on economic development investments. In addition, these decisions should be subject to continuing review and public reports by the Auditor General.

The Commission’s most basic concern is that these different development agencies work together more effectively as a more fully integrated support system for business growth and economic transformation. The development of the ten-year plan that we have proposed as a transformation goal will provide a context and a framework for achieving this greater integration, coherence and focus.

XII. Finding A Committed Federal Partner

In almost every policy field that is important for Nova Scotia—energy, fisheries and oceans, international trade, immigration, transportation, human resources development, environment, research and development, etc—the Canadian constitution divides responsibilities between federal and provincial jurisdictions. Nova Scotia’s shrinking share of both Canada’s economy and its population provides prima facie evidence that this arrangement is not currently working well for us. There is significant room for improvement in the working relationship between the two levels of government.

The trend in recent years, amplified by fiscal restraint measures at both levels, has been towards a less effective partnership. Nova Scotia has seen a sharp reduction in federal jobs in the province—some 25% since the mid-1990s—and significant cuts in federal fisheries management and science and in regional development programming including the withdrawal of federal funding for regional development authorities (RDAs). While this has been happening, Ottawa committed $1 billion to shore up Ontario’s manufacturing sector and untold millions in tax advantages for the fossil fuel industry in the West. Such investments are regularly characterized as commitments to building Canada’s “national economy”, while support for fisheries and forestry renewal in the Atlantic Region seem to be seen as inefficiencies that the federal government simply can’t afford any more. At the same time the provincial government’s priority on expanding international immigration has been frustrated by inflexible federal policies on quotas and program categories.

Current federal intentions to move to a per capita formula for fiscal transfers is cause for deep concern in a province with an aging population that continues to export significant numbers of working age people to other provinces. Similarly, Ottawa’s current plan
Every effort must be made to build a more meaningful partnership in which the needs and aspirations of Nova Scotia are genuinely respected and actively supported.

to reduce funding for employment support for disadvantaged groups is a serious problem in a province that needs to improve its labour force participation rate to meet worker shortages now and in the future.

Economic renewal in Nova Scotia will require much more effective policy alignment with the federal government and enhanced collaboration at the level of services to business and communities. Every effort must be made to build a more meaningful partnership in which the needs and aspirations of Nova Scotia are genuinely respected and actively supported.

The Commission emphasizes very strongly that we are not proposing a return to the province’s prior over-dependence on federal transfers. Rather than a paternalistic sponsor, Nova Scotia needs a partner in economic transformation to build a stronger and more resilient place within the Canadian economy. This report lays out the business case for such a transformation, and asks all key sectors – business, labour, local governments, First Nations, strategic institutions and communities — to make the investments needed to achieve it, each according to their strengths and capacities. We ask no more nor less from the Government of Canada.
Over the course of its work the Commission was informed about many undertakings by community organizations, business groups, First Nations, education and training institutions, government agencies and others that addressed the economic and population challenges we are most concerned about. There were too many of these to single out for support here, but the Commission would like to point to a few as examples of the kinds of concerted action and collaboration that are needed to build the new Nova Scotia Economy.

TOURISM STRATEGY

The new Nova Scotia Tourism Agency (NSTA) is a unique collaborative partnership between industry and government. It was established to provide new leadership and strategic direction to help this critically important sector adapt to rapidly changing regional and international markets. The industry currently generates $2 billion in revenues and creates 24,000 jobs, but has declined in recent years due to the high dollar, recession in the crucial U.S. market, and other factors. The NSTA’s new strategy, developed through extensive industry consultation and market research, aims to achieve one over-arching goal: more visitors, who spend more and stay longer. To meet this goal the Agency has established five action priorities to be achieved over five years: improved leadership and collaboration; strategic marketing; evidence-based decision making on new investments; higher quality products and experiences; and improved access to Nova Scotia.

In the Commission’s view, these are appropriate goals and priorities that will provide solid groundwork for achieving our proposed “stretch goal” to double total revenues over the next ten years.

MINERALS AND MINING POLICY REVIEW

Rising global demand for mineral and energy products over the past decade played a large part in sustaining the Canadian economy through the financial and market upheavals of the period. Nova Scotia did not enjoy the benefits of this growth in demand largely because of our traditional over-dependence on the one U.S. market. However, regulatory barriers and policy constraints were factors as well. From 2001-2011, Nova Scotia’s mining and quarrying industry shrunk from a value of $285 million to $247 million while the industry grew dramatically in almost every other province. Nova Scotia lost some 800 jobs in the sector over the five years prior to 2012.

As a key element in its implementation of the 2011 Natural Resources Strategy, the Nova Scotia Department of Natural Resources will undertake a review of the Mineral Resources Act to provide a modern and responsive legislative framework to support and promote sustainable mineral resource management in the future — from exploration to development, to active mining, and finally to land reclamation. This will require sustainable mining practices, effective community engagement, and a commitment to informed decision-making. The end result will be a sustainable industry that is successful both economically and environmentally.

The Commission welcomes this commitment to the modernization of this important sector so that the province can benefit more fully from its valuable resource base. It is also important that this review exemplify the government’s commitment to effective public engagement and regulatory excellence.

WORKFORCE OF THE FUTURE TABLE AND ATLANTIC WORKFORCE STRATEGY

These are two critically important initiatives for building the workforce needed by a more productive and growth oriented Nova Scotia economy.

In its efforts to secure the Irving Shipyard bid for Canada’s $25 billion naval vessel procurement, the provincial government initiated stakeholder consultations to ensure that Nova Scotia would be prepared to undertake the project and then leverage it to drive wider industry growth. The success of those first discussions inspired a broader collaboration on how to prepare the workforce to meet future skill needs. A roundtable of leaders from governments, industry, the educational institutions, unions, First Nations, and community organizations has
been meeting regularly since 2012 to develop strategies to build the best workforce for Nova Scotia. They have identified five priority areas to guide policy and program development and future government-industry-community collaboration: employer engagement in apprenticeship, linking people to growth sector jobs, excellence in math and science, youth retention and entrepreneurship.

The Atlantic Workforce Strategy is a regional initiative to harmonize occupational standards in key industrial trades. Recognizing the need for a coordinated approach to build the labour force needed for impending major capital projects in mining, shipbuilding, offshore energy and construction, the four Premiers established the Atlantic Workforce Partnership in 2013. The project will begin by creating common certification standards for construction, electrician, bricklayer, instrumentation technician and cook apprentices by mid-2015. This will improve workforce entry and the transfer of skilled labour across provinces, and will ensure the region has experienced and prepared apprentices ready to meet upcoming opportunities. Additional high-priority trades will be aligned by mid-2017.

The Commission again commends these ambitious efforts to break down barriers to worker mobility, to enhance skills training and to create a more attractive labour market environment to attract skilled workers back to the region.

**CAPE BRETON ISLAND AND MULGRAVE PROSPERITY FRAMEWORK**

The Cape Breton Partnership provides an excellent example of how key sectors for economic advancement — business, the three levels of government, First Nations, strategic institutions and community organizations — can come together to plan and implement transformative change. This is very much what the Commission has in mind in proposing a province-wide project to build a new Nova Scotia economy, and we are very appreciative of the efforts made by the Cape Breton Partnership to align their strategic directions with wider policy directions at the provincial and federal levels.

A major outcome of the Partnership’s work is the Prosperity Framework a comprehensive economic development plan for the region that sets four overriding goals:

1. Pursue updated economic development strategies for the entire region, with a focus on growth sectors and value-added components of existing sectors.
2. Align the Strategic Framework with the provincial and federal economic strategies.
3. Collaborate with Cape Breton-Mulgrave’s principal economic development partners in the pursuit of updated strategies with provincial and federal plans, and fill gaps in economic development programming, particularly as they relate to human resources and entrepreneurship development.
4. Facilitate and monitor the net creation of new jobs on an ongoing basis.

These again are critical elements to be addressed in the development of our proposed ten-year plan for economic growth and renewal in Nova Scotia.

**ENGAGE NOVA SCOTIA**

Engage Nova Scotia (previously named “Envision”) is a non-partisan coalition of volunteers from the public, private, voluntary and academic sectors across the province. Their goal is to help foster the emergence of a more vibrant, inclusive and resilient society by promoting the engagement and collaboration of all Nova Scotians in designing and building the future they want. They undertake engagement activities aimed at achieving more meaningful participation in change and innovation at the community and provincial levels, and at building capacity for engagement and collaboration through training and education. Engage will also conduct research and analysis to contribute to an evolving narrative about our communities and province.

The Commission recognizes the importance of this broader and more creative approach to citizen participation if we are to change attitudes and adapt to new ideas as we address our economic and demographic challenges.

**4FRONT ATLANTIC**

4Front is an important learning and visioning initiative driven by private sector leaders from across the four Atlantic Provinces. It brought together hundreds of business leaders in three intensive working conferences over three years. The first gathering focused on why
regional businesses need to grow, innovate and expand trade; the second examined steps to achieve these outcomes; and the third looked at how to implement these strategies. A major outcome of the conferences was an action plan detailing 15 activities for businesses to undertake to help the region succeed in a changing global marketplace. The 4Front Steering Committee will release a report card detailing how Atlantic Canada is performing as a region on the 2013 plan.

The Commission strongly endorses this form of private sector initiative in defining the economic challenges facing the province and bringing business leaders together to address them. More such action and collaboration will be needed as we move forward with building the new Nova Scotia economy.

COMPREHENSIVE TAXATION REVIEW

The new government of Nova Scotia has committed to a comprehensive review of tax policies and measures and their impacts on business development and investment in the province. The Commission welcomes this long overdue effort to modernize our tax policies and to align them more effectively with our economic development strategies and priorities. We also believe that there are innovations in other jurisdictions to be evaluated, a key example being the Start-Up NY initiative in New York State that will incent innovative business start-ups in incubation centres on university and college campuses.

SCHOOL REVIEW CONSULTATIONS

Schools are crucial elements of social infrastructure, vital to the viability and attractiveness of communities. However, declining enrolment, consistent with population loss and the changing age profile in most areas of Nova Scotia, has triggered province-wide processes to rationalize school facilities. In 1973 the P-12 school enrolment in Nova Scotia was 211,258 students. Today we have only 122,643 students in the province’s schools with expectations of continuing and substantial decline. Escalating facility maintenance costs and salary levels, combined with provincial budgetary constraints, add further impetus for restructuring the school system.

In response to community concerns about how decisions were being made to close or consolidate schools, in 2013 the provincial government announced a full public consultation on the school review process. The review will address the question of how best to manage the current stock of school buildings to deliver excellent school programs to all students. It will consider opportunities to diversify the use of under-used buildings and examine the factors that should determine if a school should be considered for closure. The review will generate recommendations on how to improve the planning, consultation, and decision-making processes in ways that are good for students and for communities while maintaining a financially sustainable system.

The Commission strongly supports this effort to engage the public on the future of our smaller schools, particularly in rural regions, and hopes that it will lead to higher levels of understanding and consensus about ways to meet these challenges.

INDEPENDENT REVIEW OF BUSINESS INCENTIVES

The Commission welcomes the appointment of Dr. Tom Traves to lead the review of current tools and resources for support of business development in the province. Dr. Traves will evaluate the current use of loans, loan guarantees, grants, equity, venture capital supports and payroll rebates, and make recommendations on how the government can better support economic growth and improve transparency and accountability. The Commission sees this as an excellent and timely follow-up to its work and as a means to align policies and programs in the government with the broad strategic directions we are proposing to stimulate growth and renewal in the Nova Scotia economy.

There are many more such initiatives that the Commission could identify and support. The major point to be conveyed is that Nova Scotia does not have to start from scratch in building a new economy: leaders in many corners of the province understand the need for such an effort and are already committed to it. There are many resources and institutional capabilities already committed to the task. It our hope that our report will lend impetus to the development of a larger vision and planning framework to link and coordinate these many initiatives and orient them to shared objectives and intended outcomes.
As stated in the introduction to this report, the Commission on Building Our New Economy set out in late 2012 to generate specific policy advice and recommendations primarily for the Nova Scotia government. However, because we had a broad mandate, and sufficient time and resources to carry out extensive public engagement, research, and reflection on the current economic condition of the province, we find ourselves at the end of our work in a somewhat different place than was anticipated. Our thinking has shifted on how best to fulfill that mandate.

First of all, as emphasized throughout the report, we believe that the province is on the verge of a serious crisis in the viability of its communities and the capacity of its economy to sustain the current standard of living for citizens and the quality of public services. A primary purpose of this report is therefore to alert Nova Scotians to this situation and to call for concerted action on the part of all sectors — business, labour, government, First Nations, leading institutions and voluntary sector and community organizations — to come together around a new vision and concerted strategies to meet our economic and population challenges.

Secondly, and almost as daunting as our economic and population challenges, Nova Scotians need to understand and embrace the significant opportunities we now have to build a better future — “daunting” in the sense that to succeed in this effort we will need to do things differently and to change old attitudes that limit our capacities to come together in common cause. We have valuable assets and significant new capacities to change and grow as a province, and the macroeconomic climate may finally be shifting somewhat in our favour, but we will not overcome our economic and population challenges through business as usual or, for that matter, through politics as usual.

Because of this shift in thinking and approach, this report has not proposed the usual list of policy options and action steps aimed primarily at government. While policies and programs can always be improved, the Commission does not believe that, in and of themselves, such changes on the government side will provide the needed answers. Our challenges run much deeper. They are embedded in the very structure of the economy after decades of weak private sector growth and perhaps an over-reliance on government as the leading source of new employment and wealth generation. And they are amplified by our lack of confidence and collective ambition to do better, and in our attitudes of mistrust and indifference with regard to the successes of our entrepreneurs and their capacities to rebuild local economies.

This report calls upon governments at all levels to provide stronger leadership and direction, to align their policies and programs more effectively, and to be more efficient and focused in supporting business growth and innovation. But we do not mean to suggest that government holds the answers or that these better approaches will solve the problems we face as a province. For that to happen, everyone else — in business, labour, partner institutions and communities — will have to play their part.

For these reasons the Commission has developed its advice in a different format that it hopes will convey the urgency of the situation and the need for new directions and strategies.

First, on the level of broad vision, the Commission proposes that Nova Scotia consciously undertake to transform itself over the next decade into a dynamic and creative province, capable of taking bold measures and risks, and of coming together as a unified community to build a better future. We observe that the regions and nations of the world that are having the greatest success
Nova Scotians need to understand and embrace the significant opportunities we now have to build a better future — ‘daunting’ in the sense that to succeed in this effort we will need to do things differently and to change old attitudes that limit our capacities to come together in common cause.

in meeting the challenges of globalization and technological advance are those often small states that are best able to take on such projects of self-transformation. We can undertake our version of such a projet national, by building on our unique assets, strengths and cultural traditions, by mobilizing our creative youth, business entrepreneurs and social innovators, and by focusing the immense capacities of our educational institutions, our business and voluntary sector organizations and our governments on shared goals for growth and renewal.

As the next step, the Commission has proposed a set of “stretch goals” whose achievement would require active commitments from all key sectors and adoption of new and much more ambitious strategies and approaches. It is intended that progress towards these goals be measurable, and that their achievement would signal a dramatic shift for the better in the province’s condition. They address three fundamental imperatives that the Commission believes are self-evident and inescapable if we are to reverse an accelerating crisis of economic and population decline: the province needs more people, more businesses and a more efficient, focused and effective system of governance.

Just to clarify: the Commission is not proposing that the new goals for Nova Scotia set out in this report be written in stone as absolute targets or standards. It is assumed that there will be further stakeholder consultation and deliberation at the political level. We have made suggestions for where to start in terms of the nature and scale of such goals. The strongest points of emphasis are that such goals are needed to bring all the sectors together, and they need to be transformative.

Finally, the Commission has proposed 12 new strategic directions, or “game changers”, as a way to indicate the nature and scale of the changes in attitude and approach that will be needed to achieve the new goals for the province. For example, we cannot possibly hit our population and labour force growth targets unless all sectors of the community adopt a much more positive and active commitment to welcoming newcomers to our province, and to supporting our disadvantaged citizens, to facilitate their success as students, as workers and as entrepreneurs.

Similarly, it will not be possible to turn around our economic outlook as a province unless we significantly improve productivity and competitiveness in our traditional rural industry sectors. They are our cultural foundations and our unique competitive advantage in global markets, but they need to be brought more completely into the new world of innovation and knowledge economy thinking so that we generate much greater value from them on a sustainable basis.

And that transformation in turn implies a “game change” in our attitudes and understandings about the interdependence of our rural and urban economies and about the management of environmental impacts to balance our growth objectives with our commitments to sustainability and regulatory excellence.

The Commission does not propose major changes in the scale, structure and operations of government programming in the economic development sphere. As indicated above, we do not believe that poor policies and programs are the major cause of our economic and population difficulties in Nova Scotia, and therefore in is unlikely that far-reaching changes in them represent a major solution.
We can always do better, and previous studies and reports, and new ones now underway, will provide detailed advice on moving forward in that direction. To add value to those efforts the Commission emphasizes greater transparency and accountability, more effective public communication on the ‘business case’ evidence behind economic development investments, and the appointment of a new Minister of Business to strengthen communications between government, business operators and the wider community.

Finally, the report concludes by pointing to a number of current and ongoing initiatives that are entirely consistent with the new directions proposed in this report. Clearly we are not starting from scratch. On the business side, we have many growth-oriented enterprises in Nova Scotia that are doing all the right things to invest, innovate and trade more. We just don’t have enough of them. Similarly our universities and the Nova Scotia Community College are expanding their research and development efforts and their partnerships with business, but we need much more of this innovation and collaboration and it needs to be more actively embraced on the business side. The Atlantic Workforce Strategy, the Workforce of the Future process and the review of school curricula to improve mathematics and science learning all hold great potential to energize and facilitate positive change. These initiatives need to be actively supported and perhaps more effectively linked and coordinated within a wider strategy for economic growth and renewal.

In closing, the Commission wants again to thank the many stakeholder and community representatives, and the experts from many fields, who attended public meetings, met with the Commissioners and staff, or submitted briefs or social media messages over the past year. This voluminous input has been both a rich resource and a source of inspiration for the Commission. Our decision in this report to call for concerted action on a shared project of transformative change seems to us entirely justified by the overwhelming evidence that many, many Nova Scotians care deeply about our province and are actively committed today to helping to build a better future for it. That is the most essential ingredient for success.
The Report of the Nova Scotia Commission on Building Our New Economy: Section II

SECTION II
Research and Engagement Documentation

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Introduction to Section II
Research and Documentation

The Nova Scotia Commission on Building our New Economy was formed to engage citizens in rigorous conversations about our economic opportunities and challenges as well as to identify new directions for wealth creation in all regions of our province. In fulfilling this weighty charge, the Commission has made every effort to find data and expert opinion to inform both those participating in the process and as the basis of our best advice for Nova Scotians. The front section of this report conveys key elements of research findings that grounded our analysis and focused advice (available at onens.ca). The second section of our full report presents a range of evidence prepared or commissioned by Commission staff to inform Commissioners toward the fulfillment of their mandate.

Views expressed in Section II are not necessarily those of the Commission or individual Commissioners, but do reflect the diverse perspectives presented to the Commissioners from staff research and public engagement activities.

A series of ‘snapshots’ of our current economy begins the second section of Section II. Following that, a compendium of commissioned reports, solicited opinions on specific themes, and staff writings conveys the research gathered for the Commissioners’ use.

Public engagement was not only central to Commission activity as mandate fulfillment; it was truly a crowd-sourcing endeavour with a harvest of diverse perspectives and ideas. Our Interim Report of May 2013, which focussed on what the Commission had heard and learned up to that point, is available in full at onens.ca. Activities subsequent to interim reporting are described in the final part of Section II. The Commission broadened its reach of interaction with Nova Scotians by co-developing, with Corporate Research Associates, a survey of opinions and attitudes about our economy. The results and CRA’s analysis is presented in full. This is followed by a listing and brief description of the approximately one hundred written submissions made to the Commission.

Finally, to celebrate the many things that make Nova Scotia wonderful now and that can be built upon for our new economy, we present the Awesome Nova Scotia Map.
Snapshots of the Current Economy of Nova Scotia

Nova Scotia’s population is getting smaller, ageing and more urbanized

FACTS

- Nova Scotia population is impacted by the influence of the baby boom (approximately one-third of Nova Scotians), fertility rates below replacement for over three decades, increased life expectancy, and outmigration, as well as economic conditions.

- Nova Scotia’s population appears to have peaked in July 2012; 2013 population is 0.5 per cent lower at 940,789.

- From 2002 to 2012, the 65 and older population grew 26.2 per cent increasing the seniors’ population share to 17.2 per cent. Regions outside of Halifax have a higher share of seniors (65 and older):
  - Southern: 21.5 per cent
  - Cape Breton: 20.6 per cent
  - North Shore: 19.8 per cent
  - Annapolis Valley: 18.1 per cent
  - Halifax: 13.5 per cent

- Nova Scotia has the highest proportion of people age 65 and older, the lowest percentage of population under 15 (14.5 per cent) and is tied with New Brunswick for the second oldest median age at 43.3 years. (2012 data; 2013 unavailable)

- Rural Nova Scotia has had population growth for most of the last 160 years of census data. This growth was generally at a lower rate than the urban areas so its share has been dropping. Between the 2006 and 2011 Censuses, both rural population and share dropped.

- During periods of overall increasing rural population, some rural areas experienced decline.

- In the last 10 years, 13 counties had population losses while five had population gains. With the exception of Antigonish (0.1 per cent gain), it was the counties within a 60 minute drive of downtown Halifax that showed growth.

- Between the 2006 and 2011 censuses, Nova Scotia’s population increased 0.9 per cent. Not all urban areas gained population. Upon examination of the larger population centres defined by Statistics Canada:
  - Halifax (Census Metropolitan Area) +4.7 per cent
  - Truro (Census Agglomeration (CA)) +1.8 per cent
  - Kentville (CA) +1.5 per cent
  - New Glasgow (CA) - 1.3 per cent
  - Cape Breton (CA) - 4.1 per cent

- Although Halifax has seen growth, in terms of the 33 Census Metropolitan Areas (CMAs) across Canada it was in the bottom third for growth.
LIKELY FUTURE

- Based on Nova Scotia Department of Finance projections (spring 2013) out to 25 years to 2038:
  - Total population is expected to decline 2.4 per cent to approximately 926,000.
  - Population share age 65 and older is expected to grow by 62.5 per cent to 2038 to be 28.6 per cent of population.
  - Population age 18-64 (source of most of the labour force) is expected to decrease by 16.9 per cent or 104,000 by 2038. It is projected to be 47,000 lower by 2023.
- Population ageing is, in a large part, a function of the “baby boom” who began turning 65 in 2011. The baby boomers are one-third of Nova Scotia’s population with the largest age cohort now 50/51. The effects of this population ageing on the age structure, is exacerbated by lower number of births, increased lifespan and population out-migration. Deaths now outpace births and this trend is expected to continue as the number of women of child-bearing age decline and the number of older people increase.
- Nova Scotia is not alone in experiencing these demographic trends. Most of Europe and Japan’s population is older. However, the ageing of the baby boom means that Nova Scotia will age relatively quicker than many of the countries in Europe who did not experience the baby boom. Most developed countries have fertility rates below replacement levels for population.
- Government policy alone cannot reverse this ageing trend.
- Urbanization is a long-term world-wide trend driven in part by increased productivity in the rural areas and increased opportunity provided by concentrations of population.

IMPLICATIONS FOR THE ECONOMY

- The population age structure is the demographic characteristic that will have the most impact on our economy. The age structure of the population will result in a smaller labour force. Increasing the labour force through higher immigration and increased participation of marginalized groups and older workers will only moderate the decline in the short to medium term. It appears inevitable that the size of our workforce will shrink.
- Economists have decomposed GDP to help understand what makes it grow. Growth in GDP can come from increase in hours worked on the part of the population and/or productivity, expressed as an increase in the value of the good or service produced per person hour worked. Person hours worked is unlikely to increase in the medium-term and will likely decrease.
- Productivity increases can be achieved by producing the same product more efficiently in terms of labour through factors such as investment in training and development, machinery and technology, high performance work practices and better management techniques. Productivity can also be achieved by improving the product so that it has greater value or by producing an entirely different product.
- A decreased labour supply will put pressure on wages. If wage gains are not matched by gains in investment and productivity, businesses may close or move their production elsewhere which means reducing the demand for labour, taking pressure off wages. The challenge is to have employers make the necessary changes to ensure that workers are employed in higher wage jobs. If employers do not adjust, Nova Scotia may find itself with a lower standard of living.

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1 CMA Census Metropolitan Area
Population of 1000,000 or more with a core of at least 50,000
CA – Census Agglomeration
Core population must be at least 10,000
Demographic factors will also affect the types, amount and location of goods and services demanded. The goods and products that people consume change with age. The consumption patterns of the “baby boomers” affect the market for locally produced goods and services (e.g., new starter home market will decrease, market for personal care will increase). As population declines in some places it will mean that there may not be enough of a local market to support a business. This is an important factor in the closure of retail businesses including gas stations, and financial institutions.

Rural areas of the province tend to be older; Southern Nova Scotia and Cape Breton already have more than one in five people 65 and older. The combination of an already older age structure and outmigration suggest that general labour market shortages will likely show up in rural areas first. There are additional issues of challenges for the transition of business in terms of succession planning, municipalities being able to maintain/expand infrastructure and the provision of government and other services.
Nova Scotia is a service-based economy

**FACTS**

- Nova Scotia is a service-based economy, based on either employment or GDP.
  - Based on 2012 employment:
    - service-producing sector - 81.3 per cent
    - goods-producing sector - 18.7 per cent (primary industries, utilities, construction and manufacturing)

  *Note: The employment data does not include military (Regular Forces) employment.*

  - Based on 2012 GDP:
    - service-producing sector - 81.8 per cent (includes defence services as well as imputed value of owner-occupied dwellings (similar to the value of what rent for that housing would be)
    - goods producing sector - 18.2 per cent

- The table at left presents the top five industries on an employment and a GDP basis. As can be seen there are differences. The finance, insurance, real estate and leasing industry is in top place for GDP by the virtue of the imputed rent. Part of the differences in the ranking for public administration is that employment does not include military while the calculation of GDP includes defence services which are about one-third of public administration GDP. Other differences in ranking reflect that some of the industries such as accommodation and food services, and retail trade, produce much less value added per employee.

- Manufacturing is the only goods-producing industry that breaks the top five.

- By employment, all regions of the economy are service dominated. The service share by 2012 employment is:
  - Halifax: 86.9 per cent
  - Cape Breton: 84.3 per cent
  - Annapolis Valley: 76.4 per cent
  - North Shore: 73.1 per cent
  - Southern: 70.3 per cent

- The top three industries by employment for the regions are all service industries except that manufacturing is the third largest in the North Shore and Annapolis Valley.

- Service sector industries could be divided into private and public sector. Public sector is grouping of educational services, health care and social assistance, and public administration. There are some private firms within these sectors but employment is dominated by public sector firms.

- By employment, the public sector is 30.3 per cent of Nova Scotia employment (military excluded) and 30.4 per cent of GDP (military included). The private services part of the economy is 51 per cent.

- The size of the public sector varies by region in Nova Scotia:
  - Cape Breton: 38.2 per cent
  - Halifax: 31.1 per cent
  - Annapolis Valley: 30.0 per cent
  - North Shore: 26.6 per cent
  - Southern: 23.5 per cent

- There is often a perception that service sector jobs are not high-paying. The 2012 average weekly service sector wage including overtime was $763.57 as opposed to the goods sector’s $940.61, which does not include agriculture and fishing. Weekly wages are a function of the hourly wage rate and hours worked. However, there is considerable variance within the service sector:
• Four industries (information and cultural industries which includes telecommunications; professional scientific and technical services; public administration; and management of companies and enterprises) have a weekly wage over $1,000.

• The bottom three industries are accommodations and food services ($376.32), arts, entertainment and recreation ($518.17) and wholesale and retail trade ($596.24).

- In 2011, 36.0 per cent of all exports (interprovincial and international) were services.

**LIKELY FUTURE**

- Nova Scotia will continue to remain a service-based economy.

- There are different factors that will drive the performance of individual industries of the service sector of the economy:
  
  • There are business to business services that are dependent on performance of other industries as they help provide support services that are used to deliver other goods and services (e.g., transportation of goods, environmental impact statements, call centres). These services can be exported. This would include industries such as:

    ◊ Transportation and warehousing
    ◊ Professional, scientific and technical services
    ◊ Business, building and other support services

  • The demand for finance, insurance and real estate services is a combination of individual and business needs. This sector is comprised of small “offices” that deliver services around the province and larger “offices” which may also be involved in exporting services. The changes in where people live and the age of the population will affect the demand for some of these services.

  • There are other services that primarily serve a local market, although tourists can augment that demand. These will be impacted by the disposable income and population dispersions of Nova Scotians. These industries include:

    ◊ Wholesale and retail services
    ◊ Information, culture and recreation services
    ◊ Other services (e.g., automotive repair and maintenance, personal and laundry services, etc.)

  • The public sector industries have a number of factors that have both negative and positive pressures on the sector – dropping population of younger people will have a negative impact on the demand for educational services, the increasing number of older people would put an increase in demand for health care, particularly personal care services, while government budgetary considerations will try to constrain growth in these services.

**IMPLICATIONS FOR THE ECONOMY**

- To increase the health of some of these industries, consideration needs to be given to exporting services.

- Increasing interprovincial and internationally traded services would contribute to economic growth. Opportunities relate to gateway and transportation, information and communication technology (ICT), financial services, and professional and technical services to key global industries such as energy, defence and environmental management.
The structure of Nova Scotia’s economy is undergoing change

FACTS

- Although economies are always in a long term process of restructuring, the early to mid-1990s were particularly painful for Nova Scotia. The decade began with a recession, but the 1992 Northern Cod Moratorium (affecting fishing, fish plants and boat building) and federal government cutbacks in the early 1990s (including the closure of military bases) made permanent changes to the economy in Nova Scotia, particularly in some of the regions. It took until 1998 for employment to rise above 1990 levels.

- The deepest world-wide recession since the Great Depression, often referred to as the Great Recession, struck in late 2008. Nova Scotia weathered the first year better than most Canadian provinces but the slow international recovery and ongoing uncertainty took its toll on Nova Scotia firms and accelerated restructuring in several industries.

- Restructuring occurs because of a variety of reasons: development of new industries (e.g., oil and gas, call centres); resource constraints impacting existing industries (e.g., groundfish processing); and demand for the product declines (e.g., gypsum). Sometimes the changes are gradual (e.g., agriculture) while other times it is more dramatic (base closures).

- The Nova Scotia economy has been on a long term trend toward being an increasingly service-based economy.
  - In 1990 service-based employment was 74.8 per cent of all employment; in 2012 it was 81.3 per cent.
  - In 1990 goods employment was 25.2 per cent of the economy; by 2012 its share had dropped to 18.7 per cent.

- One particular industry sector has been responsible for most of this change since 1990 – health care and social services. The chart below shows its growth and illustrates some of the major structural change in the Nova Scotia economy since 1990.

SERVICES

- Between 1990 and 2012, employment in health care and social assistance grew 67.5 per cent or 28,000 people; total Nova Scotia employment growth was 18.2 per cent. Health care and social assistance’s share increased from 10.8 per cent of Nova Scotia employment in 1990 to 15.3 per cent in 2012. Employment had increased 9,200 from 1990 to 2000 and 18,800 from 2000 to 2012. Employment in 2012 was 69,500. Not all of these employees would be publicly paid as this industry also encompasses private personal care workers.
  - In terms of the regions, Cape Breton, Northern Nova Scotia, and Annapolis Valley experienced similar growth. Halifax was at the high end with growth of 78.6 per cent and Southern Nova Scotia was at the low end with growth of 37.5 per cent.

- The late 1990s saw the establishment of an internationally-focused business services industry focused predominately on customer service call centres. This industry was a mixture of contract and in-house call centres as well as out-going and in-coming calls. As the industry developed,
higher value call centres and support to business operations were part of the mix. Given that these services can be provided in many locations, changes in cost structures and changes in contracting firms’ needs has meant that there is significant churn in the sector. Centres come and go as Nova Scotia’s value proposition for the sector changes.

- From 1990 to 2012, the business, building and other support services industry (includes call centres) grew 190.0 per cent. This hides the fact that industry peaked at 28,600 in 2006. In 1990 there were 7,000 people in this industry; in 2000, 16,400; and in 2012, 20,300.
  - Regionally all parts of the province saw growth, with the strongest being in Cape Breton as the industry tripled. It peaked at 5,400 in 2006. In 2012 it was 3,300. Northern Nova Scotia also had strong growth, more than doubling in that time period. By 2012, it had lost 2,100 from its 2006 peak of 4,400. Halifax also peaked in 2006, losing 3,700 by 2012.
  - This industry peaked at different times in other regions: 2004 in Southern Nova Scotia (2012 - 1,300 lower than peak), and 2009 in the Annapolis Valley (900 drop).

- Professional, scientific and technical services, which encompasses such services as engineering, scientific measurement, legal, accounting, architecture, specialized design, computer systems design, advertising and public relations services, etc. has experienced growth of 141.9 per cent from 1990 to 2012 to 25,400 people. Growth has been similar between the 1990s and the 2000-2012 period.
  - All regions saw growth in this industry ranging from 111.1 per cent in Cape Breton to 171.4 per cent in Southern Nova Scotia. One of the differences is that Cape Breton growth occurred mostly in the 1990s; it only grew 26.7 per cent from 2000 to 2012.
  - Some service industries have had a similar employment growth as the economy since 2000 (10.6 per cent) or slightly better.

- Finance, insurance and real estate grew 9.6 per cent as the finance and insurance growth (14.9 per cent) was able to overcome the real estate and leasing part’s losses (-1.4 per cent). Employment in 2012 was 23,900.
- Information, culture and recreation industries grew 12.7 per cent to 18,600 in 2012.
- Public administration grew 12.9 per cent over this period to 29,700 but this was not enough to recover the losses in the 1990s.
- Accommodation and food services grew 18.9 per cent to 31,400 in 2012.
- Educational services, despite a drop in the youth population, grew 21.7 per cent to 38,700 in 2012, aided in part by a growth in international students.
- Some services industries have had employment slip since 2000:
  - Transportation services employment was 1.0 per cent lower to 20,200 in 2012.
  - Wholesale and retail trade employment slipped 1.6 per cent, largely because of a 19.7 per cent decline in wholesale trade to 71,600 in 2012.
  - Other services (repair and maintenance (not construction), personal and laundry, religious, grant-making, civic and professional and similar organizations, and private household services) dropped 5.8 per cent to 21,100 in 2012.

GOODS

- Manufacturing has undergone dramatic change in the last two decades. It was the third highest industry by employment in 1990 (11.5 per cent) and dropped to number five by 2012 (7.1 per cent). In 2012, average manufacturing employment was 32,300.
- Between 1990 and 2012, employment in manufacturing dropped 25.6 per cent. Non durable manufacturing (e.g., food and beverage and pulp
and paper) shrunk 40.4 per cent over that time period beginning with the closure of fishing plants, continuing on through with restructuring in the meat processing industry and closures in sawmills and the pulp and paper industry. Durable manufacturing had growth in the 1990s (38.6 per cent) but declined 22.4 per cent from 2000-2012.

- The decline did not occur evenly around the province. Cape Breton (-64.6 per cent) and Southern Nova Scotia (-31.1 per cent) had greater percentage losses than the average while Halifax (-14.6 per cent) did not lose as much proportionally.

- Primary employment has been on a general downward trend, dropping 31.0 per cent from 1990 to 2012. In 2012 primary employment was 17,400, with approximately 98 per cent occurring outside of Halifax.

- Fisheries employment dropped 48.9 per cent. In 1991 fishing peaked at 10,300 while in 2012 it was 4,700. It was unusually low as the previous three years had averaged 6,300.

- Forestry employment has had some volatility, but since 2000 forestry employment has dropped 45.2 per cent. The recession, technological changes affecting the demand for paper, particularly newsprint, and the increased Canadian dollar affected demand resulting in temporary shutdowns and/or permanent closures of sawmills, pulp and paper plants and other wood manufacturing firms which dropped the demand for raw product. Employment in 2012 was 2,300.

- Agriculture dropped 17.8 per cent, with larger part of the drop since 2000. Agriculture employment in 2012 was 6,000.

- Mining, quarrying and oil and gas’s employment history is down 27.9 per cent, largely because of the 1990s when the employment decreased 42.6 per cent. Two of DEVCO’s large mines in Cape Breton closed in the 1990s while the last mine closed in 2001. The offshore oil industry came to an end in the 1990s while the start of the natural gas industry occurred just before 2000 (first commercial gas late December 1999). The natural gas employment would not be fully reflected until the 2000. From 2000 to 2012, employment grew 25.7 per cent despite the suspension of some gypsum mines as a result of the recession. Employment in 2012 was 4,400, nearly doubled the previous year.

- Data for the regions are not as detailed, only breaking out agriculture separately. The majority of agriculture employment in found in the Annapolis Valley and Northern Nova Scotia. Annapolis Valley and Southern Nova Scotia showed losses while Northern Nova Scotia had gains. Employment was below reportable levels (500) for Halifax and Cape Breton.

- Two goods industries bucked the trend:
  - Construction employment was up 21.9 per cent from 1990 to 2012 but this was a function of strong growth in 2000 to 2012 overcoming losses in the 1990s. Construction employment is largely comprised of a series of projects and will depend on investment. The federal government, in response to the recession, re-profiled its spending causing planned construction expenditure to occur earlier. Construction employment was 31,200 in 2012. All areas except Cape Breton showed employment growth from 2000-2012.
  - Utilities which employed 4,200 in 2012 grew 40.0 per cent but it was growth since 2000 that overwhelmed employment losses of the 1990s. This is essentially a Halifax story linked to Emera. For the two regions that had reportable levels of utilities employment, Cape Breton had losses in the 1990s and no employment change since 2000. Northern Nova Scotia reported losses in this period.
LIKELY FUTURE

- Restructuring of the Nova Scotia economy will continue. The question will be what factors will precipitate changes and whether they will be more gradual or sudden.

- The primary industries will face ongoing pressure to adapt to changes in economy, whether through trade agreements (e.g., agriculture), demand (e.g., forestry, gypsum), and prices (e.g., lobster fishery). There are other challenges such as environmental considerations (e.g., mining, quarrying, oil and gas, and aquaculture), and adapting to changes caused by climate change or government policy decisions (e.g., changes in Employment Insurance rules).

- The continued focus on business services and on high value professional, financial and scientific services will provide opportunities to increase interprovincial and international exports. The National Shipbuilding Procurement Strategy will prove a significant anchor for these companies, but new markets in Europe, South America and Asia will drive long-term growth and innovation.

IMPLICATIONS FOR THE ECONOMY

- The implications for the economy depend on what the structural changes are and how quickly adaptation is required. Globalization has increased the pressure for industries to adapt to change as they are not so much protected by distance.

- For individual Nova Scotians, whether there is dislocation or opportunity, they will need a skill set that will enable them to adapt to the changes. More education, re-training, or even relocation may be necessary.

- Structural changes have implications for the economic wealth of Nova Scotia. The impact on productivity will help determine the long term wealth of the province. Often wage rates are an indication of productivity as industries that are more productive can afford higher wages. If industries that were highly productive disappear or as new industries emerge that are not as productive then the wealth of the province is impacted along with that of individual citizens.

- The chart below left shows some of the change in the economy in terms of growth of full-time jobs by wages. The demand for low paying jobs has been impacted by the development of the call centre industry and its decline. High-paying jobs have had the slowest growth. In an economy that faces decreased labour it is important that there are relatively more high paying jobs so that our standard of living will not drop.

- It will be challenging for Nova Scotia to continue to support the growth rate of health care and social assistance. Costs borne by the government will cause other government expenditures to decrease or deficits to increase impacting our long-term fiscal future. If costs are borne by the individual, it will mean reduced consumption in other ways. This also raises the question if there is a substantial increase in personal care workers, how are these workers going to be supplied.
Most businesses in Nova Scotia are small

FACTS

• In June 2013 there were 56,853 businesses in Nova Scotia. The count is based on the smallest unit that files payroll so this includes public sector and non-profits. In some cases, school boards would be one “business” as they submit payroll on behalf of a number of sites but if a firm has multiple branches it is possible that they could submit payroll separately for each location and thus be counted a number of times.

- Of these businesses, 30,976 or 54.5 per cent had employees. For businesses with paid employees:
  - 500 + employees 0.2 per cent
  - 200-499 employees 0.5 per cent
  - 100-199 employees 1.2 per cent
  - under 100 employees 98.1 per cent (official definition of “small business”)
    - under 50 employees 95.6 per cent
    - under 10 employees 74.7 per cent
    - under 5 employees 54.7 per cent

• In Nova Scotia, 45.5 per cent of businesses (25,877) have no paid employees which would include owner-operator, contracted workers, family members or businesses that had no employees for a year (closed/shutdown but not dissolved).

• In 2011, businesses under 50 employees (includes those without paid employees) contributed 23 per cent to Nova Scotia’s GDP. This has slipped from 26 per cent in 2007. Business under that size contributed 27 per cent to Canada’s GDP.

• As of December 2012, Nova Scotia had 38.0 small and medium-sized businesses (under 500 employees) per 1,000 people age 15 and older. The GDP per all employer businesses was estimated at $1.247 million for Nova Scotia, based on 2010 GDP estimates.

- Industry Canada research indicates that there is a negative relationship between the number of small and medium enterprises (SMEs) per 1,000 population and the contribution to GDP per SME. A larger number suggests more small SMEs, but basically more SMEs/1000, the less the average SME’s contribution to GDP.

- With all business sizes and types included, the following industries have the highest percentage of one to four employees (2011):
  - Agriculture, forestry, fishing and hunting: 51.3 per cent
  - Accommodation and food services: 49.9 per cent
  - Educational services: 42.2 per cent
  - Construction: 37.0 per cent
  - Health care and social assistance: 30.4 per cent

- With all business sizes and types included, the industries with the highest percentage of no employees are (2011) are:
  - Professional, scientific and technical services: 87.2 per cent
  - Finance and insurance: 76.8 per cent
  - Information and cultural industries: 67.9 per cent
  - Real estate, rental and leasing: 59.2 per cent
  - Transportation and warehousing: 56.2 per cent
Trade is vital for Nova Scotia

FACTS

- The total value of all goods and services exported from Nova Scotia approached $16 billion in 2011. This was divided almost equally between exports to other countries ($7.7 billion) and exports to other provinces ($8.1 billion). The value of the province’s international export mix in 2011 was dominated by goods, 80 per cent, with 20 per cent for services. In contrast, the value of Nova Scotia’s services exported to other provinces exceeded that of goods by a small margin.

- Nova Scotia has a large and increasing trade deficit - imports increasingly exceed exports. In 2011, Nova Scotia’s trade deficit widened by $1.6 billion to reach almost $10 billion or 27 per cent of GDP.

- Trade with other provinces and countries contributes a significant share of economic activity in the province. In 2011, exports of goods and services to other Canadian provinces/territories and to other countries represented 43 per cent of Nova Scotia GDP.

- International trade is an important generator of jobs in the province as 27 per cent of all jobs are directly or indirectly related to exports. In 2011, there were 897 merchandise exporting establishments in Nova Scotia.

- Over the previous decade, Nova Scotia has experienced a decline in goods exports. Goods exports as a share of GDP decreased from 37 per cent in 2002 to 27 per cent in 2011. Nova Scotia’s goods trade deficit widened from $3.2 billion in 2002 to $6.7 billion in 2011.

- The decline in Nova Scotia’s goods export performance was centred on four product groups that accounted for 60 per cent of international exports in 2002: fish and seafood, energy, paper and paperboard, and wood and pulp. International exports of these four commodity groups fell in dollar value from $3.1 billion to $1.4 billion over the 2002-2012 period.

An ERDT survey of businesses (excluding retail, non-profits and public sector) in 2012 indicated that:

- The larger the business, the more likely they were to export a good or service outside of Canada (16 per cent of businesses with 1 to 4 full-time employees to 40 per cent of business with 100 or more employees).

- The larger the business, the more likely to invest in new or improved products or processes (40 per cent of business with 1 to 4 employees to 89 per cent of business with 100 or more employees).

- Nova Scotia had just under 900 merchandise exporters in 2011 with over half of the province’s exporters having fewer than 25 employees. Collectively, these smaller firms contributed roughly 14 per cent to overall international merchandise exports, meaning Nova Scotia relies on a small number of key firms and facilities for a large portion of its exports.

- Growth firms (average growth of 20 per year over a three year period) account for most of the employment growth. From 1985 to 1999 period, 6.6 per cent of firms (growth firms) accounted for 79.7 per cent of job creation in Nova Scotia.

LIKELY FUTURE

- Nova Scotia will continue to have a large number of small businesses.

- Small businesses that exist to provide goods and services to the local population will find themselves under pressure in many areas of the province as people move and/or grow older.

IMPLICATIONS FOR THE ECONOMY

- To maintain the same standard of living in Nova Scotia, there is a need to have more businesses that are growing in size and exporting. Businesses that are without employees or are very small businesses make a very limited contribution to the Nova Scotia economy.
From a market perspective, Nova Scotia exports to the United States declined and were not offset by increased exports to other markets.

In contrast, the value of export of services as a share of GDP has moderately increased. In particular, interprovincial service exports experienced significant growth, from $2.3 billion in 2002 to $4.3 billion in 2011, representing 12 per cent of GDP. At the same time, the services trade deficit also widened (from $1.7 billion in 2002 to $3.3 billion in 2011).

**LIKELY FUTURE**

A recent development in the global economy is the emergence of global value chains, which have been facilitated by reduced costs associated with trade across borders.

Global value chains spread the production of goods and delivery of services across many locations in the world. Large international companies can now identify the most beneficial location (e.g., due to cost-efficiency, access to strategic assets, or proximity to customers) for each step in the chain. Regions across the globe are seeking to attract high-value-added global value chain activities, because the firms that undertake these tasks require skilled workers and create good jobs.

Global trade patterns have also been changing. Emerging large markets such as Brazil, India, and China are attracting a significant share of global trade flows. Overall, the share of world GDP and trade flows accounted by developing countries has sharply increased over the last decade and is forecasted by the International Monetary Fund to increase further.

Trade between developing economies, so-called South-South trade, is also growing rapidly and represents a significant share of world trade. Firms in these countries are organizing their own global value chains, and it is a challenge for Canadian firms to integrate into those chains and participate in these markets.

In this context, it is important that Nova Scotia companies build the capacity to sell into diverse markets; focus on high-value-added goods and services that meet the demands of these markets, and increase their participation in global value chains.

- The United States is still Nova Scotia’s biggest market, but the province’s dependence on this market is declining. Nova Scotia companies are building sales, partners, and momentum in in the European Union and Asia.

**IMPLICATIONS FOR THE ECONOMY**

Trade is vital for Nova Scotia because it is a small province. The size of the province’s economy means that its internal market is too small to support efficient production. Increased trade (international and interprovincial) brings a number of benefits to Nova Scotia including:

- enabling firms to exploit economies of scale, become more productive and reduce costs
- stimulating innovation and investment
- creating jobs, increasing incomes and imposing downward pressures on prices

Nova Scotia’s small size means that often times manufactured exports are substantially made up of imported components (e.g., rubber for tires). Therefore, imports are important for Nova Scotia.

Rural Nova Scotia still produces significant resource-based exports (e.g., fish and seafood, paper and paperboard, wood and pulp, agriculture products); therefore, the decline in these exports negatively impacts rural communities.
Globalization affects all businesses, and provides international opportunities

FACTS

- The financial and banking crises that precipitated a global recession in late 2008 and the continuing slow recovery around the world demonstrated how interconnected economies are. Losses on US mortgage-backed securities impacted the finances of towns in Australia. Freefall in the US housing market closed building products firms in Nova Scotia.

- Nova Scotia is integrated into the global economy, along with the rest of the world. It has always been influenced by global trade but significant advances in information technology, communications, knowledge transfer, and transportation links have increased the two way flow of people, goods, services, and ideas.

- Nova Scotia’s Gateway provides access to markets across North America – with strong, inter-connected rail, sea and air links. Movement through the Gateway provides opportunities to Nova Scotia firms.

- Trade agreements have provided increased access to Nova Scotia firms to existing and new markets while also providing out-of-province firms access to our markets.

- Nova Scotia firms that focus on domestic markets are not immune from the effects of globalization. For example, retailers are impacted by the growth in online shopping across the province and across Canada.

- The modern global economy is increasingly driven by the activities of global value chains (GVCs). A value chain refers to the full range of activities that a company undertakes to bring a product or service from conception to end use and beyond. This includes supply chain activities, as well as value-added inputs like research, design, production, marketing, and after sales support. Some companies undertake activities - such as manufacturing, or after sales support - in specific locations around the world to lower costs, increase quality, or meet specific customer demands.

- Nova Scotia companies already participate in global value chains. A 2010 report commissioned from the Conference Board of Canada (CBOC) measured that participation. The overall results of the CBOC study suggest that Nova Scotia’s involvement in global supply chains grew between 1990 and 2007, before scaling back in recent years due to the global recession. Now it is growing again.

- As well as providing resources such as seafood, forestry products, and energy products, Nova Scotia companies sell high-value-added components into global value chains. For example:

  » Machinery and Mechanical Appliance exports increased by 12 percent in 2012 to reach $169 million. This product group has grown by 40 percent since 2002.

  » Exports of transportation equipment increased by 10 percent in 2012 to reach $95 million. It is dominated by aircraft parts (49 percent) and parts for motor vehicles (29 per cent).

  » Instruments and Apparatus exports totaled $60 million in 2012. Key products were sensors (44 per cent of exports) and navigational instruments (26 per cent). Over the decade it has grown by 19 per cent.

- Nova Scotia service companies also participate in global value chains by delivering business services to global sectors, including:

  • back office and middle office functions for financial services companies

  • customer support services for global ICT companies

  • high value engineering and technical support services to the oil and gas, and defence sectors.

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LIKELY FUTURE

- New trade agreements will improve access to Asia and Europe and provide opportunities and challenges for companies that go global.

- Global companies will continue to position their value chains around the world. Nova Scotia has opportunities to participate in high-value-added global value chains in key sectors such as defence, energy, business and financial services of these global value chains.

- The National Shipbuilding Procurement Strategy will mean that Nova Scotia becomes a global centre for shipbuilding expertise. Local companies will be able to sell to international companies setting up shop here. If Nova Scotia companies meet the strict certifications, IT, and training standards set by these companies, they will be able to sell across the global value chains of these companies.

- Nova Scotia offers advantages as a nearshore location to global companies in key sectors that wish to enter North American markets. These advantages include:
  - access to a highly trained workforce
  - a supportive business environment
  - geographical advantages
The Nova Scotia economy is not as productive as the Canadian average

FACTS

- It is well accepted that productivity is the single most important factor of a country’s per capita income (standard of living) in the long term.

- Labour productivity is the ratio between real value added and hours worked. Real value added is expressed in chained 2007 dollars which helps remove “inflation”.

- The labour productivity of the total Nova Scotia economy in 2012 was $40.50, 79.7 per cent of the Canadian total economy ($50.80). The Canadian productivity is approximately 80 per cent of the American productivity.

- In Nova Scotia in 2012, labour productivity for the business sector was expressed as $34.70, a decline of 2.0 per cent from the previous year. In 2012, it was 72.7 per cent of the Canadian business sector productivity. The business sector includes business establishments from every sector except public administration.

- Productivity declined in all sectors since 2011, ranging from -1.1 per cent in manufacturing to -22.1 per cent in agriculture, forestry, fishing and hunting.

- Goods sector productivity in 2012 was:
  - $34.90 with values ranging from $21.50 in agriculture, forestry, fishing and hunting to $190.40 for utilities.
  - 58.9 per cent of the Canadian average for the goods sector.
  - Only the utilities sector productivity ratio is higher than the Canadian industry average ($190.4 versus $171.8).

IMPLICATIONS FOR THE ECONOMY

- International trade is no longer focused on a ‘make it here, ship it there’ model. Global value chains dominate trade flows, and opportunities exist to develop innovative international partnerships to succeed in key markets.

- Nova Scotia’s economy will depend more and more on building highly skilled, competitive, knowledge-based companies that are “born globals”; focused on a global market from day one.

- Growth in exports and imports through the Gateway will provide opportunities for value-added activities in logistics, cold chain, and other transportation services.
Service sector productivity in 2012 was:

- $34.60 with values ranging from $16.90 in arts, entertainment and recreation to $101.80 in information and cultural industries (includes telecommunications; publishing; data processing, hosting and related services; publishing except internet; broadcasting except internet; motion picture and sound recording; and other information).

- 82.2 per cent of the Canadian average.

- Only wholesale trade ($40.20 NS versus $39.90 Can) and information and cultural industries ($101.80 NS versus $87.20 Can) were above the Canadian industry average.

Industry performance in the service sector was mixed ranging from a drop of 6.2 per cent in administrative and support, waste management and remediation services to an increase of 6.4 per cent for finance and insurance and holding companies.

Capital stock is a factor in productivity. In 2012 the real net capital stock per worker in Nova Scotia was $58,404, the second lowest in the country and 67.8 per cent of the Canadian average ($86,189).

In the Conference Board of Canada’s framework on sources of income and productivity differences they break the factors into three areas:

- firm-specific: physical capital (machinery and equipment); human capital; and innovation

- business and policy environment: clustering; urbanization; openness to trade and investment; degree of competition; foreign ownership; size of firm; mix of products and services; industrial structure; and class of worker

- global forces: trade liberalization; world commodity process changes; political events; and other events.

**LIKELY FUTURE**

- Nova Scotia’s productivity will remain below the Canadian average unless there is significantly more investment in capital and technology, worker and management skills, research and development, etc
**IMPLICATION FOR THE ECONOMY**

- The structure of the Nova Scotia economy is challenging for long-term growth. In 2012, 55.9 per cent of Nova Scotia business sector jobs were below the Canadian business sector averages for both labour productivity and total compensation for hour worked.

- The chart on the previous page indicates industries’ relationship to the Canadian and Nova Scotian averages. From the province’s perspective the most desirable place is the upper right quadrant where firms have higher than average productivity and pay higher than average total compensation. The least desirable place is the lower left quadrant where the industries are the least productive and pay lower compensation.

- On the chart, the solid blue lines indicate the Nova Scotia average for the business sector: the horizontal line is the average labour productivity expressed as a ratio of value added (chained 2007 dollars) per hour worked while the vertical average line is the average total compensation per hour. The red dashed lines are the Canadian averages. The Canadian averages, particularly the one for productivity is much higher than the Nova Scotia average. The total compensation per hour worked is slightly different from hourly wage as it includes salary, the employer’s social contributions for employees and imputed labour income for self-employed workers.

- The farther right each industry is on the graph, the higher compensation per hour while the higher the industry position is, the higher the productivity. This means that utilities is the most productive and best compensated and the arts, entertainment and recreation is the least productive and has the lowest total compensation per hour.

**Nova Scotia is a low growth economy**

**FACTS**

- From 1990 to 2010 Nova Scotia’s compounded annual growth rate was 1.9 per cent, the lowest in the country. Canada’s growth rate was 2.4 per cent.

- This has resulted in the second lowest GDP per capita in the country; $37,349 ($2007 chained dollars per capita). Nova Scotia is 79.1 per cent of the Canadian GDP per capita ($47,219).

- GDP is subject to short term fluctuations depending on the business cycle but it is long run economic growth that is a strong indicator of the change in our material well-being. Productivity is key to GDP growth.

- Long-term growth is determined by the quality and quantity of our workforce (labour), investments made in machinery and equipment (capital), resources available to Nova Scotia producers, and the technology used to produce products. Underlying the performance of those are a myriad of factors including education, innovation and technology adoption, capital stock, public infrastructure, regulations and taxes.

**LIKELY FUTURE**

- Some of the underlying factors that contribute to long term growth trends point to continued low growth:

- The quality of the workforce is not consistent, as a significant portion of Nova Scotians, including those that are employed, lack the level of skills to work in a knowledge-based economy. Given the population structure, the quantity of the labour force will decline but the quality will improve as older, less educated workers leave the workplace.
For most of this decade, investment has not contributed as much to GDP growth as it previously had. The lower Canadian dollar provided an advantage for firms to compete internationally. Unfortunately, many of these firms did not invest to maintain a competitive advantage when the dollar strengthened. Our real net capital stock per worker in 2012 was $58,404, the second lowest in the country and 67.8 per cent of the Canadian average ($86,189).

Productivity which can be thought of as an expression of the efficiency of turning labour, capital, energy and materials into goods and services, is below the Canadian average in Nova Scotia. In 2012, Nova Scotia’s total labour productivity was 79.7 per cent of Canada and the productivity of its business sector was 72.7 per cent of Canada’s. In 2012, labour productivity of the total economy fell by 1.0 per cent but the business sector’s labour productivity declined by 2.0 per cent from the previous year.

The Nova Scotia Department of Finance’s budget forecast update in August forecast growth of 1.3 per cent in 2012 and 1.7 per cent in 2014. The October private sector consensus forecast was also 1.3 per cent for 2013 but the 2014 was higher at 2.1 per cent. Timing of major projects is an issue that impacts forecasting.

Going forward there are positives including such things as major non-residential construction projects, the capital investment in the Irving shipyards and subsequent vessel construction, full production at Deep Panuke, and offshore exploration.

With population growth slowing, pressure on resources and implications of climate change, more people are taking about a low growth world.

**IMPLICATIONS FOR THE ECONOMY**

The underlying structure of the economy, investment in people, machinery and equipment and technology will have an important impact on our future.

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Thank you to Shirley Hazen of the Department of Rural and Economic Development and Tourism, and also Lorraine Glendenning and Dmitry Lysenko of the Department of Finance for their preparations of the snapshot fact sheets.
Global Opportunities for Nova Scotia’s Food Industries

By Elizabeth Beale, Fred Bergman and Patrick Brannon
January 2014

ABOUT THE ATLANTIC PROVINCES ECONOMIC COUNCIL

The Atlantic Provinces Economic Council (APEC) is an independent think-tank dedicated to economic progress in Atlantic Canada. Founded in 1954 as a partnership between the provincial governments and the private sector, its objective is to promote the economic development of the Atlantic region of Canada. It accomplishes this through analysing current and emerging economic trends and policies; by communicating the results of its analysis and consulting with a wide audience; and by advocating the appropriate public and private sector response.

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This report has been completed at the request of the Nova Scotia Commission on Building our New Economy, which has a mandate to provide advice to government on shaping the economy of the future. The views expressed in this study do not necessarily reflect the views of the Commission or the government of Nova Scotia. APEC is responsible for the accuracy of the information and the opinions expressed in this report.

APEC would like to thank all those who shared their knowledge and insights during interviews conducted as preparation for this report.

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The food and beverage industry is a key contributor to Nova Scotia’s economy, accounting for an estimated 3.3% of provincial output and 4.3% of provincial employment. The industry is the third largest employer in the goods sector.

The industry encompasses primary production in the fishery, agriculture, and food processing. Seafood processing is particularly important to the province’s economy, representing about 41% of output in the food industries.

Close to 20,000 Nova Scotians are employed in the food industry, mostly outside urban areas. The food industry contributes just over 1% of employment in the Halifax area, but over 20% of employment in southwestern Nova Scotia. Employment across the province has dropped by 20% over the past decade.

Nova Scotia’s food industries have struggled in recent years as competition from low-cost producers elsewhere in the world has increased and reduced fish quotas have directly curtailed seafood processing. Between 2004 and 2012, seafood processing revenues fell by 24%.

The food industry faces a continual challenge to embrace innovative business practices and improve productivity: small firms and owner-operators dominate the industry and are typically less able to invest in product development and new process technologies.

Further restructuring as companies strive to improve their bottom line is likely to continue to put downward pressure on employment.

Some of Nova Scotia’s largest firms are successfully securing a stronger position in global markets through the investments they are making to secure and add value to current and new products.

With an enormous expansion expected in global food trade over the next 20 years, there are some key opportunities for Nova Scotia firms to exploit. Trade liberalization under the Canada-European Union Comprehensive Economic and Trade Agreement offers promise for the province’s fish and fruit exporters.

Building a strong aquaculture sector will also be of increasing importance to communities around the province seeking to exploit fish production, given the limits to growth of wild fish stocks.

Consumers are increasingly interested in making a connection with food producers. Nova Scotia’s food producers are responding with growth in local markets and community based initiatives. The recognized excellence of Nova Scotia food products is also a draw for tourism.

Successful firms in the food sector are now innovation focused, requiring the same types of support as other technology focused enterprises: a highly skilled labour force, access to leading edge research and support to reach out to new markets.

Supporting these activities and encouraging smaller firms to partner and follow the industry leaders could bring significant benefits to the province’s economy over the long term.
1. Introduction

The food industries have been a core component of Nova Scotia’s economy and pattern of settlement throughout its history. However, in line with changes in the global economy, the footprint of the food sector in Nova Scotia has changed markedly over the past 20 years. Many traditionally based food producers and companies are in decline, certainly in terms of their employment in rural communities. Others have surged on the basis of new export markets and changes in consumer demand.

This report identifies growth opportunities in the food sector in Nova Scotia, monitoring its contribution to the Nova Scotia economy and exploring the global trends which could pave the way for a stronger future.

The report was prepared at the request of the Nova Scotia Commission on Building our New Economy which has a mandate to engage with Nova Scotians on a discussion of how to shape the economic future of the province and build a better economy across all regions in the province. The Commission expects to deliver its recommendations to government early in 2014.

The study draws on data analysis, a review of recent reports and an assessment of government policies. Interviews with food industry executives, researchers and industry analysts were a key input in the overall research process, and in the identification of the competitive strengths of Nova Scotia food producers and processors.

2. Profile of the Food Industry in Nova Scotia

2.1 OVERVIEW

The food industry is a key contributor to Nova Scotia’s economy, accounting for an estimated 3.3% of provincial output\(^1\) and 4.3% of provincial employment\(^2\). Food and beverages\(^3\) are one of the province’s leading industries and the third largest employer in the goods sector.

The food and beverage industry covers a diverse range of products including primary production in agriculture and the fishery such as blueberries or live lobsters; processing from bulk into intermediate goods such as frozen fish fillets or fresh meat products, and further processing into consumer goods such as frozen entrees or wine. Seafood processing is particularly important to Nova Scotia, representing about 41% of output in the food sector. New products such as nutraceuticals and functional foods are a small but growing share of the food industry. The industry also encompasses related activity such as fur farming.

Of a total direct contribution of $1.1 billion in gross domestic product (GDP) by the food sector to the Nova Scotia economy in 2009, primary production in agriculture and fishing accounted for $486 million, while food processing accounted for $593 million\(^4\).

The value chain for the food industry moves well beyond direct goods production to encompass many other products and services that are generated as food products move through various stages of production to reach consumers. This includes distribution through wholesalers, distributors and retailers; infrastructure, transportation and storage systems; as well as marketing, research and other consultant services.

Beyond its direct output, the food sector is estimated to contribute a further $1.1 billion in indirect and induced spending in the province’s economy, for a total contribution of $2.2 billion.

2.2 INDUSTRY TRENDS – AGRICULTURE AND THE AGRI-FOODS SECTOR

Nova Scotia’s agricultural sector has experienced a number of changes over the past ten years, with a drop in hog and beef production and an increase in fur

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1 GDP, 2009: APEC estimate.
3 The term food industry is utilized interchangeably with the term food and beverage industry or the term food sector.
4 2009 is the most current year for data calculations using Statistics Canada’s input-output model.
(largely mink) and corn production, the latter aided by strong grain prices. Farm cash receipts in the province grew at a respectable 3.7% per year on average over the last decade to reach $586 million in 2012. This was slightly lower than the Canadian trend which was boosted by Canada’s dominant presence in the global grain industry.

Fur farming has been the growth leader in the province with farm receipts reaching $122 million in 2012 and the number of fur farms almost doubling over the last decade. Fur farming is now second only to dairy products in importance to Nova Scotia’s agriculture sector. A preference for black mink in China and other parts of Asia has boosted demand although markets in the US are also seeing improvement.

Dairy, chicken and egg producers have maintained a stable growth path, reflecting the inherent protection to these industries from outside competition under a supply-managed system. Supply management provides a price guarantee to farmers, with established limits through licencing on the amount of the product that can be produced to meet the needs of the local – provincial market. The total production quota limits growth unless the individual farm wants to purchase a quota from another farm, although the quota also ensures returns to the farmer, and as such is strongly supported by supply managed producers. The three supply managed sectors in Nova Scotia all experienced between 3 and 4% growth on average over the last decade which is in line with growth in inflation coupled with modest population growth.

Agriculture production in the province is typically evenly split between supply-managed and non-supply-managed sectors.

A principal drain on farm cash receipts has been the downsizing of the hog industry in the province. Hog farm cash receipts fell from about $30 million in 2002 to about $5 million in 2009. Consolidation and cost reductions in hog production across North America led to lower prices with the resulting closure of a number of Nova Scotia hog farms. Similar circumstances have affected beef and vegetable production.

This has triggered losses in food processing, with the closure since 2004 of a number of meat and poultry processing firms plus the region’s last vegetable canning plant. Between 2004 and 2013, the number of business establishments in agri-food processing in Nova Scotia declined by 27% to 154 establishments. The agri-food processing sector (non-fur) experienced no net growth in revenues between 2004 and 2010.

Revenues in agri-food processing revenues have recovered by about 13% over the last two years primarily on the strength of fruit production. Fruit production continues to be a leading industry for Nova Scotia, with blueberries, apples and grapes all with above average growth over the past decade and blueberries and grapes leading agricultural exports. Frozen fruit exports from Nova Scotia were $104 million of in 2012, up from $42 million in 2002. However most fruits continue to be exported as unprocessed or minimally processed products, thus exposing the industry to the volatility inherent in global commodity markets. Blueberry production for example grew rapidly in Nova Scotia in the early years of the last decade as prices climbed to a peak of $1.28 per pound in 2006. Since then the production of blueberries in Nova Scotia has slipped well below peak as new producers have emerged elsewhere in the world and prices have weakened.

There has been growth in the beverage and tobacco industry where the number of businesses in the province increased by 39% between 2004 and 2013 to 43 establishments. During this time, Nova Scotia has gained a number of micro and craft breweries, as well as wineries.
2.3 INDUSTRY TRENDS – FISHERY, SEAFOOD PROCESSING AND AQUACULTURE

The fishery and seafood processing industry in Nova Scotia has experienced continuous upheaval over the past two decades as stock depletion and tight quota management have greatly reduced the ground fish and pelagic stocks available for harvesting. As a result, the industry has moved away from its traditional base in harvesting and processing ground fish towards exploitation primarily based on shellfish. Shellfish currently dominates landed values in Nova Scotia with lobster (52%), queen crab (14%), scallop (9%) and shrimp (7%) representing 83% of landed values in 2012. Landed values in 2012 were $751 million, up 10% over 2010. The primary fishery continues to harvest a number of ground fish and pelagic species, with most of the product either directed at processors or shipped fresh to export markets.

While some high-end products such as crab, halibut and redfish have held their value, the total value of Nova Scotia fish landings nevertheless dropped 4% between 2001 and 2012. Much of this can be explained by what has happened to lobster prices and volumes. Landed values of lobster which accounted for over one-half of total landed values in 2012 barely increased at all over the past decade. The combined effects of a drop in demand from US consumers due to the recession, the appreciation of the Canadian dollar and an increase in the fishing effort have kept prices low, well below their pre-recession peak. Most Nova Scotia lobster is currently shipped as live product; limited processing occurs in Nova Scotia although an increase in Maine lobster catches boosted processing of Maine lobsters in the Maritimes in 2012. Value is now being added to lobster production with the growth in shipments of fresh-frozen lobster products, primarily directed at Asian consumers, but this is still a small share of total production.

Seafood processing has undergone a number of sharp changes over the past twenty years. The rapid decline in the ground fishery in the early 1990s led to the closure of a number of processing plants, and a shift for others to a reliance on imported products. Competition for raw material and from low-cost producers elsewhere in the world subsequently led to the closure of a number of operations. With difficulties in accessing raw material and an increase in the value of the Canadian dollar, seafood manufacturers have continued to face challenges in this past decade. Between 2004 and 2012, seafood processing revenues dropped by 24%⁵. Despite this decline, seafood processing remains a dominant sector in the province’s food industry, accounting for 42% of food manufacturing and 8% of total manufacturing revenues⁶. The value of seafood manufacturing shipments was projected to be $767 million in 2012⁷.
2.4 THE IMPORTANCE OF EXPORT MARKETS

The food and beverage industry contributes a significant share to provincial exports. In 2012, food exports accounted for $1.1 billion or 30% of the value of Nova Scotia exports. Of that total, shellfish including lobster, crab and mollusks represented the largest share at 61% followed by fish at 17% of the total. According to Fisheries and Oceans Canada, Nova Scotia was Canada’s second largest exporter of fish and seafood in 2012 after New Brunswick. Blueberries and other fruit comprise 10% of Nova Scotia exports.

Markets for Nova Scotia food exports have changed significantly over the past two decades. Food exports to the US rose strongly in the 1990’s due in part to the North American Free Trade Agreement but have declined by 20% or nearly $300 million over the past decade due to factors such as the appreciation of the exchange rate, tough competition from low cost producers and weak demand from the prolonged recession. The US nevertheless continues to be Nova Scotia’s top customer, accounting for 57% of Nova Scotia’s exports. Continued weakness in the Japanese economy has eroded its appetite for luxury goods such as a lobster and crab and as a result food exports from Nova Scotia to Japan fell by $125 million over the past decade.

Nova Scotia’s food exports have increased to fast growing markets including China (+$40 million), Hong Kong (+$20 million), and Russia (+$25 million) as well as the Netherlands (+$27 million). However growing global production in blueberries and other products is also exposing Nova Scotia exporters to much tougher competition.

While the value that Nova Scotia derives from its exports of food products is considerable – a positive $881 million trade surplus in 2012 - its trade balance in food products has eroded by about 20% over the past decade. Some of this reflects factors that are common across Canada, such as a growing reliance by consumers on imported food products. However the biggest contributor has been the drop in processed fish production and locally sourced fish production in particular. While shellfish exports have grown rapidly and replaced the losses in other parts of the fishery, the value added component of fish and seafood exports from Nova Scotia is lower now than it was 20 years ago. Nova Scotia’s export intensity - the value of its exports as a share of the total output - was 59.2% for food and beverage commodities in 2007, lower than in New Brunswick at 75.5% where the share of its exports generated by food processing is higher.\(^8\)

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5 Nova Scotia nominal GDP in the seafood processing industry fell by 8% between 2000 and 2009.

6 Annual data, Principal Manufacturing Shipments, 2011.

7 Preliminary estimates.

8 While processed fish has been the biggest source of export decline, the closure of other food processing facilities such as the Moirs chocolate plant in 2007 also reduced value added food exports.
2.5 EMPLOYMENT

Close to 20,000 Nova Scotians are currently employed in the food industry\(^9\). The primary sectors accounted for more than 50% of total food industry employment in 2012, with 4,700 employed in the primary fishery, hunting and trapping and 6,000 in agriculture. An estimated 8,900 are employed in food processing. Seafood processing accounts for about 65% of food manufacturing employment and 19% of total manufacturing employment in the province\(^10\).

The importance of the food sector to employment varies widely across Nova Scotia with employment concentrated in rural areas. The food industry contributes just 1.2% of employment in Halifax County but over 20% in southwestern Nova Scotia. In Shelburne County, nearly one in three jobs is connected to the food sector, mostly in the fishery and fish processing. Rural Cape Breton and Guysborough County also have high reliance on food-related jobs, also dominated by the fishery.

The challenges in the food industry have contributed to a 20% drop in food sector employment in the province over the past decade. The food processing sector accounted for two-thirds of the decline, dropping from a peak employment of 12,300 in 2005 to 8,900 in 2012. Regions with the heaviest concentration of food processing facilities and related primary employment such as south-western Nova Scotia in the fishery and Kings County in agriculture have typically experienced the greatest employment losses.

Wages in Nova Scotia’s primary fishery are typically on par with wages nationally, although wage growth at 1.5% annually over the period 2000 to 2012 was below the all industry trend in the province. The most recent data for occupations related to the primary fishery indicate that employment income averaged $27,517 annually, ranging between $40,789 for fishing vessel masters and officers to $22,761 for fishing vessel deckhands\(^11\).

In the food processing sector, wages in Nova Scotia are among the lowest in the country. Average weekly wages were $640 in 2012, 82% of the national average. Total wages and salaries in seafood processing fell by 8% between 2005 and 2012. Annual employment income ranges from $22,823 for fish and seafood processing labourers to $16,716 for fish and seafood processing machine operators.
The employment and wage profile in the food industry reflects factors such as a high proportion of very small business, including independent operators. Many in the food industry are self-employed: self-employment rates of 42% in agriculture and 49% in the fishery are well above the all-industry average of 13%. Much of the employment in the food sector is also seasonal, with employment peaking over the summer months. A complicating factor currently is changes being made to the Employment Insurance (EI) program in 2012 and 2013 to reduce payments to frequent claimants. Seasonal workers in the food industries typically have a high reliance on EI during the winter months. With EI comprising a significant portion of income for workers in some sectors - for example, it accounted for 18% of total fishing industry income in 2010 – the impact is likely to be significant.

The drop in employment in many rural areas is contributing to an exodus of workers from the province, primarily to western Canada. Many rurally based companies in fish processing and agriculture now face significant challenges re labour shortages, which has led to increased reliance on temporary foreign workers to fill the current gap.

2.6 FOOD INDUSTRY RESTRUCTURING AND THE PRODUCTIVITY CHALLENGE

There has been a substantial restructuring of the food industry in Nova Scotia over the past decade with a steady consolidation of food processing establishments into larger operations. In the seafood processing sector, the number of businesses declined by 60% between 2002 and 2012 while those with 50 or more employees have increased from their share from 11% to 18% over the same period.

A number of the province’s leading companies in food processing are strengthening their competitive position through investments and acquisitions in markets outside Nova Scotia. A similar trend is evident within the province. The ownership structure of the dairy industry has shifted in recent years with Quebec-based interests acquiring a number of dairies in the province. Although local ownership is being lost, this could bring much needed investment into the industry, and help to build a platform in the future for more value-added production such as cheese.

Despite the trend towards consolidation, the food industry continues to be dominated by small operations. Business Registry data indicates that in 2012, there were more than 5,300 establishments in the food sector in the province including 1,900 farms and other primary food producing operations, 3,000 fishing operations and 360 food manufacturing establishments (including 305 in seafood processing). The large majority of these - 93% of fishing operations and 81% of farms – are owner-operators or had fewer than five employees. Less than 1% of fishing and farming operations and 16% of food processing establishments had 50 or more employees.

Industry consolidation has been much less evident in the primary fishery, in part due to the federal fleet-separation policy which has supported the development of the inshore fishery. As a consequence, the number of Nova Scotia primary fishing businesses has grown by 14% over the last decade while the average size of fishing operations has declined. The share of business establishments in the primary fishery with 50 or more employees dropped from 1.2% to 0.3% over the past decade while the number of operations with five or more employees declined by three quarters. In 2012, 35% of Nova Scotia’s primary fishing businesses had no paid employees.

The high number and labour-intensive nature of small operations contributes to a low level of investment and weak productivity in the food industry. According to the Centre for the Study of Living Standards, seafood product preparation and packaging had the lowest labour productivity within Canadian food manufacturing in 2007, at $20.25 (current dollar GDP) per hour versus $51.81 for Canadian food manufacturing.

The productivity of Nova Scotia’s primary agriculture sector is also among the weakest in the country and Nova Scotia was the only province to see a decline in its primary agriculture sector productivity between 2000 and 2007. Productivity in primary agriculture was 80% higher at the national level than in Nova Scotia in 2007.

A 2007 study for the Nova Scotia Department of Fisheries and Aquaculture identified some of the factors which contribute to continued low productivity in seafood processing. Under the fleet-separation policy, inshore vessels and the landings they produce may not be controlled directly through fish plant ownership or control of fishing licences. Thus fish processors operate...
largely independently from the harvesting sector, resulting in intense competition for raw material. While protecting the bargaining power of fish harvesters, this also sets up a difficult operating environment for fish plants whereby they cannot rely on secure supplies of raw material in order to establish marketing arrangements. The policy also limits vertical integration and plant consolidation which would help to reduce costs. This makes it difficult for firms to access capital or other financial assistance for expansion. The financial challenges of the industry are evident in on-going cash flow constraints and a low level of investment in new technology and product development. Seafood processors in Nova Scotia are further disadvantaged by declining resources and rising raw material costs at a time where competition from low-cost producers is increasing around the globe.

A similar set of factors can be identified as holding back productivity gains in agriculture and the agri-foods sector. Although conditions are changing rapidly, Nova Scotia still has a prevalence of smaller farms where investment in new technologies and the achievement of economies of scale can be difficult to achieve. The quota system for supply managed sectors in agriculture can also contribute to less than optimal productivity gains, restricting the growth potential of the most efficient farms and limiting exposure to outside competition.

3. Factors Reshaping the Food Industry

The food industry in Nova Scotia and elsewhere is being radically reshaped by a number of factors.

On the demand side, the rapid growth of emerging economies in Asia is expected to transform the global food industry over the next decade. The number of middle class consumers is projected to more than double to nearly 5 billion people in the next 20 years\(^\text{15}\). It is estimated that the world will require 50% more food to meet the increase in demand.

As the number of middle class consumers expands in emerging countries, their demand for imported foods is escalating. In Asia, where consumption of seafood is typically double the global average on a per capita basis, it is the high value products including lobster, scallops and crab that are experiencing the biggest impact. For exporters in Nova Scotia, this is requiring rapid changes in food packaging and processing, logistics and marketing, all designed to take advantage of this elite market. China has already replaced the European Union as Canada’s second largest seafood market\(^\text{16}\) and the president of the Canadian Fisheries Council expects this could mushroom over the next few years\(^\text{17}\).

The global food market is also becoming increasingly segmented with double-income households willing to spend more on time-saving and convenience foods. Changes to family structure such as the rising number of one-person households and the increasing number of immigrants in communities around the world are also influencing the demand for innovative or niche food products.

Changes are also underway in established markets in North America and Western Europe as the population ages and consumers increasingly target healthier food and beverage options. This is leading to growing demand for sustainable food products, and better product information to confirm certification and food safety. In the wild fishery and shellfishery where Nova Scotia producers have the capacity to excel, new measures are helping consumers to make more informed choices about the authenticity, quality and sustainability of the seafood they eat. A number of Nova Scotia fish processors are partnering in ThisFish which provides a traceability

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15 Deloitte, 2012. UK Food and Beverage 2020., p. 3.
16 As of 2012.
18 Food and Agriculture Organization of the United Nations, The State of World Fisheries and Aquaculture 2012.
tag on each fish with bar code access to supplier and product information. Traceability may also be extended to other species such as cold-water lobster in the hopes of adding value.

In the past, the price premium associated with certified sustainable or organic products has dampened growth. However, the greater awareness by consumers of the content of the food they are consuming and the rising incomes of two income households is helping to overcome this resistance.

Local markets and other direct-to-consumer opportunities are also growing as customers seek to make a personal connection with producers. Although the expansion of local market activity in Nova Scotia can never rival export-led growth in terms of the net economic benefits to the province, local demand is spurring some new, high value-added activity. The establishment of Nova Scotia’s wine industry and a number of restaurants capitalizing on local food and beverage products are both examples of a growing trend.

However, price and affordability are still the dominant factors affecting consumer demand. The hangover of the recession and the slow recovery in employment and income growth in established markets including North America will continue to hold back growth in food prices and put pressure on firms to improve productivity and reduce input costs.

At the firm level, new opportunities are emerging for smaller companies to enter global supply chains as the food industry shifts from a focus on primary production to a more sophisticated global industry which provides unique products and services tailored to different consumer segments. The opportunities go well beyond food production, into a wide range activities related to harvesting, processing technologies, packaging, marketing and distribution. More open markets in Europe will be of interest to many Nova Scotia firms, but firms will need to be nimble and embrace innovative practices that will help them to rise ahead of the pack under greater competition.

The growing globalization of the food chain is not without its perils for Nova Scotia producers, particularly smaller firms. As processing becomes more intensive and vertically integrated around global supply chains, smaller processors of traditional products are losing market share. Large retailers increasingly control international distribution channels and can exert considerable pressure on suppliers to lower their prices and meet exacting standards. Technological development in food processing and packaging is progressing rapidly and small producers may find it very difficult to adjust to an increasingly complex set of market and regulatory requirements. Within this milieu, supplier development and partnerships between small and large firms are vital to assist smaller enterprises to gain the expertise necessary to enter a larger marketplace.

Firms of all sizes are continuing to face the challenge of rising input costs. The increased cost of energy, and oil in particular, has an immediate and deleterious impact throughout Nova Scotia’s food production and distribution system. Rising labour costs are also likely to become a much more critical consideration for the food industry, as the working age population continues to shrink in small communities around the province.

Squeezed by low competition around the world, food companies in Nova Scotia and elsewhere are looking to consolidate their best assets around higher value products. The current trends suggest that acquisitions and mergers will continue to be in evidence across Nova Scotia’s food industry in the coming years.

In response to these changes, government’s role is also evolving. In some areas, government intervention is being reduced. On a number of fronts, the Canadian government has stepped back from marketing and industry protection to pave the way for trade liberalization. The new Canada-EU trade agreement will further eliminate tariffs and many non-tariff barriers in Atlantic Canada’s second largest export market, although protection will remain intact for most supply-managed sectors.

In other areas, government’s role is increasing. In particular, government is expanding its requirements for food security and some areas of environmental protection. The food processing sector can expect to be face heightened standards of food safety as international and local concern over food security and traceability grows. Meeting the increasingly stringent requirements of the Canadian Food Inspection Agency standards will require continual investment for food producers in Nova Scotia. Establishing high standards of food safety and certification can be key assets to enhance
market development and trade, but such policies could also reduce the competitiveness of Canadian and Nova Scotian food and beverage firms if they are not carefully implemented.\textsuperscript{19}

Governments are under pressure both to better manage the environment as it affects the food industry (for example improving the monitoring of fish stocks to ensure sustainability), and to minimize or mitigate adverse environmental consequences of food industry activity. The latter has become a key issue in Nova Scotia communities concerned about the establishment of new aquaculture sites (i.e. disease spread to resident fish species or coastal pollution) or expanded agriculture holdings (i.e. waste disposal and run-off from fertilizers). Government’s efforts to step up often run well behind community expectations. Improving environmental outcomes is a priority not only for government but also for the food industry where environmental sustainability is the foundation for its future. A better partnership between government and industry to establish and comply with environmental standards would engender much needed confidence in local communities, and in the public at large.

4. Opportunities in Nova Scotia’s Food Industries

The opportunities that are identified in this section are cast around some of the central themes that have been explored in this report.

**Meeting the export challenge** explores how successful Nova Scotia food companies are exploiting new opportunities in global markets, and how smaller firms can piggy back on this success.

**Fostering innovation in the food industry** focuses on the links to research and development and the core requirement for firms to invest in productivity enhancements.

**Growing the aquaculture sector** identifies the importance of developing a new source of food production to meet the demands of a hungry world, an essential requirement as the opportunities for achieving growth from wild fish stocks are increasingly constrained.

**Encouraging a dynamic food industry** connected to local communities recognizes the benefits of fostering the relationship between local food consumers and producers in an age of rising concerns about food safety and environmental sustainability.

4.1 MEETING THE EXPORT CHALLENGE

Although many of Nova Scotia’s food producers have faced considerable challenges in export markets over the past decade, there are encouraging signs of better opportunities ahead in both established and emerging markets.

At the top of the target list for many Nova Scotia exporters will be the US, a major food importer and currently accounting for over 50% of Nova Scotia’s food exports. With food expenditures on the rise in the US as its economy improves, the US will continue to be an important market for Nova Scotia firms, with trade facilitated by well-established logistics and transportation systems. Over the past year, there have been strong export gains into the US in a number of processed food products, as well as fresh and frozen fish and shellfish. Food and beverage exports to the US increased by 11.2% in the first 11 months of 2013, and can be expected to

\textsuperscript{25} Food and Agriculture Organization of the United Nations, The State of World Fisheries and Aquaculture 2012.
increase again this year on the strength of the recent depreciation of the Canadian dollar.

The recent announcement of the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) is encouraging news for many Nova Scotia food producers. The EU is the world’s largest importer of agricultural and agri-food products ($130 billion in 2012) and fish and seafood products (averaging $25 billion annually between 2010 and 2012). Europe is currently a significant market for Nova Scotia food exporters, on the receiving end of $192 million or 17% of Nova Scotia’s total international food exports in 2012. Nevertheless, this lies well below full potential as tariff protection in the EU over the past twenty years has gradually curtailed opportunities for Nova Scotia firms. The establishment of CETA will eliminate much of that tariff protection: almost 94% of European Union (EU) agricultural tariff lines and 96% of EU fish and seafood tariff lines will be duty-free.

For Nova Scotia producers, this will make permanent the temporary relief currently provided from the EU tariff of 14.4% on frozen blueberries. Nova Scotia’s frozen blueberry exports to the EU were $47 million in 2012. Current tariffs on lobster (8% live; 16% frozen), scallops (8%), shrimp (12% or 20%) and fish oil (5% or 10.9%) will also be eliminated under CETA. Nova Scotia exports of these fish products to the EU in 2012 totalled $123 million.

CETA will not significantly affect Canada’s supply management system: the vast majority of supply-managed products will continue to be exempt under the proposed agreement.

While the EU will increase quotas on duty-free access for imported meat products, this is primarily to the benefit of western Canadian producers as Nova Scotia has no large-scale, federally-inspected meat processing plants for pork or beef.

Beyond opportunities for tariff relief, it is also hoped that this will allow large and small Nova Scotia food producers to join the supply chains of the leading European food brands that are making significant headway in domestic and emerging markets. With large global food and beverage companies increasingly focused on securing their supply chain to control input costs, CETA may act as important leverage to encourage foreign direct investment (FDI) in Nova Scotia’s food industry. Canada is raising its threshold for net benefit reviews under the Investment Canada Act, which approves FDI in Canadian firms: CETA will provide a higher threshold for investments from the EU.

However, for some exporters, the biggest market potential may lie well beyond North America. While fish consumption is on the decline in many established markets in emerging markets, the reverse trend is evident with rising incomes leading to a direct increase in fish consumption. Per-capita fish consumption in China increased at an average annual rate of 6% between 1990 and 2009 and China has become the third largest importer of fish and fish products in the world, after the United States and Japan.

High Liner Foods Inc. is a leading supplier of processed frozen seafood in North America. It currently has one plant in Nova Scotia (Lunenburg) with three in the United States. High Liner is primarily focused on the North American market, with two-thirds of their 2012 sales in the U.S. and the residual in Canada. An estimated 1,482 are employed throughout the company, including 316 in Atlantic Canada.

The company has radically changed its business model in response to changing environmental and market conditions. Following a period of decline in its pivotal fish stocks, High Liner sold-off its fishing assets including factory-freezer vessels in 2002 to concentrate on secondary processing. It closed two of its high cost and underutilized plants in 2012/2013 following the acquisition of a more up-to-date facility in the U.S.

High Liner is now focused on acquisitions to grow its bottom line, including Fishery Products International in 2007; Viking in 2010; Icelandic in 2011; and American Pride in 2013. The acquisitions are providing significant growth opportunities in new products: in 2012, sales from new products launched in the previous 24 months were approximately 8% of High Liner’s total sales of $942 million. The company is also achieving savings through High Liner’s focus on supply chain excellence, including a diversified global procurement and purchasing system; inventory management; product rationalization; and frozen food shipping and warehousing.

High Liner is committed to sourcing all of its seafood from certified sustainable or responsible fisheries and aquaculture farms by the end of 2013. 95% of its fish and aquaculture purchases now meet these criteria. From its early roots in fish harvesting in Nova Scotia, High Liner now has ambition to be the leading supplier of frozen seafood in North America. Its immediate goals are to increase earnings (EBITDA) to $150 million by 2015 from $92 million in 2012.

While China has imported raw fish from Canada for its fish processing plants over many years, it is now offering opportunities for higher value products such as Nova Scotia frozen scallops or lobster tails as well as the potential for other processing and supply chain development. Moving into emerging markets can be a challenge for Nova Scotia exporters, but nevertheless offers considerable rewards in terms of the growth potential. Nova Scotia producers will also be aware that China is a serious competitor, particularly in aquaculture. China’s share of world fish production from aquaculture has been growing at a rapid rate, up from 7 percent in 1961 to 35 percent in 2010. Smaller food producers may be able to take advantage of their relationship with some of the region’s larger food exporters to gain access to new markets. An earlier study by APEC highlighted that many Atlantic firms are suppliers of resource and intermediate products, rather than finished consumer products. By participating in global value chains, they can gain the expertise and leverage of working with a larger player to help them reach out beyond their current customer base.26

Continued improvements to Nova Scotia’s transportation and logistics infrastructure are helping to broaden the reach of exporters into global markets. Halifax Stanfield International Airport, the largest airport in the region opened up a 7,000 square foot temperature-controlled cargo facility in 2010, the largest of its kind north of Miami. This handles perishable goods, including high-valued fish commodities such as live lobster. The airport’s recent runway expansion will also allow larger cargo planes to land at the airport. A 10-year $380 million capital program will provide additional expansion for terminals, airside and groundside services.

Improvements are also underway at linked facilities including the Port of Halifax, CN Rail and the Burnside Logistics Park27, all directed at strengthening Halifax’s position as a preferred gateway for food shippers over other east coast ports. Nova Cold Consolidated Ltd. opened a new $10 million cold storage facility recently in Burnside, with customers including Clearwater, St. Mary’s Smokehouse and Fisherman’s Market28.

Ferry service is important to the Nova Scotia fishing industry, especially for international exports to the US or other provinces. The year-round, freight-focused Digby ferry provides a vital link for seafood processors plus primary and aquaculture producers in southwestern Nova Scotia, allowing their products to reach New England markets faster than through road access alone. The ferry, currently supported by federal-provincial subsidies, has faced an uncertain future in recent years. However the federal government has begun the process to search for a replacement vessel and interested parties such as the Nova Scotia Fish Packers Association are lobbying hard for continued support.29

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29 Department of Transport Canada, News Release, June 24, 2013.
Clearwater Seafoods Inc. is North America’s largest vertically integrated harvester, processor, and distributor of premium shellfish, with approximately 75 million pounds sold in 2012. Its factory-freezer vessels fish and process lobster, scallops, clams, coldwater shrimp and crab. Clearwater offers the widest selection of MSC-certified species of any seafood harvester worldwide. The company employs 1,470 people globally, including 998 in Nova Scotia where it has primary processing plants in Lockeport (scallops), Arichat (lobster) and Glace Bay (crab). There are also two plants in Newfoundland and Labrador. Clearwater sales are mainly to Europe, China, US, Canada and Japan.

The company is actively engaged in the development and utilization of innovative process technologies. For example, Clearwater’s just-in-time live lobster distribution system with cold storage facilities can be found in Canada, the US, United Kingdom, France and China. Its research and commercialization has led to inventions such as the world’s first lobster-friendly Dryland Pound Storage System and automated scallop-shucking equipment for its factory-freezer fishing vessels. Clearwater recently received a US patent on its scallop-shucking technology. The company is currently developing new technologies that will allow it to ship lobsters by sea.

Clearwater plans to increase its sales to $500 million by 2016, from $350 million in 2012. Its growth strategy includes quota license acquisition to increase its supply of wild fish products. In addition there may be opportunities to license proprietary processing technologies. The company is also expanding its capacity to process underutilized species, currently investing $45 million to build a new clam vessel to harvest under-utilized quota. Clearwater intends to increase value added production to 10%-15% of sales by 2015. Its current value-added products (bacon-wrapped scallops and scallops in sauce) are processed at the Lockeport plant in Nova Scotia.

Clearwater is the largest holder of offshore shellfish quotas in Canada. With demand for wild fish continuing to out-price supply, this gives Clearwater long-term pricing power. This may be a particularly important for sales to the EU, which represented 35% of Clearwater’s total sales in 2012. On the eve of the establishment of the CELTA, Clearwater faces a clear advantage in positioning itself to take early advantage of open market access to the EU.


4.2 FOSTERING INNOVATION IN THE FOOD INDUSTRY

One of the key factors behind the success of leading firms in the food industry is their willingness to embrace continuous innovation and invest in the development of new products and process technologies. Innovation involves taking risks, and the gains are never guaranteed. However without a significant effort to improve production lines, develop new products or identify new markets, the food industry cannot move ahead.

In agriculture and agri-business, new innovations such as precision agriculture, GPS technology in equipment, and sensors in the fields are helping to improve productivity on farms and lower the cost of production. Researchers in Nova Scotia are engaged in product development and in applying new global knowledge to the unique soil and climate conditions affecting Nova Scotia farms. The Honey Crisp apple for example has had great success in Nova Scotia as it is well suited to the climate of the Annapolis Valley. Research on similar products continues - a recent four year study examined 50 different varieties of apples from around the world and their ability to adapt to the soil and climate of the Annapolis Valley.

Nova Scotia has a strong innovation support network for agri-foods including the Nova Scotia Agriculture College (NSAC) which is now part of Dalhousie University and the Atlantic Food and Horticulture Research Centre in Kentville which is funded by the federal department of Agriculture and Agri-Food Canada. These researchers work in partnerships with other universities (regional and international) as well as the National Research Council and the Atlantic Veterinary College in Prince Edward Island. Perennia is a Nova Scotia crown corporation dedicated to supporting the agriculture industry in the province by providing knowledge and advice to create value. The company does this by helping to improve productivity and food safety, support product and market development with respect to plant, animal or marine-based resources.

Some of Nova Scotia’s fruit growers are at the leading edge of product innovation. Scotian Gold for example has been steadily moving away from traditional commodity apples such as MacIntosh and Cortland, and moving into new sweeter varieties such as Honeycrisp and SweeTango to satisfy growing customer demand locally and in export markets. Their newest product is Sonja. Premium apples grow well in Nova Scotia due to the cooler climate, and offer margins which are higher than conventional varieties.

Another product innovation is the Haskap berry, a new product which is now being grown in Nova Scotia and Saskatchewan. The company developing this product hopes to be a market leader and pave the way for new investment.
At Dalhousie University, researchers are exploring new ways to utilize genomics and biotechnology to improve agricultural production. These include delving deeper into the genomes of products already important to Nova Scotia’s agriculture sector such as apples and blueberries to identify new uses, new agriculture techniques, improvements in food safety and pest resistance and the maximization of crop yields. The new uses for these products include extracting nutrients from apple peel waste and identifying new health benefits from blueberries. Partnerships with larger industry players such as Oxford Frozen Foods, Acadian Seaplants and Sobeys continue to be important although smaller companies struggle to find the resources to build a relationship with the research community.

The dairy and poultry industries are key drivers of research and development in the province’s agriculture sector. The dairy industry will get a boost from Scotsburn Dairy’s plans to spend $25 million to upgrade its ice cream production facility in Truro and to establish a “centre of excellence for ice cream” focused on innovation, research and development. The productivity of poultry processing improved when Eden Valley Poultry invested $40 million to reopen the Larsen’s plant in Berwick in 2012. The company is processing about 40 million kilograms of chicken and turkey annually. The facility is expected to process poultry about 45 percent faster that previous processing plants in the province, which will allow it to compete more effectively with other processors nationally. The plant is handling about 70 percent of all production from Nova Scotia and Prince Edward Island.

A number of networks support research activity for the fish and seafood sector. Examples include the Ocean Tracking Network (OTN), a $168-million conservation project at the Halifax Marine Institute at Dalhousie University supported by the granting councils.31 NSERC also funds a new $5 million strategic research network among Nova Scotia universities, the Canadian Capture Fisheries Research Network.

The Canadian Institute of Fisheries Technology (CIFT) at Dalhousie University provides advanced technology for research and education in food science and process engineering with an emphasis on seafood. It hosts a fish and food processing pilot plant and offers a seafood technology training course annually.32 Researchers at Dalhousie University also partner with the Atlantic Veterinary College which has a Lobster Science Centre, the Centre for Marine Biodiversity at the Bedford Institute of Oceanography, Institute for Marine Biosciences at the National Research Council, Huntsman Marine Centre and the Canadian Centre for Fisheries Innovation and the Ocean Sciences Centre both at Memorial University.

Fisheries and Oceans Canada (DFO) has held a significant direct research presence in Nova Scotia over many years. However cuts to its programs of an estimated $80 million from 2012-2015 have greatly reduced research capacity and employment, including research staff. An additional $100 million will be cut from the department’s budget over the next 5-6 years.

The concentration of marine research activities draws many smaller companies to partner with research institutions on research and innovation. BioNovations Inc. designs and manufactures live seafood holding systems for customers in over 20 countries. In partnership with the Université de St. Anne, the company developed a concept for a new innovative recirculation system for culturing juvenile lobsters for the purpose of stock enhancement. In partnership with the Northumberland Fishermen’s Association and university researchers, they developed the first recirculation Lobster Hatchery in North America.

Genome Atlantic’s $4.1 million project for enhancing commercial culture of Atlantic halibut and Senegal sole has created a partnership with Scotia Halibut Ltd. to explore the traits in these genetically similar species most attractive to aquaculture. This partnership has brought together the Institute for Marine Biosciences at the NRC with scientists from a number of organizations, demonstrating commercial potential in marine biosciences and life sciences.
Success on the innovation front is often directly linked to financing capacity. Over the past decade, several of the leading firms in Nova Scotia’s food sector have been making headway in improving their productivity through mergers and acquisitions, partnerships, greater efficiency around production processes and realignment around core products. Some of the larger food companies in the provinces have ambitious plans for further investment. Clearwater Foods expects to spend an estimated $113 million on vessel replacement and refits over the next four years. Cooke Aquaculture is expecting to spend $70 million on capital projects in Nova Scotia over the next few years. In addition to its acquisitions and expansion in the US, High Liner Foods Inc. has invested $4 million over the last 2 years in continuous improvement projects at its Lunenburg fish processing plant. Fisherman’s Premium Atlantic Inc. plans to build a $12.5 million lobster processing facility on Cape Sable Island in 2014 to allow it to ship live hard-shell lobster overseas by air and process soft-shell lobster.

A variety of financing vehicles are being utilized to support these investments. Public companies such as High Liner and Clearwater can issue shares to raise equity or use other financial debt instruments to raise capital. In 2012, Clearwater refinanced some of its debt to reduce its cost of capital. Clearwater also hedges against the Canadian exchange rate for some of its investments. High Liner Foods’s investment in plant modernization has been supported by a recent amendment to certain debt facilities that will reduce its financing costs by an estimated $6.2 million in 2013.

Investing to improve productivity is also essential for smaller producers. Cooperatives throughout the food industry have pooled resources in order to ensure their members benefit from shared investments in marketing or research that would otherwise be beyond the reach of individual producers. Some tax changes also support investment by smaller firms or producers, such as the increase in the capital gains exemption which minimizes the tax on transferred property. The fishing industry, including fishing and fish processing, is also incented to invest through the 10% Atlantic and Gaspe Region Investment Tax Credits. As farms and other operations move to embrace a corporate structure, they also have greater access to private lending, while also having the benefits of limited directors’ liability. The quota system can also be a tool to attract investment as it gives financial leverage to attract capital.

For many producers, conventional borrowing to support investment comes at too high a price. A number of government programs have offered bridging assistance.

ACADIAN SEAPLANTS INC.

Acadian Seaplants Ltd. is a fully-integrated and diversified manufacturer of products derived from select species of marine plants. Acadian Seaplants is considered an industry leader in the production of Irish moss, kelp and other seaweeds (i.e. rockweed) for use in animal feed, botanicals and supplements and brewery agents. Their unique technologies provide a platform to supply high quality natural plant and crop input products, animal feed supplements, cultivated sea-vegetables and functional ingredients.

The company operates four main manufacturing facilities located close to cultivation and harvesting sites in Cornwallis, Charlesville and Yarmouth, Nova Scotia and in Pennfield, New Brunswick. They also have a harvesting operations office in Pembroke, Maine and a site in Mininegash, PEI.

They export 95% of their product to clients in 70 countries. They directly employ 254 people in Nova Scotia with another 298 employed in seaweed harvesting.

Acadian Seaplants has the largest on-land commercial cultivation and food processing facility for the production of edible sea vegetables in the world. The company holds a number of quality assurance certifications, including GMP and HACCP certifications for their animal feed processing facilities, as well as numerous organic certifications.

They pioneered the commercial cultivation of seaweeds using land-based tank technology over 30 years ago. This was accomplished with the participation of leading scientists from the NRC Institute for Marine Biosciences. Acadian Seaplants research staff are a principle driving force behind the development of new products and technologies. The 27 researchers includes 10 PhDs. Annually, the company estimates it spends 5% to 10% of its revenues – an estimated $40 million per year on research and development.

Acadian Seaplants’ new $4 million plant in Cornwall will boost production from its existing operation when it opens next year. The new plant will produce biostimulants, fertilizers and soil amendments for agriculture markets, as well as develop new product lines. The Atlantic Canada Opportunities Agency provided a $490,000 repayable investment towards this plant’s construction under the Business Development Program.

2 Retrieved January 3, 2014 from http://www.acoa-apeca.gc.ca/eng/1mLookingFor/ProgramInformation/AtlanticInnovationFund/Pages/Acadian.aspx
3 Atlantic Canada Opportunities Agency (February 21, 2012), News Release: Harper Government
or subsidization of borrowing costs, with an increasing effort to shift this funding from short term job creation towards more sustained productivity enhancement. The Atlantic Canada Opportunities Agency supports value-added investments in smaller companies through programs such as the Business Development Program and the Community Adjustment Fund. The Nova Scotia government provides productivity and innovation vouchers: in 2012/2013, 9% of the Productivity and Innovation Vouchers went to fisheries and aquaculture, including projects by Louisbourg Seafoods, BioNovations, and Acadian Seaplants.

4.3 GROWING THE AQUACULTURE SECTOR

On a global basis, aquaculture has grown from an almost negligible industry to rival production from the wild fishery. With sustainable wild fish stocks under threat around the world, it is expected that aquaculture will become increasingly important to consumers seeking the benefits of fish and shellfish consumption.

Although aquaculture in Nova Scotia has been slow to develop, the province has now introduced an aquaculture growth strategy which is expected to substantially boost output and employment in the industry. The targets are to more than double employment with the creation of 800 full and part-time jobs in primary aquaculture and 325 full-time jobs in processing by 2015. However with a current glut in the supply of farmed salmon in global markets and low prices, it may take many years before this goal is realized.

Establishing a sustainable industry which provides a high standard of environmental protection is a key requirement, and to that end the province is currently developing new regulations and stepping up its monitoring to ensure compliance. The Environmental Monitoring Program will run tests on 18 finfish sites in 2013, with some high-intensity shellfish operations also to be tested. Earlier this year, Snow Island Farms application for a salmon farm in Shoal Bay was rejected amidst a lack of community support for the project.

With the adoption of the province’s aquaculture strategy, new opportunities are emerging. Cooke Aquaculture is at the lead in investing in new aquaculture development, receiving $25 million in loans in 2012 from the provincial Jobs Fund on a commitment to create 470 jobs. Aboriginal communities are also keen to diversify their interests to include aquaculture as part of their commitment to develop the fishery.

Investment is also underway in land-based fish farming which is gaining popularity as a way to alleviate community concerns about aquaculture’s impact on coastal environments. Sustainable Blue based in Hants County is developing land-based farming for several species including European Sea Bass and Char and is undergoing a $4.5 million expansion to expand to salmon. The project has received funding from ACOA and the province’s Industrial Expansion Fund.

At this early stage of aquaculture development, research is a key component of the aquaculture sector strategy, focused in areas such as disease prevention, nutritional benefits and alternative feeds for fish. Feedstock accounts for over half of all production costs in the aquaculture industry.

Leading funding programs supporting the industry include the Atlantic Innovation Funding (AIF) for projects such as the development of certified Halibut broodstock (Scotian Halibut Ltd.). Since 2001, 4% of AIF investments in Nova Scotia have been in aquaculture. Genome Atlantic has supported this and other projects including the$18 million Atlantic Cod Genomics and Broodstock Development Project and the $6.1-million

COOKE AQUACULTURE

Cooke Aquaculture is a leading producer of farmed fish products. The company processes more than 160 million pounds of Atlantic salmon, five million pounds of trout and 20 million pounds of sea bass and sea bream each year and had sales of $570 million in 2012. Cooke Aquaculture currently has operations in New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland, Maine, Chile and Spain. In mid-2012, Cooke Aquaculture employed 2,000 people in Atlantic Canada, including 140 in Nova Scotia.

Cooke Aquaculture focuses on 5 key areas to achieve sustainability, as specified by the Certified Qualified Salmon/ECO Seafood Trust. Cooke Aquaculture is investing in a DNA traceability project that will revolutionize the way fish are tracked from egg to plate, via the Offspring DNA Traceability System.

Cooke Aquaculture opened two new fish farms in St. Mary’s Bay in mid-2011 and received approval at the end of 2012 for two new fish farm sites in Jordan Bay. Cooke Aquaculture owns Northeast Nutrition in Truro, the only aquaculture feed mill in Nova Scotia. Its intention is to expand annual capacity beyond its current 150 million pounds, making this the largest aquaculture feed mill facility of its kind in the Atlantic region. The company also plans to build a processing facility in Shelburne. Cooke Aquaculture’s total spending for these various projects in the province is expected to be $150 million ($70 million capital/$80 million operational) with additional assistance of $25 million in loans from the provincial government.

2 Nova Scotia Department of Fisheries and Aquaculture (December 18, 2012). News Release: Fish Farm Approved for Jordan Bay.
The Natural Sciences Engineering Research Council (NSERC) is providing $5 million in funding for a new strategic research initiative with Nova Scotia universities called the Canadian Integrated Multi-Trophic Aquaculture (IMTA) Network. IMTA combines the cultivation of fed aquaculture species with inorganic extractive aquaculture species (e.g., seaweeds) and organic extractive aquaculture species (e.g., suspension and deposit feeders) for a balanced ecosystem management approach. In the IMTA system, any feed not eaten by the salmon – together with other organic wastes – is then available as a nutrient source for the mussels. As part of their natural metabolic processes, both the salmon and the mussels release soluble ammonia and phosphorus – thereby also providing essential nutrients for the kelps. This nutrient abundance has a positive impact on the growth of both species: mussels reach market size 8-10 months earlier than normal – and the kelps grow 46% beyond normal levels. Cooke Aquaculture is pioneering the IMTA approach to fish farming. NSERC has also supported industry-partnered research grants with Cooke Aquaculture and these two organizations will soon co-fund an Industrial Research Chair at Dalhousie University. Cooke Aquaculture’s feed mill in Truro has been experimenting with using seaweed it grows at some of its farm sites as a component of its fish feed.


project on Camelina oil’s replacement for fish oil and fish meal in aquaculture feeds.

Research partnerships in aquaculture typically extend well beyond research and teaching institutions in Nova Scotia. Dalhousie University and the NRC Institute for Marine Biosciences regularly combine resources with other regional research facilities such as the Atlantic Veterinary College in Prince Edward Island, the Canadian Centre for Fisheries Innovation in St. John’s, the Ocean Sciences Centre at Memorial University and the Huntsman Marine Centre in St. Andrews.

4.4 ENCOURAGING A DYNAMIC FOOD INDUSTRY CONNECTED TO LOCAL COMMUNITIES

Food consumers are increasingly interested in making a direct connection to food producers. Maintaining a healthy life style, gaining access to high quality products and ensuring food security are all factors contributing to the growing interest in local foods. An Agriculture and Agri-Food Canada survey revealed that supporting the local economy (53%) and product freshness (29%) were the main reasons for buying local.

With food production in agriculture and the fishery broadly distributed across the province, Nova Scotians are able to buy many local food products in communities around the province. The local food movement is now extending its reach through: the growth of farmers markets; local food promotions in supermarkets and other retail outlets; and restaurants, trade shows and events that showcase local ingredients. The increased demand is encouraging local producers to innovate and bring new niche products to market.

About 13% of food produced in the province is consumed locally. For agricultural products, approximately 40% of farm cash receipts are attributed to supply managed sectors such as dairy and poultry which are mainly sold within the province or across the Maritimes. A recent Conference Board report indicated that Nova Scotia ranks 4th among provinces in the share of food produced and consumed within the province.

For many local producers, the support they receive from local consumers is central to their overall market positioning and profitability. However small local producers often find it difficult to achieve a volume of production which would allow them to lower their costs; or offer the predictable level of supply that distributors or retailers require. For meat and vegetable producers, this is now complicated by the loss of food processing capacity within the province. As a result, no matter how good the quality, local producers can be on the losing end of consumer choice when imported food comes into the local market at a significant cost advantage. Food producers are addressing this directly by educating consumers about the benefits of buying local and through improving distribution throughout the province.

While the province’s small population is a limiting factor on local market growth, local producers have found ways to reach beyond provincial boundaries. One way to address this is through the promotion of local foods as a draw for tourism. Nova Scotia is already well recognized internationally for the quality of its seafood products including lobster and scallops, a draw for visitors to the province. Provincial marketing agencies such as Taste of Nova Scotia are now actively promoting a broad range of Nova Scotia food products in established markets such as the U.S but also in new markets such as Asia. The agency is leading missions to Hong Kong and several European locations in 2014, showcasing Nova Scotia products such
HASKAPA

Haskapa is a subsidiary of LaHave Forests, a company based in Blockhouse that is developing the Haskap berry for commercial sales in Nova Scotia, other parts of North America and the UK. Haskap is a highly nutritious berry and the company is looking at ways of maximizing the health benefits in their product line. It has twice the antioxidant content of wild blueberries and three times their iron content. The product line includes Haskap juice, dried Haskap berries and Haskap jam. The company has over 50 acres of Haskap orchards, with more acreage planned. Production is expected to ramp up as the orchards reach maturity over the next few years. Their Haskap juice won the award for best new juice at the World Juice Awards in October, 2013.

NS WINE AND GRAPE INDUSTRY

Nova Scotia’s wine and grape industry has expanded steadily over the last two decades as several new wineries have been established, primarily in the Annapolis Valley. Grape production tripled from a few hundred tonnes in the 1990’s to over 1,200 tonnes currently, and winery revenues have increased from $8.4 million in 2000 to $13.9 million in 2011. The wine and grape industry is estimated to be contributing about $36.3 million to the economy of Nova Scotia and employing 870 people.

The wine industry is a magnet for tourists, with an estimated 100,000 visits to the province’s 14 wineries. The wine industry and provincial government have collaborated on a plan to double the number of wineries to 20 by 2020 and increase the acreage of grapes grown from 320 101,000. The focus of the industry is expected to remain on producing high quality wines, with a number of Nova Scotia wines receiving awards and strong customer recognition in 2013. The wine industry is also drawing increased interest from hobby farmers: the Kingtec Campus of the Nova Scotia Community Colleges offers a “Grape Growing in Nova Scotia” course.

Figure 8 - Grape Production in Nova Scotia

Source: Statistics Canada

Sources: NS Department of Agriculture, (January 2013), Nova Scotia’s Emerging Grape & Wine Industry - Economic Impacts, Strengths, Weaknesses, Threats and Opportunities

The wine industry is increasingly important to food tourism, with the establishment of a number of wineries throughout the province which are drawing visitors from around the world. With the anticipated return on the Yarmouth-Portland ferry in 2014, there may be an opportunity to further exploit food tourism.

About 13% of food produced in the province is consumed locally. For agricultural products, approximately 40% of farm cash receipts are attributed to supply managed sectors such as dairy and poultry which are mainly sold within the province or across the Maritimes. A recent Conference Board report indicated that Nova Scotia ranks 4th among provinces in the share of food produced and consumed within the province.

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Community led initiatives have played a prominent role in supporting Nova Scotia’s food sector at the local level. There are over 40 farmers’ markets in Nova Scotia supporting more than 1,500 small businesses in the province. The growth in demand for local products has led to expansion of farmers’ markets including construction of the new $12 million Seaport market on the Halifax waterfront (2010) and plans in place to expand the Masstown Market, an independently owned business specializing in local produce near Truro. Markets are also growing in smaller centres across the province.

The cooperative movement has been a prime supporter of the food industry in Nova Scotia. Coops originated in the late 1800s, gathering momentum with the Antigonish Movement of the 1930s. Co-ops continue to play an important role in many communities: there are currently 50 co-ops in agriculture, 14 in fishing and a few retail operations, with an estimated 3,000 employed in 2009. While most are small, some are sizeable initiatives at the forefront of spurring global product outreach and innovative business practices. The Next Big Thing, a 45-member cooperative which includes growers from five US states and two Canadian provinces including Nova Scotia, grows and markets apples such as HoneyCrisp and SweeTango. Next Big Thing is designed to bring managed fruit varieties to market using sustainable farming practices that help reduce food miles.

Other community based initiatives that are supporting the growth and sustainability of the food sector include CEDIFs and community financed food initiatives. The largest CEDIF is the Farmworks Investment Co-op which enables Nova Scotians to purchase common shares in a diversified portfolio of agriculture businesses. The investments provide debt financing for farms and food processors, particularly those who may have difficulty in securing financing from conventional sources.

Community Supported Agriculture (CSA) initiatives to improve the viability of small food producers are growing in popularity. For consumers who are increasingly concerned about where their food comes from, the CSA model creates a strong link between the local farmers and local consumers. The process typically requires buy-in early in the season from consumers to allow the farmer to fund the upfront costs of production, with delivery of product over the course of the year. There are about 30 CSAs in Nova Scotia including Tap Root Farms which delivers fresh organic vegetables and Wild Mountain which delivers grass fed meats. There also several other community supported food initiatives emerging throughout the food system including Off the Hook which provides hook and line caught haddock. The latter connects a co-operative of small-scale, ground fish bottom hook and line fishermen from the Bay of Fundy to subscribing customers in and around Halifax. In the summer of 2013 they delivered fish to over 300 households.

A 2009 survey of small-scale fishers and fish farmers in Nova Scotia showed they are overwhelmingly motivated to engage in direct marketing, in part because the opportunities to enter global markets are so difficult or costly to pursue. Many small scale producers view the trends towards buyer consolidation as favouring larger industry players. While the economic returns from selling locally may be less lucrative, the perceived benefits such as commanding a better price for products, exerting more control over one’s livelihood and interacting directly with customers outweigh the disadvantages.

An important step of diversification for local food production has come through the 1999 Marshall decision by the Supreme Court of Canada. This established an entry point for aboriginal people into the commercial fishery, with agreements for 32 of the 34 eligible First Nations in Nova Scotia, New Brunswick, Prince Edward Island and the Gaspé Region of Quebec. As a result, First Nations communities across Nova Scotia are now taking steps to engage in the primary fishery, fish processing and aquaculture.

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39 Department of Fisheries and Aquaculture, Accountability Report for the fiscal year 2012-2013.
41 Farmer’s Markets of Nova Scotia
Since the landmark decision in 1999 by the Supreme Court of Canada recognizing treaty rights to harvest and sell fish, First Nations in Nova Scotia have stepped up to enter the commercial fishery. Over the past dozen years, the commercial fishery has made its mark in the economic development of many aboriginal communities.

Funding to support this decision has been largely provided by Fisheries and Oceans Canada (DFO). Between 2000 and 2007, DFO invested almost $600 million in the Marshall Response Initiative, reaching agreements with 32 of the 34 eligible First Nations in the Maritimes and the Gaspe. This allowed communities to acquire vessels and gear, buy licenses, build infrastructure and develop the appropriate governance and internal controls. Aboriginal communities, and individuals in those communities now hold licensed access to a number of lucrative fisheries including lobster and snow crab. In addition, communal commercial fishery initiatives, such as Mvme’j Seafoods Ltd sponsored by the Native Council of Nova Scotia, are exploring new ways to add value to the assets held by First Nations in the fishery.

Although precise information on the number and value of licenses held by First Nations is not available, some earlier estimates (2009) suggest that approximately 1,300 communal commercial fishing licenses and and 520 fishing enterprises had been created in the 32 First Nations communities . An economic impact study determined that ten years after the Marshall Response Initiative began there were 1,089 primary fishing jobs and 209 fish processing jobs on First Nations in Atlantic Canada and the Gaspe region.

DFO provided additional funding of $55.1 million to First Nations communities for 2007-2012 under the Atlantic Integrated Commercial Fisheries Initiative (AICFI). This has primarily been directed at sustaining the significant investment made under the Marshall Response Initiative, including providing training, maintenance and diversification.


5. The Path Ahead

As this report has revealed, the past decade has been a tough one for the food industry and food producers in Nova Scotia. It is difficult to argue at this point that the pain is fully behind us: further restructuring is continuing in some key sectors. But this is now balanced out by very encouraging results for some of the province’s leading food companies as their investment to improve productivity starts to bear fruit.

However, one should not have unrealistic expectations about prospects for the food industry, particularly on the employment side. Canadian manufacturers including those in the food industry are under enormous pressure to improve their competitiveness by controlling costs, often at the expense of employment. While this is essential in order for these firms to prosper, the loss of employment is a difficult pill to swallow, particularly for those in small communities where alternative employment may be difficult to obtain.

And it is clear that while there are new opportunities in global food markets, there are no guarantees of success. The opening up of markets in Europe offers tremendous potential to some in the food sector. But exposure to global markets also means more competition. Nova Scotia food producers have lost market share for some key products in the face of low cost competition from elsewhere in the world.

Successful firms in the food sector are now innovation focused, requiring the same types of support as other technology focused enterprises: a highly skilled labour force, access to leading edge research and support to reach out to new markets. Supporting these activities and encouraging smaller firms to partner and follow the industry leaders could bring significant benefits to the province’s economy over the long term.
Appendix A: List of Interviews

Coles, Larry, Account Manager & Bradford, Brenda, Account Manager, ACOA

Cudmore, David, President and CEO, Scotian Gold Co-Operative

Donald, Dr. Richard, Associate Dean, External Relations and Strategic Partnerships, Dalhousie University, Faculty of Agriculture

Durling, Greg & Julie Ann Parker, Human Resources, DSM Nutritional Products (formerly Ocean Nutrition Canada Ltd.)

Egerton, Fraser, Director, Trade Policy, Nova Scotia Department of Economic and Rural Development and Tourism

Halse, Nell, VP Communications, Cooke Aquaculture

Hosking, Scott, Trade Promotion, Nova Scotia Department of Economic and Rural Development and Tourism

Isnor, Richard, Manager, Atlantic Regional Office, Natural Sciences and Engineering Research Council

Keeler-Hurshman, Heather, Director, Investor Relations, High Liner Foods Incorporated

Liew, Doreen, Manager, Economic Research, Policy & Economics Branch, Maritimes Region, Fisheries and Oceans Canada

MacDonald, Linda, Executive Director, Policy and Corporate Services, Nova Scotia Department of Agriculture

MacNeil, Ross, Lahave Forests (Haskapa)

MacPherson, Mark, Manager, Research and Analytics, Nova Scotia Department Fisheries & Aquaculture

Owen, Steve, Industrial Technology Advisor, National Research Council - Industrial Research Assistance Program

Power, Rowena, Owner, Jitterbug Sodas

Queripel, Michael, Director, Business Financing, Nova Scotia Business Inc.

Ruddock, Janice, Executive Director, Taste of Nova Scotia

Smith, Ian D., Chief Executive Officer, Clearwater Seafoods LP

Theriault, Linda, Director, Public and Government Relations, Acadian Seaplants

Appendix B: Explanation of Data Sources

This report relies on a variety of data sources. In general, efforts are made to use the most recently released data with comparison to previous periods for context. Most secondary data originates from surveys carried out by Statistics Canada or from administrative data bases.

In some cases, preliminary data is referenced, such as for fish landings and the landed value of fish. There can be a considerable adjustment when the final data is released.

Some of the data sources have a lagged release.

For example, there is usually a two-year lag before the release of Statistics Canada’s manufacturing statistics and a four-year lag before the release of Input-Output Accounts on output and nominal Gross Domestic Product by industry.

The National Household Survey (NHS) has now replaced the decennial Census. Comparisons are not always possible for small area data between the Census and the NHS due to the different methodology utilized for each data source. Canada continues to produce a Census of Agriculture, although there can be a considerable lag in the data release.
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Adding Value to Forest Resources

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February 2, 2014

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1. How We Got Here

A foundational premise for this study is that the forest products sector in Canada is undergoing fundamental, structural change and therefore must find new technology, product and market pathways to a sustainable future if use of this resource is to continue contributing to the country’s socio-economic and environmental sustainability.

Since 2006, volumes of timber harvested from Canada’s forests have decreased to current levels that are half or less the levels permitted as annual allowable harvests. This decrease in activity has been driven by two fundamental and potentially long term structural declines in demand for the commodity products that have been fundamental elements of the industry’s economic foundation.

STRUCTURAL MARKET CHANGES

As shown in the following graph, demand for newsprint in North America has declined by more than 60 per cent over the past six years. That decline in demand appears closely correlated to a decline in newspaper classified advertising revenues. Both phenomena have been brought about primarily by the transformation in classified advertising that has shifted to online environments across the developed world; and is best exemplified by the launch and growth of Kijiji.

Newsprint has historically been the dominant grade of paper manufactured by Canada’s forest products sector and most of that output has been traditionally sold into the North American market. The reduction in demand portrayed in the graph – roughly 10 million tonnes – can also be characterised as the equivalent output of 30 – 40 newsprint machines, or the closure of 15 – 20 mills.

We have seen this reduction in demand have an impact in Nova Scotia with the permanent shut down of all three of the newsprint machines which operated here, along with the permanent closure of the Province’s only exclusively newsprint mill.

Demand for Canadian lumber and other wood building products have historically been driven predominantly by residential construction in the United States. As the following graph shows, housing construction in the US accelerated well ahead of housing formations during the decade leading into the financial market collapse and ‘Great Recession’ of 2008 – 2009.

The decline in the economy of the United States (US) that began in 2007 and culminated in the financial markets collapse and ‘Great Recession’ of 2008 – 2009 highlighted for all involved with Canada’s lumber industry that our wood products manufacturers were highly vulnerable to major disruptions in the housing market in that country. Indeed, several recent studies have identified the dominance of the US market as the primary export market for Canadian and Atlantic wood products, representing more than 90 per cent of the value of wood products export shipments from the region.
The reality is that from 2002 through 2010, the US residential construction industry built 2.6 million more homes than there were households formed. This represented a significant increase in over supply of housing.

Adding to the excess inventory of housing available for sale are homes that have been foreclosed and / or repossessed. As shown in the graph below, during the period 2006 – 2012 more than 25.3 million homes were foreclosed / repossessed in the US. In the years of the financial markets collapse and ‘Great Recession’, (2008-2011), there were 14.2 million foreclosures, of which almost three quarters remained unsold by the 4th Quarter of calendar year 2012.

It is therefore not surprising that housing starts, the primary driver of demand for lumber and related building materials, are currently at less than one third of the levels of seven years ago. As well, as reported by the US Census Bureau and Department of Housing and Urban Development on January 27th, 2014, sales of new single-family homes in December, 2012 were at a seasonally adjusted annual rate of 414,000, slightly more than one fifth the SAAR that prevailed in 2006 – 2007. The same report also estimated that some 428,000 new homes were sold in 2013, about 16 percent, above the 2012 figure of 368,000, almost 40% above the 2011 figure of 306,000. While moving in a positive direction, these levels remain well below the sales volumes of roughly 2 million new homes that were experienced prior to the Great Recession; and well below the level of 1.5 ± million new homes that most economists and knowledgeable industry observers identify as the level required for a sustainable residential construction sector.

These changes in market demand appear to be structural and long term if not permanent; and, have significantly disrupted the traditional supply chain / materials flow balance that has sustained the forest products sector in Canada for most of the past century. That historic balance is portrayed in the schematic (‘Fig. A’, page 4).

With the decline in the pulp and paper and wood products segments of the industry, the supply chain balance that resulted in availability of very low cost feedstocks to support industry-generated bioenergy has been disrupted.
Given this shift, a key question related to rejuvenation and longer term sustainability of the forest products sector in the country becomes where do we find ‘higher valued’ products to absorb the major portion of costs related to the supply chain flow from forest to processing sites? What will replace lumber / pulp – paper?

Thus, the challenge becomes how to define and develop a new technology / product / market paradigm that can sustainably support a forest sector of the future, along with the communities that are dependent on continued industrial use of our renewable forest resource.

2. Current State

OVERVIEW – FOREST HARVEST

The Nova Scotia Department of Natural Resources reports that the total provincial forest harvest in 2012 (3.45 million cubic meters) was barely 50 per cent of the harvest level in 2004 (6.89 million cubic meters) as illustrated in the graph below.

It is also evident from the graph that hardwood harvest levels, while modest, have remained relatively stable over the ten year period shown. The declines have been driven by the softwood industry which reflects the challenges of the US residential construction industry. As noted previously, housing starts in that market began to decline during 2004 and that decline accelerated through the ensuing several years until the complete collapse of the ‘Great Recession’ of 2008-09.

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PROCESSING AND MANUFACTURING ACTIVITY

As the graph below illustrates, Nova Scotia’s lumber industry has stabilised since 2009-10 with respect to volumes of wood being processed; though the number of mills actively producing has continued to decline from slightly more than 200 mills in 2008 to 137 in 2012.

The recent levelling off of harvest and processing levels in the lumber industry has, however, been more than offset by the decline in wood being processed in the pulp and paper sector. The sharp declines in wood flows to the pulp and paper mills from 2010 to 2012 shown in the graph above reflect the disruptions in activity at both the Port Hawkesbury and Liverpool mills. With the permanent closure of the Liverpool mill in June 2012 and the resumption of operations in Port Hawkesbury of only the (larger) machine producing supercalendared grade paper, forest harvest volumes to supply the remaining pulp and paper mill operations in Port Hawkesbury and Pictou can be expected to level off in 2013 at a volume approximately equal to or somewhat below the volume shown for 2012, likely in the range of 600,000 – 700,000 cubic meters.

The result will be a total harvest of roughly 3.2 ± million cubic meters, a harvest level that will be below half (45 % ±) the volume harvested in 2004.

The shutdowns of paper machines and closures of

Forest Harvests Nova Scotia 2003-2012

Source: NS-DNR Annual Reports 2003

It has been suggested anecdotally, (eg. Woodbridge), that the increase from 2003 to 2004 may have resulted from accelerated salvage harvesting of wind blow down resulting from Hurricane Juan, though no data is available to validate this assertion; and, in any event, to whatever extent that may have been accurate, it represented but a minor ‘blip’ in a downward trend in harvest volumes that began in the mid-1990’s.
responsible for the purchase of wood from Private Woodlots as well as the actual harvesting and transport of the wood to the processing mill. Precise data on the impacts of the declining harvests on contractors is unavailable, though there is certainly anecdotal evidence to suggest that many former contractors and employees have exited the logging business. Regardless, based on various sources of anecdotal evidence, we have calculated the overall decline in harvest likely represents a loss of as much as $80 ± million in revenues to contractors, (in addition to the decline in stumpage payments).

In other words, the combined impacts of declines in stumpage revenues to woodlot owners and the reduced levels of contract harvesting and transport activity over this period almost certainly represent a reduction of $100 ± million in economic activity across rural Nova Scotia.

3. Envisioning Our New Forest Sector

**FOUNDATIONAL ASSETS**

**Forest Resources**

As illustrated in the preceding chapter, and as presented in data prepared by the Department of Natural Resources (DNR) in development of the Natural Resources Strategy there is an underutilised wood supply of approximately 2.2 – 2.6 million cubic meters of forest resource which could be available for harvest on an annual basis. This estimate takes into account and is therefore calculated as potentially available after implementation of the 50% clear-cut reduction policy incorporated in the Natural Resources Strategy.

DNR forest inventory data indicates the resource is comprised of predominately (60% - 65%) conifer species, mostly black and red spruce and balsam fir; with the remainder comprised of various hardwood species, the most common being red maple.

Approximately half this timber is located on small, privately owned woodlots and thus could potentially represent an important source of revenues and economic activity across rural Nova Scotia, if new processing opportunities can generate sufficient value to motivate these land owners to convert standing timber.
POTENTIAL FOR COMMUNITY FOREST MANAGEMENT

An important recent development with respect to Nova Scotia's forest resource is the significant increase in Provincial ownership that has resulted from active purchases of surplus forest land from various forest products companies and other owners. Of particular importance is the acquisition of approximately 240,000 ha of forest land that was included in the purchase of the shares of Bowater-Mersey Ltd.

In aggregate, this increase in Government forest ownership places the Province in the somewhat unfamiliar role of having direct responsibility for active planning and management of activities on a much larger portion of the Province’s forests than has previously been the case.

During the consultation process conducted by the Bowater Transition Advisory Committee during the summer and fall of 2012, several individuals and groups suggested consideration be given to creating a mechanism for community management and control of that forest. Two types of objectives were proposed – some focused on conservation and preservation of several unique ecosystem attributes present within the purchased lands; and, some focused on local forest management as a means of ensuring no single industrial organisation could dominate demand and hence prices paid for standing or harvested timber. Several of these groups also suggested that local, community management and control of the resource would strengthen the potential for development of processing operations focused on manufacturing value added products.

Readers are asked to refer to Appendix A for a more detailed discussion of approaches to local community forest management that have been implemented in Ontario, Québec and British Columbia.

IDLED INDUSTRIAL EQUIPMENT

At the site of the Port Hawkesbury Paper mill there is an idled thermo-mechanical pulp line, as well as an idled newsprint machine which may have potential for conversion to demonstration scale facilities for production of new forms of converted / refined biomass as well as of alternative forms of paper-related products. The owners of that facility have publicly stated their interest in and willingness to explore such new product and technology opportunities and as recently as late January, 2014 have been reported in news media as actively investigating opportunities to extract sugars for biorefining applications in conjunction with a European partner.

Also, FP Innovations has identified that facility as a potential site for implementation of its “novel proprietary biomass fractionation process that produces value-added bio-fuels and bio-chemicals from individual components of wood. This patent-pending process involves mechanical and mild chemical treatments, and is expected to be easily retrofitted into existing TMP mills. A mechanical pulp refiner is used to fractionate the wood into a highly digestible biomass. Chemical treatments then fractionate the wood into its components, namely cellulose, hemicellulose and lignin, which can be converted into value-added fuels and chemicals.”

The potential Return on Capital Employed for this potential repurposing of the idled facility is significantly positive when the residual output from the process is sold as lignin.

At the site of the former Resolute Forest Products newsprint mill in Liverpool, (otherwise known as Bowater-Mersey Ltd., and now owned by the Province of Nova Scotia), there are two idled thermo-mechanical pulp lines as well as other related industrial infrastructure. Much of this facility now comprises the Innovacorp Demonstration Centre which is being developed as an ‘incubation’ and ‘demonstration scale’ facility for promising new bioconversion / biorefining technologies and other new forest products. This too represents a potentially positive repurposing of idled industrial capacity that can be used as the launching pad for successful commercialisation of new technologies.

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2 The total of 137 mills licensed and producing lumber includes a large number of very small mills producing for local or even personal use only. It is generally recognised that there are only seven (7) significant softwood lumber producers in the Province and only two or three significant hardwood producers.

3 As also analysed and reported on by Woodbridge Associates in “Economic Impact Analysis of Timber Management and Supply Changes on Nova Scotia’s Forest Industry”, May 2011.
that convert wood fibre into sustainable, advanced value added forest products.

IDENTIFYING NEW OPPORTUNITIES

To describe the range of potential opportunities in a meaningful context, the conversion technologies and potential new products have been grouped around the three major platforms for bioconversion / biorefining – traditional, biological, and thermochemical – as summarised in the following schematic.

Traditional Platforms

There are two aspects to the traditional platforms, wood and related composite products and pulp and related paper technologies.

The research and development of wood and composite products is predominantly oriented to improving the performance of wood based construction products, and to development of new composites and engineered products. Examples of such products which have been identified potential new opportunities for Nova Scotia include cross-laminated timber (CLT) and laminated veneer lumber (LVL), which will be discussed in more detail in a subsequent section of this paper.

Historically and in its current state, the pulp and paper industries that have operated and continue to operate across Canada have used mechanical pulping technologies predominantly. Of the chemical pulping mills that have operated, most have been idled and dismantled, and several have been converted to the production of dissolving pulp, a feedstock for synthetic fabric (rayon) manufacturing, predominantly in South Asia. A small number of chemical mills, including Northern Pulp in Pictou, continue to produce kraft pulp, (in Pictou, northern bleached softwood kraft pulp), much of which is exported to paper manufacturers around the globe.

The most common pulping technology used in mills that continue to operate is thermo-mechanical pulping, (TMP). Several mills in Western Canada also combine bleaching and chemical treatment with thermo-mechanical pulping.

Much of the research and development underway is in fields related to advancing pulping technologies and, in particular, decomposition of pulping process by-products for value extraction. While a significant portion of this work is focused on chemical pulping technologies and hardwoods, which may have more limited potential as a foundation for development of integrated biorefineries in Canada, this paper is focused somewhat more on research related to adaptation of mechanical pulping to integrated biorefinery application, (within the context of examination of this ‘traditional platform’).

This is particularly relevant given the Provincial ownership (through Innovacorp) of the TMP production lines at the now idled Liverpool newsprint mill. As noted in a previous section, these pulp lines are an important asset and foundation for new research and development activity in Nova Scotia and will be an important element of the newly established Innovacorp Demonstration Centre.

Biological Platforms

The research and development underway with respect to the applicability of biological platforms to development of integrated biorefineries addresses the application of genomics to the decomposition of lignin and the related extraction of vanillin, as
well as to extraction of phenolic compounds from softwood species and decomposition of lignin through microbial transformations.

Biological platforms also generally include a pre-treatment to reduce feedstock to very small parts or chemical constituents, followed by processes such as: Enzymatic hydrolysis – the application of enzymes (proteins) to accelerate the breakdown of long-chain sugars (cellulose) to monomers (glucose); Aerobic fermentation (or example to make ethanol); and, which will be followed by Product recovery – through which separation of a biofuel product from other sugars will occur.

Biological platforms can also involve non-traditional fermentation to create other innovative, non-fuel products. Non-traditional can mean anaerobic, but with different feedstocks than conventional anaerobic fermentation of such materials as conventional effluents. Within this category, research and development is also underway to use natural products chemistry to recover chemicals after pre-treatment or after enzymatic hydrolysis. In a forest biorefinery application, this type of process could involve recovery of elements of the lignocellulose framework, and not necessarily construction of new chemicals.

**Thermochemical Platforms**

There are three basic technologies which are considered central to this platform: pyrolysis, (often described as ‘flash or fast pyrolysis); gasification; and plasticization.

Pyrolysis is combustion in the absence of oxygen, at temperatures of up to about 5,500° C followed by a reforming process, usually cooling through condensation and sometimes with a catalyst. Subsequent processes involve separation of final products, which could be in the form of gas, liquids, and solid. Pyrolysis is most often associated with bio-oil or crude pyrolysis oil. Production of liquid product depends on heating rate — a high heating rate for short times increases liquid yield, with the maximum being approximately 62% of mass.

Pyrolysis can also yield light gases, (eg. CO, CO2, H2, H2O, methane, ethylene, etc.), but not synthesis gas; char, carbon and inorganic residues (eg. heavy metals, minerals, etc.). Bio-oils are notoriously unstable and need the addition hydrogen and removal of oxygen – hydrodeoxygenation – to attain stability. This process is also frequently referred to as biomass-to-liquid (BTL):

Gasification is higher temperature combustion without oxygen, usually 600 - 800 ° C and can be used to create ‘syngas’, (synthesis gas), which can be cleaned and catalysed into fuels or chemicals. The process may include pyrolysis as an initial processing step to ‘clean up’ the chemistry of the feedstock. As a result, bio-oil or char could be products from a gasification system, along with gas.

Plasticization describes the process by which plastic-like products can be created from superheated lignocellulose. In this process, oxygen, temperature, and pressure are controlled to drive chemicals to act more like a plastic, similar to the way cheese reacts in a microwave oven. The process usually stands alone, but some research and development is underway in which it is being incorporated into other platforms.

**Potential New Directions**

As we consider potential new product / market opportunities that can lead to revitalisation of Nova Scotia’s forest products sector it is critical that such opportunities yield a spread between wood costs and sales revenues that will be “large enough to pay operating costs such as energy, chemicals and labour, return the investment made in a reasonably short time, and generate a profit”.5

It is very likely that a viable future will be built on wood products, and particularly higher valued wood products than have traditionally been produced in the Province. However, it will be essential that a mix of processing applications be developed to provide secondary processing markets for the wood chips, sawdust / shavings and other mill residues produced by primary wood products converters and which will be essential to their viability.

As noted above, CLT, LVL and glue laminated timber (glulam) have been identified as value added wood products with good potential for development
in Nova Scotia. All three are discussed in length in FP Innovations Biopathways Analysis for Nova Scotia. As illustration of the potential for these products, we review the CLT opportunity here.

**Manufacturing – Cross-Laminated Timber Panels introduction and overview**

Cross Laminated Timber is a new generation of lightweight and prefabricated wood building systems first developed in Europe. The product is typically configured as wide structural panels consisting of several layers (usually 3 – 7) of boards stacked crosswise (typically 90 degrees) and glued together on their wide faces. (In some applications, the boards can be nailed together, though this seems to be increasingly rare.) Panels are also typically configured in large dimensions, with thicknesses varying from 50 – 400 mm, widths up to about 3 m and lengths to 20 m.

CLT can be manufactured to a wide range of specifications for various structural applications and are mainly used as components of wall, floor or roof systems.

There are a number of identifiable, significant benefits to be gained from using CLT panels in construction, including:

- The cross lamination minimizes swelling and shrinkage, and is thus dimensionally a very stable building product;
- The panels exhibit relatively high in-plane & out-of-plane strength and stiffness properties, with two-way action capability similar to the performance of a concrete slab;
- The ability to pre-cut panels to the particular dimensions required for a specific installation and to pre-fit the panels with insulation, hardware, windows and entry systems facilitates a modular construction approach and significantly shortened construction time;
- The creation of waste and noise during the construction process is also minimised through the use of CLT panels;
- Research by FP Innovations and others has demonstrated that CLT panels are cost competitive;
- The panels are constructed from renewable materials that can be harvested from sustainably managed forests; and,
- CLT panel systems also demonstrate very good seismic and fire performance.

Perhaps the most important advantage of CLT panels is that they facilitate construction of much taller buildings using wood than can be achieved using conventional solid wood construction techniques. Examples are illustrated in the article by Wells attached in Appendix B.

CLT is at an early stage in its product life cycle curve and demand growth is expected to increase as knowledge of production, code acceptance, design and installation support all become more commonplace.

FP Innovations research indicates that premium wood grades, (i.e. MSR softwood lumber), are required for CLT fabrication. However, we have noted from European and other research sources that CLT is being manufactured there using beech and other species and it does not appear that stress rating is required.

Information regarding building code or other market acceptance constraints that may influence demand for CLT panels in Asian markets such as China has not been obtained for this research. However, given the significant potential advantages offered by CLT panels for accelerating construction of moderate cost housing we would expect that ultimate demand could be substantial.

**ECONOMIC HIGHLIGHTS**

FP Innovations has undertaken an assessment of the North American market for CLT\(^4\) which identified the following key findings:

- The total market potential for the US has been estimated at 7MM m\(^3\) for non-residential construction, of which about 10% is estimated to be generated in the Northeastern US;
- Unit selling prices in North America are estimated at approximately $875 - $900 / m\(^3\) and shipping
costs from central / eastern Canada to the Northeast US have been estimated at approximately $25 / m³.

- Research and modeling by FP Innovations suggests a ‘base line’ plant capable of producing approximately 30,000 – 35,000 m³/yr. At that production volume a plant would generate approximately $28 - $30 million in annual revenues. It would also consume approximately 57,000 m³/yr. of lumber produced by area sawmills.

The capital investment requirement for the plant modelled by FP Innovations is approximately $35 million. Direct employment is estimated at 45 – 50; and, based on the model, the mill should be able to generate ROCE of 15% - 20%.

The output from a CLT mill in Nova Scotia would almost certainly be export market focused, either to the US, Europe or Asia, using port facilities in Halifax, (or potentially Liverpool or Port Hawkesbury) or through rail links to US markets.

However, if local building codes and regulations were modified to permit construction of mid-rise buildings, (5 -6 stories, or perhaps up to 10 stories), using wood construction, the resulting changes in structural materials used could serve as a significant boost to a locally focused, added value wood products industry.

**Mechanical Fractionation**

As we noted above, FP Innovations has developed a fractionation process\(^7\) that combines mechanical and mild chemical treatments of hardwood chips to produce bio-fuels and bio-chemicals from individual components of wood. FPI anticipates the technology could be easily retrofitted into existing TMP mills, such as in Port Hawkesbury. The basic elements of the process include use of a mechanical pulp refiner to fractionate the wood into digestible biomass; followed by chemical treatments to fractionate the wood into its components, namely cellulose, hemicellulose and lignin. These components can be converted into value-added fuels and chemicals.

The mechanical fractionation option produces mixed sugars and a lignin-rich residue from hardwood chips and yields slightly more than 0.5 t / yr. of sugars from each oven dry tonne of chips. The ROCE achieved by the plant modeled by FPI is quite promising when the residue is refined and sold as lignin, rather than as solid fuel.

**TORRIFIED WOOD — PYROLYSIS OIL / BIOFUELS**

**INTRODUCTION AND OVERVIEW**

Torrefaction, particularly using sawmill residues as feedstock could also represent a new product opportunity for Nova Scotia’s forest products industry.

Torrefaction of woody biomass can be described as a mild form of thermal conversion (controlled carbonisation) at temperatures typically ranging between 250-300 °C in the absence of oxygen. During torrefaction the biomass properties are changed – essentially the hemicelluloses and moisture are decomposed / converted to a gaseous state and the lignin and cellulose remain. The result is a significantly higher fuel quality (increased heating value) for combustion, gasification and co-firing in conventional coal-fired power plants and steel industry. Low calorific components are transferred to the gas phase. The torrefaction objective is to improve the energy properties of biomass within a defined residence time and temperature less than 300° C.

Through torrefaction it is possible to transform the wood to a state in which its unit energy values are very close to the equivalent of coal. Other advantages of torrefaction include:

- Upgrading of biomass into commodity solid biofuels, (when combined with densification), with favourable properties related to logistics and end-use;
- Increased energy density, better water resistance, slower biodegradation, good grind ability, good

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6 Future Biopathways Project
7 This process description is largely drawn from FP Innovations, Forest Sector – Wood Product and Bio-Pathways Mill Analysis for Nova Scotia, 2012, p.70
manufacturing facility. We would expect potential for such a combination to be particularly strong in Western Nova Scotia.

Given the forest cover and related feedstocks estimated to be available in Nova Scotia it may be more productive to consider a more comprehensive approach to bioconversion / biorefining of the forest resource to extract a wider range of potentially higher valued products. A useful parallel is to consider a valuation approach similar to that used by the oil industry, as summarised in the schematic below.

One potential process for consideration is pyrolysis to produce bio-oil that is suitable further refining. The pyrolysis process involves heating of biomass in near absence of air – the newest technologies achieve temperatures up to 900° C – produces vapours / aerosols that condense to bio-oil used for energy or chemical outputs. The fuel value of the oil, in its initial state, is about half of conventional fuel oil. However, with further refining, bio-oils can also be produced for food additive / pharma applications or be refined into higher value fuels.

Information provided by Dynamotive indicates that typical outputs from their commercial scale pyrolysis technology include 60 – 75% bio-oil, 15 – 20 bio-char and 10 – 20% non-condensable gases, (which can be used to meet roughly 90% of the plant’s energy needs). The bio-oil can be economically produced at relatively small scale (130 – 200 tpd) at quality standards acceptable to the oil and gas sector. Thus the bio-oil can be suitable for further refining into higher value bio-fuels.

As with torrefaction, however, the feedstock requirement is for relatively low cost mill residuals. However, if development of a torrefaction facility were considered in combination with a pyrolysis plant, sufficient economies of scale might potentially be
achievable to support a combined forest harvesting and pre-processing operation. The potential feasibility of such a combined or dual development will obviously require further, more detailed evaluation.

**ECONOMIC HIGHLIGHTS**

As these technologies are currently at early stages of development, business modelling of potential facilities is not as well developed as the modelling for CLT, for example. However, by combining data from various sources we have estimated the following economic characteristics:

- A torrefaction plant producing approximately 90,000 tpy would generate roughly $13 – 15 million in revenue, with a capital investment likely in the range of $25± million;¹⁸

- A pyrolysis plant generating roughly 40,000 – 50,000 tpy of bio-oil, plus bio-char, could potentially generate revenues of $15 - $20 million, depending on the further refining applications into which the oil was transferred;

- Direct employment in each facility would likely be limited to approximately 5± personnel, plus indirect staff support;

- Forest harvesting operations would likely employ 60 – 80 people;

**ADDITIONAL POTENTIAL NEW OPPORTUNITIES**

There are also a number of forest-based product opportunities involving development, implementation and commercialisation of new technologies that could potentially be developed in Nova Scotia, and specifically at a facility such as the Innovacorp Demonstration Centre in Liverpool. We have been advised by Innovacorp that several ventures involving further development of new technology / products are under consideration for incubation at the Centre. Some of the products proposed include:

- Renewable diesel from wood biomass;
- Renewable energy storage;
- Torrified wood / pellets;
- Bio-fuels and bio-chemicals from biomass fractionation process;
- Inulin / Xylitol / Bio-Char; and,
- Several engineered wood products, including glued – laminated structural components.

4. **Envisioning Success – Making It Happen**

**KEY CHALLENGES, CONSTRAINTS AND RISKS**

The research and analysis we have undertaken in developing this report leads to identification of three key issues which constitute the major challenges, constraints and risks facing Nova Scotia’s forest products sector.

**Disappearance of Buyers for Sawmill Residues**

The permanent closure of the newsprint mill in Liverpool and the shutdown of the newsprint machine in Port Hawkesbury have significantly reduced the market for sawmill residues which makes operation of most of these sawmills uneconomic, even if there were to be a significant recovery in markets for conventional lumber products. This situation is especially acute in the Western half of the Province.

**Shifts in Markets for Traditional, Commodity Products**

The permanent decline in demand for newsprint and the likely long term decline (or at least long, slow recovery) in demand for commodity lumber has created a situation in which sawmills and pulp and paper mills operating in Nova Scotia have not been profitable for many years and have been unable to invest in new technologies or market investigations needed to adapt to these changes. As a result, outputs have declined and the sector has been operating under a significant cloud of uncertainty for most of the past decade. This has led to reductions in demand for timber purchases from woodlot

¹⁸ A key determinant of required capital investment will be the availability of a ‘brownfield’ site for the facility, (eg. the Liverpool mill site). If such a site would be available, capital costs would be positively constrained.
operators and has almost certainly contributed to the declining level of engagement in the industry by woodlot operators and also by logging and transport contractors. As a result of these developments it is arguable, though by no means conclusive, that Nova Scotia may no longer have available the critical mass of participants needed to constitute a viable forest products sector.

**Cultural Disinclination to Seek Out New Product / Market Opportunities**

Recent research we have conducted examining export market opportunities for Atlantic wood products illustrated a number of ‘gaps’ in the skills and knowledge of Atlantic (and other) Canadian wood products manufacturers with respect to effective sales development in export markets. These gaps start with limited to no understanding of how to undertake market research and intelligence gathering, of how to evaluate market data to identify ‘real’ opportunities, and extend to weakness in sales skills training that is particularly focused on relationship development efforts and the need for long term commitment to that relationship that will be so critical to export success. As well, we found a need for training of staff within potential exporting companies to deal with the particular document processing, including financing and export insurance, needed for international trade. Without significant change, these attitudes and skills weaknesses will act as a major constraint on rejuvenation of the sector because, to paraphrase Einstein, doing what we’ve always done is unlikely to result in the fundamental changes needed.

**Meeting the Challenges, Making the Changes**

We would argue that three key shifts are needed to meet the challenges described above and to rejuvenate Nova Scotia’s forest products sector successfully. There are certainly many other, additional changes that could be identified, but as a starting point, as the base foundation for a new future, at least the following three changes need to be in place.

**Fostering a New Symbiosis**

As described earlier in this report, the foundation of the forest sector’s economic success historically has been the symbiotic relationship between the sawmill segment and the pulp and paper segment which supplied fibre back and forth to each other, leaving relatively small volumes of low quality residual fibre that was well suited to producing energy in the form of heat and power. This relationship has been shattered, not just in Nova Scotia but across much of the country and elsewhere.

Therefore, efforts to foster new ventures using new processing and conversion technologies, or even ventures pursuing new product / market opportunities based on conventional technologies must simultaneously foster development of a new symbiosis so that wood fibre extracted from our forests can be fully and economically utilised. As noted by FP Innovations and previously cited here, it will be essential the combinations of opportunities being pursued yield a spread between wood costs and sales revenues that will be “large enough to pay operating costs such as energy, chemicals and labour, return the investment made in a reasonably short time, and generate a profit”.

**Resuscitate Our Trading and Exporting History**

Nova Scotia’s history is replete with tales of heroic figures who sailed the globe seeking out opportunities to sell our fish and to buy other products we needed – dare I note rum!! That tradition extended to selling our apples and other products and today, in another sector entirely, extends to producing ice cream novelties here and shipping them fully across Canada and around the world. The same spirit of seeking out new markets, identifying customer needs that can be met with Nova Scotia wood products, particularly value added and further processed products such as composite and engineered building components. There is significant need for such products in the rapidly growing markets in Asia and South Asia, but we must go there, seek them out and develop them. Buyers in those markets may come looking for our raw wood, but we need to work hard to develop relationships that will enable us to add value here and sell elsewhere.

This shift in market focus, both geographically away from the reliance on the United States, and value-
wise away from wholesale distribution of commodity products towards higher value products sold to end users will be essential to long term success of Nova Scotia’s forest products sector. This change in particular will require a significant shift in attitude from the traditional orientation of the companies which have operated in Nova Scotia’s forest products sector, and especially on the part of the smaller, independent producers. These companies will need to learn how to develop supplier – customer relationships with direct users of products, rather than with brokers – wholesalers. As well, these companies will need to expand horizons and directly explore potential new export market opportunities.

At the same time, we would also note there are opportunities to develop and foster the use of advanced wood products in innovative ways at home. As noted in an earlier section of this paper, modification of local building codes and regulations to permit construction of mid-rise buildings using wood construction, could result in a significant boost to a locally focused, added value wood products industry. As well, with locally gained experience in innovative applications and use of wood products, Nova Scotia’s advanced wood products manufacturers would be even better equipped to compete across the globe.

**Research, Development and Innovation**

It is evident that the scope and nature of the change required to achieve the future potential of Nova Scotia’s forest sector necessitates development of new relationships with researchers and other organisations across Canada and internationally. Already, building from transition work related to the closure of the Liverpool mill and sale of the Port Hawkesbury mill, Innovacorp has established an impressive set of working relationships with organisations focused on three main areas, as follows:

- **Research and Development**
  - BioFuelNet – National Network of Centres of Excellence
  - National Research Council of Canada
  - Atlantic Center for Green Chemistry

- **Commercialization**
  - Green Centre Canada
  - Bioindustrial Innovation Centre (BIC)
  - Spring Board Atlantic (13 academic members)
  - FP Innovations

- **Cluster Partners**
  - Sustainable Development Technology Canada (SDTC)
  - Atlantic Canada Opportunities Agency (ACOA)
  - Department of Foreign Affairs, Development and Trade Canada (DFADTC)
  - Atlantic Council for Bioenergy Co-operation
  - Nova Scotia Community College

These relationships will need to be deepened, and the range of organisations expanded.

Additionally, industry groups such as the Maritime Lumber Bureau and the Forest products Association of Nova Scotia need to become fully engaged as partners in the change and development process.

As well, there is almost certainly potential for implementation of changes in various government
APPENDIX A: COMMUNITY CONTROL AND MANAGEMENT OF INDUSTRIAL / COMMERCIAL FOREST RESOURCES – ONTARIO, QUÉBEC AND BRITISH COLUMBIA

INTRODUCTION

This Appendix was originally prepared as part of an assignment through which Halifax Global was engaged by the Nova Scotia Department of Economic and Rural Development and Tourism (ERDT) to provide support to the Bowater Transition Team of senior officials dealing with the closure of the Resolute Forest Products mill in Liverpool. It is reproduced here with permission of ERDT.

The purpose of this brief summary report was to provide a brief overview of the approaches taken in three Provinces – Ontario, Québec and British Columbia – to establish mechanisms for community-based control and management of industrial / commercial forest resources. We want to note explicitly that the focus of our research has been to examine approaches taken in the Provinces identified to facilitate community level control and management of forest resources that continue to be used for industrial and commercial purposes. That is, we have not focused on ‘community forest’ initiatives that have been oriented primarily towards forest preservation / conservation objectives.

We identified four key issue areas / questions for investigation:

- Governance – Board composition and stakeholder representation;
- Duties, responsibilities and authorities related to forest management, timber pricing, etc. that have been vested in the local management organisation;
- The relationship between the local organisation and provincial-level authority, particularly with respect to land ownership and the applicability of provincial-level forest management regimes; and,
- Policies and programs to stimulate development of new approaches to utilisation of the Province’s forest resources.
Dispute resolution mechanisms through which ‘disputes’ between the local organisations and major industrial forest products companies or other stakeholders can be addressed. Our findings are reported in the following sections, organised by jurisdiction.

ONTARIO


In May, 2011, Ontario announced that it had begun working with First Nations, local communities and forest industry partners to design and establish the first Local Forest Management Corporation — Nawiinginokiima Forest Management Corporation. This new proposed LFMC would sustainably manage the Crown forests in the Pic River Ojibway, Big Pic, Black River, Nagagami, and White River forests in the Marathon area. It would also sell and market timber and negotiate the price of wood.

A key objective of the LFMC’s is to ensure the allocation of Ontario’s wood, (referring specifically here to Crown Forest), as well as prices, become more responsive to market demand, create new opportunities for entrepreneurs, and facilitate greater Aboriginal and local involvement in the forest sector.

To launch the Corporation, a ‘Working Group’ was formed and is comprised of representatives of all key stakeholders, including the sponsoring communities, industries that will purchase timber from the Corporation, the Provincial Government and several advisers, (most with specific professional expertise), who have been engaged by other stakeholders, such as one or more of the communities. A number of members of the ‘Working Group’ will become members of the Board.

The ‘Working Group’ has also formed a ‘Task Team’, effectively a sub-committee, which has been assigned the mandate to develop a draft business model and operational assumptions as the basis for confirming the Corporation’s viability and subsequent Government decision-making related to its formal, legal establishment.

It is therefore appropriate to view the Nawiinginokiima Forest Management Corporation as a pilot stage implementation of the LFMC concept which is eventually expected to be implemented in several other areas of Ontario.

GOVERNANCE

The composition of the Corporation’s Board has been defined to a large extent by the composition of the group which participated in development of the original proposal to the Crown. The seven (7) communities within the geographic area controlled by the Corporation will have permanent seats on the Board. These include four municipalities and three First Nations communities.

The concept of a smaller board representing greater flexibility was proposed by the Corporation’s proponents and accepted by the Ministry of Natural Resources (MNR). Initial Board size was set at twelve (12), including the seven community-based members and five (5) “At Large” members. One of these is a Provincial Government representative.

It will be through the “At Large” members, (who will be nominated / appointed by the “Working Group” and MNR), that needed professional skills will be brought to the Boa that may not otherwise be available from or represented in the community-based Board members. There will no forest industry representation on the Board, although it is expected that many of the ‘At Large’ members will have forestry or industrial experience in some form.

The role of the Board has been stated as “noses in, fingers out” with regard to the business of the Corporation. It is to be managed and operated by professional staff. The forest products consumers will be convened into an Advisory Committee.

The Chair of the Board is accountable to the Minister of Natural Resources. The General Manager will be the
organisation’s Chief Executive Officer and as such will be accountable to the Board, and will work closely with the Board Chair. The consolidated Corporation forest will remain Crown land, and be managed by a Crown agency, (the Corporation).

All involved agree that sorting out the ‘mechanics’ is cumbersome and challenging at the outset.

**DUTIES, RESPONSIBILITIES, AUTHORITIES**

The Corporation has four legislated objects, in order of importance:

- Forest Sustainability;
- Development of First Nations business opportunities;
- Marketing of forest products, (timber, biomass, and non-timber products); and,
- Business self-sufficiency.

The Corporation has all the rights/responsibilities of any Sustainable Forest License (SFL) holder with regard to management of the forest land base and related regulations. However, the major difference between the LFMC and an FL-holder is that the LFMC has the authority to set, collect and retain for the purposes of the Corporation stumpage charges that would normally be levied and collected by the Crown. Charges related to the Forest Renewal Fund continue unchanged from past practice and will be deposited to a Trust Fund.

A significant attraction of the LFMC concept is the potential for reduced cost to consumer facilities through:

- Forest management services costs being included in the stumpage rate; and,
- The potential for the stumpage rate to be set at a level lower than for the rest of the Province is a significant attraction.

Industrial consumers working with the LFMC must generally subscribe to the concept of the right wood, at the right time, in the right form, at a comparatively attractive price.

Those directly involved in the establishment of this first LFMC recognise this concept will not always be an easy sell.

**RELATIONSHIP WITH PROVINCIAL LEVEL**

While many aspects of the introduction of the LFMC concept are not directly relevant or analogous to the situation in NS, (because of the absence of large Crown Forest resources), an implicit objective for MNR seems to be to download to the local level responsibility for sorting a variety of troublesome allocation / access issues that have come to be associated with the various forests being consolidated.

Thus far, the Corporation has not been forced to take on these issues.

MNR District offices will essentially have no oversight or other responsibilities for the Corporation’s activities; and are expected to lay off or otherwise reassign / reallocate staff resources that become redundant as a result of this implementation. The Corporation will also have no responsibilities for fish & wildlife management.

However, there is a definite expectation the Corporation will be highly entrepreneurial so those involved with the Working Group believe a wide range of activities and responsibilities can potentially come under the Corporation’s purview, especially if the outcome is reduced Crown expenditures.

The success of the concept will be very much dependent on the skills and capabilities of the initial General Manager. There appears to be a consensus that the initial executive hired will require knowledge of the industry, creativity, energy, a talented efficient support team and a willingness to exhibit some ‘bloody mindedness’ from time to time to be successful.

**DISPUTE RESOLUTION**

This is an issue area that apparently has not yet been fully developed.
It is known that the original tenure related to the five individual forests that will constitute the Corporation’s land base will be canceled or surrendered and reissued to the Corporation.

Issues may develop with regard to wood pricing and there is an expectation that normal commercial arbitration procedures will apply.

Former SFL holders, (the major industrial consumers will have long term supply agreements confirmed with the Corporation, as will mills with Ministerial supply commitments, (a different category of licensing). These commitments should serve to minimize conflicts between the Corporation and wood consumers.

OTHER ISSUES

There are a number of aspects to the LFMC concept, particularly operational issues, that are evolving through the implementation process. The Crown, (read MNR), has limited experience with this sort of implementation and, as a result, potentially contentious issues, especially those involving potential expense commitments for the Crown are being deferred or avoided.

Implementation of the Nawiinginokiima Forest Management Corporation appears to be proceeding successfully because the participants, as represented in the ‘Working Group’ generally share a common perception of the desired outcome, and exhibit a level of trust and commitment to work together that is effective.

QUÉBEC

Forestry cooperatives have been an important part of Quebec’s Forest Industry for more than 65 years. Today there are more than 45 forest cooperatives in Quebec.

The forestry cooperatives are organizations that are controlled by their members. Their goal is to contribute to sustainable development in their respective regions based on the range of forest resources.

The Cooperatives are formed by groups of people, family businesses, small businesses etc., who want to create employment together within a cooperative. Government support facilitates the creation and start-up of cooperatives through various government agencies and programs. For example Emploi-Quebec helps with training for numerous new forest workers.

The Fédération québécoise des coopératives forestières (FQCF) is a cooperative group that represents a total of 40 forestry worker cooperatives from all over Quebec. As of 2009, the FQCF had 2,700 member workers, employed 3,500 people, and generated more than $250 million in total revenue. Its mission is to build a framework for cooperative development in order to provide, secure, and create stable and meaningful jobs for its member workers, and to ensure the survival and development of its member businesses.

The primary areas of economic activity of Quebec forestry cooperatives include:

- Production of forest seedlings;
- Silviculture (land preparation, planting, brush cutting, selective cutting);
- Harvesting (forest road system, cutting, hauling, measuring);
- Lumber transport;
- Primary and secondary processing;
- Harvesting of forest biomass and energy sales;
- Marketing of non-timber forest products (small fruit, medicinal plants, food plants); and,
- Technical forestry work (inventory, forestry planning).

GOVERNANCE

Community forestry requires the formation of an organization with a clear decision-making structure based on community representation. The board of directors is accountable upwards to the government and downwards to the community. Two common organization approaches are used in the cooperatives:

- One is the municipal model where a local government organization is in charge; and,
- A second approach is the stakeholder model.
whereby the organization invites forestry stakeholders to the board.

The composition of the board is determined by the members during a general assembly. Each board member represents an organization from the region with a specific interest in forest management issues in the area.

**DUTIES, RESPONSIBILITIES, AUTHORITIES**

The cooperatives do not set stumpage prices independently. The stumpage is set by the government based on a complex system.

The Quebec government has the power over Quebec’s public forests. The public forests are administered by several agencies but the main one is the Ministere des Ressources naturelles et de la faune. The government has the authority to make decisions on who can use the forest, for what purpose and when and where the activities take place.

**RELATIONSHIP WITH PROVINCIAL LEVEL**

The relationship between the cooperative and the province is the same as for other enterprises. The ownership of the land remains with the province. They can become the land owners if they buy private lands but that is generally not the case. The cooperatives operate within the provincial forest management legislation.

**DISPUTE RESOLUTION**

With regards to dispute resolution, there have been situations in the past in which governments have forced the hand of large companies, in particular to ensure the cooperatives have had significant volumes of timber to exploit. The cooperatives are subject to cooperative-specific legal regulations and function based on contractual agreements, with usual commercial or judicial avenues of dispute resolution available.

**OTHER ISSUES – NEW LEGISLATION**

A new forest law was recently passed by the Quebec government called the Sustainable Forest Development Act (2010). This law replaces the Timber Supply Forest Management Agreements with a system of guaranteed volume allocations and a portion is also set aside on the open market for auction. This shifts the responsibility for forest management planning to the Ministere des Ressources naturelles de la Faune from companies.

The new legislation replaces the existing set of policies with new sustainable forest development standards. A new agency was established called the Bureau de mise en marché des bois (timber marketing board). It is responsible for evaluating the market value of wood harvested on public land and with selling it on the open market.

From the standpoint of community forestry, the new legislation appears to hold some interesting possibilities. It establishes the concept of local forests. There will likely be more wood available to community forests, due to the establishment of the auction system; and the new law empowers regional organizations to play a bigger role in decision making.

**BRITISH COLUMBIA**

Currently, British Columbia has 57 communities engaged in the planning or operational stage of a Community Forest Agreement, representing approximately 1.5% of the provincial annual harvest. Amendments to the Forest Act in 1998 allowed for the existence of new, community-based Crown tenures. The Ministry of Forests and Range initiated the Forestry Revitalization Plan in March of 2003, its key component being timber reallocation — (the takeback of 20% of long-term replaceable logging rights held by major licensees) — in an effort to diversify and revitalize the forest economy. Approximately 1.2 million m3 of timber was to be made available for small-scale tenure holders (community forests and woodlots).

The general objectives included within the tenure reform aimed to encourage local training and skills development, innovation, unconventional forest management practices (the integration of recreation, wildlife, and watershed values into management plans),
conflict resolution, economic diversification, and the advocacy of forest worker safety.

To establish a community forest, Section 43.2 of the Forest Act (Community Forest Agreements) states that an eligible applicant must be:

- A First Nation;
- A municipality or regional district; or,
- Any of the following, if prescribed requirements are met:
  - A society incorporated under the Society Act,
  - An association as defined in the Cooperative Association Act,
  - A corporation, or
  - A partnership.

GOVERNANCE, DUTIES, RESPONSIBILITIES, AUTHORITIES

The land-use arrangements that exist between the Ministry and the community (henceforth referred to as holder) are wide-ranging, in accordance with the varied organizational structure of the applicants and the varied descriptions of areas managed. Legislation comes in the form of a Community Forestry Agreement (CMA), and the stipulations are detailed within the Forest Act, Part 3, Division 7.1.

Key facets of the agreements are as follows:

- Agreements must describe in detail the community forest agreement area, as determined by the minister or a person authorized by the minister; the area being comprised of (1) Crown land, (2) land that is in a reserve as defined by the Indian Act, or (3) private land;
- Holders are granted exclusive harvesting rights of Crown timber, non-timber botanical products, and other prescribed forest products;
- Agreements are granted for no less than 25 years, no more than 99 years;
- Holders must pay to the government stumpage fees as set by the ministry and described under Part 7 of the Forest Act in respect of Crown timber;
- Cutting permits (that do not exceed four years) must be provided by the ministry (by way of a district manager, or a forest officer authorized by the district manager) in accordance with the Forest and Range Practices Act;
- Holders must submit management plans for approval by the ministry, that meet the terms of the CMA, and are responsible for full implementation of the management plan; they must also carry out audits and submit performance reports to the ministry, as determined by a schedule contained within the agreement; management plans must include guiding principles, management objectives, and a proposed annual allowable cut (AAC) for the agreement area; and,
- Holders must provide documentation of community awareness and support of the CMA as part of the application process, and must continually make information available to the public throughout the tenure agreement, and carry out public consultation activities if any matters pertaining to the agreement arise.

A SPECIFIC CASE STUDY

As there is considerable variation across the Province with regard to the focus, objectives and operations of community forests, we have developed a brief case study of one community forest organisation, (selected in part because known contacts were available to provide us with ready access to information).

The Lower North Thompson Community Forest Society (LNTCFS) is located in the south-central interior of British Columbia, and was established August 2004. The Society manages an area of 8,406 hectares, with a volume (ACC) of 20,000 m³. Formation of the society came after Tolko Industries decided not to rebuild the Louis Creek sawmill; the entire site burned during the McLure Wildfire (2003), which forced the temporary
evacuation of 3000 valley residents and left 180 employees out of work. Tolko’s decision not to rebuild in Louis Creek was based on a number of factors (lack of rail access and natural gas; the impact of Canada-US lumber trade dispute), and compelled the community to establish alternative and localized pathways of economic revitalization.

As a not-for-profit Society, the composition of the LNTCFS board is determined via election of directors at their Annual General Meeting. They presently have 12 directors total, with 6 positions annually up for election/re-election. To be a member of the LNTCFS, a person must apply, pay $1/year membership fee, be 19 years or older, and be a resident and/or property owner within the Lower North Thompson Valley (TNRD Area O) for minimum 6 months. Representation on the board strives to maintain balance between the five communities within the valley with a target of 2 directors from each of the five communities (McLure, Louis Creek, Barriere, Chu Chua, Little Fort). Current composition is weighted to Barriere due to vacancies in director representation for McLure, Louis Creek, and Chu Chua.

It should be noted that the structure and composition of a board of directors varies, in relation to the profiles of the CMA applicants/holders, and not all resemble the LNTCFS example. Within a municipal or village organization, the local council typically appoints a Volunteer Board of Directors. First Nations boards can be composed of Chief and Council members, or can be managed by a wholly owned subsidiary of a First Nation (i.e. Heartland Economics LP that is responsible for all of the Westbank First Nation’s forestry holdings, with an acting manager reporting directly to the Chief and Council).

The society’s mission statement (as submitted to the BC Community Forestry Association) is as follows:

- To establish local control of dedicated forest resources for the long-term sustainability of the five participating communities;
- To secure for these communities an opportunity to be more self-determined;
- To engender economic stability in these communities; and,
- To practice and model exemplary stewardship of this local forest environment.

The society has also pursued initiatives such as their 2010 Job Creation Partnership (JCP) program, funded through Ministry of Social Development (MSD) and aimed at providing training and work experience for EI funded participants. MSD funding in 2010, (excluding participant wages), totaled $89,000. They have continued to work within the JCP program throughout subsequent years.

CONCLUSION

This memorandum has been intended to provide a relatively ‘high level’ overview of approaches to community level forest management that have been or are being implemented in three Canadian Provinces. With respect to the potential application of these approaches to the forest lands owned by Bower Mersey Ltd. / Resolute Forest Products in southwestern Nova Scotia we have concluded that:

- For forest areas for which conservation / preservation and/or research objectives, (perhaps combined with small scale industrial or commercial use), represent the primary intent to be served through community level forest resource control, the British Columbia model likely holds most promise for implementation in Nova Scotia; and,
- To that extent that larger scale industrial harvest activity is to be the primary objective, albeit in a manner that avoids control of the area by a large, dominant economic interest, the Ontario LFMC concept appears to have significant potential for implementation in Nova Scotia.
- We want to note, however, that before moving towards a decision to adopt and implement either approach, more detailed investigation of the feasibility of each in the Nova Scotia context should be undertaken.
APPENDIX B: BUILDING WITH CLT

Stadthaus, London: raising the bar for timber buildings

The nine-storey Stadthaus building in Murray Grove, London is the world’s tallest timber residential building. It is also the first building of this height to have load-bearing walls and floor slabs as well as stair and lift cores constructed entirely from cross-laminated wooden panels. While cross-laminated timber construction has been around since the 1970s, several problems limited its use above six storeys. However, the advantage of low or negative embodied carbon dioxide, clean and safe processes and rapid assembly have prompted a range of solutions enabling taller structures. This paper describes the design and construction of the project, the practical and legislative concerns addressed and the lessons learned.

Timber as a construction material has limitations in its consistency and susceptibility to secondary effects, particularly long-term creep and moisture movements. It has very good strength-to-weight ratios (Gordon, 1991). More recently, the sustainability of wood production has promoted its use, offering the possibility of minimal cost and zero carbon dioxide footprint combined. Engineered timber seeks to mitigate the disadvantages (Tsuda, 2009). The process of cross-lamination takes short lengths of reduced sections and bonds them in layers to produce wooden boards which are dimensionally stable and of consistent strength and elasticity. A typical product is a panel of solid spruce strips stacked in perpendicular layers and glued under a pressure of 60 t/m². Table 1 shows typical manufacturers’ data for structural properties of cross-laminated timber.

Conventional applications stack the panels like a house of cards or as folded-plate structures. Schools, houses, hotels, industrial buildings, auditoria and museums have all been constructed in this
Table 1: Typical characteristics of cross-laminated timber panels from different manufacturers

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>KLH</th>
<th>Binderholz</th>
<th>Schüller Holz</th>
<th>Finnbosch</th>
<th>Stora Enso</th>
<th>Kaufmann</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modulus of elasticity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel to the direction of the panel grain, $E_{par}$</td>
<td>12,000</td>
<td>11,000</td>
<td>11,600</td>
<td>11,000</td>
<td>11,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Perpendicular to the direction of the panel grain, $E_{perp}$</td>
<td>370</td>
<td>370</td>
<td>360</td>
<td>370</td>
<td>370</td>
<td>370</td>
</tr>
<tr>
<td><strong>Shear modulus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel to the direction of the panel grain, $G_{par}$</td>
<td>690</td>
<td>690</td>
<td>720</td>
<td>690</td>
<td>690</td>
<td>690</td>
</tr>
<tr>
<td>Bonding strength</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Tensile strength</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel to the direction of the panel grain, $F_{par}$</td>
<td>28</td>
<td>28</td>
<td>24</td>
<td>24</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Perpendicular to the direction of the panel grain, $F_{perp}$</td>
<td>1150</td>
<td>140</td>
<td>145</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td><strong>Compressive strength</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel to the direction of the panel grain, $f_{c}$</td>
<td>240</td>
<td>210</td>
<td>240</td>
<td>210</td>
<td>240</td>
<td>210</td>
</tr>
<tr>
<td>Perpendicular to the direction of the panel grain, $f_{cri}$</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td><strong>Shore strength</strong> $f_{sh}$</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Normal to panel grain, rolling shear $f_{r}$</td>
<td>15</td>
<td>0.7</td>
<td>1.0</td>
<td>0.7</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

way, taking advantage of the medium-scale spans achievable in the material. Cross-wall high-rise structures, particularly residential buildings, have low stress in their structural components. Walls and floors dimensioned in timber to provide adequate acoustic separation and thermal performance have plenty of substance to resist the levels of applied loads encountered in buildings up to 15 stories. However, beyond this limit, cross-grain crushing prevents the use of platform construction. The economy of solid timber construction turns on the simplicity of the junctions and any addition of ties or strengthening significantly affects costs.

Description of Stadthaus

The Stadthaus apartment building in Murray Grove, Hoxton, north London provides 29 one- and two-bedroom apartments on nine floors (Figure 1). The corner site was previously occupied by a public house and the surroundings ruled a development of the type and scale proposed. Preliminary designs were made for a concrete-framed building with brick cladding, and foundations were completed to support a building of that kind. The architect reviewed solid timber construction as an option of similar cost but one which demonstrated a sustainable form of construction and one with a ‘positive carbon footprint’ – the process of construction would fix more carbon dioxide within the building fabric than it would produce. Five-storey examples of this form of construction were found and their stress levels and behaviour characteristics reviewed (Thompson, 2009). In designing a taller building, all the main walls including the external facades were taken to be solid load-bearing timber. For cellular constructions involving structural perimeter walls the notions of tube and banded tube configurations are helpful. Spreading the structure out towards the edge of the plan then completing closed sections within it maximizes lateral and torsional stiffnesses. To avoid any relative movements the stair and lift cores were also timber.

The fact that lateral resistance is provided only by wooden cores and walls makes this building the tallest of its kind. A ground storey of in situ reinforced concrete framing provides more open accommodation at ground level and lifts the timber a complete storey above ground level. The extent to which this
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Design considerations and analysis

The cheapest way of building in solid timber is platform construction, with cross-walls set perpendicular to one another and floors laid over. Upper storeys bear on the side grain of the horizontal floor panels below. Fixings using long screws, skewed into the lapped panels have been developed for most conditions. Five key design issues have been resolved and tested out at low-rise scale.

Strength

The junction of wall, floor and wall below is the system’s ‘weak link’. The end-grain strength of the wall panels is 24 N/mm², whereas the cross-grain crushing capacity of the floor plate is only 27 N/mm². Screw or nail arrays at highly loaded points alleviate these weaknesses (see Figure 2).

The modulus of elasticity of the laminated wood is typically 20% above that of unmodified timber. For domestically scaled walls approximately 2.7 m high this means that the vertical stress reduction due to the elastic instability is about 20%. So, in typical wind conditions, the walls would have to be 5 m high before buckling occurs.

Fire

Structural fire resistance relies on charring. Floor and wall sections progressively reduce during an incident and sufficient surplus is provided to ensure integrity until the fire is controlled.

Close-grain timber specified on the faces of panels significantly improves their fire resistance (Trada, 2009b). BS 5268 part 4 (BSI, 1978) allows testing to establish the specific charring rate of timber and the precise characteristics of the timber used in Stadthaus were established at source (see Figure 3).

An apartment block like Stadthaus requires half-hour separation within residential units, one hour between apartments and two hours between principal vertical circulation areas. The various wall and floor elements are thickened up accordingly. Approximately 35% of the superstructure weight is given over to fire resistance (see Figure 4).

Acoustics

Cross-laminated structures cannot be considered lightweight and the very good seals obtained between units prevent noise transfer. Extra separations are generally required to achieve adequate acoustic performance to meet part E of the UK Building Regulations (HM Government, 2000).

A suite of standard details has been developed for various conditions. Across party walls two layers of plasterboard, each side of a single timber leaf will suffice. Externally a 10 mm air gap between wall and lining is needed.

An acoustic ceiling is required between floors, and for stairs and lift cores double-wall construction is desirable with a 40 mm air gap.

Loading and analysis

Stadthaus was designed to the loading and deflection criteria of Eurocode 1 (BSI, 2005). An elastic analysis using Robot Millennium computer software produced forces and moments which were used to size elements on limit-state principles in accordance with Eurocode 5 (BSI, 2004).
Issues for high-rise construction

Compared to other conventional structural materials, timber is relatively elastic. Forces cannot be localised and so joints are inherently weak. These factors affect the way cross-laminated timber can be deployed in tall buildings.

Robustness

Panelised buildings are susceptible to progressive collapse; the loss of one component may lead to the sequential failure of others. In Britain there is guidance developed by the UK Timber Frame Association (UKTFA), for timber frame construction up to eight storeys (UKTFA, 2005). This is directly applicable to mass-timber construction.

At the time of Studdha’s design and construction there was no EU regulation. Discussions with the Timber Research and Development Association (TRA) and the UKTFA resulted in design criteria for progressive collapse of a notional shock load of 7.5 kN/m² and the removal of any single wall, either full length or over a distance of four times its height.

The provision of ties between units to resist anticipated accidents was reviewed but fixing arms proved too expensive and spandrel frames were very thin and thick. At domestic scale all the floor panels span over more than one support line. It is possible to achieve a moment transfer between panels using lapped joints.

For Studdha, the designer’s preferred route to achieve structural robustness has been to exploit the cross-structuring typical in residential layouts by conjecturing alternative load-paths should any component fail – a policy of ‘efficient redundancy.’

Whenever possible, floor panels are designed to double-span or cantilever if a support is removed. By providing ties between floors and walls using simple ‘off-the-shelf’ brackets and screws, vertical elements can be made to act as deep beams spanning across compromised elements below (Figures 5 and 6).
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Figure 7. Interleaving wall and floor elements to form continuous vertical load paths significantly reduces the structural weight and permits taller thinner structures (red line).

Figure 8. Interleaved wall and floor joints provide end-grain to end-grain contact, increasing vertical load capacity by 100%.

Figure 9. The pelta effect becomes important for timber structures above about 20 stories—the tendency of a structure pushed off axis to pull itself over must be resisted by additional stiffness provided by extra wall thicknesses.

Movement

The control of movement is the key to the development of large timber structures. Moisture content is most significant. In London’s climate, 10% change produces 2% change across grain, less than 0.5% along grain. Long-term creep movement of cross-laminated timber in its working range is negligible, being less than 0.06% along the face of the panel and less than 1% across the thickness. The coefficient of linear expansion is $34 \times 10^{-5}$, about three times that of steel. Standard manufacturing tolerances are far superior to concrete or steel, typically ±2 mm on any dimension.

The timber used for Stadthaus is European whitewood from the Austrian forest above Murau. It was air-dried for 1 year, made into panels and left in the factory at a moisture content of 12%. When placed in the building, it was checked and the moisture content was found to be 14%. Following rain, the surface layer moisture rose to 18% but this returned to 12–14% before the cladding was placed.

Strength, elasticity, and construction process

For tall buildings, timber’s structural characteristics and methods of construction become highly interdependent. If the simple platform construction currently most common is unmodified, then a typical block reaches 15 storeys with economic wall thicknesses. If bearing points are strengthened locally then this limit increases two or three extra stories (see Figure 7).

Wall and floor elements can, however, be interleaved to form continuous vertical load paths down through buildings (Figure 8). With the materials now in use, height then reach 25 storeys remaining economic wall thicknesses. If a joined floor requires a bearing area of approximately 8% of a wall section, then 90% is available for vertical load-bearing. Arranging for end grain contact can then increase vertical load capacity over simple platform construction significantly.

The pelta effect becomes important for structures above about 20 storeys. The tendency of a tall structure pushed off axis to pull itself over must be resisted by additional stiffness provided by extra wall thicknesses (Figure 9).

Stadthaus is very sticky and so no-pro-
vision for additional shear due to large lateral movement was required. Wall-to-floor joints are improved in several locations to minimize the size of wall panels (Figure 10).

The building occupied nearly half its site but is accessible from local streets on two sides. No permanent craneage was established for construction. Foundations consisted of 20 bored piles of 660 mm diameter taken down 15 m to bed in London Clay. Reinforced concrete ground beams and ground story columns and slabs were all cast in situ, then the site was cleared and panels began arriving by lorry from Austria.

Units were placed directly upon delivery and work proceeded at the rate of one story completed every 3 days (Figure 11). The erection unit comprised four assemblies. There were 25 lorry movements and 300 t of timber placed, which provided a total offset of 760 t of embodied carbon dioxide, of which 20% was lost due to long-distance transportation.

Temporary safety barriers were easily fixed at each floor as was installed. Barriers were up and across the construction and water was stopped after each shower. The moisture content of all panels was measured weekly, varying by as much as 6%. This caused a movement on each storey of about 4 mm. The site remained safe and clear of waste throughout the process (Table 2).

Tolermores were high enough for windows to be fitted directly into performed openings without pucks. The external cladding comprised a rain screen over 170 mm thick insulation (Kingspan "Kooltherm" K15 Rainscreen Insulation Board). A U-value of 0.27 W/m²K was achieved without considering the contribution of the timber structure. Horizontal movement gaps of 8 mm were allowed between storeys with 2 mm vertical joints.

Platforms construction involves operations that are relatively repetitive and safe. The biggest panels on Stadlau, the main floor panels, weighed 5-6 t. Two types of crane were used: a mobile boom crane for the first three floors and a self-erecting tower crane for the remainder. The main frame was erected in 8 weeks, which compares favourably with the 12 weeks estimated for concrete.
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Lessons learned

Stadhaus was built using the conventional and well-proven method of platform construction. As horizontal joints occurred at specific levels, it was sufficient to obtain vertical loads by hand calculation. Using the limit-state approach of Eurocode 5 (BSI, 2004) and assuming the material to be elastic, stresses and deflections due to lateral loads could also be estimated by a linear elastic computer programme. Robot Millenium was used on Stadhaus.

The economy of the system depends on its simplicity of construction. The ethos of the material is to use it directly with the simplest details and construction methods. At the point of manufacture, as much complexity, shape, routing and edge preparation should be completed as possible. On-site joining needs to be kept direct, with panels set down on one another without levelling, checked for verticality then screws installed through pre-drilled holes. Additional plants and clamps can then be surface-fixed as required.

As chances and receses are easy to make, it has been found cheaper to follow traditional trade practice and to set out on site rather than print or route at the works. The base cill detail, where the first lift of panels is fixed down, was made using a hardwood pack and angle cleats. This detail could be improved to reduce the time needed to ensure that the first elements are correctly placed so that the next follow without any adjustment.

Conclusion

The Eurocode philosophy makes room for buildings to be studied in use and foundings then applied to new designs, all the time refining reliability. The next step in the development of structures like Stadhaus will be to take the opportunity of recording the construction form in use, especially its structural, thermal and acoustic behaviour. To ensure environmental performance also needs development.

At Stadhaus, user feedback has been positive. Tenants and owners have not complained of excessive noise transmission, poor comfort conditions or excessive heating costs. The building has required no special maintenance since its completion in 2009.

The project took 49 weeks to complete as programmed and there appeared to be room for improving on that time. No site accidents or minor injuries indicate that the work required in assembling such buildings can be safely managed with no detriment to health.

For cellular buildings between four and 12 storeys, solid timber construction is easy and makes efficient use of its constituents.

Acknowledgements

Client/main contractor: Telford Homes; timber frame contractor: KLH (UK) Ltd; architect: Waugh Thistleton Architects.

Table 2: Construction Tolerances

| Fabrication tolerances (to BS EN 13153-2003 (BSI, 2003)) |
|-----------------|-----------------|
| Manufacture     | 8 mm            |
| Delivery        | 60.3 mm on longest dimension |

<table>
<thead>
<tr>
<th>Overall plan dimension</th>
<th>1.5 m, 3 m, 5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical plane</td>
<td>0.25 mm</td>
</tr>
<tr>
<td>Horizontal deviation</td>
<td>0.15 mm</td>
</tr>
<tr>
<td>Maximum dimension</td>
<td>0.30 mm</td>
</tr>
<tr>
<td>Minimum dimension</td>
<td>0.22 mm</td>
</tr>
</tbody>
</table>

What do you think?

If you would like to comment on this paper, please email up to 400 words to the editor at journal@iss.org.uk.

If you would like to write a paper of 2000 to 3500 words about your own experience in this or any related area of civil engineering this editor will be happy to provide any help or advice you need.
The Fishing Industry

Overview

GROWTH AND TRANSITION

The Nova Scotia fishery is too often described as an industry with no future, as a declining sector, or as an artifact of our romantic past to be inevitably replaced by more modern economic activities. These views possibly reflect an urban bias in media and business commentaries; they are certainly not an accurate reading of current realities.

First of all, despite many challenges the fishery continues to be a growth sector within the provincial economy in terms of total wealth production and value of exports. The above chart shows changes in landed value, i.e., the prices paid to fish harvesters at the wharf, for all fish products and separately for shellfish (lobster, crab, scallops and shrimp) over the 1990 to 2012 period. We see the affects of the near total shutdown of the groundfish fishery (cod, haddock, halibut, etc.) in the mid-1990s, after which shellfish grew in importance and pushed the entire industry to record high values by 2003. There followed a period of sharp decline driven first by the high Canadian dollar and then by global recession, hitting a low point in 2009. Since then, however, the industry is back on a growth track despite the high dollar and the slow economic recovery in the U.S.

The fishery has long been a leading export generator for Nova Scotia, currently second only to rubber products (i.e., Michelin tires) and ahead of natural gas and forestry products. Over 90% of all production is exported to markets in the U.S. and around the world. The second chart shows the same pattern of significant growth in value of exports through the 1996 to 2003 period, sharp decline after that, and then signs of recovery since 2009.

Part of the reason why people might not see the fishery as a growth sector is the widespread concern about the state of fish stocks. The virtual collapse of the groundfish industry in the 1990s alerted everyone to the dangers of overfishing and the possible impacts of climate change on marine eco-systems. But again the picture is more complex than it might seem.

Chart 1 compares total landings and shellfish landings by volume with changes in the landed value for all fisheries and for shellfish, all indexed to 1990. On the volume side, reflecting the state of the stocks, total landings stabilized in the mid-1990s at about half the 1990 level. Shellfish catches surged in the 1998 to 2004 period but again have settled out at about 20% above the base year level. On the value side, however there was modest but still positive growth over the period in total landed value, but a quite significant rise in the value of shellfish products.

Charts 2 and 3 confirm the scale of the collapse in groundfish and pelagics (e.g., herring) landings and the offsetting increases in the lobster, shrimp and snow crab fisheries. Between 1990 and 2012 the Nova Scotia fishing industry changed from one centred on export of relatively low value groundfish commodities, to one that relies much more on higher value fresh, frozen and processed shellfish products.

Two clear points emerge from this recent history: firstly, the fishery remains a growth sector despite adverse trade conditions, and secondly, growth has been and will continue to be generated not by increasing the volume of fish landed but by improving the market value of our seafood products. The pre-1990s fishery was dominated by the groundfish sector, conducted largely by industrial fleets linked to high volume processing operations. Today’s industry centres on more widely dispersed inshore harvesting of shellfish.


Chart 3. Nova Scotia Comparison of Landed Volumes, 1990 and 2012 (Metric Tonnes)
conducted mainly by small to medium sized and locally owned harvesting enterprises. The total economic impact of the industry improved significantly as this transition unfolded.

The bottom line: future development for the fishing industry — and for the scores of rural communities that rely on it — is all about quality and value in the marketplace. The amount of fish that is landed is clearly important, but that is not primarily where the growth will come from. The industry can and should shift its focus from growing the size of the catch – further relieving the pressure on vulnerable fish stocks – to improving the quality of the product and getting it to markets that will pay better prices.

**ASSETS AND OPPORTUNITIES**

Consider the following:

- Of the top 40 countries in the world for value of seafood exports, Canada ranks 8th
- Nova Scotia leads among Canadian provinces in terms of value of landings and share of total exports (22%)
- The fishery supports 3,000 fishing enterprises and 7,000 people employed in harvesting and processing in rural Nova Scotia
- With a growing world population, demand for food products generally will increase steadily for the foreseeable future

---

**Canadian Fisheries Landed Volume and Value, 2012**

<table>
<thead>
<tr>
<th></th>
<th>NS</th>
<th>NB</th>
<th>PEI</th>
<th>Que</th>
<th>N&amp;L</th>
<th>BC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume - Metric Tonnes</td>
<td>234</td>
<td>74</td>
<td>32</td>
<td>57</td>
<td>273</td>
<td>129</td>
</tr>
<tr>
<td>Value - $000s</td>
<td>$768</td>
<td>$199</td>
<td>$142</td>
<td>$162</td>
<td>$629</td>
<td>$213</td>
</tr>
</tbody>
</table>

*Source: Fisheries & Oceans Canada: http://www.dfo-mpo.gc.ca/stats/stats-eng.htm*
- Demand for healthier and higher value foods is expected to grow in North America and Europe
- The population of middle class consumers is expanding rapidly in large parts of Asia and Latin America
- The local food movement is creating new demand for fresh, higher value seafood products within Nova Scotia

Given all these factors, is there any basis for considering the fishery to be a “sunset” or no growth industry in Nova Scotia, now and in the future? Is there any reason for rural communities, governments and industry leaders to resist change and innovation in the industry to take advantage of these opportunities?

Nova Scotia has the ingredients to build a highly successful fishing industry, beginning with a skilled harvester workforce in dispersed coastal communities adjacent to the resource base. Unlike farming and forestry, sectors of the rural economy that have seen dramatic reductions in the numbers of small and medium sized business operators over the past 50 years, there has not been a parallel decline in the number of fish harvesting enterprises. A combination of government policies and programs – most notably the Employment Insurance system and the Owner Operator and Fleet Separation policies — has sustained a seasonal labour force and has limited vertical integration in what is predominantly an inshore industry comprised of independent small and medium-sized businesses.

The second major asset is our highly productive marine environment supporting abundant stocks in our most valuable fisheries. As a result Nova Scotia is second only to Newfoundland & Labrador in total fish landings, and leads the country by a considerable margin in value of landings.

While there is reason to be concerned about the state of the marine eco-system and to continue to improve conservation efforts, much has been accomplished since the 1990s in promoting stock rebuilding and sustainable harvesting practices. The halibut, shrimp, haddock, scallops and snow crab fisheries have all received Marine Stewardship Council (MSC) certification for sustainable harvesting, and the lobster industry is actively considering that step. MSC certification and other responsible harvesting and traceability programs also enhance the market value of our seafood products.

A third asset in the Nova Scotia fishery is the presence in the province of some of the most sophisticated marine products processing and marketing companies in the world. These businesses—some of them small and niche market driven, others managing large and diverse international operations— are exemplary in their use of advanced research and innovation to produce and market leading edge products around the globe. Most of these companies rely on fish and marine products harvested in the Atlantic region, but many also operate extended supply chains with harvesting and processing operations in many parts of the world. Such companies hold the potential for a more integrated and dynamic industry based in our region but using local assets and business expertise to accomplish in fisheries what Japan and Germany have done in car manufacturing or France and California in wine production.

The significant opportunities available to our fishing industry are self-evident. Fish products have two unique qualities that distinguish them from many other proteins: they can be justifiably promoted as healthy organic foods, and many seafood products are in demand in higher value or luxury, “white table cloth”
The Panel report identifies three critical problem areas:

- **Industry relationships** – the mutually destructive competition and weak cooperation among harvester groups and between the harvesting, processing and marketing sectors;

- **Industry operations** – the disorganization and poor product quality resulting from the ways harvesters, buyers, shippers and processors currently conduct their activities; and,

- **Industry structure** – “how the industry is set up and where the gaps exist that are contributing to value loss”.

The report makes 33 recommendations for actions to overcome these challenges through improved industry organization, a coordinated marketing program, an orderly and fair price setting mechanism, and substantial new investment by industry and government to support these initiatives. These together comprise what the Panel calls a Value Recovery Strategy aimed at capturing and fairly distributing the wealth that lobster can and should generate in the global marketplace.

The picture of the lobster industry provided by the Maritime Lobster Panel is an accurate representation of the general state of the Nova Scotia fishing industry. While some sectors are clearly doing better than others under current industry structures and market conditions, the evidence is convincing that most sectors and the industry as a whole could benefit significantly if government and the industry leadership worked together realize the huge potential for growth and rural renewal that the fishery presents.

### CHALLENGES AND CONSTRAINTS

The key question then is whether the Nova Scotia fishing industry is well positioned to leverage its assets to take advantage of such major opportunities. Regrettably the weight of evidence would suggest that this is not currently the case.

The Commission is fortunate to have access to the very recent report of the Maritime Lobster Panel, a study initiated by the three Maritime Provinces in the spring of 2013 in response to growing industry conflict over low lobster prices. This report provides an in-depth look at the single most important sector within the Atlantic fishery, and identifies the major threats to industry viability and growth.

Throughout the Panel’s discussions with industry, analyses of the many studies and reports available and our internal discussions and observations, we saw a distinct set of messages emerging. These messages portray an industry that has been struggling instead of cooperating, fishing for quantity instead of value, fighting over pennies and losing dollars and asking others to solve their problems.

Report of the Maritime Lobster Panel
November 2013
POLICY CONSIDERATIONS

Leaders in government, industry and rural communities are urged to come together to pursue three broad policy objectives for economic development in the fisheries sector:

1) FISHERY AS A STRATEGIC PRIORITY

There are perhaps many reasons why the fishing industry does not get more recognition and positive attention in Nova Scotia, but lead among them perhaps is that fisheries have long been seen as a federal responsibility. The BNA Act gives the province jurisdiction over on-land processing, industry organization and training activities, but the federal government leads in the strategic areas of fisheries management and conservation, fisheries and oceans science, and international trade promotion. In recent years, however, budget cuts at Fisheries and Oceans Canada have resulted in some service reductions and offloading of responsibilities to industry and the provinces.

Spending levels are of course a somewhat crude measure of a government’s policy commitments, but in the case of fisheries it is hard to avoid the conclusion that fisheries have long been low on the priority list for the Nova Scotia government. The following table compares 2012/13 spending levels for all the economic development and resource departments in the Nova Scotia government. Taken together, all of these departments funded at $385 million, about 4% of total expenditure by the Province. Of that amount, however, the Department of Fisheries and Aquaculture has a budget of $9 million with which to manage provincial responsibilities for aquaculture development, management of freshwater and recreation fisheries, and regulation of commercial fisheries and the processing sector.

2) INDUSTRY ORGANIZATION

It will not be possible to bring greater discipline to harvesting operations and the marketing of seafood products, or to produce higher quality/higher value products, unless harvesters at the grassroots level are better organized and better represented in the conduct of the industry. The Commission should endorse the position taken by the lobster panel, and endorsed by the Chronicle Herald editorial, that anarchy and unproductive competition are conditions that the industry, and indeed the province, can no longer tolerate in such a strategic economic sector. By the same token, the processing and marketing components of the industry

3) INDUSTRY COLLABORATION AND DISCIPLINE

In the absence of vertical integration, which we should not expect for the foreseeable future given the level of industry and community support for the fleet separation and owner-operator policies, other ways have to be found to link and coordinate the efforts of harvesters, buyers, processors and marketing enterprises so as to achieve the same advantages by other means. Processing and marketing firms need security of supply if they are to confidently invest in R&D, product development and market diversification. Harvesters need to know that investments they make, or risks they take, to improve product quality, manage their harvesting operations more rationally, and invest themselves in marketing initiatives, will eventually pay off for them. New industry structures and regulatory tools may be needed to encourage these developments.

4) INTERNATIONAL MARKET EXPANSION AND DIVERSIFICATION

In the medium to longer term the industry will only grow and provide enhanced rewards for harvesters and processors if it moves away from the traditional price-taker business model of selling volume into commodity markets over which we have little control. Expanded marketing efforts could potentially create a demand environment in which all actors experience incentives for more rational, future oriented decision-making. Again, provincial government leadership is essential to kick-start needed changes.
Concise SWOT Analysis of the Nova Scotia Economy

Prepared by Gardner Pinfold, for the NS Commission on Building Our New Economy
April 2013

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1. Introduction

An economy generates wealth by combining labour, capital and resources to produce goods and services that markets want. Economic growth occurs by extending the market for these goods and services beyond the borders of our province. Success in extending markets depends on our ability to compete with others selling into these same markets. Our competitiveness, in turn, depends on our productivity and efficiency – our capacity and ability to innovate – to combine inputs in ways that result in quality products at competitive prices.

Sustaining economic growth represents a major challenge. This is because conditions change. What markets want changes. What others are able to produce in competition with us changes. Our cost structures change, sometimes to our advantage, sometimes not. Technology changes. Exchange rates shift, either enhancing or undermining our competitiveness. Adjusting to adverse changes requires innovation and adaptability; identifying opportunities and seizing them can be difficult if alternatives are not readily obvious or available.

This paper offers an overview of the structure of the Nova Scotia economy, both in terms of its industrial composition and regional distribution. It notes that our economic structure is little different from other jurisdictions in Canada and the U.S., with an increasing dependence on service industries and less on goods production. It also, notes that within the province, services tend to be concentrated in Halifax, with rural areas more dependent on resource industries. The latter have not proven adequate to sustain communities: weak economic performance has resulted in substantial outmigration.

A SWOT analysis of the rural economy suggests that some scope for improving economic conditions exists, but at best it might slow outmigration, not reverse it. The growth that is occurring in Halifax is to an extent self-sustaining, given the large public sector presence, but there is also a significant component that relies on the export market, including services as well as manufacturing.

A brief review of economic growth and development initiatives in Nova Scotia over the past 40 years paints a bleak picture of the relationship between approach (including expenditures) and results. Recent efforts to encourage growth in the “new economy” are bearing fruit, though gains tend to be concentrated in Halifax because of the support context it provides. Results in rural areas are less encouraging.

The history of the growth and development initiatives in Nova Scotia does raise questions about objectives and methods, and about the realism of expectations in light of the broader economic context and market forces within which we operate. In light of the complexity of the issues and the scope of this paper, any prescription of a way forward deserves much greater study and consideration.
2. Profile of the Food Industry in Nova Scotia

BY INDUSTRY

The structure of the Nova Scotia economy is similar to that of many jurisdictions, with about 80% of GDP accounted for by service industries and 20% by goods producing industries (Table 1). Newfoundland & Labrador is an anomaly among the economies in Table 1 because of the disproportionate size of its offshore petroleum industry. For Canada as well, primary commodities make a relatively large contribution to GDP. So does manufacturing, at almost a 13% share of national GDP, over 50% higher than manufacturing’s relative share of Nova Scotia’s GDP (8%).

Before examining the goods producing sector in more detail, it is worth commenting on a widely held belief that it is the goods producing sector that creates wealth, while the service sector merely circulates it within the economy; that production of services is akin to “taking in each other’s laundry”. Certainly, many services fit this description – retail sales, dry cleaning, automotive repair, dental care, etc. – essential to day-to-day living, but contributing little to economic growth as measured by change in GDP. But if this were the case, how could 20% of economic activity support 80%?

The short answer is that services themselves also contribute to economic growth; but it is harder to quantify because what is produced and exported is not as tangible as, say, a tire or a fish stick. Buried in the set of service industries in Table 1 are several with a significant export component that contributes directly to GDP growth. Wholesale trade and transportation facilitate the movement of goods into and out of the province, generating income that would not otherwise accrue. Our universities (Education Services) attract thousands of foreign students, in effect, generating income by exporting education. Tourists expand the economy by buying accommodation and food services, as well as entertainment and recreation. Many professionals and businesses generate economic growth in the province by exporting their services.

Exported services are often termed “invisibles” because they are ordinarily not captured in export statistics. This is problematic because it is difficult to

Table 1: GDP percentage breakdown by industry, 2011

<table>
<thead>
<tr>
<th>Goods producing</th>
<th>Nova Scotia</th>
<th>Prince Edward Island</th>
<th>New Brunswick</th>
<th>Newfoundland &amp; Labrador</th>
<th>Canada</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, fishing and hunting [11]</td>
<td>1.69</td>
<td>4.23</td>
<td>2.25</td>
<td>1.34</td>
<td>2.31</td>
<td>1.20</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction [21]</td>
<td>1.54</td>
<td>0.06</td>
<td>3.47</td>
<td>40.82</td>
<td>4.45</td>
<td>1.90</td>
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<td>Utilities [22]</td>
<td>2.17</td>
<td>1.34</td>
<td>2.64</td>
<td>2.29</td>
<td>2.64</td>
<td>2.00</td>
</tr>
<tr>
<td>Construction [23]</td>
<td>2.17</td>
<td>6.56</td>
<td>6.11</td>
<td>5.58</td>
<td>5.95</td>
<td>3.50</td>
</tr>
<tr>
<td>Manufacturing [31-33]</td>
<td>8.04</td>
<td>8.55</td>
<td>11.08</td>
<td>3.88</td>
<td>12.83</td>
<td>11.50</td>
</tr>
<tr>
<td>Service producing</td>
<td>80.74</td>
<td>78.49</td>
<td>74.97</td>
<td>45.79</td>
<td>70.95</td>
<td>80.00</td>
</tr>
<tr>
<td>Wholesale trade [41]</td>
<td>3.97</td>
<td>1.76</td>
<td>4.21</td>
<td>1.74</td>
<td>5.58</td>
<td>5.60</td>
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<tr>
<td>Retail trade [44-45]</td>
<td>7.11</td>
<td>7.61</td>
<td>6.84</td>
<td>4.77</td>
<td>6.13</td>
<td>6.00</td>
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<td>Transportation and warehousing [48-49]</td>
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<td>3.14</td>
<td>4.80</td>
<td>2.39</td>
<td>4.67</td>
<td>3.00</td>
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<tr>
<td>Information and cultural industries [51]</td>
<td>3.55</td>
<td>3.07</td>
<td>2.96</td>
<td>1.93</td>
<td>3.67</td>
<td>4.30</td>
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<tr>
<td>Finance and insurance, real estate, renting and management</td>
<td>20.83</td>
<td>18.72</td>
<td>17.27</td>
<td>9.99</td>
<td>20.01</td>
<td>20.30</td>
</tr>
<tr>
<td>Professional, scientific and technical services [54]</td>
<td>3.97</td>
<td>2.85</td>
<td>3.30</td>
<td>2.11</td>
<td>4.86</td>
<td>7.60</td>
</tr>
<tr>
<td>Administrative and support, waste management services [56]</td>
<td>2.41</td>
<td>2.71</td>
<td>4.04</td>
<td>1.12</td>
<td>2.46</td>
<td>4.90</td>
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<td>Educational services [61]</td>
<td>6.86</td>
<td>7.88</td>
<td>6.48</td>
<td>5.00</td>
<td>5.07</td>
<td>1.20</td>
</tr>
<tr>
<td>Health care and social assistance [62]</td>
<td>9.84</td>
<td>9.70</td>
<td>9.08</td>
<td>6.91</td>
<td>6.71</td>
<td>7.50</td>
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<tr>
<td>Arts, entertainment and recreation [71]</td>
<td>0.57</td>
<td>1.16</td>
<td>0.55</td>
<td>0.21</td>
<td>0.92</td>
<td>1.00</td>
</tr>
<tr>
<td>Accommodation and food services [72]</td>
<td>2.40</td>
<td>2.96</td>
<td>2.02</td>
<td>1.40</td>
<td>2.16</td>
<td>2.90</td>
</tr>
<tr>
<td>Other services (except public administration) [81]</td>
<td>2.20</td>
<td>2.61</td>
<td>1.95</td>
<td>1.39</td>
<td>2.62</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Total 100.00 100.00 100.00 100.00 100.00 100.00

Source: Statistics Canada Table 379-0028
Note: columns may not add to 100% due to rounding
gauge their relative importance and growth trends (except in a highly aggregated form and with a time lag of 2-3 years).

What the data do show (Table 2) is that the relative importance of the goods producing industries has declined over time in Nova Scotia (as it has in most other developed economies), their contribution to total GDP dropping from 26% to 19%. Much of the decline is attributable to the primary sector – natural gas and forestry – but manufacturing has also experienced a significant drop. The reasons vary; depletion of reserves in the Sable gas field explains natural gas; forestry reflects the weakness in lumber markets in the U.S. and also in pulp and paper; within manufacturing, several industries have experienced weakness, including seafood processing, paper mills and sawmills. Utilities and construction, both stable in terms of contribution to GDP, serve mainly the local market and have limited export earning potential.

The exchange rate is another factor influencing the shift in the relative importance of the industries in Table 2. The period covered, 2002-2011, saw a 40% decline in the value of the U.S. dollar relative to our Canadian dollar. Thus, the greater the exposure to the U.S. market, the more significant the loss in revenue and resulting contribution to GDP. This would have had a much greater effect on goods producing industries – primary sector industries in particular – than services, given their substantial dependence on the U.S. market (more on this below). The exchange rate shift would also have affected the relative strength of manufacturing, though other factors affecting competitiveness were also at work. By contrast, the electric utility industry would have benefitted from the stronger dollar given the dependence on imported coal (its contribution to GDP declined only slightly). Construction serves provincial demand, so has limited exposure to external markets (except through import content of materials and equipment).

BY REGION

Geographic location of industry offers another dimension of provincial economic structure. It helps us understand regional differences in socio-economic conditions and demographic trends. It also offers insights into some of the challenges facing the province in terms of realizing its objective of achieving a regional balance in economic growth.

Urban Nova Scotia, defined here as any community with a population over 25,000, consists of two regional municipalities: Halifax and Cape Breton. The urban economy consists mainly, but not exclusively, of service sector industries. The main drivers of the HRM economy, for example, include finance and insurance, public administration, defence, education (post-secondary), health services, retail trade and transportation and warehousing. Within the goods producing industries, shipbuilding and repair, petroleum refining and manufacturing also feature prominently.

Rural Nova Scotia, the area of the province outside these urban centres, consists of some 25 communities with a population exceeding 1,000 and numerous smaller settlements. The rural economy is characterized by a relatively strong dependence on goods producing industries: fisheries, agriculture, forestry, minerals, food processing and some manufacturing. Of course, rural areas are well served with such key public services as education and health, with larger regional centres also offering a full range of commercial services.

Nova Scotia’s settlement patterns reflect a close economic attachment to the sea and the land. Most of the province’s population lives in coastal communities; the sea provided the original rationale for settlement in the 18th and 19th Centuries, whether in the fisheries, shipping or maritime defence. Much has changed in the intervening years, including significant shifts in the role the sea plays in supporting these coastal communities. Some continue to thrive, but others have seen their economic base – whether fishing or shipping – gradually decline.

The economic rationale for other communities in the interior and on the coast lay mainly in agriculture and minerals, with forestry also developing in some areas. Agriculture continues to provide an important source of employment and income, with total hectares in crops slightly higher now than 30 years ago, though the number of farms has declined. Mineral production, once an important source of employment and income in Cape Breton and northern Nova Scotia, is greatly diminished with the phase-out of coal mining in the 1990s and the more recent suspension of gypsum mining resulting from weak markets in the U.S. Forestry continues to struggle, with several sawmills shutting down in the wake of the housing crash in the U.S., and the closure of the Bowater mill in Liverpool and reduced output at the Point Tupper mill.
Table 2: Nova Scotia GDP, percentage breakdown by industry, 2002-2011

<table>
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<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, fishing and hunting</td>
<td>3.1</td>
<td>3.3</td>
<td>2.7</td>
<td>2.7</td>
<td>2.5</td>
<td>2.1</td>
<td>2.0</td>
<td>1.8</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>5.1</td>
<td>5.8</td>
<td>5.7</td>
<td>5.8</td>
<td>5.1</td>
<td>4.3</td>
<td>5.3</td>
<td>2.3</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>2.5</td>
<td>2.7</td>
<td>2.2</td>
<td>2.0</td>
<td>2.1</td>
<td>2.3</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Construction</td>
<td>5.5</td>
<td>6.4</td>
<td>6.9</td>
<td>6.7</td>
<td>6.1</td>
<td>5.1</td>
<td>6.0</td>
<td>6.4</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10.9</td>
<td>10.6</td>
<td>11.2</td>
<td>10.5</td>
<td>8.8</td>
<td>8.5</td>
<td>8.0</td>
<td>7.4</td>
<td>7.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Sub-total goods producing industries</td>
<td>26.0</td>
<td>27.1</td>
<td>26.8</td>
<td>26.7</td>
<td>24.4</td>
<td>22.2</td>
<td>22.5</td>
<td>19.5</td>
<td>19.5</td>
<td>19.1</td>
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<td>Wholesale trade</td>
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<td>Finance and insurance</td>
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<td>Administrative support, waste management, and remediation services</td>
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<td>Arts, entertainment and recreation</td>
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<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
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<tr>
<td>Accommodation and food services</td>
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<td>2.5</td>
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<td>2.4</td>
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<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
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<tr>
<td>Other services (except public administration)</td>
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<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
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<td>Public administration</td>
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<td>11.2</td>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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<td>100.0</td>
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</table>

Source: Statistics Canada. Table 379-0028
In short, the rural-coastal economy is struggling. This struggle is obscured by the provincial GDP statistics that show positive, albeit slow, growth over the past 20 years (2.0% average annual growth vs. 2.8% for Canada as a whole). But it is the service sector, dominated by activity in one urban area (HRM), which accounts for this growth. Resource-based industries are in decline. This decline has had its greatest direct impact in the areas where these industries are located – mainly in rural Nova Scotia.

Export data provide some insight into the performance of the rural economy. Table 3 shows annual export revenues for the leading 25 goods producing industries in Nova Scotia. Based on the trends between 2003 and 2012, we see the sources of weakness: declining value of production in fisheries, seafood processing, forestry, minerals and natural gas. Table 3 also indicates at least three sources of strength: increased value of output in tire manufacturing (i.e., Michelin), frozen foods (e.g., blueberries), and dairy production (though we have to remind ourselves that this industry is protected by supply management).

The three Michelin plants in rural Nova Scotia, employing some 3,500, are one of the province’s outstanding success stories. Export value has increased steadily despite adverse exchange rate movements, with exports exceeding $1 billion in 2011 and 2012. The 1968 decision of the company to locate in Nova Scotia serves to demonstrate that manufacturing can succeed even without proximity to raw materials, provided the right combination of factors exists.

By contrast, the importance of seafood processing as a source of employment and income has declined much more than the export statistics would indicate. This is because, compared with conditions in the 1980s and 1990s, products requiring limited processing (e.g., lobster, crab, scallop) account for a much higher proportion of current export value. This shift is attributable to the collapse of major Scotian Shelf groundfish stocks in the early 1990s and the substantial increase in shellfish abundance. The inclusion of fishing as a distinct export industry is misleading because all exports pass through federally registered plants and should be included in seafood product manufacturing (despite minimal processing). Nonetheless, the value shown captures mainly lobster exports. The steady decline in export value is up to 2010 is attributable mainly to the depreciation of the U.S. dollar. Increased fishing pressure and rising catches in response to a weak U.S. market and lower prices led to a modest recovery of revenues in the past 2-3 years.

Natural gas exports show a sharp decline mainly because the one producing field – Sable – is approaching the end of its economically recoverable reserves, but also because prices have declined. Production is expected to terminate in 2016. In addition to its importance as a source of employment and income and alternative energy for the province, Sable production also generated over $1.7 billion in royalty payments to the province. Deep Panuke, a smaller natural gas field now in development, is expected to come on stream sometime in 2013. It will match daily production from Sable, but with one-third the recoverable reserves, Panuke is expected to produce for only 6-7 years. Further exploration of the Scotian Shelf is planned, but it could be years before any commercial discoveries are made and developed.
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Tire Manufacturing</td>
<td>685,956</td>
<td>735,845</td>
<td>735,245</td>
<td>758,874</td>
<td>819,375</td>
<td>857,904</td>
<td>783,677</td>
<td>946,661</td>
<td>1,023,470</td>
<td>1,028,102</td>
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<tr>
<td>Seafood Product Preparation and Packaging</td>
<td>634,136</td>
<td>595,555</td>
<td>557,251</td>
<td>513,812</td>
<td>503,452</td>
<td>430,469</td>
<td>391,465</td>
<td>409,398</td>
<td>469,926</td>
<td>489,338</td>
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<td>Fishing</td>
<td>560,134</td>
<td>509,317</td>
<td>496,165</td>
<td>478,677</td>
<td>461,575</td>
<td>422,896</td>
<td>429,356</td>
<td>394,242</td>
<td>437,385</td>
<td>432,934</td>
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<td>Pulp Mills</td>
<td>191,138</td>
<td>219,461</td>
<td>172,896</td>
<td>170,918</td>
<td>168,499</td>
<td>163,873</td>
<td>126,638</td>
<td>162,988</td>
<td>161,342</td>
<td>164,904</td>
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<td>Frozen Food Manufacturing</td>
<td>76,951</td>
<td>101,448</td>
<td>96,218</td>
<td>114,480</td>
<td>111,918</td>
<td>108,236</td>
<td>78,677</td>
<td>90,059</td>
<td>143,274</td>
<td>120,598</td>
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<td>Paper Mills</td>
<td>472,607</td>
<td>495,298</td>
<td>568,206</td>
<td>246,206</td>
<td>512,025</td>
<td>619,051</td>
<td>426,548</td>
<td>455,359</td>
<td>441,755</td>
<td>111,677</td>
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<td>Unsupported Plastic Film, Sheet and Bag</td>
<td>68,540</td>
<td>71,026</td>
<td>65,770</td>
<td>65,734</td>
<td>64,578</td>
<td>71,455</td>
<td>73,081</td>
<td>74,953</td>
<td>84,249</td>
<td>88,304</td>
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<tr>
<td>Sawmills and Wood Preservation</td>
<td>193,501</td>
<td>250,718</td>
<td>227,744</td>
<td>204,254</td>
<td>158,782</td>
<td>97,991</td>
<td>68,746</td>
<td>108,532</td>
<td>81,787</td>
<td>80,905</td>
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<tr>
<td>Recyclable Metal Wholesaler-Distributors</td>
<td>23,956</td>
<td>30,441</td>
<td>33,005</td>
<td>54,292</td>
<td>53,058</td>
<td>53,582</td>
<td>36,004</td>
<td>60,135</td>
<td>80,080</td>
<td>76,081</td>
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<tr>
<td>Navigational, Measuring, Medical and Control</td>
<td>64,793</td>
<td>67,113</td>
<td>62,904</td>
<td>63,719</td>
<td>69,183</td>
<td>78,701</td>
<td>76,440</td>
<td>85,261</td>
<td>78,145</td>
<td>66,397</td>
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<tr>
<td>Other Rubber Product Manufacturing</td>
<td>38,450</td>
<td>48,136</td>
<td>28,490</td>
<td>19,601</td>
<td>29,238</td>
<td>21,445</td>
<td>24,415</td>
<td>35,795</td>
<td>51,919</td>
<td>66,118</td>
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<td>Petroleum Refineries</td>
<td>84,120</td>
<td>149,055</td>
<td>69,760</td>
<td>130,043</td>
<td>100,498</td>
<td>104,694</td>
<td>59,618</td>
<td>117,593</td>
<td>93,630</td>
<td>55,596</td>
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<td>Material Handling Equipment</td>
<td>14,056</td>
<td>16,056</td>
<td>16,550</td>
<td>29,310</td>
<td>41,335</td>
<td>42,627</td>
<td>37,138</td>
<td>30,841</td>
<td>43,768</td>
<td>53,784</td>
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<tr>
<td>Aerospace Product and Parts Manufacturing</td>
<td>28,373</td>
<td>31,976</td>
<td>17,947</td>
<td>84,142</td>
<td>41,235</td>
<td>45,510</td>
<td>36,900</td>
<td>88,761</td>
<td>40,059</td>
<td>50,671</td>
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<tr>
<td>All Other Chemical Product Manufacturing</td>
<td>9,575</td>
<td>20,807</td>
<td>19,255</td>
<td>19,474</td>
<td>26,632</td>
<td>48,860</td>
<td>52,132</td>
<td>38,904</td>
<td>38,315</td>
<td>48,378</td>
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<tr>
<td>Oil and Gas Extraction</td>
<td>1,200,299</td>
<td>1,067,847</td>
<td>1,348,601</td>
<td>974,945</td>
<td>1,099,268</td>
<td>1,449,565</td>
<td>672,569</td>
<td>392,483</td>
<td>363,627</td>
<td>44,292</td>
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<tr>
<td>Spring and Wire Product Manufacturing</td>
<td>22,067</td>
<td>24,783</td>
<td>25,984</td>
<td>33,680</td>
<td>33,235</td>
<td>37,338</td>
<td>34,423</td>
<td>36,047</td>
<td>45,689</td>
<td>43,401</td>
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<td>Broad-Woven Fabric Mills</td>
<td>28,641</td>
<td>32,595</td>
<td>33,143</td>
<td>31,485</td>
<td>30,758</td>
<td>28,967</td>
<td>26,259</td>
<td>25,236</td>
<td>30,556</td>
<td>28,675</td>
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<tr>
<td>Dairy Cattle and Milk Production</td>
<td>7,064</td>
<td>9,198</td>
<td>8,160</td>
<td>10,249</td>
<td>12,331</td>
<td>13,899</td>
<td>17,473</td>
<td>17,690</td>
<td>17,481</td>
<td>21,644</td>
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<tr>
<td>Other Non-Metallic Mineral Mining and Quarrying</td>
<td>75,881</td>
<td>89,211</td>
<td>98,926</td>
<td>92,139</td>
<td>83,320</td>
<td>71,161</td>
<td>47,786</td>
<td>32,735</td>
<td>22,672</td>
<td>18,729</td>
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</table>

Sub-total                                      | 4,574,336| 4,677,576| 4,815,399| 4,232,942| 4,542,630| 4,891,068| 3,621,664| 3,731,041| 3,878,373| 3,247,754|

Others                                         | 903,081  | 1,132,832| 987,498  | 966,004  | 948,600  | 938,000  | 866,893  | 838,500  | 818,500  | 798,500  |

Total (All Industries)                        | 5,477,416| 5,810,408| 5,802,896| 5,193,673| 5,390,635| 5,723,448| 4,286,002| 4,349,541| 4,460,310| 3,826,254|

Data Source: Statistics Canada & US Census Bureau
### Table 4: Nova Scotia socio-economic indicators by Health Region, 2006

<table>
<thead>
<tr>
<th>Economic indicator</th>
<th>Nova Scotia</th>
<th>South Shore</th>
<th>Annapolis Valley</th>
<th>Colchester</th>
<th>East Hants</th>
<th>Cumberland</th>
<th>Guysborough</th>
<th>Antigonish</th>
<th>Pictou</th>
<th>Cape Breton Island</th>
<th>Halifax</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school graduates aged 25 to 29, % of population aged 25 to 29</td>
<td>86.4</td>
<td>76.3</td>
<td>83.7</td>
<td>79.1</td>
<td>88.1</td>
<td>83.1</td>
<td>90.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-secondary graduates aged 25 to 54, % of population aged 25 to 54</td>
<td>62.7</td>
<td>53.2</td>
<td>59.4</td>
<td>56</td>
<td>63.4</td>
<td>58.6</td>
<td>68.3</td>
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<td></td>
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</tr>
<tr>
<td>Labour force aged 15 and over (number)</td>
<td>476,125</td>
<td>58,975</td>
<td>40,530</td>
<td>51,750</td>
<td>45,600</td>
<td>56,270</td>
<td>222,995</td>
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<tr>
<td>Participation rate (%)</td>
<td>62.9</td>
<td>59.0</td>
<td>60.6</td>
<td>61.6</td>
<td>60.3</td>
<td>53.0</td>
<td>68.4</td>
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<td></td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>9.1</td>
<td>11.4</td>
<td>8.8</td>
<td>8.7</td>
<td>11.0</td>
<td>16.2</td>
<td>6.4</td>
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<tr>
<td>Long-term unemployment rate, labour force aged 15 and over (%)</td>
<td>4.7</td>
<td>5.4</td>
<td>5.1</td>
<td>4.8</td>
<td>5.9</td>
<td>9.5</td>
<td>3.1</td>
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<td></td>
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<tr>
<td>Average total income in 2005 of population 15 years and over ($)</td>
<td>30,187</td>
<td>26,295</td>
<td>26,860</td>
<td>27,258</td>
<td>27,989</td>
<td>25,929</td>
<td>34,663</td>
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<tr>
<td>Average total income in 2005 of males 15 years and over ($)</td>
<td>36,904</td>
<td>32,806</td>
<td>33,293</td>
<td>33,071</td>
<td>34,796</td>
<td>30,857</td>
<td>42,328</td>
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<td></td>
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<tr>
<td>Average total income in 2005 of females 15 years and over ($)</td>
<td>23,956</td>
<td>20,027</td>
<td>20,786</td>
<td>21,748</td>
<td>21,510</td>
<td>21,539</td>
<td>27,650</td>
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<tr>
<td>Average value of dwelling ($)</td>
<td>158,000</td>
<td>145,619</td>
<td>149,791</td>
<td>124,371</td>
<td>116,368</td>
<td>94,761</td>
<td>208,715</td>
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<td></td>
</tr>
<tr>
<td>Households spending 30% or more of income on major payments (%)</td>
<td>13.9</td>
<td>13.2</td>
<td>14</td>
<td>12.8</td>
<td>12.9</td>
<td>12.6</td>
<td>15.2</td>
<td></td>
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</tr>
<tr>
<td>Median household income ($)</td>
<td>46,605</td>
<td>41,162</td>
<td>42,392</td>
<td>42,964</td>
<td>43,607</td>
<td>41,022</td>
<td>53,671</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Government transfer income in 2005, as a proportion of total income ($)</td>
<td>15.1</td>
<td>20.3</td>
<td>17.1</td>
<td>17.6</td>
<td>18.9</td>
<td>25</td>
<td>10.1</td>
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</tbody>
</table>

Source: Census of Canada 2006
Table 5: Nova Scotia population by county, 2006-2012

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<tr>
<th>County</th>
<th>1986</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
<th>2012</th>
<th>Percentage change</th>
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</thead>
<tbody>
<tr>
<td>Shelburne</td>
<td>17,800</td>
<td>17,394</td>
<td>16,655</td>
<td>15,904</td>
<td>14,792</td>
<td>-15.0%</td>
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<tr>
<td>Yarmouth</td>
<td>27,600</td>
<td>27,941</td>
<td>27,548</td>
<td>26,919</td>
<td>25,501</td>
<td>-8.7%</td>
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<tr>
<td>Digby</td>
<td>22,300</td>
<td>20,968</td>
<td>20,068</td>
<td>19,382</td>
<td>17,930</td>
<td>-14.5%</td>
</tr>
<tr>
<td>Queens</td>
<td>13,400</td>
<td>12,712</td>
<td>12,022</td>
<td>11,446</td>
<td>10,971</td>
<td>-13.7%</td>
</tr>
<tr>
<td>Annapolis</td>
<td>24,000</td>
<td>22,856</td>
<td>22,330</td>
<td>21,870</td>
<td>21,582</td>
<td>-5.6%</td>
</tr>
<tr>
<td>Lunenburg</td>
<td>47,400</td>
<td>48,658</td>
<td>48,884</td>
<td>48,184</td>
<td>46,743</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Kings</td>
<td>54,600</td>
<td>60,648</td>
<td>60,436</td>
<td>61,620</td>
<td>60,935</td>
<td>0.5%</td>
</tr>
<tr>
<td>Hants</td>
<td>37,200</td>
<td>40,450</td>
<td>41,643</td>
<td>42,276</td>
<td>41,576</td>
<td>2.8%</td>
</tr>
<tr>
<td>Halifax</td>
<td>314,300</td>
<td>351,739</td>
<td>369,244</td>
<td>384,778</td>
<td>413,512</td>
<td>17.6%</td>
</tr>
<tr>
<td>Colchester</td>
<td>46,000</td>
<td>50,468</td>
<td>50,632</td>
<td>51,283</td>
<td>52,424</td>
<td>3.9%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>35,500</td>
<td>34,615</td>
<td>33,438</td>
<td>32,748</td>
<td>31,464</td>
<td>-9.1%</td>
</tr>
<tr>
<td>Pictou</td>
<td>50,700</td>
<td>49,849</td>
<td>48,226</td>
<td>47,621</td>
<td>46,533</td>
<td>-6.7%</td>
</tr>
<tr>
<td>Guysborough</td>
<td>12,900</td>
<td>11,160</td>
<td>10,059</td>
<td>9,222</td>
<td>8,299</td>
<td>-25.6%</td>
</tr>
<tr>
<td>Antigonish</td>
<td>19,100</td>
<td>20,018</td>
<td>20,084</td>
<td>19,335</td>
<td>18,779</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Inverness</td>
<td>22,300</td>
<td>21,404</td>
<td>20,441</td>
<td>19,430</td>
<td>18,198</td>
<td>-15.0%</td>
</tr>
<tr>
<td>Richmond</td>
<td>12,000</td>
<td>11,273</td>
<td>10,486</td>
<td>9,945</td>
<td>9,342</td>
<td>-17.1%</td>
</tr>
<tr>
<td>Cape Breton</td>
<td>126,100</td>
<td>120,490</td>
<td>112,093</td>
<td>108,285</td>
<td>102,810</td>
<td>-14.7%</td>
</tr>
<tr>
<td>Victoria</td>
<td>8,900</td>
<td>8,684</td>
<td>8,165</td>
<td>7,762</td>
<td>7,304</td>
<td>-15.9%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>892,100</td>
<td>931,327</td>
<td>932,454</td>
<td>938,010</td>
<td>948,695</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada
3. The Rural/Urban divide

The urban/rural divide in Nova Scotia, while apparent in terms of industry structure, is felt most acutely at the level of socio-economic conditions and the resulting impact on population and demography. Table 4 sets out a range of socio-economic indicators for Nova Scotia and each of its health regions. The data are drawn from the 2006 census. The difference in circumstances between HRM and the other regions is striking. Though all indicators help to complete the picture, four stand out: the participation rate is substantially lower in rural areas, reflecting a lack of employment opportunities (Cape Breton is a full 15 percentage points below Halifax); the unemployment rate is higher (notwithstanding the much lower participation rate); average incomes are substantially lower (Halifax average income is 20-40% higher); and, government transfers account for as much as 25% of total income, compared with just 10% for Halifax.

Simply stated, the rural economy has provided insufficient opportunity for employment and income. One result is that people leave. Modest out-migration occurred in 11 counties between 1986 and 1996. But after 1996, population loss increased. Though the total population of Nova Scotia has increased by 1.1% since 1996, the population of 14 of 18 counties has declined (Table 5); in several counties the decrease exceeds 15%, with Guysborough losing over 25%. Looking at the 2006-2012 period, only Halifax and Colchester Counties show a population increase. Taking Halifax (with almost 44% of the population) out of the mix means population in the rest of the province has dropped by 7.7% since 1996.

The population statistics in Table 5 reflect the broad implications of insufficient economic opportunity in rural areas. An examination of the demographic details within these statistics gives even greater cause for concern. The demographic data in Table 6 shows that in the past decade, every county except Halifax has experienced a net population loss in the age groups under 50, while the population aged 50 and over is increasing throughout the province. In other words, rural areas are experiencing an outflow of the very cohorts that are essential to economic growth and community stability. These outflows exceed 25% in several counties.

<table>
<thead>
<tr>
<th>Population change 2001-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Under 50</td>
</tr>
<tr>
<td>Shelburne</td>
</tr>
<tr>
<td>Yarmouth</td>
</tr>
<tr>
<td>Digby</td>
</tr>
<tr>
<td>Queens</td>
</tr>
<tr>
<td>Annapolis</td>
</tr>
<tr>
<td>Lunenburg</td>
</tr>
<tr>
<td>Kings</td>
</tr>
<tr>
<td>Hants</td>
</tr>
<tr>
<td>Halifax</td>
</tr>
<tr>
<td>Colchester</td>
</tr>
<tr>
<td>Cumberland</td>
</tr>
<tr>
<td>Pictou</td>
</tr>
<tr>
<td>Guysborough</td>
</tr>
<tr>
<td>Antigonish</td>
</tr>
<tr>
<td>Inverness</td>
</tr>
<tr>
<td>Richmond</td>
</tr>
<tr>
<td>Cape Breton</td>
</tr>
<tr>
<td>Victoria</td>
</tr>
</tbody>
</table>

Source: Statistics Canada Table 051-0052

The details of these demographic shifts are set out in Table 7. These data indicate that in the 5-year cohorts of prime income earning and household formation age (25-44) the declines exceed 40% in many cases. If these are the better educated, more skilled and more motivated individuals, then it heightens the challenge of identifying and developing productive employment opportunities for the unemployed and underemployed who are left behind.

In the absence of such opportunities, there is every likelihood that the population decline would continue.
| 0 to 4 years | -15% | -17% | -26% | -16% | -12% | -15% | -17% | 4% | 2% | -1% | -11% | -8% | -31% | -11% | 25% | -38% | -7% | 14% |
| 5 to 9 years | -39% | -30% | -24% | -33% | -16% | -26% | -25% | 19% | 16% | -22% | 24% | 20% | 20% | 21% | 23% | 29% | -23% | -25% |
| 10 to 14 years | -36% | -20% | -20% | -31% | -12% | -27% | -23% | 18% | 19% | -18% | -20% | -22% | -39% | -38% | -31% | -28% | -33% | -27% |
| 15 to 19 years | -10% | -13% | -19% | -10% | -20% | -24% | 4% | 4% | 1% | -4% | 19% | 16% | 39% | -29% | 28% | -23% | -33% | -23% |
| 20 to 24 years | -13% | -14% | -22% | -3% | -4% | -2% | 33% | 2% | 20% | 11% | -9% | -14% | 1% | -4% | 5% | -1% | 1% | -7% |
| 25 to 29 years | -44% | -22% | -40% | -42% | -7% | -22% | -24% | 18% | 18% | -5% | -25% | -24% | -38% | 14% | 29% | -43% | 2% | -35% |
| 30 to 34 years | -41% | -18% | -42% | -32% | -14% | -31% | -30% | 1% | -14% | 30% | 20% | -55% | 27% | 40% | 51% | 22% | 26% |
| 35 to 39 years | -40% | 34% | -42% | -38% | -42% | -41% | 35% | 41% | 12% | 22% | 38% | 26% | 57% | 33% | 49% | 37% | 38% | 50% |
| 40 to 44 years | -31% | 29% | -23% | -33% | -37% | -30% | 28% | 28% | 6% | 19% | 23% | 28% | 46% | 29% | 36% | 32% | 43% | 46% |
| 45 to 49 years | 2% | -2% | -3% | 10% | -1% | 9% | 15% | -3% | -3% | -1% | -10% | -14% | -14% | -19% | -14% | -21% | -15% |
| 50 to 54 years | 11% | 5% | 6% | 1% | 19% | 16% | 30% | 25% | 24% | 21% | 4% | 6% | 2% | 1% | 7% | 2% | 3% | 3% |
| 55 to 59 years | 31% | 25% | 18% | 14% | 17% | 29% | 37% | 43% | 53% | 40% | 32% | 37% | 9% | 35% | 22% | 18% | 34% | 27% |
| 60 to 64 years | 44% | 52% | 31% | 43% | 40% | 48% | 47% | 59% | 76% | 49% | 33% | 66% | 32% | 76% | 51% | 51% | 39% | 63% |
| 65 to 69 years | 29% | 56% | 33% | 37% | 38% | 49% | 40% | 43% | 60% | 52% | 25% | 57% | 29% | 64% | 64% | 44% | 29% | 51% |
| 70 to 74 years | 9% | 7% | 11% | 11% | 20% | 31% | 41% | 39% | 51% | 40% | 72% | 33% | 66% | 51% | 51% | 39% | 63% |
| 75 to 79 years | 3% | 18% | -1% | 10% | 11% | 16% | 25% | 12% | 18% | 14% | -3% | -7% | 20% | 7% | 14% | 12% | 2% | 12% |
| 80 to 84 years | 13% | 15% | 9% | 7% | -3% | 5% | 32% | 20% | 22% | 11% | 4% | 2% | 11% | 9% | -13% | -2% | -3% | -13% |
| 85 to 89 years | 20% | 16% | 5% | 19% | 13% | 16% | 42% | 10% | 57% | 28% | 31% | 14% | -24% | 24% | 1% | 25% | 19% | -30% |
| 90 years and over | 15% | 58% | 52% | 37% | -9% | 4% | 84% | 51% | 92% | 89% | 72% | 97% | -70% | 37% | 37% | 74% | 80% | 90% |

Source: Statistics Canada Table 051-0052
4. Prospects for rural growth

HOW GROWTH OCCURS

Generally speaking, regional economic growth may occur either organically by identifying and seizing opportunities within existing industries, or inorganically through investment in industries that do not currently exist within a region. Investing in a value added lobster product line for an existing or emerging market is an example of organic growth since it adds business dimensions to established industries. Starting or locating an Information Technology (IT) company in a rural area is an example of inorganic growth because it represents an addition to the established economic structure.

Where we see sustained economic growth we are likely to see both approaches at work; organic growth through product or process innovation, coupled with local and export market development; and inorganic growth based on developing and supplying a wider range of products and services to both local and export markets. For growth to occur – that is, a sustained increase in GDP – it is essential for enterprises to export goods and services from the local market (displacing imports into the local market also supports growth). The export earnings can then support essential services (e.g., health, education, policing, infrastructure) in the local economy.

In this simple model of the economy, the structure is divided into two parts: the basic sector and the service sector. The Basic Sector serves export markets and generates the employment and incomes that sustain the rest of the economy. The Service Sector (narrowly defined to refer only to essential services) serves the local market and is supported by the Basic Sector. Growth in the export sector due to outside demand for Basic Sector goods or services increases incomes and employment in the export industries. In turn, these gains circulate through the economy, positively affecting the service sector as incomes are spent and re-spent (the induced, or spin-off effects.) This shock causes both sectors to expand proportionately.

In the case of Nova Scotia, the Basic Sector is not large enough to support the Service Sector. We rely on federal transfer payments to make up the difference. A similar process operates at the provincial level, with transfers supporting rural areas. As we see a decline in the Basic Sector – which we have seen for some years in rural Nova Scotia – the overall inflow of income into the economy shrinks. This in turn results in a reduced ability to sustain the Service Sector, exacerbating an already challenging environment in which to retain population.

Among the weaknesses in the rural economy are its narrow export base, heavy reliance on primary products selling into commodity markets, seasonal operations, and vulnerability to shifts in external markets (including exchange rates). These factors go a long way to explain the low average incomes, low participation rates, high unemployment and excessive reliance on transfer payments the rural economy experiences (Table 4).

While there have been numerous initiatives over the past 40 years to diversify the rural economy – to promote inorganic growth – there have been few successes and many very expensive failures. Michelin stands out as one the more obvious successes; the combination of a well-managed company, a strong brand, proximity to market, good transportation infrastructure and a productive labour force.

By contrast, too many companies were attracted by easy money and collapsed when the money ran out. For example, the Enterprise Cape Breton experience in the late 1980s serves as a bleak reminder of the perils of simply spending money to import companies – so-called “forced growth” – that lack any stake in the community. Most operated for a year or two, but even the more resilient eventually closed shop. Local enterprises, though smaller, enjoyed a higher success rate. Despite (some would say because of) all the further growth initiatives since 1990, the socio-economic conditions in Cape Breton stand more or less where they did 25 years ago.

POTENTIAL FOR ORGANIC GROWTH

IN THE RURAL ECONOMY – SWOT ANALYSIS

The point of departure for this focus on the rural economy is that this is where the economic growth and development challenges are most pressing. The urban economy (HRM) compares favourably to the Canadian average in terms of such indicators as population growth, income level, participation rate and unemployment rate. This does not mean that efforts to promote growth and development in HRM should cease or be curtailed in favour of rural Nova Scotia. After all, having strong urban centres benefits the whole province given their...
economic linkages with the rural economy. But it does mean that rural development may require different solutions and approaches, ones that recognize and build on the specific characteristics and needs of the rural economy.

What seems clear from the overview in Section 4 is that whatever measures have been taken to advance growth in rural areas, the urban-rural development gap remains just as wide as it was 20-30 years ago – wider in some areas. Particularly troublesome is the on-going net outmigration, arguably the strongest indicator of poor economic performance and a reflection of local belief in limited prospects for the future.

The SWOT analysis in Table 8 is an attempt to provide some insight into whether traditional industries in rural areas could provide the basis for a level of future growth that would at least stem the tide of out-migration, and possibly reverse it. The analysis suggests that opportunities exist that would strengthen economic performance, but even if these gains were achieved, with few exceptions, the impact on key economic indicators would be limited.

Taking each industry in turn:

- **Agriculture**: the industry has been fairly stable in terms of number farms, farm area, land in crops and product value for the past 25 years. Livestock and dairy products account for about three-quarters of total farm revenues, with crops (mainly tree fruits and berries) making up the balance. Diversity represents a major strength of the industry, with production in over 20 crop and 12 livestock categories. Limited arable land and a short growing season present obstacles to expansion, though the industry is continuing to diversify. Loss of land to urban creep, an aging farm population and difficulty attracting workers threaten industry growth.

- **Fisheries**: the number of vessels and harvesters has declined over the past 20 years as a result of quota consolidation in several fisheries where licenses permit. With access limited and fish stocks fully utilized, any change in output value would be the result of changes in abundance or prices. Overall landed value stabilized in the $700 million range over the past decade, with rising catches of high valued species offset by the declining value of the U.S. dollar. Licensing and management are source of strength. Coastal communities were hard hit by collapse of groundfish stocks in the early 1990s, resulting in loss of important fishing opportunities. More effective marketing, better organization and improved quality are sources of opportunity. There is limited prospect for significant increases in value. Major threats include declining abundance, the impact of climate change.

- **Aquaculture**: many suitable coves and sheltered bays are sources of strength, as is the scientific support the industry enjoys. Cold water can inhibit growth, as can access to capital. Public & fishing industry opposition arising from environmental and aesthetic concerns is an obstacle to expansion. Opportunities to expand production across several species exist, including with the use of new technologies (small cage net-pen for salmon and closed containment for several species). Expansion is likely to be slow unless newer technologies that are both technically and financially feasible are developed and publicly accepted.

- **Forestry**: the industry has been devastated by weak lumber markets and reduced demand for pulpwood. Sawmills and one paper mill have closed; harvesting industry is greatly diminished. There may be opportunities in producing wood pellets and wood biomass for energy production, and also niche hardwood products. Small local product market forces dependence on declining and increasingly competitive export markets.
**Mining:** strengths lie in world-class industrial mineral deposits and tidewater quarries, coupled with excellent geological database. Specific opportunities include re-opening the Donkin mine, gypsum market recovery (mainly U.S.) and gold potential. There is limited metals potential. Land use constraints and opposition impede industry development.

**Seafood processing:** proximity to resource means potential for high quality and proximity to the large U.S. market means low transportation costs. With collapse of groundfish, industry depends on fewer species requiring limited processing. Generates far less employment than it used to. Many small firms (fragmented industry) leads to destructive competition and limited capacity to market effectively. Industry is subject to commodity pricing and exchange rate uncertainty. Opportunities exist to enter new markets, produce higher quality. Harvesting and processing sectors need to work cooperatively to seize opportunities. Long term may see recovery of groundfish and more local processing, but even now plants complain it is hard to find workers; workers complain about low wages.

**Tourism:** our strengths are great scenery, culture and historic sites. But visitors from outside NS (the ones that count in terms of export dollars) have declined over the past decade due to factors beyond our control (exchange rate, SARS, 9/11, passport requirements). Among the weaknesses are a short season, “tired” accommodation outside HRM, and few major attractions (other than scenery). Cruise travel has grown considerably, but passengers spend little when ashore. Effective marketing in EU and Asia is essential. With global travel opportunities, NS is competing with many exotic locations (many of which attract tourists from Atlantic Canada, our main source of visitors).

**POTENTIAL FOR INORGANIC GROWTH**

The terms organic and inorganic growth form part of the private sector lexicon and are used to describe expansion from within the firm (organic), or growth through mergers and acquisitions (inorganic). Inorganic growth in the context of economic growth conforms to the notion of acquisitions – attracting companies – offering financial and other inducements to convince a company to establish or re-establish in a specified location. In other words, shortcutting the development process and buying economic growth off the shelf.

Nova Scotia has a long history with forcing or inducing growth through business attraction. There are examples where it has resulted in a successful “graft”. But there are many more examples of failure. This history has been well told elsewhere and there is no need to recount it here. But it is worth reminding ourselves of one important lesson to emerge from the experience, a lesson that extends beyond the particulars of the example:

“Ownership directly influenced success rates. Projects owned either wholly or partially by Cape Bretoners or Atlantic Canadians show a much higher success rate than those owned outside of Atlantic Canada. Companies with at least partial local ownership... are often owner-managed enterprises, and their owners have a personal financial interest and a vigorous commitment to the success of the project...The generous up-front and topping-up financing built into the programs reduced the equity required from the client to an extremely low level and attracted a disproportionate number of high-risk companies. Some of these companies proved unwilling or unable to see their projects through difficult times.... Branch-plant operations approved by ECB have had a low rate of success.”

Business attraction initiatives continue, though their targets and forms of inducement have changed. There is far greater emphasis on “new economy” companies, ones operating in the areas of information technology (IT) and business support services (e.g., outsourcing customer contact). Nova Scotia Business Inc. is the main player in this field in the Province. It has four business units: Investment Attraction, Business Financing, Venture Capital, Trade Development and a Business Advisory Team. Investment Attraction is aimed at increasing investment in Nova Scotia from foreign jurisdictions and elsewhere in Canada to establish sustainable, export-oriented, value-added businesses. The payroll rebate
| Strength                                                                 | Weakness                                                                    | Opportunity                                                                 | Threat                                                                 |
|------------------------------------------------------------------------|                                                                            |                                                                           |                                                                        |
| Agriculture                                                            | New sectors/diversified farms                                               | Buy local/farm market                                                     | NSAC/outreach                                                          |
|                                                             | Ability to adapt/productivity                                              | Supply management                                                         | Ability to attract workers                                            |
|                                                             | High margin                                                                |                             |                             |
|                                                             |                               |                             |                             |
| Fisheries                                                              | Ability to supply/commodity                                                |                              |                             |
|                                                             |                             |                              |                             |
| Forestry                                                               |                              |                              |                             |
|                                                             |                             |                              |                             |
| Mining                                                                 |                              |                              |                             |
|                                                             |                             |                              |                             |
| Tourism                                                                |                              |                              |                             |
|                                                             |                             |                              |                             |
| Tourism                                                                |                              |                              |                             |
| Seafood processing                                                     |                              |                              |                             |
|                                                             |                              |                              |                             |
is the main incentive. Over the 2007-2012 period, its Investment Attraction initiative put together 49 deals resulting in an average increase in employment of some 3,400 full-time equivalent jobs per year.

Halifax is the location of choice for 70% (34) of these companies. This should not be surprising since their decision to locate (or stay) in Nova Scotia would turn on the labour skills and experience, support services, business infrastructure and amenities the city has to offer. These companies operate in a range of sectors including aerospace and defence, science and technology, financial services, IT and “BPO – business process outsourcing” (contact centres).

Rural communities lack some or all of the assets Halifax offers. The 15 (30%) companies locating elsewhere in Nova Scotia operate primarily in the BPO sector, attracted by the lower wages in rural areas. While these companies do provide much-needed employment opportunities and generate export income, they operate from contract to contract, so job security is limited. Also, they do not represent economic development in the sense that they integrate into the economy through backward and forward linkages with other companies in other sectors.

One of the main lessons that emerges from the extensive experience with inorganic growth and development in Nova Scotia and elsewhere is that it is fraught with challenges, not the least of which is the recognition that in trying to attract companies means we are in competition with many other jurisdictions.

Of course, inorganic growth and development can occur without parachuting in non-resident companies. Enterprises are formed because someone has a good idea and the entrepreneurial ability to build a business around it. This can occur anywhere, including rural communities. The difficulty is that building the business requires capital, a skilled workforce, technical and other support services. These rarely exist in rural communities. Start-ups tend to migrate to larger centres where these are more readily available. Perhaps as technology develops, more and more of these services will be supplied virtually (as many are now), allowing participants in the burgeoning digital universe to stay home.

Concluding observation

We have been struggling to resolve the economic growth and development challenge for decades in Nova Scotia, and elsewhere in Canada. We have devised and borrowed a wide range of strategies and approaches in trying to improve conditions. In this province alone, we have spent billions of dollars in the process. Key indicators would suggest that economic conditions in rural Nova Scotia have proven remarkably resistant to improvement. True, they may have been significantly worse in the absence of the various initiatives. Nonetheless, the experience does raise important questions about objectives and methods, and about the realism of expectations in light of the broader economic context and forces within which we operate. These are questions that require more in-depth study and greater resources than available for this paper.
Overview

We know that Nova Scotia has one of the oldest populations in the country and that the labour force is shrinking. Such factors as low levels of immigration and the loss of young people from rural to urban centres were frequently cited in our consultations as serious threats to maintaining our current sense of community and level of prosperity. We know also that levels of educational attainment are correlated with employment and productivity. The irony that 19% of working age adults (aged 25 to 64) has not completed high school in a province with the greatest number of post-secondary institutions in the country has not gone unnoticed.

When viewed overall, the picture with regard to the development and deployment of our people is both positive and disappointing. More Nova Scotians have a post-secondary certificate or diploma (38.9%) than in the rest of Canada (36.4%) yet, we have high levels of non-completion of high school and the highest levels of unemployment in the country among those without a high school diploma. Despite the fact that 21% of the adult population in Nova Scotia has a university degree, the situation with regard to university education is also beginning to show worrying trends. Over the last 10 years there has been a 12% decrease in the number of Maritime students attending university in the region. Although Nova Scotia undergraduate enrolment has increased by 3.6%, only three institutions showed an increase over that period, and this increase is almost entirely attributable to increased enrolments of International students. There is also a slight increase in the number of graduate students. This may yield some positive results for Nova Scotia, in better levels of education for those who return to school, and increased immigration, but it may also be indicative of a trend toward a decline in university attendance among Nova Scotians. On a positive note statistics indicate that community college enrolments are stable and increasing.

A highly trained workforce is supposed to produce individual as well as social returns in the form of wages, salary and other benefits and to pay off at the macro level in terms of higher workforce productivity. Yet, we find stubbornly high unemployment rates among those aged 15-24 and decreasing employment and earning premiums for those with an undergraduate degree. Unemployment for young men in Nova Scotia has been reported as high as 23% and the unemployment gap between university and high school graduate has narrowed considerably. In addition many university graduates are not working in the field for which they were educated. In fact one in five are reported to work in areas not requiring a university degree and to earn less than $18,000/ year and many more are acknowledged to carry heavy debt from student loans. The situation is even worse for the internationally educated. Immigrants face a low return on foreign work experience, difficulty in having their international credentials recognized, and concerns about the quality of skills earned abroad. While it can still be said that higher education is a necessary condition for a good job, it is no longer a sufficient condition.

1 MPHEC, Trends in Maritime Higher Education, Annual Digest, Volume 10 #3, June 2013
2 Many factors beyond demographics contribute to a decrease in university enrolments and this does not take into consideration statistics from community colleges and private training institutions, nevertheless it indicates a trend that needs ongoing monitoring and attention.
3 Financial Post, Garry Marr, August 26, 2013
5 OECD Country Reports, Canada 2006
The consensus from our research and public discussions is that we need to:

- Find more effective ways to upgrade, and build on the skills of the people who are already here
- Attract more people, especially immigrants and entrepreneurs, to live in Nova Scotia
- Reach out and incorporate marginally attached individuals and groups with low or no qualifications into the workforce

The challenge is: How do we do this? What strategies or approaches will help us to better develop and deploy the full range of our talents, generating quality of life for our citizens and attracting more people to live in NS? How can we build on current activities to better recognize and develop the skills of Nova Scotians?

Nova Scotia has a strong human capital development system: ten independent universities and a decentralized community college system, as well as an established network of adult learning and workplace education programs delivered in partnership with institutions and non-profit organizations throughout the province.

However, like the experience of other jurisdictions, it is becoming increasingly apparent that the traditional approach to education and training is not sufficient to handle the demands of a new, more skills-intensive economy. More needs to be done to bridge the chasm between formal education, the workplace and the community if we are to succeed in recognizing the full array of our skills and develop more highly skilled workers.

Looking to other jurisdictions we find remarkable convergence in the policy mechanisms and strategies for building a more inclusive and skilled workforce. Generally this approach focuses on:

- Modernizing the education and training system
- Building core skills frameworks (Identifying the skills needed for the 21st century workforce)
- Setting targets for increased participation in the workforce, and in education and training

This new approach is based on a shift away from a closed system of delivery to a more flexible, transparent and permeable way of thinking about teaching and learning. It is a system which starts with the individual and ends with greater participation in society and the economy. At the international level a modernized system includes the following underlying features. It is:

- **Learner centered**: designed to meet the needs of individuals and to create individual learning pathways.
- **Outcomes-oriented**: imparts core skills and competencies. The key concepts are competence and lifelong learning and the currency is the language of learning outcomes or what a learner should know and be able to do based on completing a given program or qualification.
- **Built on the Recognition of Prior Learning (RPL)**: recognizes that legitimate learning occurs in many forms and includes formal, non-formal and informal learning (learning that occurs at home, in the community and the workplace as well as in the formal system).
- **Stake-holder Driven**: driven by the needs of stakeholders and developed in collaboration with key partners across sectors; responsive and relevant to society and labour market needs.

Over 100 countries from around the world have developed, or are developing, national qualifications frameworks (NQFs) as the policy mechanism for updating and modernizing their education systems. The EU has moved beyond national frameworks to create a meta-framework, the European Qualification Framework (EQF) and the European Credit Transfer System (ECTS) which span the range of its 28 member states. These frameworks are essentially a compilation of a society’s certificates, diplomas and degrees – translated into statements of learning (learning outcomes) articulating what a person should know and be able to do as a result of achieving a particular ‘qualification’. They are a way of regulating and listing all the available qualifications in a country/sector/region and bring a higher level of transparency and accountability to the system as a whole. They are also the foundation from which to build new more effective responses to human capital development linking formal education to real world skill challenges.
Comprehensive, Inclusive, and Permeable: deals with the different learning needs at different points in an individual’s life and allows individuals to progress from one level to another, within and across occupations or industrial sectors and vocational and academic fields (in a single framework).

Recent initiatives in Nova Scotia provide insight into how we might more effectively bridge the gap between formal education and training and workforce development. The first example is drawn from the report of the Reference Group on Apprenticeship and addresses the need for revising and re-invigorating the apprenticeship system to align it more effectively with the needs of employers and the economy. The second, the Record of Achievement Project presents a comprehensive approach for facilitating the greater participation of people without formal qualifications, into the workplace.

NOVA SCOTIA APPRENTICESHIP SYSTEM

A recent review of the NS Apprenticeship System (Reference Group’s Report on Employer Engagement in Apprenticeship) speaks to the challenges of apprenticeship process and the need to revise and re-invigorate the system. Too few are challenging the exams or completing the process within the ideal timeframe. The current number of apprentices is insufficient to replace those who are retiring and access to training programs is described as ‘problematic’ and unconnected to the realities of the workplace. At the same time it acknowledges such new industrial opportunities as the shipbuilding contract and the Maritime Link Project and the implications these have for increasing the number of skilled trades workers.

The report stresses that there is a critical need to engage employers and realign the decision-making structures. It recommends a new governance model of shared responsibility and accountability to key stakeholders: government, industry, employers, journey persons, apprentices, and society as a whole.

A new vision is proposed of “an industry led apprenticeship system that builds and maintains a highly skilled and diverse workforce”. This in turn, aligns with the desired outcomes of:

- Responding directly to the labour market needs of the NS economy
- Actively engaging employers as leaders in the full continuum of activities
- Redefining the scope of the present system to be more comprehensive and include access programs, prior learning assessment and other forms of training and certification
- Providing for the different needs of different trades and establishing relevant and integrated training pathways thus moving apprentices along their journey without interruption– thereby supporting

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more apprentices through the process.

The guiding principles underlying this new approach are fully consistent with the vision and features of a ‘modernized system’ as expressed in the international literature. This new approach is competency-based, learner-centred and stakeholder driven; it is oriented to outcomes and built on a full range of supports and training options. It proposes to build a system that is ‘flexible, responsive and innovative—open to multiple solutions and aware that one size will never fit all’.

In addition, Sector Councils have repeatedly raised the issue of non-replacement of older, experienced workers retiring over the next decade (both with and without trade certifications). It is widely acknowledged that there is a large scale need for the transfer of knowledge between older and younger workers to recognize and support skill development in the trades. They have pointed to PLAR (prior learning assessment and recognition) as an important tool that needs to be part of the repertoire in recognizing existing skills and transitioning more workers into the system. For example it could be used to:

- recognize the skills of experienced but un-credentialed older workers
- facilitate the transformation of these older workers into new roles as teachers and mentors (for transferring knowledge to the next generation)
- recognize the workplace and experiential learning of younger workers towards a qualification

THE RECORD OF ACHIEVEMENT PROJECT (ROA)

The Record of Achievement project contains many of the characteristics of the ‘modernized’ approach. Further to that, it introduces a new core skills framework as the standard against which to measure an individual’s skills and knowledge.

The purpose of the ROA is to reach out and support marginally attached individuals and groups with low or no qualifications to gain access to the workforce. Partnering with the Prior Learning Centre, the Adult Education Division (LAE) through the RPL Unit and NSSAL has established a process for validating the skills and abilities of adults who have not completed high school. This project is based on the belief that individuals gain legitimate learning through their life experiences, i.e. though lifelong non-formal and informal learning, in the workplace, home and community and that this learning can be assessed and recognized for purposes of gaining entry to employment.

The Record of Achievement (ROA) is a document issued by LAE to an individual who has completed a prior learning assessment process. It validates the knowledge, skills and behaviour of the individual against a new NS Core Skills Framework for Employability, a multi-leveled framework which identifies the ‘core’ skills necessary for entry and advancement in the workplace (Communication Skills, Reasoning Skills, Continuous Learning Skills, and Personal Management Basics).

Piloted in both urban and rural settings the ROA enables the learner to show an employer evidence of their level of knowledge and skills (what they know and can do) relative to employment, allowing the employer to better determine whether the individual is the right fit for the job. An accompanying document, the Skills Record provides the individual with more detailed information including areas for improvement that can be used in mapping a path (or individual learning plan) towards further development.

PROGRAMS FOR NEW CANADIANS

The question was raised about how we can attract more people to come to Nova Scotia, especially
immigrants and entrepreneurs. In our consultations people commented on the need to create a more welcoming environment for new Canadians in our rural and urban communities. At the same time we noted wide scale public initiatives designed to assist immigrants in making connections to the workplace and settling successfully in the province. Although centred mostly in Halifax these include such initiatives as the Multi-Stakeholder Work Group model, a collaborative model created by ISIS (Immigrant Settlement and Integration Services) for bringing a wide range of stakeholders around the table for making systemic change in regulated occupations in order to better welcome new immigrants. This program centres specifically on client needs and helps individuals and groups to develop pathways through administrative obstacles to employment. It also includes the Halifax Connector Program of the Greater Halifax Partnership, a referral process that helps immigrants, international students and young and emerging talent build professional networks, and connect with job opportunities.

**OTHER PROGRAMS**

The *Bun is Barr Master Apprentice Program* (BBMAP), is a community program that builds language skills among teams and networks of individuals whose social bonds and relationships allow them to create deeper cultural roots and contribute to the fabric of the whole community, and the *Connecting Aboriginals to Manufacturing* program in Manitoba is a new model for Aboriginal workforce development in Canada.

*Bun is Barr* (Gaelic for ‘Root and Branch’) *Master Apprentice Program* is the most recent in a series of programs sponsored by the Office of Gaelic Affairs to support Gaelic language and cultural development. It is an intergenerational mentorship program that pairs elderly Gaelic speakers with younger apprentices and focuses on learning language through visiting and everyday activities. The Master Apprentices improve their existing skills and develop new skills relevant to sustaining the Gaelic language and culture. Many
of the apprentices work in areas of Celtic history, music, language education and tourism. It is in many ways a ‘modernized’ program, focused on building competency (in the Gaelic language and cultural practices) and driven by the need to transmit cultural knowledge across generations.

The Connecting Aboriginals to Manufacturing Program (CAM), a new model for Aboriginal workforce development, is a comprehensive and holistic model, a continuum of success strategies, for helping to transition Aboriginal people and their families, from life on the reserve to full time career-oriented work in manufacturing. Building trust and support among partners and collaborating across cultures and traditional education/workforce boundaries while paying special attention to the full range of needs of individuals and families, were critical elements in the success of this project. Driven by the employers’ need for workers, and the Aboriginal communities’ need for good and sustainable jobs, the project was characterized by high levels of commitment. It was conceived, designed and implemented in a spirit of co-learning and partnership among the stakeholders: four First Nations communities, the employer sponsor Canadian Manufacturers and Exporters (CME) and five manufacturing employers, the University of Winnipeg and Winnipeg Technical College, and Workplace Education Manitoba.

In addition to these examples, it should be noted that the recent announcement of federal funding to support the establishment of a learning centre in Wagmatcook N.S., is welcome news. The new centre, working in collaboration with the Nova Scotia Community College will provide skills training to Aboriginal and non-Aboriginal learners in Northern Cape Breton. This will include trades programs, Mi’kmaw health and wellness certificates and plans to design and deliver other pre-employment, pre-training and financial management programs that will enable learners to acquire the skills for labour market participation.

These examples demonstrate the need to move beyond individual programming to the ‘systems’ level if we are to provide meaningful pathways for developing our people. In fact, we need to build an entirely different response from that of the past: we need to build ecosystems, or collaborative, system-wide networks and relationships that bridge the education and workforce systems, and respond to the needs of individuals. The responses that are emerging, such as those offered above and others, show that it is within our reach and the culture of our communities to build a pro-active and ‘can-do’ mentality that fosters lifelong and life-wide learning within a context of innovation and developmental success.

We can build on our strengths. In fact, new models for working across systems are already emerging. The roles and responsibilities of stakeholders are changing and may be described in a new spirit of shared leadership and accountability. Overall we need to support this general direction of shifting to competencies and linking programs across the work/post-secondary divide in order to make the education and training system more efficient, inclusive, and accountable.

Government needs to continue to play a strong role in supporting human capital development, but it needs to shift its role to shared leadership, where it is one player among many, providing strategic advice, policy support and funding. Government is needed as a facilitator of dialogue and action, fostering an environment conducive to change. The new Workforce of the Future Leadership Table is one example of this shift in thinking and includes membership from government, the private sector, organized labour and academe. It is within this context that we need to set targets and develop shared goals for labour market participation and participation in education and training.

Employer engagement in apprenticeship is one of five priorities of the Workforce of the Future Leadership Table, and a key component for building a more responsive skills development system. Employers, professional and industry associations, and Sector Councils are key stakeholders in HR training and development, identifying the ‘core skills’ necessary for the future. Partnerships with employers are also critical to shaping and developing programs for special populations making them consistent with the needs and realities of the workplace. As a key stakeholder, employers need to make the investment in time, priority and attention to provide leadership in shaping the direction and content of the new
Individuals and groups have a role to play in setting the tone, supporting lifelong and life wide learning, and contributing to the quality of services people receive.

The challenge is in engaging post-secondary institutions in a new way. The Post-Secondary Institutions need to be strategically engaged and consciously committed to playing a strong role in developing the provincial economy. They have the opportunity and the potential to develop new laddered and integrated programs and new combinations of qualifications designed to meet specific skills-intensive workplace needs. To do so however, the universities would need to be able to work more effectively as a single system, and be willing to engage with the community college and others in creating new collaborative programs and making their programs more accessible to a wider range of learners. In relation to this, work has been done in the area of credit transfer and some work has begun in recognizing non-formal and informal learning for admission and advancement in the system, facilitating more efficient pathways for individuals. If RPL is to become more than ad hoc measures however, more will need to be done in systematizing it across post-secondary institutions.

Like post-secondary institutions, government and employers, community groups and organizations, geographic communities and communities of interest are stakeholders in the new economy and central to human capital development. Individuals and groups have a role to play in setting the tone, supporting lifelong and life wide learning, and contributing to the quality of services people receive. It is the community groups and organizations who are responsible for delivering such turnkey programs as the ROA, pre-employment training, and adult basic education. We need to be able to recognize and support the work of these groups, making a place for them at the leadership table. In turn, they too need to be held to a level of mutual accountability, expected to advocate for and support the members of their communities, and to mobilize individuals to engage in personal and skills development.

Similarly individuals and families have a role to play in creating a culture of lifelong, life wide learning. Family members especially need to be willing to support individuals to take the risk and participate in programs to upgrade or develop their skills. Individuals have to be willing to participate, and to commit to developing new pathways for themselves. This is not easy and for some it may be a very difficult challenge – acknowledging and making the commitment to change one’s personal circumstances.

POLICY CONSIDERATIONS FOR DISCUSSION

1) Confirm the language and process of Learning Outcomes as central to education and training programs.

In order to create an environment conducive to new and innovative programming—programs that serve new workplace needs—we need to develop a common language and process for stating the expectations attached to educational programs. That is, what a person should know and be able to do, as a result of completing a particular education or training program. Learning Outcomes are the basic currency of an modernized system, and provide a standard against which to measure learning. This would allow for transparency in reading and understanding the skills and knowledge connected with the current programs and establish a foundation for laddering and combining programs in ways that respond to workplace demands. It would also open the system to PLAR challenges. The Office of Higher Education has recently supported this approach for the Nova Scotia universities, and the MPHEC requires translation of new degree programs to learning outcomes as part of its new program application process. This would confirm those actions and help take the process to the next level of application.

The MPHEC is the quality assurance body for the maritime universities and as such holds credibility for developing QA processes and practices. There are no commonly accepted methods or standards for assessing non formal and informal learning among the universities, and having the MPHEC set common standards for assessment processes and training would help to facilitate the greater implementation of PLAR in the post-secondary system.

3) **Support the right for all Nova Scotians to have their learning recognized.**

Many countries have legislated the right for individuals to have their learning recognized as part of a strategy to shift public thinking away from a deficit oriented view of education to an asset based approach to learning and development. Quebec has legislated this right; Manitoba has embedded this process in its adult learning centres. Both have successfully integrated more people into their development systems as a result. In Nova Scotia this could be part of strengthening the Adult learning Act. The ROA has started a process of recognizing skills and abilities according to a new core skills framework. This process could be applied more broadly and incorporated into the fabric of NS as a place that recognizes the learning of all people, immigrants, those without qualifications and the highly skilled. Everyone in NS could have access to developing their own record of achievement, documenting what they know and can do. Recognizing each person’s learning allows people to see themselves differently. A recent study by the Council of Adult and Experiential Learning (CAEL) of 60,000 people in the United States found much evidence to suggest that those who go through a PLAR process have increased confidence and self-esteem, improved training outcomes and greater links to employment. Instead of starting with trying to change the whole system—we could approach this as starting with individual citizens—helping them to reflect on what they know and can do—and applying this positive approach to building the future.

4) **Consider targets for education (upgrading) and employment — for specific groups.**

Portugal set target of raising the education level of 1,000,000 people in the workplace over a 5 year period. They wanted to raise the overall level of education (average level grade 7) to equivalent of secondary school completion. They used PLAR portfolio and Adult education modules – going out to rural communities, workplaces, churches, community halls etc., and were highly successful – in 3 years had reached over 600,000. The EU has also set an employment target of 75% by 2020 which will require greater emphasis in reaching out to people with low educational levels to find jobs and a greater emphasis on continuing education and adult learning. Without targets it is difficult to know what we have achieved.
Startup Nova Scotia: Comment for the Nova Scotia Commission on Building Our New Economy

By Peter Moreira
Principal of Entrevestor, www.entrevestor.com

Introduction

The Nova Scotia Commission on Building Our New Economy commissioned me to write a brief comment recommending ways to continue and improve the success of the Nova Scotian startup community.

ENHANCING NOVA SCOTIA’S STARTUP SEGMENT

Startups in Nova Scotia are flourishing. They are developing amazing products, attracting capital, selling around the world and creating employment. The tech, biotech and clean-tech segments are still in their infancy, so more work needs to be done to continue this growth.

One striking feature of the startup community is a profound belief that its development must be led by entrepreneurs. Luckily, entrepreneurs throughout the region are working together to improve the ecosystem for seeding young companies. Here are five suggestions on how government and academia can work with the private sector to further create optimum conditions for growing prosperous companies. Only one recommendation requires new provincial government spending.

Develop a Regional Strategy – A unified regional ecosystem for startups is utterly essential because the most valuable resource for knowledge-based businesses is human talent. No Atlantic Canadian province has a large enough talent pool to develop a complete startup industry, so everybody gains by development of a regional community. However, the community must deal with four provincial governments, each enacting policies independently. Therefore, the community is striving to develop a unified ecosystem against a patchwork of four sets of regulations and funding programs. The provincial governments must collaborate on these strategies.

Recommendation: The Nova Scotia government should propose a deputy minister of Economic and Regional Development and Tourism hold quarterly meetings with counterparts in the other three Atlantic Provinces and a senior representative of the Atlantic Canada Opportunities Agency. These meetings could provide an exchange of ideas and identify strengths and weaknesses in the ecosystem. The goal would be to move over time to harmonize the policies of the four provinces. This recommendation would cost nothing.

Enhanced Equity Tax Credit Program – Aside from talent, the greatest need for young companies is capital. In Nova Scotia, equity tax credits, or ETCs, give investors a tax credit of 35 percent of an investment in a qualifying company up to a maximum credit of $50,000. The program is open to Nova Scotian residents investing in Nova Scotian companies. The problem is the pool of capital available for investment by Nova Scotian residents is too small to finance a meaningful growth by startups.

Other states and provinces have more liberal policies. The best model is Minnesota’s Angel Tax Credit. Under the Minnesota system, it doesn’t matter whether the investor is a fund or an individual; he, she, or it still gets a 25 percent tax credit up to a maximum of $125,000 per year. What’s more, it doesn’t matter whether investors are based in Minnesota, another state, or even another country; they still get the tax credit. Nova Scotia should mirror the
Minnesota system.

If we worry about the government writing cheques for people outside the province, we are looking at it the wrong way. This policy would channel investment capital into small businesses with the highest growth potential, as judged by local and international investors. The government should be willing to ease these investors’ risk by offsetting part of their investment, regardless of where they live. The emphasis has to be on the benefit for the Nova Scotian companies and the Nova Scotian economy.

**Recommendation:** Nova Scotia should adopt three components of the Minnesota plan: a higher maximum tax credit; a credit that applies to institutions as well as individuals; and extend ETCs to investors from outside Nova Scotia.

The cost would depend on how the government caps the program. A cap of $30 million in annual ETC expenditures by the government would greatly improve the environment for raising capital. It would also prove less costly than many recent economic development efforts.

**Develop Technology Sales Skills** – Startup entrepreneurs say the skill position they need most is technology sales people. (Note: this refers to sales, not marketing.) There is a general shortage in Canada and an acute shortage in Atlantic Canada. There is a huge opportunity for a post-secondary institution to launch a program or institute for tech sales.

**Recommendation:** The government should coordinate efforts by a university or community college to develop a program for tech sales. If possible, a private donor could lend his or her name to a Technology Sales Institute to finance the costs of the program. Efforts should also be made to secure scholarships from the tech/startup community.

There would be no cost to the government. The cost to the university or community college would likely be offset by tuitions and scholarships.

**Computer Science Education** – Computer science education in Nova Scotia is now an optional program in Grade 12. As well as improving math education, Nova Scotia should introduce some programming at an earlier age. There are superb computer science programs in universities, but they are daunting for students who are not “Geeks”, especially women. There’s an opportunity for an institution like Mount St. Vincent to launch a program that bring tech-ropies into this field that is crying out for quality programmers.

**Recommendation:** Introduce programming courses into junior high school, or encourage more extra-curricular programs. Work with a post-secondary institute to introduce coding programs for people who are new to technology. I can’t estimate the costs but they shouldn’t be too onerous.

**Recognize that Tech is an Urban Phenomenon** – Technology companies grow where talent abounds, so a successful program to encourage innovation will show more results in the two urban centres – around Halifax and Sydney – than in rural parts of the province. Startups will grow in rural areas, and they should be supported and applauded. But we have to accept there will be a disproportionate number of startups in large centres.

**Recommendation:** Accept that a successful policy to develop startups will have greater traction in cities.

This policy may save money because it will prevent the province from spending too much to force tech startups into communities that don’t have the population to support them.
The Commission heard many calls for the future economy of Nova Scotia to be reshaped towards ever-increasing sustainability. However the term sustainability has been used and misused in so many ways that there were calls in community sessions for it to be banished from our vocabulary. But most participants supported the fullest meaning of the term: enduring economic prosperity that respects our values and natural environment. Commitment to this future – a thriving economy, just and vibrant communities, and stewardship of nature – will need to be an essential element of any shared vision in Nova Scotia.

There are many exemplary policies and actions undertaken by Nova Scotian companies and community groups, municipal and First Nations governments, and individuals committed to sustainability goals. These range from energy efficiency measures to volunteerism to the implementation of community sustainability plans. At the provincial level, legislation and resources are moving us toward energy efficiency, increased capacity for renewables, and carbon emission reduction. Beyond the environmental aspect of sustainability, the Province plays a key role in striving for social and economic inclusion through community services and cultural programing.

The Nova Scotia Environmental Goals and Sustainable Prosperity Act (2007) and its amended form, the Green Economy Act (2012) set out a framework to pursue and measure sustainability that directly links environmental and economic progress. The Act, known in short as EGSPA, established a Roundtable on the Environment to monitor and stimulate sustainability achievement. The Roundtable is made up of a cross-section of individuals linked to government, business, educational institutions, and non-governmental organizations from across the province. This collaborative approach, where diverse perspective and expertise can work to find agreement, is reflective of the new economy mode needed to get us beyond the stand-offs that have come to dominate development discourse.

Green economy is another phrase that carries multiple meanings. It is most often used in relation to entrepreneurial opportunities that have emerged with public and regulatory demands for environmentally friendly products and processes. Nova Scotia’s clean tech businesses are part of the new green economy, but so too are businesses and institutions that, while not producing environmental products or services, have realigned their activities to meet green goals. In the course of its work, the Commission learned of the development of a Green Economy Strategy within the Provincial Government. The fundamental premise of the undertaking is that environmental protection and resilient economic growth need not be incompatible. In fact, green economic activity can generate significant new investment and job creation, and this conforms well to the Commission’s vision for new economy in Nova Scotia.

‘No Growth’ labels a collection of views that prescribe scenarios of deliberate planning for economies that are not oriented toward expansion and growth on conventional scale indicators such as GDP. We are not here discussing the description of economies that are stagnant or in recession despite aiming for growth. Steady State economy is among the models called for by no-growth proponents. Advocates who voice a critique of growth-focussed economic strategies are grounded in concerns of environmental depletion, income inequality and exclusions, labour exploitation, and, generally, materialism. Many who call for growth to be abandoned as the goal of development offer programs...
for transition to economies that work toward correcting these threats (e.g. Transition Towns, New Economics Institute). Indicators that measure more broadly defined prosperity, such as the Human Development Index and the Genuine Progress Indicator, are gaining credibility but have not been widely adopted for use by nation states who operate in financial systems bound to dominant indicators.

Nova Scotia’s consistent slow growth is not an achievement of deliberate planning of an alternative to dominant economic models; it is quite simply poor performance within the dominant paradigm. To champion a no growth mode in HRM or the entire province without a consensually planned alternative route to genuine distributed prosperity is exclusively oppositional. If enough resistance to growth is mustered and not accompanied by resourced propositions for sustainable abundance, we will have not only less wealth, but more unemployment, poverty, and the inability to provide services and protect the environment. Green Economy proposes, instead, growth within parameters of values and capacity, and could include zoning for certain economic activities to be pursued or excluded.

THE GREEN ECONOMY – DEFINITION AND POLICY RESEARCH

The following notes were developed by the Nova Scotia Green Economy Strategy Team of the Nova Scotia government.

- **Definition:** Our focus and definition will be “Greening” the economy, rather than endless debate on perfect definition of “green economy” as though it is a sector (e.g. clean tech). Also as TD Economics pointed out in a recent report, a narrow approach to defining some sectors as “green”, others as “brown”, excludes environmentally positive actions going on outside of enterprises that are exclusively “green”.

- **‘Greening’** means taking a larger view of Efficiency: i.e. when we combine ‘economic efficiency’ (max cost savings, now) with ‘environmental efficiency’ (sustaining our natural assets, long term), we capture the total benefit.

- **The Keys to building a greener economy:**
  - Increase energy and resource efficiency
  - Promote “Regulatory Certainty”**: Well-designed regulation is not a “job killer” or obstacle to economic expansion. Instead, industry surveys say it triggers new investment that brings innovation, economic expansion, greater longevity of businesses and jobs.
  - Address business complaints (especially from small business) about “red tape”: The Commissioners noted that many such complaints were really about regulatory inefficiency, e.g., can’t get through by phone; prescriptive regulation; lack of single window to file, etc. than about “over-regulation” pe se. It is possible and appropriate to support improvements in regulatory efficiency while promoting regulatory certainty and effectiveness.

A review of current best practice and policy research on the green economy yields the following findings relevant to Nova Scotia:

1. The economy cannot sustain expansion and prosperity without clear policies for sustainability of our energy, resources, and ecosystems.

2. A green(er) economy means greening all sectors, not only environmental goods and services.

3. Regulatory Certainty and well-designed regulation in energy, environment, and natural resources is repeatedly cited by industry as crucial to the emerging economy. It triggers investment and innovation. Early adopters gain economic advantage.

4. Energy and resource productivity and efficiency are core measurable goals.

5. Greater resilience and adaptability on climate change and its impacts on infrastructure and industry are economic wins.

6. Re-investing resource rents for enduring benefits can help build a resource efficient, low-carbon, and climate resilient economy.
7. Most “green jobs” are not new occupations, but existing occupations where the skillsets and knowledge are made “greener” to meet emerging duties, regulations, and markets.

8. Measurement: It is crucial to establish appropriate indicators for measuring a green(er) economy.

SUSTAINABILITY IN NOVA SCOTIA

Nova Scotia has committed to two strategies to improve our environment and develop green energy sources. The first of these is the Environmental Goals and Sustainable Prosperity Act (EGSPA), which states that the Province will strive to become one of the cleanest and most sustainable environments in the world by the year 2020. The government has also committed to develop a Green Economy Strategy by 2014.

Nova Scotia has abundant sources of renewable energy, including wind, tidal, geothermal and solar energy as well as agricultural and forest biomass. Using these natural resources to help meet energy demands, while also working toward reducing demand through efficiency, presents a significant development opportunity for rural areas of the province in particular. A prime example of a growing green economy sub-sector in Nova Scotia is the wind industry, which was in its infancy ten years ago, but today tallies one billion dollars in investment. Nova Scotia’s universities and colleges also have opportunities to provide graduates with solid experience and education in environmental stewardship and green energy technologies to fill jobs created through growth in the sector. Green jobs include those in renewable energy sources and bioenergy, energy storage, green buildings, energy reduction through local food production, public transit, and environmental protection.

Other sectors within the green economy that are also seeing development include sustainable farming, forestry and fisheries. The number of farmers actually grew in Nova Scotia in 2012 – the only province to see an increase – although there are troubling trends including decreasing revenues and the need to work off-farm. Increasing interest in local food consumption as well as safe and organic food sources holds promise for the farming industry going forward. Sustainable local food production has proven to be a foundation for ancillary economic developments such as artisanal product development, agri-tourism, retail and entrepreneurial incubators such as farmers’ markets.

There is growing interest in silviculture in our forestry industry: a method of harvesting that creates 50% more jobs than does clear-cutting, as well as presenting higher value and quality timber for value-added manufacturing.

Our fishing industry is responding to consumer demand, lower catches, and lower prices by exploring ways to change fishing technologies and models to secure more value for high quality, sustainable seafood. Trap-caught shrimp and hand-caught ground fish ventures are two examples of this development. Most of the major fishing sectors either have achieved Marine Stewardship Council certification for sustainability or are working towards that goal.

Nova Scotia is also globally recognized for its recycling and composting programs. The related Clean Tech sector is profiled separately in this report section. Further efforts are needed in the greening of our transportation sector, notably with community active and public transit systems, and the potential for increased use of rail transit in order to improve the sustainability of our transportation use.

Nova Scotia’s green economy is growing but lacks coherent statistic measurement at this point. There are many reasons to continue the momentum with support and training of skilled workers, continuing to develop new, innovative green technologies, and encouraging public interest and participation in energy conservation. Aside from being good global citizens, placing ourselves in a position to develop self-sufficiency and expertise, and having the ability to benefit from eco-tourism, a green economy helps our province remain a wonderful place to live for future generations.
ON SOCIAL SUSTAINABILITY

Municipalities across Nova Scotia have developed sustainability plans that address environmental, economic, social, and cultural sustainability. While the Commission is focused on our need for economic growth, it is clear that each element of sustainability depends on the others. In particular, social sustainability, the ability for communities to collaborate and find shared goals, is paramount for the province as a whole to navigate economic development decisions.

FOR DISCUSSION:

- Nova Scotians need mutual trust and a sense of common purpose if we are to navigate the rapids of change successfully. We need unity while respecting and celebrating our diversity - of culture and beliefs, of urban and rural community, of abilities and values.

- Compromise and tolerance are minimal standards of community living. To achieve shared vision of place and entity, we need to agree on common values, and parameters of sustainability. These are the ingredients of a renewed social pact among Nova Scotians, inclusive of all citizens, governments, institutions, community organizations, and businesses.

- Building our new economy is a vital part of the on-going renewal of our province as a wonderful place to live. It requires desire and belief - a can-do attitude.

- New tools for authentic citizen engagement should be used to re-build our social capital. Nova Scotia has much expertise in this area through organizations such as Engage Nova Scotia, the Coady Institute, Alia, the Tatamagouche Centre, Rural and Coastal Communities Network, and Art of Hosting workshops. Within government, the Public Engagement Support Unit is well equipped to assist government with genuine connections on policy discussions.

- A proposed vision statement: As Nova Scotians we commit to realizing a shared vision of our province that ensures the well-being of both current and future citizens by: creating just and vibrant communities; pursuing a thriving abundant economy; the stewardship of our natural environment.

- Shared wealth requires sustainable wealth creation and collaboration.

- Indicators such as the Human Development Index, Well-being Index, or GPI should be adopted to accompany standard economic indicators such as GDP in Nova Scotia.

NEW STRATEGIES TO ENGAGE RURAL COMMUNITIES IN RESOURCE DEVELOPMENT

Nova Scotia is experiencing a growing tension between economic development and the desire of communities to protect what they have and know. Frequently, this is construed as a battle between development and anti-development factions with little room for dialogue or compromise. This tension often reflects a long history of great wealth being generated from resource extraction and later a heavy burden of environmental damage and social disadvantage being left for communities and governments to cope with.

For example, while the economic benefits of the Sydney Steel Plant were undoubtedly positive to the Cape Breton economy, the collateral damage to community health and the environment became the responsibility of the public and government. In this case, the public had to shoulder the impacts of pollution and failure to regulate waste with a significant investment of tax-payer funded clean up. Another example would be the collapse of groundfish fishery in the 1990s, with coastal communities bearing the brunt of the collapse and the federal government having to transition fish workers to other jobs.

The CRA poll carried out for the Commission found that Nova Scotians from all regions feel that environmental protection is important, and that in some cases environmental degradation is not acceptable under any circumstances. There is a lack of trust in both the government and private sector in protecting the environment, either through regulatory mechanisms or
best practices.

The opposition to uranium mining and fracking as extractive resources comes from a genuine concern for the environmental impacts of such industries, as well as a desire to explore alternatives to such extraction for our energy needs. Yet, we see other jurisdictions financially benefiting from such industries and governments are receiving much needed revenues to contribute to public infrastructure, health care, transportation and education. Nova Scotia must find a way forward in these conflicts. There are a variety of mechanisms to decrease conflict and ensure community benefit. In some cases, it may mean that we do not develop some resources where in other cases it may mean that we have enhanced regulatory frameworks that ensure community input and environmental protection.

As a first step, engaging communities in economic development planning will help develop a vision within which to constrain or allow certain types of development. Nova Scotia conducted extensive consultations for a Natural Resource Strategy, which attempted to bring in community perspectives and industry perspectives. There has been disappointment in how the recommendations from this process have been implemented, and there is a view that community input often gets set aside for industrial interests and the immediate need to support economic development. However, given our low economic growth over the last two decades and increasing demands on government to supply public infrastructure, citizens need to work through the issues to find a sustainable balance. There is a collective recognition of the need for well paying jobs in rural areas, that natural resource development is an important driver in rural economies and that greater value can be extracted from our natural resources.

The concept of community benefit from economic development is being explored in other jurisdictions — the Boreal Forest Initiative in central Canada for example has attempted to meet the needs of the environment and the forestry industry, although the process has been criticized for the lack of inclusion of First Nations communities. Rural Action in Southern Appalachia has assisted communities in recovering from coal extraction and then abandonment of that industry, leaving behind unemployment and environmental degradation. Initial efforts are focused on environmental remediation and recovery and building alternative economies. Now faced with the potential of fracking, Rural Action is working to ensure that should such activity take place, there is adequate community benefit through compensation to land owners. The policy framework in the US allows this to take place, where as Canadians do not own the rights to the mineral or oil and gas beneath the soil and as such we tend to expropriate rather than develop mechanisms where individuals and communities can benefit.

In Nova Scotia, we have much better success at reaching a shared vision for economic development where there is community benefit that is clearly articulated at the outset. These include:

- **Community Feed In Tariffs (COMFIT)** program for wind farm development. Where the community is seen to benefit directly either from renewable energy or revenues directly back to the community, there is significantly less opposition to wind development.

- **Community forests** proposals resulting from the closure of the Bowater Mill, and the public purchase of the Bowater-Mersey lands have been the result of collaborative input from multiple stakeholders.

- The **Owner-operator and Fleet Separation** policies have for many years ensured that ownership of fishing rights for inshore fleets remains in coastal communities.

Rebuilding Nova Scotia’s economy will require changes in how we perceive development, how we quantify community benefit and how we embark on the process of economic development planning that
meets overall objectives of economic, social and environmental benefits.

Policy Options

GOVERNMENT

The provincial government should explore options for new legislative and regulatory mechanisms to ensure that rural communities (through their local government structures) benefit directly from the development and continued exploitation of their local resources, be they energy, minerals, fisheries, forestry and agricultural products, etc. This could involve changes to property taxes or the development of heritage funds, remediation funds and/or insurance mechanisms to guarantee that the negative impacts of resource extraction are not left to local communities to carry.

PRIVATE SECTOR

Improved tax or royalty revenues flowing directly to rural communities could help them mitigate the risks associated with various forms of resource extraction, and could create an environment of improved buy-in and social license.

Private companies could develop creative mechanisms for community economic development that support an engaged workforce, a good example being the contributions of Oxford Frozen Foods in Ova Scotia to support the local public school and to provide a employee mortgage repayment program to keep young families in the local area.

COMMUNITIES

Local governments could establish processes to engage citizens directly in economic development planning, including participatory budget processes, so that communities have a say in their economic future.

They could also establish processes to ensure reinvestment of community benefits in long-term community sustainability.

CITIZENS

Concerned individuals have an obligation to participate to the extent possible in collaborative economic planning and local decision-making on economic development and resource extraction activities. They should participate in regulatory and legislative processes to ensure community economic benefit is considered for all rural development processes.
Fostering more export-based entrepreneurs in Nova Scotia

By David Campbell, for the Nova Scotia Commission on Building Our New Economy

Background

There is no question the decline in international exports from Nova Scotia has played a role in the province’s weak economic performance in recent years. As shown in Table 1 the total value of international merchandise exports from the province has declined by 30 percent over the past 10 years. Much of this decline comes from the reduction in natural gas exports but many of the province’s other key traditional industries have witnessed declines including seafood, forest products and mining.

Governments in Nova Scotia have invested an enormous amount of time and money over the past 30 years with the specific goal of encouraging small and medium-sized firms to export their products and services. Other than a few celebrated examples, there is very little evidence this substantial investment has worked. A review of the top merchandise export sectors reveals they are mostly dominated by large firms. In fact, the number of exporters from Nova Scotia is in decline dropping by 10 percent between 1999 and 2009. Nova Scotia has fewer international exporters (adjusted for population size) than all other provinces except Newfoundland and Labrador.

In addition, the environment for Nova Scotia exporters has never been more challenging. Consider the following trends:

- In just over a decade, the high value of the Canadian dollar has wiped out a 30 percent cost advantage for firms exporting into the United States. Wage costs are rising and the province’s productivity levels are below the national average. This is putting significant competitive pressure on many of the province’s key export industries.
- The opening up of the global economy means Nova Scotia firms face competition like never before in history. Instead of competing against other Canadian or U.S. firms, Nova Scotia exporters are competing with firms in Brazil and Indonesia. This is particularly true for our traditional industries such as forest products and seafood.
- The median age of the population in Nova Scotia is rising fast. This means there are relatively fewer young people as potential entrepreneurs and the older business owners may be less interested in taking the risk of building new export ventures.

Table 1. Exporting Firms by Province (2009)

<table>
<thead>
<tr>
<th>Region</th>
<th># of exporters</th>
<th>Per 100,000 population</th>
<th>% Change 1999-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>307</td>
<td>60.6</td>
<td>38%</td>
</tr>
<tr>
<td>PE</td>
<td>203</td>
<td>145.5</td>
<td>25%</td>
</tr>
<tr>
<td>NS</td>
<td>831</td>
<td>90.8</td>
<td>-10%</td>
</tr>
<tr>
<td>NB</td>
<td>728</td>
<td>97.5</td>
<td>-14%</td>
</tr>
<tr>
<td>QC</td>
<td>10,681</td>
<td>137.8</td>
<td>11%</td>
</tr>
<tr>
<td>ON</td>
<td>21,400</td>
<td>165.5</td>
<td>5%</td>
</tr>
<tr>
<td>MB</td>
<td>1,564</td>
<td>129.7</td>
<td>5%</td>
</tr>
<tr>
<td>SK</td>
<td>1,128</td>
<td>111.3</td>
<td>31%</td>
</tr>
<tr>
<td>AB</td>
<td>4,374</td>
<td>121.8</td>
<td>22%</td>
</tr>
<tr>
<td>BC</td>
<td>6,401</td>
<td>146.0</td>
<td>0%</td>
</tr>
<tr>
<td>CAN</td>
<td>47,637</td>
<td>143.0</td>
<td>7%</td>
</tr>
</tbody>
</table>

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

Instead of focusing on small companies that ‘need the money’ to help them develop export markets, governments should be focused on more clearly defined export opportunities, looking to support specific industries and trying to link trade with investment, immigration and tourism to build greater economic linkages with specific, targeted countries.

WE NEED TO FOCUS ON INDUSTRIES WHERE WE CAN COMPETE

The competitive environment for most export markets has fundamentally changed. The cheap labour and undervalued Canadian currency advantages that supported Nova Scotia exports for more than two decades have all but disappeared. Now, we need to focus on exportable products and services where there is a demand and where we can compete.

Natural resources are a fundamental part of this equation. Across Canada, natural resources-related revenue (including renewable resources such as forests, seafood and agriculture and non-renewable resources such as uranium, potash, oil and gas) accounts for the majority of national exports. In addition, natural resource industries are the fastest growing export sectors (Table 2). In Nova Scotia, by contrast, natural resources-related exports have been in decline (Table 2) and that has dampened economic growth and job creation in the province – particularly in smaller communities and rural areas. We need to spend considerable time thinking about what natural resource sectors have export potential and work to attract investment into those sectors.

But natural resources are not the only export area where Nova Scotia can compete. We need to focus on sectors where proximity to major U.S. and Canadian markets is an advantage (i.e. certain food manufacturing and just-in-time manufacturing processes).

In addition, we need to foster service industries where

<table>
<thead>
<tr>
<th>Industry (NAICS):</th>
<th>2003</th>
<th>2012</th>
<th>10 Year % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>32621 - Tire Manufacturing</td>
<td>$ 685,956</td>
<td>$ 1,028,102</td>
<td>50%</td>
</tr>
<tr>
<td>31171 - Seafood Product Preparation and Packaging</td>
<td>634,136</td>
<td>489,338</td>
<td>-23%</td>
</tr>
<tr>
<td>14111 - Fishing</td>
<td>560,134</td>
<td>432,934</td>
<td>-23%</td>
</tr>
<tr>
<td>32211 - Pulp Mills</td>
<td>191,138</td>
<td>164,904</td>
<td>-14%</td>
</tr>
<tr>
<td>31141 - Frozen Food Manufacturing</td>
<td>76,951</td>
<td>120,598</td>
<td>57%</td>
</tr>
<tr>
<td>32212 - Paper Mills</td>
<td>472,607</td>
<td>111,723</td>
<td>-76%</td>
</tr>
<tr>
<td>32611 - Unsupported Plastic Film, Sheet and Bags</td>
<td>68,540</td>
<td>88,304</td>
<td>29%</td>
</tr>
<tr>
<td>32111 - Sawmills and Wood Preservation</td>
<td>193,501</td>
<td>80,905</td>
<td>-58%</td>
</tr>
<tr>
<td>41811 - Recyclable Metal Wholesaler-Distributors</td>
<td>23,956</td>
<td>76,081</td>
<td>218%</td>
</tr>
<tr>
<td>33451 - Navigational, Measuring, Medical and Control Instruments Manufacturing</td>
<td>64,793</td>
<td>66,397</td>
<td>3%</td>
</tr>
<tr>
<td>32629 - Other Rubber Product Manufacturing</td>
<td>38,450</td>
<td>65,279</td>
<td>72%</td>
</tr>
<tr>
<td>32411 - Petroleum Refineries</td>
<td>84,120</td>
<td>55,296</td>
<td>-34%</td>
</tr>
<tr>
<td>33392 - Material Handling Equipment Manufacturing</td>
<td>14,056</td>
<td>53,784</td>
<td>283%</td>
</tr>
<tr>
<td>33641 - Aerospace Product and Parts Manufacturing</td>
<td>28,373</td>
<td>50,671</td>
<td>79%</td>
</tr>
<tr>
<td>32599 - All Other Chemical Product Manufacturing</td>
<td>9,575</td>
<td>48,378</td>
<td>405%</td>
</tr>
<tr>
<td>31261 - Spring and Wire Product Manufacturing</td>
<td>22,067</td>
<td>43,401</td>
<td>97%</td>
</tr>
<tr>
<td>32613 - Laminated Plastic Plate, Sheet and Shapes</td>
<td>23,385</td>
<td>42,133</td>
<td>80%</td>
</tr>
<tr>
<td>21111 - Oil and Gas Extraction</td>
<td>1,200,299</td>
<td>38,736</td>
<td>-97%</td>
</tr>
<tr>
<td>33322 - Rubber and Plastics Industry Machinery</td>
<td>16,267</td>
<td>37,344</td>
<td>129%</td>
</tr>
<tr>
<td>33422 - Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing</td>
<td>21,565</td>
<td>37,242</td>
<td>73%</td>
</tr>
<tr>
<td>31321 - Broad-Woven Fabric Mills</td>
<td>28,641</td>
<td>28,675</td>
<td>0%</td>
</tr>
<tr>
<td>11212 - Dairy Cattle and Milk Production</td>
<td>7,064</td>
<td>21,644</td>
<td>206%</td>
</tr>
<tr>
<td>32619 - Other Plastic Product Manufacturing</td>
<td>21,048</td>
<td>20,618</td>
<td>-2%</td>
</tr>
<tr>
<td>31411 - Carpet and Rug Mills</td>
<td>11,830</td>
<td>19,907</td>
<td>68%</td>
</tr>
<tr>
<td>21239 - Other Non-Metallic Mineral Mining and Quarrying</td>
<td>75,881</td>
<td>18,729</td>
<td>-75%</td>
</tr>
</tbody>
</table>

Sub-total: $ 4,574,336 $ 3,242,105 -29%
Others: $ 903,081 $ 579,626 -36%
Total (All Industries): $ 5,477,416 $ 3,821,731 -30%

Source: Industry Canada Trade Data Online.
statistics canada provides an estimated level of international export revenue for a wide variety of industries. for the industry group architectural, engineering and related services, nova scotia generates about seven cents’ worth of export revenue for every dollar of industry output (table 4) – below most of its peers across canada. nova scotia generates an above average amount of export revenue from a number of service industries including data processing, hosting, and related services; banking and other depository credit intermediation; insurance carriers; advertising, public relations, and related services; business support services; and even legal services.

the province generates comparatively less export revenue from software publishers, computer systems design and related services, motion picture industries, accounting and performing arts.

this table also reiterates that tourism is an ‘export’ industry. for every dollar in traveller accommodation industry output, 32 cents is export revenue behind only quebec and british columbia. nova scotia generates the highest level of export revenue from its amusement and recreation industries among the provinces.

how do we support firms that want to scale up to take on global competitors?

one of the key challenges facing potential nova scotia exporters is one of scale. for most companies, properly developing international markets requires significant sales and marketing resources as well as in-market knowledge. this is very hard for firms with limited sales resources. there are very small firms with...
highly niche products that can develop international markets with limited resources but that is not the case for most.

As shown in Table x, the vast majority of Nova Scotia’s 1,100+ manufacturing establishments have fewer than 20 employees. Only 7.2 percent have 100 or more employees. This poses a significant challenge to fostering more exports.

There are ways that government can help small firms scale up to compete in global markets.

First, government should be doing more to encourage private investment in high growth potential firms. There are many government funding programs for firms that need $10,000 to $100,000 and very few for firms requiring $1-5 million to fund expansion. The government can develop tax-based incentives to encourage more private sector from Nova Scotia and beyond to flow into high growth potential firms. Historically, Nova Scotia entrepreneurs have been reluctant to sell equity to an outside partner but that is changing. Particularly in the information technology and life sciences sectors, firms are now open to

<table>
<thead>
<tr>
<th>Table 4. Export shares per $1.00 of industry output</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS</td>
</tr>
<tr>
<td>Software publishers</td>
</tr>
<tr>
<td>Motion picture and video industries (except exhibition)</td>
</tr>
<tr>
<td>Data processing, hosting, and related services</td>
</tr>
<tr>
<td>Banking and other depository credit intermediation</td>
</tr>
<tr>
<td>Insurance carriers</td>
</tr>
<tr>
<td>Legal services</td>
</tr>
<tr>
<td>Accounting, tax prep., bookkeeping and payroll services</td>
</tr>
<tr>
<td>Architectural, engineering and related services</td>
</tr>
<tr>
<td>Specialized design services</td>
</tr>
<tr>
<td>Computer systems design and related services</td>
</tr>
<tr>
<td>Management, scientific &amp; technical consulting services</td>
</tr>
<tr>
<td>Scientific research and development services</td>
</tr>
<tr>
<td>Advertising, public relations, and related services</td>
</tr>
<tr>
<td>Business support services</td>
</tr>
<tr>
<td>Travel arrangement and reservation services</td>
</tr>
<tr>
<td>Performing arts, spectator sports and related industries</td>
</tr>
<tr>
<td>Amusement and recreation industries</td>
</tr>
<tr>
<td>Traveller accommodation</td>
</tr>
<tr>
<td>RV (recreational vehicle) parks, recreational camps, and rooming and boarding houses</td>
</tr>
</tbody>
</table>

opportunities, pre-qualify them and then promote the concept to entrepreneurs and investors in Nova Scotia and beyond. Immigrant investors could be made aware of the opportunities. These could include:

- Brownfield redevelopment of a former manufacturing site
- Supply chain opportunities for existing industries
- The development of a specific natural resource
- The use of land for agricultural purposes and specific agricultural opportunities
- Existing businesses looking for an exit.

This also includes the development of tools to help firms scale up and get ready for export markets. For example, a small community could use a vacant downtown real commercial building to establish an incubator for technology and other creative entrepreneurs. This is done in large cities – why can’t it be the same in smaller communities. It could be done in conjunction with the province’s community colleges which could be training people to become entrepreneurs in their chosen field of endeavour. A person could take a two year course in software programming and then move into an incubator facility where they develop tech-based business concepts and then pitch them to potential investors after a 3-6 month period.

SIMULATING SCALE: JOINT INTERNATIONAL MARKETING

One of the ways to overcome the scale problem is through joint or cooperative marketing efforts. This involves an industry (rather than a firm) picking specific international markets and jointly attempting to develop that market. This supports cluster development at home (i.e. wine producers) and helps generate the scale required to penetrate international markets.

LOCAL EXPORT OPPORTUNITY IDENTIFICATION

Traditionally, the identification of export opportunities has been left to the ‘market’. In other words, firms from around Nova Scotia would develop products or services and then approach government for support to start development markets outside the province.

In general, more effort should be undertaken by economic development organization to identify business opportunities, pre-qualify them and then promote the concept to entrepreneurs and investors in Nova Scotia and beyond. Immigrant investors could be made aware of the opportunities. These could include:

- Brownfield redevelopment of a former manufacturing site
- Supply chain opportunities for existing industries
- The development of a specific natural resource
- The use of land for agricultural purposes and specific agricultural opportunities
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This idea of opportunity identification should extend across all sectors of the economy. Communities and regional economic development agencies should be encouraged to focus on these kinds of opportunities. It can include tourism-related business opportunities and even local services opportunities in the community. Examples include:

- Retirement housing, health care and entertainment and lifestyle services.
- Educational opportunities
Good business ideas are pre-qualified and then pitched to potential investors rather than the old model of selling cheap costs and available labour.

**ATTRACTING IMMIGRANT ENTREPRENEURS WITH EXPORT AMBITION**

Nova Scotia attracts a moderate number of immigrant entrepreneurs each year (well below the national average) but the focus has been mostly on lifestyle entrepreneurs – those immigrants looking for a better life in Canada and will buy a small business in Nova Scotia to help them achieve their goal. For the most part they purchase restaurants, motels and other small retail or personal services businesses in Nova Scotia but few are ambitious entrepreneurs that go on to build large, export-based businesses in the province.

Nova Scotia has very few large or fast growing firms that are helmed by a first-generation immigrant. Using Progress Magazine’s list of Top 101 firms in Atlantic Canada, only two of Nova Scotia’s firms on that list are led by first generation immigrants: George Armoyan, the Syrian-born founder and CEO of Clarke Inc. and Danilo and Renato Gasparetto from Cherubini Machine Works. By contrast, a high-level review of the Top 100 firms in British Columbia found that nearly one-quarter were led by a first generation immigrant.¹

A 2005 study prepared for the Nova Scotia Office of Economic Development² looked at 119 high growth companies in Nova Scotia and found they were either lifetime or long-time residents of Nova Scotia prior to launching their current business. Only one of these businesses was owned by an immigrant.³

Immigrants can be important catalyst for entrepreneurship and economic growth. A study by the Kauffman Foundation examined a random sample of 1,882 engineering and technology companies across the United States started between 2006 and 2012.³ Of those companies, 458 (one quarter) had at least one foreign-born founder. In Silicon Valley, 44 percent of all new technology company startups in 2012 were founded by immigrants – and this was actually down from 52 percent in 2005. The Kauffman Foundation report concludes that the United States economy is at risk because of the declining levels of immigrant entrepreneurs setting up in the country.

It could equally be said that Nova Scotia’s economy has chronically underperformed the rest of North America because of its lack of high growth potential immigrant entrepreneurs. In addition, the lack of immigrants at a senior level in public and private sector institutions changes the management culture in Nova Scotia compared to the faster growing provincial and state economies across North America.

Fostering more immigrant entrepreneurs and immigrant senior managers would provide multiple benefits including:

- Changing the risk profile of the senior leadership team in firms. Some cultures are more accepting of risk while others are less tolerant.
- Aiding in market diversification. Foreign-born entrepreneurs can support efforts to diversify export markets away from the United States because of their knowledge of their countries/regions of birth.

According to Industry Canada data, new immigrant-owned SMEs (residing in Canada for less than 5 years) are principally located in Ontario (46 percent) and British Columbia (18 percent). Only four percent were located in all of Atlantic Canada at the time of the report.⁴ According to the report, new immigrant entrepreneurs in Canada tend to be young (under 39 years of age) and tend to invest more in R&D.

Nova Scotia could do far more to target potential

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¹ This was based on an initial review of Top 100 firms published in British Columbia. More analysis would be required to determine the actually number and influence of immigrant-led firms in British Columbia and other provinces in Canada.
immigrant entrepreneurs – particularly those with ambition to make it big. For example, there are thousands of immigrant entrepreneurs that are looking to get into the United States but are not able to do so. These should be prime targets for Nova Scotia.

Nova Scotia’s universities should be incubators of immigrant entrepreneurs. Potential entrepreneurs should be targeted and recruited in to advance their business concepts through graduate level research. They should then be streamed through incubator/accelerator programs in the province to ensure they have the required support here.

This applies to other Canadians as well. Nova Scotia should be positioned nationally as an excellent place to set up and grow a business. The vast majority of provincial and economic development programming in Nova Scotia is focused on trying to foster growth among the province’s existing (and dwindling) pool of high growth potential entrepreneurs. As shown in Figure x, the number of persons that are self-employed and that have employees (as a proxy for growth-oriented entrepreneurs) has declined by 11 percent while public sector employment is up by 24 percent (and private sector employees has increased by five percent). As more and more Nova Scotians move into the retirement years, the local pool of ambitious entrepreneurs will decline even further.

The net should be cast much wider throughout Canada and across the world. We want ambitious entrepreneurs from Bahrain to Bulgaria to British Columbia to consider Nova Scotia as the place to start their export-oriented business ventures.

The federal government is adapting its focus and looking to attract these ambitious, high growth potential entrepreneurs. Canada’s Citizenship and Immigration Minister, Jason Kenney, recently announced a new startup visa program that grants permanent residency to foreign entrepreneurs who persuade Canadian venture capitalists, angels, or business incubators to back them.

A more strategic view of immigration would also include efforts to attract immigrant talent into senior management within Nova Scotia’s public and private sector institutions.

INTERNATIONAL MARKET FOCUS: ALIGNING TRADE, INVESTMENT, IMMIGRATION AND TOURISM

Canada’s new trade and investment agreement with Europe (Comprehensive Economic and Trade Agreement - CETA) provides a good opportunity to think strategically about how Nova Scotia can develop better linkages with Europe. The CETA goes beyond just trade and Nova Scotia should be thinking about broadening the scope of effort when targeting international markets to include trade, investment, immigration and even tourism.

Nova Scotia is a small province with relatively limited ability to develop international markets (both private sector and government efforts). Efforts at alignment should help the province achieve a better bang for the buck.

Nova Scotia firms generate relatively limited exports to Europe. In 2012, the province shipped $377 million worth of merchandise exports (representing 10 percent of total provincial exports) spread over a number of countries including France, United Kingdom, Netherlands, Germany and Belgium. Which of these countries holds the best potential to build those broader economic linkages?
More immigrants from the target country will support greater trade linkages as some of the new immigrants will be potential exporters and others will make good market development specialists given their knowledge of the target market language, culture and business environment.

More investment from the target country will foster greater potential for exports to that country.

Fostering more tourists from the target country will expose more people to Nova Scotia as an attractive place to live and invest.

Beyond Europe, Nova Scotia’s exporters are developing China, Russia, India and Turkey (see Table 6). The province should look select international target markets with this more holistic approach in mind. This kind of focused country targeting makes it easier to develop business linkages (industry association to industry association), government to government (province to state or city to city) and institutional (educational institution to educational institution).

### UNDERSTANDING THE COMPETITIVE ENVIRONMENT FACING EXPORTERS

Governments and business organizations will talk at great length about the need for Nova Scotia to be ‘competitive’ for business investment. This is usually discussed, however; in general terms such as tax rates, minimum wages, regulatory burden, etc. Organizations such as the Canadian Federation of Independent Business (CFIB) grade provinces on their competitiveness.

However, the definition of what it means to ‘be competitive’ changes depending on the industry. The competition for Nova Scotia’s restaurants, hairstylists and plumbers is exclusively local. The competition for the province’s accounting, legal and other professional services is mostly local but increasingly national and international. The competition for Nova Scotia’s exporters - forest products, aerospace and software development sectors - is almost exclusively national and international.

### Table 6. International merchandise exports from Nova Scotia (excluding the US)

<table>
<thead>
<tr>
<th></th>
<th>In $millions</th>
<th>% of Total</th>
<th>% Point Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2003</td>
<td>2012</td>
<td>2003</td>
</tr>
<tr>
<td>China</td>
<td>$64.6</td>
<td>$152.8</td>
<td>6.1%</td>
</tr>
<tr>
<td>France</td>
<td>$94.2</td>
<td>$81.4</td>
<td>8.9%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$88.7</td>
<td>$76.6</td>
<td>8.4%</td>
</tr>
<tr>
<td>Japan</td>
<td>$159.6</td>
<td>$74.9</td>
<td>15.1%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>$25.0</td>
<td>$60.6</td>
<td>2.4%</td>
</tr>
<tr>
<td>India</td>
<td>$21.4</td>
<td>$49.6</td>
<td>2.0%</td>
</tr>
<tr>
<td>Germany</td>
<td>$47.2</td>
<td>$47.6</td>
<td>4.5%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>$30.6</td>
<td>$41.7</td>
<td>2.9%</td>
</tr>
<tr>
<td>Belgium</td>
<td>$49.9</td>
<td>$37.4</td>
<td>4.7%</td>
</tr>
<tr>
<td>Korea, South</td>
<td>$40.1</td>
<td>$35.1</td>
<td>3.8%</td>
</tr>
<tr>
<td>Mexico</td>
<td>$38.6</td>
<td>$31.6</td>
<td>3.7%</td>
</tr>
<tr>
<td>Russia</td>
<td>$2.3</td>
<td>$31.5</td>
<td>0.2%</td>
</tr>
<tr>
<td>Turkey</td>
<td>$3.1</td>
<td>$26.7</td>
<td>0.3%</td>
</tr>
<tr>
<td>Denmark</td>
<td>$37.0</td>
<td>$24.8</td>
<td>3.5%</td>
</tr>
<tr>
<td>Australia</td>
<td>$10.3</td>
<td>$23.3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Singapore</td>
<td>$4.1</td>
<td>$19.4</td>
<td>0.4%</td>
</tr>
<tr>
<td>Cuba</td>
<td>$34.3</td>
<td>$18.9</td>
<td>3.3%</td>
</tr>
<tr>
<td>Norway</td>
<td>$30.4</td>
<td>$18.4</td>
<td>2.9%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$0.1</td>
<td>$15.9</td>
<td>0.0%</td>
</tr>
<tr>
<td>Spain</td>
<td>$33.8</td>
<td>$15.7</td>
<td>3.2%</td>
</tr>
<tr>
<td>Italy</td>
<td>$24.3</td>
<td>$10.6</td>
<td>2.3%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>$0.4</td>
<td>$10.2</td>
<td>0.0%</td>
</tr>
<tr>
<td>Brazil</td>
<td>$32.0</td>
<td>$9.7</td>
<td>3.0%</td>
</tr>
<tr>
<td>Israel</td>
<td>$1.8</td>
<td>$9.3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Saint Pierre-Miquelon</td>
<td>$6.0</td>
<td>$9.2</td>
<td>0.6%</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>$1.2</td>
<td>$8.2</td>
<td>0.1%</td>
</tr>
<tr>
<td>Sweden</td>
<td>$18.2</td>
<td>$8.2</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Source: Industry Canada Trade Data Online.
Focusing on generating a return on taxpayer investment will force discipline on the efforts and ensure the taxpayer sees the value of the public investment. The table above shows an example of a return on taxpayers’ investment model for export activity support. If the government spent $4 million to help an industry or group of firms develop an international market and this led to $50 million worth of incremental export revenue into Nova Scotia, that would generate some $6 million worth of incremental tax revenue to the provincial and local governments in the province leading to a solid return on the investment ($1.50 worth of increased taxes for every dollar invested). Further, these exports could be sustained in subsequent years leading to an ongoing stream of tax revenue for governments with no further investment required.

Governments (federal and provincial) along with regional economic development agencies should be primarily focused on what sectors of the economy have export potential – that includes mining, oil and gas, natural resources, manufacturing and services – not on what firms need financial support to start exporting (that may come later). The focus should not be on small, medium or large firms but on opportunities. Then the role for the public sector to support export development for each of these industries should be defined. This can include:

- Developing jurisdiction-to-jurisdiction trade and investment linkages. This includes governmental but also economic development-related organizations.
- Enhancing transportation infrastructure links.
- Developing sales channels – in market sales consultants/support.
- Joint marketing in the targeted markets.
- Fostering more immigrants from targeted geographic markets including those with strong business links.
- Fostering educational partnerships and targeting international. The competition for the mining and oil and gas exploration sectors is also international in scope.

If Nova Scotia is to foster more competitive export-based industries, it has to shape policy understanding the competitive context facing these industries.

If Nova Scotia is attempting to be competitive in energy-intensive sectors it needs to look at energy costs in the jurisdictions where it faces the greatest competition. In Germany, for example, large industries have been excluded from bearing the cost of an ambitious green energy program in order to ensure they remain competitive.

This concept of being competitive in international export markets extends to tax rates, incentive policies, workforce training programs, infrastructure development and any other public policy related issue that impacts competitiveness.

**THE ROLE OF GOVERNMENT**

There is a strong public interest in fostering more export industries in Nova Scotia and elevating the level of international exports from the province. Every $1 million worth of exports can generate between five and 15 new jobs in the province and between $70,000 and $200,000 in tax revenues for government.

However it is important for government to develop an intelligent role in support of export development. This role should be focused on achieving sustained growth in export activity and on generating a return on the taxpayers’ investment into the efforts in the form of new tax revenue.

<table>
<thead>
<tr>
<th>Example return on taxpayers’ investment calculation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased export revenue from government supported initiatives</td>
</tr>
<tr>
<td>Taxpayer investment in these initiatives</td>
</tr>
<tr>
<td>Incremental tax revenue to local and provincial governments in Nova Scotia</td>
</tr>
<tr>
<td>Return on the taxpayers’ investment</td>
</tr>
</tbody>
</table>

*Example only. Actual return on taxpayers’ investment would depend on the industry involved.
those markets for foreign students in our post-secondary institutions.

- Possibly developing trade financing and support programs if there is demonstrated need.

**ONE DOCUMENT REVIEW OF DUKE STUDY**

Title: Nova Scotia’s Ocean Technologies: A Global Value Chain Analysis of Inshore & Extreme Climate Vehicles, Unmanned Underwater Vehicles and Underwater Sensors & Instrumentation

Author(s)/Organization: Duke Univ.
Year of Publication: 
Length: 131 page report
URL or Location:

**Overview Description:** a report on value chains in ocean technology sectors

**Key Topics:** value chains, sectors

**CONTENT SUMMARY:**

This report investigates Nova Scotia’s position in three value chains: inshore and extreme climate vessels, remotely operated vehicles (ROVs) and autonomous underwater vehicles (AUVs), and underwater sensors and instrumentation. The three value chains also have in common their application in three major end-markets, oil and gas exploration, scientific research, and military and port security.

Nova Scotia’s companies are well positioned across the value chains for the three industries evaluated. While the details differ for each value chain, overall, Nova Scotia has strengths in its skilled workforce, strong universities and research centers, excellent geographic location and transportation infrastructure, and the long-term federal shipbuilding contract. Nova Scotia’s weaknesses in the value chains include limited final product manufacturing, heavy reliance on federal budgets, and limited coordinated marketing and promotion activities by government.

The report identifies a number of opportunities in ocean technologies for Nova Scotia

- the growing importance of ocean technology in oil and gas exploration
- scientific research
- security end-markets.

Threats to the future development of ocean technology in Nova Scotia are budget reductions in Canada and in the U.S. and U.K. The ocean technology sector in Nova Scotia is heavily reliant on government funds, directly or indirectly, for R&D and as a source of end-market demand for these products in scientific research and security. The global ocean technology sector is facing increased consolidation, threatening the viability of small and medium sized enterprises traditionally characterizing the sector. Creating value chain linkages with multinational corporations will become increasingly important for maintaining the competitiveness of Nova Scotia’s firms in ocean technology. Strong foreign competition exists in the sector, particularly from the U.S. and Norway in aquatic instrumentation and unmanned underwater vehicles, and East Asia in shipbuilding. The study points out that uncertainty exists about the availability of skilled labor in the province resulting from the successful federal shipbuilding bid. Increased competition for available labor will likely increase the cost of acquiring labor with the necessary skills in the ocean technology sector.

Four market and technology trends were identified across the value chains studied in the report.

- Demand for less expensive, more versatile products;
- Demand for products suitable for use in tough,
5. Actively promote Nova Scotia's ocean technology assets in education, scientific, engineering and technical human capital, commercial enterprises, and physical infrastructure to relevant audiences.

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**RECOMMENDATIONS/KEY FINDINGS:**

Recommendations for increasing the competitiveness of the ocean technology sector in Nova Scotia are:

1. Coordinate economic development programs to take advantage of identified market and technology trends;

2. Identify export opportunities in, and prioritize export promotion activities for, the most promising international markets;

3. Actively support small and medium-size enterprises on ITAR compliance and identify methods to reduce financial barriers to commercialization;

4. Develop and deepen connections with national and international Centers of Excellence (CoEs) that match Nova Scotia's product, technology and end-market profiles;

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![Nova Scotia Total Exports and Total Imports Trade (current $)](chart.png)
<table>
<thead>
<tr>
<th>Category</th>
<th>Domestic Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Merchandise Trade (using World Customs Organization categories)</strong></td>
<td>3,790</td>
<td>6,630</td>
</tr>
<tr>
<td>I - Live animals and animal products.</td>
<td>877</td>
<td>130</td>
</tr>
<tr>
<td>II - Vegetable products</td>
<td>165</td>
<td>28</td>
</tr>
<tr>
<td>III - Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.</td>
<td>28</td>
<td>16</td>
</tr>
<tr>
<td>IV - Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactures tobacco substitutes.</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>V - Mineral products</td>
<td>164</td>
<td>1,160</td>
</tr>
<tr>
<td>VI - Products of the chemical or allied industries.</td>
<td>100</td>
<td>48</td>
</tr>
<tr>
<td>VII - Plastics and articles thereof; rubber and articles thereof.</td>
<td>1,213</td>
<td>307</td>
</tr>
<tr>
<td>VIII - Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut).</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>IX - Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork.</td>
<td>95</td>
<td>31</td>
</tr>
<tr>
<td>X - Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard.</td>
<td>291</td>
<td>17</td>
</tr>
<tr>
<td>XI - Textiles and Textile Articles</td>
<td>93</td>
<td>114</td>
</tr>
<tr>
<td>XII - Footwear, headgear, umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof; prepared feathers and articles made therewith; artificial flowers; articles of human hair.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>XIII - Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware.</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>XIV - Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>XV - Base metals and articles of base metal</td>
<td>160</td>
<td>219</td>
</tr>
<tr>
<td>XVI - Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles.</td>
<td>266</td>
<td>827</td>
</tr>
<tr>
<td>XVII - Vehicles, aircraft, vessels and associated transport equipment.</td>
<td>84</td>
<td>2,951</td>
</tr>
<tr>
<td>XVIII - Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; clocks and watches; musical instruments; parts and accessories thereof.</td>
<td>60</td>
<td>27</td>
</tr>
<tr>
<td>XIX - Arms and ammunition; parts and accessories thereof.</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>XX - Miscellaneous manufactured articles</td>
<td>11</td>
<td>50</td>
</tr>
<tr>
<td>XXI - Works of art, collectors' pieces and antiques.</td>
<td>99</td>
<td>552</td>
</tr>
</tbody>
</table>
Going Local while Going Global

We’ve emphasized the need to connect Nova Scotian goods and services to global markets through smart product development and trade. While producing and selling to meet local demand will suffice for many businesses, our economy requires trade to move beyond just the circulation of local funds. In some cases, importing materials and then using them for production of other goods for sale elsewhere achieves a similar introduction of new capital into our economy. For example, Michelin participate in a supply and value chain that takes rubber and molds it into high quality tires to be sold to resellers and auto manufacturers throughout the world. But we import far more ready to use goods (ready to wear, eat, watch, combust, or drive) for purchase and consumption than for value-added production purposes.

Our balance of trade is the difference between the sum of our international and inter-provincial imports (both goods and services) compared with that of our exports. The chart below traces the patterns of our

<table>
<thead>
<tr>
<th>Year (thousands of $)</th>
<th>Total Estimated Food Spending In NS (thousands of $)</th>
<th>Total NS Farm Cash Receipts For Crops (thousands of $)</th>
<th>Total NS Farm Cash Receipts For Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1,746,579</td>
<td>298,403</td>
<td>62,856</td>
</tr>
<tr>
<td>1998</td>
<td>1,831,002</td>
<td>293,612</td>
<td>64,971</td>
</tr>
<tr>
<td>1999</td>
<td>1,817,253</td>
<td>310,295</td>
<td>80,465</td>
</tr>
<tr>
<td>2000</td>
<td>1,949,456</td>
<td>325,384</td>
<td>80,541</td>
</tr>
<tr>
<td>2001</td>
<td>2,006,830</td>
<td>326,775</td>
<td>64,226</td>
</tr>
<tr>
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<td>74,722</td>
</tr>
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<td>2003</td>
<td>2,190,928</td>
<td>326,704</td>
<td>89,174</td>
</tr>
<tr>
<td>2004</td>
<td>2,257,717</td>
<td>335,824</td>
<td>84,538</td>
</tr>
<tr>
<td>2005</td>
<td>2,353,486</td>
<td>341,070</td>
<td>84,825</td>
</tr>
<tr>
<td>2006</td>
<td>2,357,378</td>
<td>348,684</td>
<td>100,109</td>
</tr>
<tr>
<td>2007</td>
<td>2,542,456</td>
<td>342,295</td>
<td>79,510</td>
</tr>
<tr>
<td>2008</td>
<td>2,647,988</td>
<td>350,228</td>
<td>82,165</td>
</tr>
</tbody>
</table>

Table 10. Proportion of Food Spending that goes back to Farms, NS, 2008

<table>
<thead>
<tr>
<th>Year (thousands of $)</th>
<th>Total Estimated Food Spending In NS (thousands of $)</th>
<th>Total NS Farm Cash Receipts For Crops (thousands of $)</th>
<th>Total NS Farm Cash Receipts For Livestock &amp; Livestock Products (thousands of $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1,746,579</td>
<td>298,403</td>
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<tr>
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</tr>
</tbody>
</table>
imports and exports from 1992 to 2012 and shows a widening trade imbalance favouring imports. In 2012 the value of our imports was nearly $10 billion more than the value of our exports.


In the Commission’s community discussions, the importance of choosing local merchants and products was stressed frequently. Many communities and business associations advocate buying locally, some municipalities have sustainable procurement policies that privilege local suppliers, and the current provincial government endorsed the concept in its November speech from the throne. Clearly neither our climate nor our economy is built for self-reliance in a number of areas that have become part of our daily lives: we don’t produce televisions and are not likely to become growers of mangos. What constitutes local varies along a continuum that roughly corresponds to the localized benefits that accrue when a local purchasing choice is made. For instance, purchasing a bottle of jam made with all local ingredients from a local farmers’ market vendor will have more impact than selecting an imported jam at a local box store. Nonetheless, the choice of a local box store over one an hour away can be said to have some localized benefit such as supporting area employment.

A closer look at what we import and export will point us to some areas where we can replace imports with locally produced goods. The chart below accounts for goods passing through customs and does not include trade in services (for examples, call centre or engineering services).

The categories used in Table 9 are somewhat obscure. For instance, II. Vegetable products, includes items such as fruits, seeds, cut flowers, and coffee. (Further descriptions of each category, including amounts within grouping that are imported for re-export, can be found at http://www5.statcan.gc.ca/cimt-cicm/home-accueil?lang=eng.) Add Live animal and animal products (including seafood and dairy) to the Vegetable products category and in fact we are exporting far more food than we are bringing in.

In fact, we are—thanks to lobster, other seafood, wild blueberries, carrots, apples, and other agricultural products. Even in the Prepared foodstuffs category the imbalance as not as pronounced as might be expected. And yet, a 2010 study by the Nova Scotia Federation of Agriculture and the Ecology Action Centre titled Is Nova Scotia Eating Local?, estimates that farmers in Nova Scotia are only benefiting from 13% of food dollars spent in the province. Clearly this is an area of opportunity to increase investment in ourselves. Choosing locally produced food will encourage retailers to supply more of it, which will, in turn, contribute to the viability of our food producing businesses while keeping more money in Nova Scotia. In 2012, the Provincial Government amended the Environmental Goals and Sustainable Prosperity Act to include a Food Goal of 20 per cent of the money spent on food by Nova Scotians being spent on locally produced food by 2020. CUPE Nova Scotia, in their written submission to the Commission, outlined their 10% Shift Nova Scotia challenge (novashift.ca) and pointed to the difference it would make in our economy: if everyone shifted 10% of their weekly spending to local goods and services, about a billion dollars would be invested in to our own economy.

There are arguments against import substitution strategies: mainly, that they create non-competitive or inefficient productivity scenarios for producers who then are ill-equipped to export competitively. However, providing for ourselves in areas of natural or developed capacity (for instance, apples or craft beer) while bolstering business viability through increased domestic demand does not preclude dual strategies (domestic and international) at the firm or sector level. In fact, our increasingly cosmopolitan product demands can drive innovation leading to new product development for the dual marketplace. The call for support for local producers through consumer selection, whether incentivized or simply encouraged, is not a call for protectionism, complacency, or insularity; it’s a call for investing in ourselves while connecting to the world.
Overview

The public input and research evidence before the Commission confirms the need for a significant shift in Nova Scotia towards a “culture of entrepreneurship”, a broad concept that includes much more positive attitudes toward business solutions to community sustainability and social development challenges, and a greater emphasis in the education and training of the young workforce on creating jobs and producing new wealth through business start-ups.

Schools, in particular rural schools, can play an important part in the development of businesses and entrepreneurial activity in Nova Scotia. We define entrepreneurship not only as small business start-ups but as the creation of a new mindset among young people, one that enables them to identify opportunities and act upon them in ways that will help them reach their full potential.

Nova Scotia has a well-funded K-12 public education system but demographic trends, changing societal demands, new economic pressures and modern technology call for a paradigm shift in public education in Nova Scotia. It is one thing to teach business plan writing skills or understanding financial statements, another altogether to teach creativity and innovation to children. Students need to develop abilities to think “outside the box” to solve problems and the school system needs to find new ways to meet these new economy needs.

Entrepreneurship programs delivered to Nova Scotia students by non-profit entrepreneurship development organizations – e.g., Junior Achievement – raise significant funding from various levels of government and corporate contributors. Great effort goes into introducing youth to entrepreneurship. But these activities are voluntary add-ons rather than integral components of the school experience for everyone. If creating an entrepreneurial culture is a priority, we need to ensure schools, government and 3rd party delivery agents are working towards the same outcomes. We need to know what we want to do and determine how to measure success. We share the belief that a province that encourages this spirit will reap the benefits of a more dynamic economy in the rural communities as well as the urban centres.

There are a growing number of entrepreneurship initiatives occurring at the post-secondary level in Nova Scotia. These are being developed and delivered by the institutions through curricula and on campus business development centres, often in partnership with external organizations. This segment of the post-secondary education system is responding to the growing demands from students, businesses, communities and government to engage in entrepreneurial knowledge, skills and attitude development. We also need to do more to engage engineers, social workers musicians and scientists. These groups, and many others, also need to see themselves and their work as being enabled by entrepreneurship.

Policy Considerations

1) Introduce entrepreneurial learning into the P-12 education system.

The Nova Scotia government has recently committed to a review of public school curricula. This provides an opportunity to rigorously evaluate options and opportunities to introduce entrepreneurship and
innovation not just as electives and after school programs but as integral elements of core learning programs.

The Nova Scotia Department of Education, in partnership with school boards and experts in appropriate voluntary sector organizations, could undertake the development of a strategy to expose P-12 students to expanded experiential and skills learning opportunities and to develop entrepreneurship as a much more influential component of the overall school experience.

The Department of Education, and its partners, could work with the university teacher training programs to introduce effective entrepreneurship leadership and teaching skills into degree programs and professional development services across the province. This may include:

- Creating courses, workshops to help teachers incorporate entrepreneurship outcomes into their existing learning outcomes.
- Building entrepreneurship outcomes into most existing courses and use the Youth Entrepreneurship Pathways to guide the process. Develop teacher resources.
- Creating a Certificate in Entrepreneurship Education for Teachers. It should be attached to a University, Faculty of Education.
- Creating a Public School Entrepreneurship Manifesto that shifts focus from outputs to outcomes and commits to a shared vision (like the Youth Entrepreneurship Pathways in 2008) will create focus.

2) **Provide and market active entrepreneurship supports to SMEs and business start-ups through the Regional Enterprise Networks.**

There is a need for more effective encouragement and support for SME operators and voluntary sector organizations in the province who may want to grow their enterprises and for people in the workforce who might want to start their own businesses.

Many of the program tools and resources are already in place, most notably the small business loan program operated through credit union system and the Community Economic Development Investment Fund (CEDIF) program. The challenge is to “market” these programs more effectively in rural communities to improve uptake and success rates.

In addition to the recommendations presented above on reorienting economic development services, there is a need for a more concerted effort to nurture and support entrepreneur in rural communities not just to start businesses but to be more innovative and ambitious in doing so. Opening a restaurant on the same street as five existing eateries counts as a new business start-up but may not be very creative or have much growth potential. Opening a small marketing firm that attracts customers to the community on behalf of all the restaurants in the area might be much more “entrepreneurial”. This kind of thinking needs to be nurtured and invested in our rural communities.

The mandate for Regional Enterprise Networks (RENs) should be elaborated to include active outreach to nurture and support entrepreneurship among SME operators and start-ups, including the development of hub model incubators and other vehicles for mutual support and collaboration among business operators.
Ideally, formal education develops individuals’ knowledge of themselves and the world, critical and creative thinking, essential skills to enhance personal and community living, and equips citizens for constructive participation in evolving economy and society. The more Nova Scotians who see themselves as having a role in our economy, the more capacity we will have to shape it prosperously. This requires an understanding of basic elements of the economy: production and relationships of exchange, people (work, skills, and ideas), transactions and businesses, money and resources used to meet our wants and needs. Teaching about our economy must also convey that it is, like community itself, a dynamic construct that presents choices and opportunities for ongoing re-creation and innovation.

In calling for our schools to play a greater role in the development of a thriving economy of entrepreneurs and skilled citizens, we are not suggesting that it is absent in current teaching. Nova Scotia structures its primary through grade twelve curricula in three sequential modules each called a Learning Outcomes Framework. There are several junctures along this educational path where students encounter and explore aspects of what makes up our economy, personal skills development, their career choices, and entrepreneurialism.

The Nova Scotia Department of Education Learning Outcomes Framework for Primary to Grade Six show that from as early as the Primary level, learning outcomes relating to students’ understanding of economy are present in the Social Studies units.

Some considerations for policy development:

- bolstered role of org. such as JA for a learning by doing approach
- integration in to P-12 curricula using entrepreneurial learning outcomes that integrate understanding and skill development in any topic rather than stand-alone courses

EDUCATING FOR PROSPERITY
DISCUSSION NOTE

In Port Hawkesbury during the Commission’s first round of community sessions, a participant told the story of his daughter bringing home some artwork from a school assignment. Each student was to draw a picture of the local community. The father listened while his daughter pointed to the school, the fire hall and police station, a park and playground, the arena, the library, the hospital, roads and sidewalks, trees, lawns, and houses. He praised her work, but then asked “where are the businesses?”. It had not occurred to this grade-school child that shops, plants, and offices were a vital part of their community. Across the province the Commissioners heard of the need for more appreciation of and education for entrepreneurialism in our public school system. We concur.
Concentration on creating change in the areas most able to increase a student’s likelihood to be entrepreneurial. Factors that influence a student’s increased likelihood to be entrepreneurial:

- Exposure to different types of entrepreneurship
- Exposure to entrepreneurship as a career option
- Initiating Student Activities
- Providing opportunity for generating entrepreneurial ideas
- Having the knowledge to start an enterprise
- Working in a small or medium business/non-profit
- Knowledge of resources and organizations that support the creation of an enterprise
- Taking entrepreneurial courses

Teach entrepreneurship to teachers first through in-services with existing teachers and to aspiring teachers.

From early childhood education onward, vocational preparation and career development, which themselves are not items of core curriculum, work largely from the premise that students will take jobs rather than make jobs. A greater understanding of and appreciation for entrepreneurship must be integrated into the P - 12 curriculum in ways that present attractive possibilities for students to imagine themselves participating in the economy as creative entrepreneurs.

It also requires the teaching of a renewed social compact to build common understanding and commitment to the on-going building of our provincial economy.

Outcomes: relationship/relevance/usefulness of creative arts, mathematics to entrepreneurship and employability in the new (globalized and knowledge economy).
Overview

Over the past several decades, Nova Scotia has been fortunate to benefit from waves of immigrants, all of which have contributed to our communities in unique ways. These immigrants include the Dutch farmers who arrived after World War II, Americans who came during the Vietnam War, Lebanese and Vietnamese families who fled their homeland in the 1970s, and Buddhists who settled here in the 1980s from Boulder, Colorado. The French and British, of course, have a long history of settlement in Nova Scotia; and, now, more and more Iranians, Egyptians, Chinese, Filipinos and Israelis are calling our province home.

Immigration is a shared responsibility between the federal government and each province and territory. Only the federal government can permit foreign nationals from entering Canada. Nova Scotia can encourage immigration to the province through two pathways: the federal pathway and, more directly, the Nova Scotia Nominee Program (NSNP). The NSNP allows the Province to recruit and nominate immigrants who best meet Nova Scotia’s economic needs. Individuals nominated by the Province, along with their partners and dependent children, can apply for permanent resident visas from Citizenship and Immigration Canada (CIC) under three NSNP streams: international workers with permanent, full-time job offers; individuals identified by Nova Scotia communities, who are employable and have strong local connections; and, close relatives of established Nova Scotia business owners who will work in the family business.¹

While the provincial Nominee Program is the most direct way for us to increase immigration, newcomers can also arrive in Nova Scotia through the federal pathway. It includes several streams, including the Federal Skilled Worker stream and the International Graduate stream.²

Unfortunately, as David Campbell notes in his submission to the Commission, over the past several decades Nova Scotia has attracted only a fraction of its proportionate share of immigrants. Between 1972 and 2012, on a per capita basis, Canada attracted three and a half times more immigrants than Nova Scotia.³

In 2012, 2,370 new immigrants arrived in Nova Scotia, an 11% increase from the year before and up 47% from 2001. The immigration declines between 2006 and 2009 were a direct result of the termination of the NSNP Economic Stream in 2006.⁴

Recent research has found that immigrants in Nova Scotia, by some measures, are very successful compared to immigrant populations in other parts of the country and to the non-immigrant population in Nova Scotia itself.⁵ Approximately 42% of immigrants residing in the province have a university education, compared to 17% of the non-immigrant population; and, unemployment rates of immigrants in Nova Scotia is 7.4%, compared to 10.0% for immigrants across Canada. Fortunately, immigrant retention rates in Nova Scotia have steadily increased as well, from 48% during the 1996-2001 census period to over 70% during the 2001-2006 census. Overall immigrant success and retention in Nova Scotia has been driven, in part, by the innovative and extensive settlement
services provided by the provincially- and federally-funded Immigrant Settlement and Integration Services (ISIS). Through community sessions, participants largely acknowledged the important role that immigrants play in creating prosperity in our province; our discussions about immigration were overwhelmingly positive. However, our telephone survey of Nova Scotians indicated that attitudes on this issue were somewhat more mixed. It found that Nova Scotians appear to be very welcoming to newcomers from other parts of the Canada, but appear somewhat less welcoming to immigrants. This finding is confirmed by other market research done on this topic. While few agree that immigrants take away jobs from other Nova Scotians, there is a segment of the population that believes this to be true. Rural residents appear to be less accepting of immigrants than their urban counterparts, at least in terms of increasing the number of immigrants and feeling that immigrants take away jobs from other Nova Scotians. This was particularly the case in mainland Nova Scotia, outside of HRM.

We as Nova Scotians need to celebrate our diverse histories and backgrounds and leverage the strengths of existing and new Nova Scotians. Our renewed economy will be based not only on the depth of our local labour pools, but also on our ability to openly welcome families, entrepreneurs and workers from around the world.

**POLICY CONSIDERATIONS FOR DISCUSSION**

1) **Tie immigration to our export development and foreign investment goals.**

Some, but not all, Nova Scotians understand that our long-term prosperity is contingent on our ability to embrace the world. This does not mean just exporting more. It also means, among other things, attracting foreign talent that will leverage our existing assets and innovate in bigger ways.

If we want greater prosperity, as Campbell contends, Government must make immigration a key plank of its foreign market development agenda. While communities should focus on identifying immigrants that could meet their most pressing local needs and aspirations, the Province should focus on attracting immigrants from regions, countries, cities or towns that:

2. Ibid.
are significant or growing trade partners with Nova Scotia;

- have a cultural/historic connection to Nova Scotia or have a critical mass or growing number of residents who have emigrated to Nova Scotia in recent years; and,

- can fill some of the province’s particular skills shortages.

In the case of Europe, prolonged economic turmoil is prompting hundreds of thousands of multilingual and skilled workers to look beyond their countries for better opportunities. This has prompted the governments of Alberta, Saskatchewan and British Colombia to actively recruit workers in Ireland. Furthermore, there is real opportunity to build Canada’s linkages with Europe through the new Comprehensive Economic and Trade Agreement.9

Outside Europe, Nova Scotia has real opportunity to attract immigrants from China, Russia, India, and Turkey – countries where our exports have grown in recent years.10

Diversity is essential to our wellbeing and long-term sustainability and immigrants from all over the world should be welcomed. However, by focusing its efforts on attracting immigrants from jurisdictions where we have substantial or growing trade and immigration linkages, and from where skilled people are in search of a better quality of life, Government can amplify the province’s connections with the world.

As Campbell aptly states:

“More immigrants from the target country will support greater trade linkages as some immigrants will be potential exporters and market development specialists.

More investment from the target country will foster greater potential for exports to that country.

Attracting more tourists from the target country will expose more people to Nova Scotia as a great place to live and invest.”11

Adopting such a holistic approach to immigration would require the Province to devise new or enhanced ways for its departments of LAE, ERDT, and Immigration to work together.

2) Establish a Premier’s Immigration Advisory Committee.

The Government’s intention of creating a Premier’s Immigration Advisory Committee is very worthwhile. Led by successful immigrants, the committee could influence immigration, workforce development, export development and business and entrepreneurialism policy at senior levels, as well as communicate to Nova Scotians immigration’s essential role in building our new economy. The committee could also leverage the skills and networks of our Honorary Counsels and international students to attract and retain new Nova Scotians.

3) Incent International Students to Stay.

The proportion of foreign students who have remained in Canada and Atlantic Canada and transitioned to permanent resident status has been relatively small at six per cent and five per cent, respectively. Those who do stay in Nova Scotia, however, account for one fifth of immigrants who transition from temporary to permanent status.12

Many international students have no intention of staying in the province; however, more could possibly stay through tuition rebate incentives. The Government could consider refunding a portion of international students’ tuition fees, provided they remain in Nova Scotia for three years after graduation. More research on the viability of such an incentive should be undertaken.

4) Establish an Entrepreneurial Stream of the Provincial Nominee Program that includes incentives to invest in export-oriented companies and enterprises outside of Halifax.
The influx of immigrant entrepreneurs to Nova Scotia in the coming years is critical to our long-term prosperity. Export- and growth-oriented entrepreneurs create wealth to the benefit of the communities in which they reside. Unfortunately, our province has a poor record in attracting ambitious entrepreneurs, and our attempts in recent years have been disappointing, to say the least. In 2006, the Province’s mentorship-focused Economic Stream pilot of the PNP was closed amid serious concerns about the program’s integrity. In fact, a class-action lawsuit resulted in several immigrants being refunded a portion of the $130,000 they each paid for a six-month internship that would allow them to immigrate to province.  

It is crucial that the Province establishes a new entrepreneurial stream of the PNP, as has been done in New Brunswick and Prince Edward Island. This new stream would require a foreign entrepreneur invest a minimum of $250,000 in a new or existing business in order to immigrate to Nova Scotia. Investment in a business outside of Halifax Regional Municipality would be incentivized further, either through a reduced minimum investment amount or some other means. Preference would also be given to entrepreneurs intending to invest in export-oriented companies.  

Such a measure would bring new talent and capital investment into the province, and solve the succession problems facing some Nova Scotian businesses. 

1) **Continue to Lobby Ottawa to increase overall immigration limits and remove all Provincial Nomination Program caps.**

Last year, Canada admitted approximately 250,000 immigrants in total, and this annual number has remained largely unchanged over the past twenty years. The Royal Bank, the Ontario Coalition of Agencies Serving Immigrants, the Conference Board of Canada and a wide range of other organizations are calling for immigration to increase to 450,000 and more. Without a significant boost to immigration levels, Deloitte and the Human Resources Professionals Association (HRPA) contend that Canada could enter into a “Lost Decade”, in which Canada fails to prepare for the next phase of its development. Despite calls from nearly every provincial government to increase annual immigration levels into Canada, the federal government appears unwilling, citing that Canadians do not want higher intake levels. The federal government does, however, understand that government needs to do more to connect immigration to the country’s economic needs. In 2012, it raised the nominations cap on the Nova Scotia PNP from 500 to 700; and, in 2013, it launched the Start-Up Visa Program to attract foreign entrepreneurs to Canada. The program gives those who have secured venture capital or angel investor capital the ability to apply for fast-tracked permanent residency. These steps are in the right direction, but not enough.  

The Province and its provincial and territorial partners should continue to press the federal government to raise its overall immigration levels, and to either significantly increase or remove the caps altogether on the number of nominations that can be approved under the NS PNP. 

2) **Make concerted efforts to attract immigrants into senior management positions within Nova Scotia’s public service.**

Nova Scotia has too few immigrants among the senior ranks of its public service. This continued dearth of international and cultural perspectives within our public sector leadership contradicts government’s calls for “going global”. As government calls upon the private sector to embrace the opportunities of globalization, it must “walk the talk.” Government must connect its public service diversity and its immigration agendas. The Public Service Commission should assess how this could be done. 

3) **Introduce immigrant-to-business networking programs to other communities in Nova Scotia.**

Communities Nova Scotia should consider establishing immigrant-to-business programs, much like those carried out by the Colchester Regional Development Authority and, more recently, the Greater Halifax Partnership. Regional Enterprise Networks, chambers of commerce or other organizations could drive these networking services.

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14 “Why Canada needs a flood of immigrants.”

4) Establish Volunteer Immigration Advisory Committees.

Many in immigration policy circles have heard of Manitoba’s success in attracting immigrants to rural communities. The communities of Steinbach and Winkler stand out. In the 1990s, both were losing its young workers to Calgary and Winnipeg, even though local businesses were doing very well.

Winkler became the first community in South Central Manitoba to address its labour shortage through targeted immigration-based solutions. Winkler’s approach was from the ground-up:

...an immigrant from Paraguay named Adele Dyck, who sat on the Chamber of Commerce, heard through family connections about skilled workers in Germany who were interested in coming to Canada, but couldn’t qualify under immigration rules that favoured university graduates. She contacted the federal and provincial governments to say she would get local employers to guarantee jobs if the Germans were admitted. They agreed, and what began with 50 immigrants in Winkler became in 1998 the country’s first “provincial nominee” program.17

Steinbach followed suit. With the assistance of Ms. Dyck, the owner of a window plant in Steinbach was able to recruit and employ hundreds of skilled German immigrants. Since the mid-1990s, Steinbach has grown 60 per cent, one of the fastest rates in the country.18

Steinbach and Winkler’s success in attracting and keeping German immigrants is due to a number of factors. Primary among them is the town’s German community and heritage, both of which have helped fill new immigrants’ linguistic and cultural needs; and, its settlement services that have attended to the complex needs of new arrivals.19 It should also be stressed that Steinbach, like Winkler, had immediate labour needs that were going unfilled.

Winkler and Steinbach’s success at attracting immigrants can be attributed in large part to these communities’ desire and ability to attract immigrants to fill their labour needs. It was community leaders, not the provincial government, who identified the types of immigrants who were willing and capable of accepting jobs, and likely to stay in the community long-term. Manitoba’s immigrant settlement services did play a key role, but only once potential immigrants had been identified.

Communities themselves should establish a means by which they can identify immigrants from specific countries, cities and towns who could meet their labour needs and would likely stay long-term in the province.

These potential immigrant types would ideally have a historic or recent connection to the Nova Scotia community in order to facilitate settlement. ISIS and the Office of Immigration can then assist these communities with focused immigration attraction and settlement services.

A community-based and volunteer Immigration Advisory Committee, whether it is a stand-alone organization or a subset of the chambers of commerce or RENs, would provide community-based immigration solutions to local needs. This body could also administer the networking service outlined in the above recommendation.

5) Develop more co-op programs to connect foreign students with employers.

Universities and colleges should increase the number of co-op programs it offers so that all of its students, not just international students, are better connected to the market place.

6) Have universities and colleges act as incubators and conduct R&D for immigrant entrepreneurs.

Universities and colleges should work with ISIS to identify landed immigrant entrepreneurs who would benefit from university-assisted innovation supports, such as the Productivity and Innovation Voucher Program. ISIS and the universities should develop a more formalized approach to integrating immigrant entrepreneurs into innovation networks if an entrepreneurial stream of the provincial nomination program is developed.
7) **Reach out to the families of international students.**

Although roughly 60% of international students in Nova Scotia have accompanied their families to the province, the other 40% are not. Universities should help immigration and economic development partners identify how best to engage family of international students. They could be future students, investors and immigrants to the province.

8) **Foster the development of accreditations programs at foreign universities in which Nova Scotia already has connections.**

Our universities and colleges have dozens of partnerships with other post-secondary institutions around the world. Our universities should explore how these partnerships could be leveraged, particularly in the area of foreign credential recognition and accreditation. Relevant skills training and bridging programs, for example, could be administered by our partner institutions and become a component of ISIS’ pre-arrival settlement services. ISIS’ Foreign Credential Recognition & the Multi-Stakeholder Working Groups would be suited to make this happen.

9) **Hire immigrants and support community activities.**

The private sector should do more to hire immigrants and help immigrants integrate into their workplaces and their communities. This could include active overseas recruitment, participation on community-based immigration advisory committees and in immigrant business networking events, and support to any community event.

**RE-THINKING IMMIGRATION**

There is a view of immigration that is still part of the old mindset: immigration is to fill labour market gaps. Nova Scotia needs a new and more strategic view of immigration that is based on:

- Immigration and Nova Scotia’s cultural dynamism
- Immigration and rural/small town Nova Scotia

Immigrants can be important catalyst for entrepreneurship and economic growth. A study by the Kauffman Foundation examined a random sample of 1,882 engineering and technology companies across the United States started between 2006 and 2012. Of those companies, 458 (one quarter) had at least one foreign-born founder. In Silicon Valley, 44 percent of all new technology company startups in 2012 were founded by immigrants – and this was actually down from 52 percent in 2005. The Kauffman Foundation report concludes that the United States economy is at risk because of the declining levels of immigrant entrepreneurs setting up in the country.

It could equally be said that Nova Scotia’s economy has chronically underperformed the rest of North America because of its lack of high growth potential immigrant entrepreneurs. In addition, the lack of immigrants at a senior level in public and private sector institutions changes the management culture in Nova Scotia compared to the faster growing provincial and state economies across North America.

Fostering more immigrant entrepreneurs and immigrant senior managers would provide multiple benefits including:

- Changing the risk profile of the senior leadership team in firms. Some cultures are more accepting of risk while others are less tolerant.
- Aiding in market diversification. Foreign-born entrepreneurs can support efforts to diversify export markets away from the United States because of their knowledge of their countries/regions of birth.

Nova Scotia’s universities should be incubators of immigrant entrepreneurs. Potential entrepreneurs should be targeted and recruited in to advance their business concepts through graduate level research. They should then be streamed through incubator/accelerator programs in the province to ensure they have the required support here.

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A renewed Nova Scotia economy will need to be based not only on the strength of its local talent pipeline but also on its ability to attract from the increasingly mobile global talent pool.

Entrepreneurs can be broken into two broad categories: those who want to work for themselves and replace employment income (the lifestyle entrepreneur) and those that want to grow a high value business enterprise. The former is not only satisfied with remaining small and comfortable. Their main objective is to generate a good income from self-employment. The latter is the opposite. They have a business concept they feel could be the next big idea and their objective is to build it into a real business growing from modest revenue and markets to substantial revenue and global reach.

These two types of entrepreneur have very different personalities and, ultimately, will have very different impact on a jurisdiction’s economic development. Professor Daniel Isenberg, Executive Director of the Babson Entrepreneurship Ecosystem Project, is a leading proponent of this divergent view of entrepreneurship. In his view, all of the policy focus should be on identifying and nurturing this class of entrepreneurs that eschews small business and reaches for much loftier heights. He has developed a short survey “Should You Be An Entrepreneur?” that asks questions such as:

- People get excited by my ideas.
- I am rarely satisfied or complacent.
- I can’t sit still.
- I can usually work my way out of a difficult situation.
- I would rather fail at my own thing than succeed at someone else’s.

Nowadays, human capital has become the most important factor for entrepreneurs determining where to set up their new business venture. Surveys of corporate executives in both Canada and the United States confirm that the availability of talent is the most important site selection criteria – particularly in the growing knowledge-based industries such as information and communications technologies, life sciences and professional services.

Nova Scotia already has a distinct advantage in this area compared to the other Atlantic Provinces. In 2012, according to Statistics Canada’s Labour Force Survey, twenty one percent of the adult population in Nova Scotia had a university degree (Figure x). This represents a 40 percent increase in the past decade.

Nova Scotia also has an enviable human capital pipeline in the form of its post-secondary education infrastructure. In the 2010/2011 year, Nova Scotia’s post-secondary institutions turned out 14,475 new graduates (this includes both colleges and universities) which represented 152.6 graduates per 10,000 in the population. As shown in Figure x, this was the second highest ratio of new graduates to population of all 10 provinces in Canada (only Quebec graduates more from post-secondary institutions).
Nova Scotia needs to do a better job of positioning its competitive tax environment as part of its value proposition for investment.

The National Governors Association report cited above states that governments should “build ecosystems, not programs”. This is a very important lesson for Nova Scotia. Ecosystem objectives should be developed between industry, government and other stakeholders on a sector-by-sector basis and efforts should be focused on the broader vision for the sector. If governments take a financial program-centric view of economic development it risks evaluating its success like a bank (i.e. loan loss ratios) rather than on broader measures of economic progress.

The key focus must be on achieving a return on the taxpayers’ investment in economic development (including incentives and the cost of economic development). If we can show a clear return on that investment then economic development efforts will have legitimacy and should have broad public support. For example, if for every $1.00 worth of incentives, the government could clearly show $3.00 worth of incremental taxes paid – it would show a clear ROI on the taxpayer investment.

**Note on Immigration Successes**

**MANITOBA**

The province of Manitoba has demonstrated a strong commitment to attracting new immigrants and helping them integrate into the community. Nova Scotia needs to boost its immigrant population, so taking a look at how Manitoba has addressed this issue may help us learn better ways to make Nova Scotia more welcoming and attractive to immigrants.

A large part of the Manitoba strategy for its immigration effort is the Provincial Nominee Program (PNP), introduced by the federal government in the late 1990s. The program permits each province or territory to tailor its own immigration program that is designed to target the immigrants with skills most needed in their region. Quebec already has its own targeting program and does not participate in PNP. Manitoba began to use the program almost immediately upon inception, aggressively targeting skilled immigrants to boost its population of skilled workers.

The PNP accounted for 77 percent of 2011 newcomers to the province, specifically those who have skills needed in the labour market. In the time period from 1999 to 2011, Manitoba grew its annual immigration number from 3,725 to 15,962. In addition, over 25,000 of the immigrants since 1999 have moved to rural Manitoba, showing that the program supports both urban and rural interests. The retention rate of new immigrants is strong, at about 84 percent, and within 5 years, 76 percent of immigrants brought in through the PNP were homeowners.

Admissions include nominees, spouses and dependents.

Manitoba has also developed a useful program to help potential immigrants with pre-planning their move, and learning what to expect. In addition, the “Manitoba Start” program provides employment readiness and job matching services for immigrants who have recently arrived. Manitoba’s Premier, Greg Selinger, has stated that “Manitoba’s immigration initiative has been very successful, not only because more and more newcomers are coming to Manitoba, but because the settlement and language-training assistance being offered are helping them succeed.”

In addition, Manitoba has been creative with its use of the program, such as bringing nurses from the Philippines in groups, which provided additional social support for them as they began life in Canada.

Support services are provided largely by the Manitoba Immigrant Centre, which is actually staffed by immigrants to Manitoba – people who have already been through the process and are ready to help others learn the ropes. The settlement workers meet with new immigrants regularly – an average of 6 to 8 times in their first year. The 18,000 square foot facility is growing and has plans to expand to satellite offices outside of Winnipeg in the future.

There are several towns in Manitoba that have become well known for their successful immigration programs and the way that they have learned to integrate newcomers and make them feel welcome. One such town is Winkler, which was the first...

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community in South Central Manitoba to specifically address its economic needs through immigration-based solutions. Skilled workers were attracted using what became known as the “Winkler Initiative,” a program matching immigrants with provincial selection criteria and skills needed in Winkler. The “Regional Connections” Centre in Winkler helps with all the settlement services in the area, and has been praised for its innovative approach and professionalism. Canada’s Minister of Citizenship and Immigration, Chris Alexander, said of the immigration program in Winkler, “People want more of it, people are excited by it, it actually makes the quality of life greater, it brings new cultures, new languages, new traditions, new influences, and that’s what Canada is about.”

Another town with a strong history and successful immigration model is Steinbach in Southeastern Manitoba. In the later part of the 1990s, Steinbach experienced considerable growth and required new immigrants to fill increasing numbers of jobs. Most of the Steinbach immigrant population are Germans, Russian-Germans, or Mennonites returning from Mexico and Central/South America. Once again, success can be in part attributed to the strong settlement assistance provided, some of which is offered in German language. There are many opportunities for newcomers to learn English and engage with workplaces and communities to become familiar with local customs and people. A study of immigration programs in Steinbach identified four primary recommendations for successful immigrant attraction and retention programs:

1. **Understand that immigrants bring with them complex, diverse and often unpredictable needs.**
   - Communities need to be ready for immigrants and ensure that support networks, and employment opportunities, are in place.

2. **Encourage exploratory visits and personal linkages.**
   - Immigrant retention and attraction is improved when there are existing communities through families, friends or church groups, helping to fill linguistic and cultural needs.

3. **Provide outreach and be proactive in contacting immigrant families to determine their needs.**
   - Ensure that settlement services are organized and visible to new immigrants, and ensure flexible program delivery. Providing some programs prior to departing the original country may also be helpful.

4. **Create opportunities for the immigrant community and non-immigrant community to simply interact with one another.**
   - Interaction is critical for successful integration.

Despite the high numbers of immigrants, there is evidence that suggests a few problems remain with the Manitoba program, primarily around income levels. Statistics indicate that one, three, and five years after arrival, the PNP immigrants had the lowest employment income of any province, earning only 88.9 percent of average income of all recent immigrants to Canada.

If Nova Scotia wants to follow in Manitoba’s footsteps and increase our immigrant population, we need to ensure that we provide a welcoming environment with ample support for newcomers, while also ensuring that the job opportunities available will ensure appropriate income levels to keep pace with the cost of living.
NOVA SCOTIA AND DUTCH AGRICULTURAL IMMIGRATION

Many immigrant groups have had a hand in shaping Nova Scotia and have contributed in significant ways to its rich history and vibrant communities. One such group are the Dutch farmers who came from the Netherlands during the late 1940s to about 1970. The majority came as a result of collaboration between the Nova Scotia Land Settlement Board and the Netherlands Farm Families Movement program operating in the Netherlands. It was a strategically developed program between the two countries. Advertisements were placed in Dutch newspapers by the provincial Department of Agriculture and the federal Department of Immigration: “Come to Nova Scotia and we will help identify farm land and help finance your acquisition of that farm land through the farm loans board.” The strategy was highly targeted, and had a specific focus on the Dutch, who were considered “preferred” immigrants due to their long, positive history as immigrants. The Dutch were known as hard-working people who shared similar religious, social, political and economic institutions to those existing in Canada.

During this time, the Netherlands was struggling with an overpopulation problem because of its high birth rate over the years of the Second World War. In addition to managing an economic crisis, the Netherlands was staggering from the effects of the war, in which tens of thousands of hectares of their land had been submerged under sea water by the invading Nazi forces. As a result, the government of the Netherlands was promoting emigration within their country as a way to begin to alleviate their country’s problems.

Upon arrival, many of the immigrants from the Netherlands were surprised at how much uncultivated land existed in the province, so they undertook the revitalization of farms that were abandoned or underutilized. They settled in large numbers in the Annapolis Valley, Antigonish County, and along the Northumberland Strait. As these immigrant families settled and began to earn a living from the land, they would send home news of their success and the beauty of our province, spurring more families to make the move to Nova Scotia.

Since 1970, immigrants from the Netherlands continued to have a strong presence in our immigration profile, representing the fourth largest group of our total immigrant population. It is certain that some of this additional immigration was a result of the first wave of immigrants who had a significant impact on our province’s agriculture. Nova Scotia is fortunate to have welcomed so many Dutch immigrants over time, as their strong work ethic and innovative thinking has helped shape our province, while they and their children continue to contribute to our communities.

33 http://thechronicleherald.ca/opinion/1127469-brison-break-immigration-bottleneck
Optimal community engagement in discussions of policy is seldom achieved; but must be strived for. Statistics do little to convey quality of dialogue in terms of representing informed and diverse community perspectives. Nonetheless, numbers do indicate effort and a measure of success. As described in the Section 1 of this report:

- 35 public meetings were held across the province, 13 Commissioner or staff speaking engagements took place, there were meetings with business and municipal, provincial, federal, and First Nations leaders in 16 communities;
- 1,730 citizens joined meetings and contributed to group discussions;
- the oneNS.ca website attracted 5,475 visits;
- 102 written submissions were received;
- 402 people completed a telephone survey, 45 an online survey;
- The ONE Facebook page recorded a reach of 16,660, including 373 ‘Likes’; and
- 507 people follow ONE on Twitter.

In November, the Commission held a live on-line ‘virtual town hall’ from the Waterfront Campus of the Nova Scotia Community College. NSCC was our generous partner on the venture and our engaging hosts were Emily Dalyrymple and Costas Halavrezos. The webcast was recorded and can be viewed at onens.ca.

Our virtual town hall had a studio audience of 62 people and 1,089 LiveStream log-ins, more than 200 comments were made in the real-time chat room. Sincere thanks to the ace crew at NSCC, especially Kevin and Patrick, for their dedication to this project and to Jeff Overmars of Communications Nova Scotia for all his work in captioning the videos.

The Commission’s Interim Report published in May 2013 after the first round of community sessions and documents the principle community engagement efforts that involved all Commissioners and staff.
VIRTUAL TOWN HALL

96 Tickets booked (roughly 50 people showed up due in part to poor weather)

1,089 clicks to LiveStream

200+ comments in chatroom

ONENS.CA WEBSITE

5,475 visits

BREAKDOWN OF VISITS BY GEOGRAPHY

4,321 from NS
431 from Ontario
136 from New Brunswick
107 from Quebec
49 from BC
48 Alberta
38 PEI
29 NL
12 YK
7 SK

3,870 unique visitors
3.39 pages/visit
18,553 page views

SOCIAL MEDIA

373 Likes on FB

Facebook Total Reach for Phase 1: 903
Facebook Total Reach for Phase 2: 15,730
Facebook total Reach Phase 1 + 2: 16,660

Facebook Reach is defined as: “The number of people who saw any activity from your page including posts, posts by other people, Page like ads, mentions, and check-ins.”

Twitter Followers: 506
Twitter Mentions: 336
COMMUNITY SESSIONS STRUCTURE

The fall sessions were staff-lead. The flow was presentation of Commission findings featuring interactive instant polling, small group discussions with guiding questions, plenary discussion. Each gathering ended with the submission of ‘good stuff’ happening locally and across the province to contribute to an Awesome Nova Scotia map (see final page of Section II).

NUMBER OF ATTENDEES AT ONE NS COMMUNITY SESSIONS
SECOND ROUND: OCTOBER TO NOVEMBER 2012

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Venue</th>
<th>Number of Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMHERST</td>
<td>Tuesday, Oct. 15</td>
<td>7:00 p.m.</td>
<td>NSCC Community Learning Centre</td>
<td>28</td>
</tr>
<tr>
<td>YARMOUTH</td>
<td>Tuesday, Oct. 22</td>
<td>7:00 p.m.</td>
<td>Rodd Grand</td>
<td>13</td>
</tr>
<tr>
<td>TRURO</td>
<td>Wednesday, Oct. 16</td>
<td>7:00 p.m.</td>
<td>NSCC, Cafeteria Salon C</td>
<td>12</td>
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<tr>
<td>LUNENBURG</td>
<td>Wednesday, Oct. 23</td>
<td>7:00 p.m.</td>
<td>Fire Hall</td>
<td>45</td>
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<tr>
<td>NEW GLASGOW</td>
<td>Thursday, Oct. 17</td>
<td>2:00 p.m.</td>
<td>Celtic Circle Cultural Centre</td>
<td>13</td>
</tr>
<tr>
<td>SHEET HARBOUR</td>
<td>Thursday, Oct. 24</td>
<td>1:00 p.m.</td>
<td>Royal Canadian Legion, Branch 38</td>
<td>19</td>
</tr>
<tr>
<td>ANTIGONISH</td>
<td>Thursday, Oct. 17</td>
<td>7:00 p.m.</td>
<td>Coady Institute, StFX</td>
<td>42</td>
</tr>
<tr>
<td>HALIFAX</td>
<td>Thursday, Oct. 24</td>
<td>7:00 p.m.</td>
<td>Citadel High School, Spatz Atrium</td>
<td>57</td>
</tr>
<tr>
<td>GUYSBOROUGH</td>
<td>Friday, Oct. 18</td>
<td>10:00 a.m.</td>
<td>Council Chambers</td>
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<tr>
<td>SYDNEY</td>
<td>Monday, Oct. 28</td>
<td>7:00 p.m.</td>
<td>Holy Angels</td>
<td>26</td>
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<tr>
<td>POINTE-DE-L’ÉGLISE</td>
<td>Monday, Oct. 21</td>
<td>2:00 p.m.</td>
<td>Université Sainte-Anne Chapel</td>
<td>6</td>
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<tr>
<td>ST. ANN’S</td>
<td>Tuesday, Oct. 29</td>
<td>10:30 a.m.</td>
<td>St. Ann’s Bay Church Hall</td>
<td>19</td>
</tr>
<tr>
<td>DIGBY</td>
<td>Monday, Oct. 21</td>
<td>7:00 p.m.</td>
<td>Fire Hall</td>
<td>31</td>
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<tr>
<td>PORT HAWKESBURY</td>
<td>Tuesday, Oct. 29</td>
<td>7:00 p.m.</td>
<td>Civic Centre</td>
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<tr>
<td>SHELBURNE</td>
<td>Tuesday, Oct. 22</td>
<td>2:00 p.m.</td>
<td>Fire Hall</td>
<td>48</td>
</tr>
<tr>
<td>WOLFVILLE</td>
<td>Monday, Nov. 4</td>
<td>7:00 p.m.</td>
<td>Fountain Learning Commons, Great Hall</td>
<td>44</td>
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</table>

Total = 450
Summary of Discussions

CHOOSING NOVA SCOTIA

Factors most frequently mentioned as necessary for Nova Scotia to be a place of choice for people and businesses were:

- quality of life
- services such as health and education
- rich cultural, recreational, and learning offerings
- enjoyment of our beautiful natural environment
- strong sense of community and social infrastructure
- affordability;
- economic
- employment opportunities
- competitive wages and benefits
- culture of excellence, innovation, enterprise
- sustainable (environmentally, economically, culturally, socially) economy.

ENTREPRENEURIALISM AND INNOVATION

Every bit of research and consultation undertaken by the Commission points to Nova Scotia’s dire need for far more entrepreneurial activity rooted in an ecosystem of innovation. The question of how to spark this garnered considerable input from participants in community sessions:

1) EDUCATING FOR ENTREPRENEURIALISM AND INNOVATION

- creative entrepreneurial thinking and skills must be nurtured, integrated, practiced, and rewarded throughout every phase of formal education
- programs such as Junior Achievement should extend and expand in to every school
- centres for business incubation and innovation should be supported throughout the province, especially in conjunction with post-secondary institutions
- innovative community enterprises (eg. co-operatives, social enterprises and community interest companies) can more efficiently deliver services while also offering a vehicle for business succession
- mentoring relationships are important for the transfer of knowledge and inter-generational linking, similarly, apprenticeships are vital

2) BUSINESS ENVIRONMENT

- less encumbering regulatory environment
- more accessible, streamlined, equitable, and faster government services and support to business
- hubs or clusters of shared services and research capacity, venues for networking and collaboration for entrepreneurs
- more competitive and predictable power rates
- economic gardening to enable existing local businesses and assets to connect with global markets
- development of a start-up culture that encourages and funds intelligent risk, innovation, learning by practice and attempt
- community-government-business collaborations that are entrepreneurially led
- review all elements of taxation that impede business development and operation unduly;

3) RESOURCES AND SUSTAINABILITY

- traditional sectors such as fishing, forestry, and agriculture will continue to be vital to our economy, but can’t be approached only in traditional ways
- new products, processes, and markets are needed in our primary sectors
green economy presents important opportunities, not only in the greening of existing business activity, but in new businesses that are both sustainable and take advantage of greater demand for sustainable products and services.

the local economy movement, particularly in food production and consumption, is both vibrant and compatible with increasing the elements of our economy that are trade-oriented;

4) **Immigration**

the phrase ‘come from away’ should be annihilated

immigration, especially international but also inter-provincial, gives Nova Scotia an economic boost through business start-ups, investment, and new ways of thinking

Nova Scotia needs to increase the number of immigrants it attracts and retains, especially in rural communities

tourism and post-secondary institutions are two important entry points for immigrants and should be supported for greater economic impact.

**WORKING TOGETHER**

Becoming a place of greater opportunity and innovation will require more unity of purpose, belief, and effort throughout our communities, businesses, and the province as a whole. Teamwork is built on relationships of trust and trustworthiness – sometimes called social capital. Our community discussions about shared vision and constructive attitudes resonated with participants:

Nova Scotians lack a statement of shared values, goals, and agreement on parameters of acceptable development – a social pact

we need both ‘must do’ and ‘can do’ attitudes that recognize our need for growth and a framework of values to guide it

**DIGITAL AND OTHER ON-GOING ENGAGEMENT**

The Commission will disband shortly after the delivery of this report to Nova Scotians. Staff will finalize administration of the undertaking, including a full audit of expenditures that will be available to the public shortly after April 31, 2014.

The website **www.onens.ca** will remain active for at least 6 months after the report release at which time it will either continue or trigger a forwarding link. It will be up to government and citizens to shape the implementation of the Commission’s messages and recommendations. Several organizations, for example Engage Nova Scotia and Junior Achievement of Nova Scotia, have expressed keen interest in furthering vital aspects of the work to achieve a better Nova Scotia.
In Lunenburg, following one of the Commission’s evening sessions in October, a group of engaged citizens spontaneously formed to continue the conversation with the intent of moving to action. We truly need ‘All Hands On Deck’ (thank you Yarmouth) in Nova Scotia in the coming years.

ARCHIVING OF COMMISSION WORK AND DATA

The extensive research and documentation accumulated over the course of the Commission’s work will not be lost as reference material for interested parties. Hard-copies will eventually be housed in the Archives of Nova Scotia and on-line where possible on a legacy site yet to established (see www.onens.ca in the near future for details).

The Commissioners and staff wish to express sincere thanks for the wonderful assistance and advice generously given to them by the staff of the Government of Nova Scotia Public Engagement Support Unit and Matthew Lumely of Lumely Communications, as well as many local champions such as Rob MacDonald, Tim Gillespie, Leslie Wright, and Keith MacDonald.
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Introduction

This report presents the results from the Building our New Economy Study undertaken by Corporate Research Associates Inc. (CRA) on behalf of the Nova Scotia Commission on Building our New Economy. The overall objective of this study was to better understand Nova Scotians' attitudes towards key factors that are deemed important to building the provincial economy. The Commission was interested in determining whether any attitudinal barriers exist that would prevent Nova Scotia from being more successful economically. More specifically, this study sought to:

- Better understand current perceptions regarding the quality of life in Nova Scotia and the level of optimism regarding the economic future of the province;
- Determine current attitudes regarding economic growth and its importance to the province;
- Assess opinions and attitudes towards business entrepreneurs in the province;
- Understand current attitudes towards resource development in Nova Scotia;
- Evaluate attitudes and opinions regarding population and immigration; and
- Assess the readiness of the population to adopt a “Can Do” attitude to build a better economy.

The results from this study provide benchmark measures for the future in terms of mitigating any engrained attitudes that might prevent Nova Scotia from achieving the kind of economic success needed.

A random telephone survey of Nova Scotians aged 18 years or older was the methodology selected for this study. A sample of 402 interviews were completed for this study, providing a 95% level of statistical reliability, with a +/-4.9 percent margin of error for the overall results. The detailed data tables are presented in the appendix of this report.

This report includes a detailed analysis of the results, along with an executive summary and a key conclusions section. The methodology, data tables and questionnaire are appended to the report. All numbers have been rounded to the nearest whole number and, consequently, totals do not always add up to 100%. Table references in the main body of the report refer to the specific data table in the appendix.
Executive Summary

The results of the Building Our New Economy Study highlight some of the attitudinal challenges facing Nova Scotia as it searches for ways to grow what has been a rather anemic economy, at least relative to the rest of the country over the past twenty years or so. These attitudinal challenges are compounded by the fact that Nova Scotia has a disproportionately high percentage of the population living in low density rural communities in comparison to the country overall. Indeed, there are more than twice as many Nova Scotians living in rural communities compared to the Canadian average.

While Nova Scotians appear reasonably satisfied with their quality of life in the province, optimism about the economic future is muted to say the least. Indeed, there is a significant minority that appears to be at least moderately pessimistic about Nova Scotia’s economic future. This is perhaps not surprising given the weakness in the Nova Scotia economy since the beginning of the recession in 2008 and continuing high levels of unemployment in the province.

There is widespread recognition among the population that economic growth is crucial to the province’s ability to deliver essential public services. At the same time, there is a considerable lack of awareness and some confusion regarding how economic growth occurs and who is responsible for that growth. It seems apparent, for example, that the role of the private sector is not well enough understood or appreciated in this regard, while the role of government is over estimated. Indeed, attitudes towards the private sector can best be described as only moderately favourable.

On the positive side, there is a relatively high level of recognition of the importance of increasing the number of business entrepreneurs in the province. Encouragingly, there is a high level of agreement that business entrepreneurism should be taught as a core subject in our school system, perhaps providing the Commission with a clear opportunity to change public education policy.

Given that there are mixed opinions regarding the practicality of delivering the same level of services to everyone in Nova Scotia, regardless of where they reside, it is clear that there is both a need and an opportunity to better manage the expectations by citizens of the government in this regard.

There is general consensus of the importance of using Nova Scotia’s natural resources to generate wealth in the province, although the protection of the environment trumps job creation in the development of such resources. It is also clear that there is a significant segment of the population that believes some natural resources, such as shale gas, cannot be developed in an environmentally safe manner regardless how strict the regulations.

While there is reasonably high recognition of the need to grow the population, there appears to be some resistance to immigration as a solution. Nova Scotia grew the slowest of all provinces in the most recent census. There is broad consensus that better economic opportunities are keys to attracting people to the province. At the same time, a minority of Nova Scotians continue to believe that immigrants take job opportunities from other Nova Scotians. This may explain why there is only moderate support for increasing the number of immigrants to the province.

There is broad recognition of the importance of every Nova Scotian adopting a “Can Do” attitude to help build a better economy. Whether or not that “Can Do” attitude currently exists is perhaps another question. Given many Nova Scotians do not believe that they can contribute to solving our economic challenges or that Nova Scotians aren’t particularly resistant to change, there is a need and an opportunity to demonstrate how average Nova Scotians can contribute to building the economy and be more accepting of the changes needed to transform the economy.

It is both interesting and encouraging that a significant percentage of the population believes that Nova Scotia can one day become a “have” province. There is a clear recognition of the need to become more entrepreneurial, but much less agreement that Nova Scotians need to become less reliant on government to build our economy. This is the cultural shift challenge that must take place, but it will take considerable time and effort.
Conclusions

The following conclusions are drawn from the analysis of the results from this study.

While satisfaction with quality of life in Nova Scotia is moderately high, optimism for the future is not.

Nova Scotians appear to be reasonably well satisfied with their quality of life in the province, with those living in the Halifax Regional Municipality the most satisfied overall. It is interesting to note, that rural residents are no more satisfied than their urban counterparts in terms of their quality of life, perhaps debunking a long held myth. Household income also impacts the perceived quality of life among those surveyed, with higher income households having a higher perceived quality of life.

While a majority of Nova Scotians are at least moderately optimistic about the economic future of their province, their community, and their household, a significant minority are at least moderately pessimistic. This is hardly surprising, given the hard economic conditions in the province since the Great Recession of 2008. This reality is reflected in our tracking of consumer confidence in the province, which has been in negative territory for much of the last two years.

There is widespread recognition among Nova Scotians that economic growth is crucial to the province’s ability to deliver essential public services.

Reassuringly perhaps, Nova Scotians recognize that economic growth is important to keep pace with the cost of delivering essential public services. Unfortunately for Nova Scotia, the province has been dead last in economic growth as measured by GDP for much of the last twenty years. It is likely that most residents are unaware of neither this reality nor the consequences of slower than average economic growth compounded over a long period of time.

There is strong recognition that without economic growth, many of those living in rural areas will have to relocate for work. There is also significant agreement that Nova Scotians must become better at selling their goods/services to world markets and that Nova Scotia’s current economy is not as globally competitive as it needs to be.

It appears that a significant number of those surveyed do not understand the role that the private sector plays or could play in the economy, particularly in terms of growing the economy. There is a low level of agreement for instance, that the private sector can help solve the rural unemployment issues. This appears to be an area of opportunity in terms of changing attitudes in this regard.

It is perhaps concerning that there are such mixed opinions regarding the practicality of delivering the same level of services to everyone in Nova Scotia. There is clearly both the need and opportunity to better manage the expectations of government in this regard.

There is a relatively high level of recognition of the importance of increasing the number of business entrepreneurs in the province.

Nova Scotia residents appear to recognize the importance of significantly increasing the number of business entrepreneurs in the province. There is a strong consensus that successful businesses are good for local economies in the province. Perhaps even more importantly, there is a high level of agreement that business entrepreneurship should be taught as a core subject in our school system. This is one area that could be clearly championed by the Commission given the ringing endorsement from Nova Scotians.

There is less agreement regarding whether or not businesses help create wealth for everyone, perhaps another indication of a lack of understanding of the role private sector plays as it relates to the economy. Similarly, there is only a moderate level of agreement that most businesses contribute significantly to their local communities through their support of charitable causes.

There is only modest agreement that Nova Scotia is a good place to do business or that most companies treat their employees well.
There is general consensus of the importance of using Nova Scotia’s natural resources to generate wealth in the province, although environmental protection trumps job creation.

Nova Scotians place a high level of importance on the development of natural resources to generate wealth in the province and agree this kind of development is essential to a growing and prosperous economy, although with the caveat that direct benefits must accrue to local communities. This could potentially ease the resistance to the development of natural resources in such communities.

The development of natural resources cannot be done without the protection of the environment even if it means choosing the environment over job creation. There is a widely held belief that some natural resources cannot be developed in an environmentally safe manner and even the strictest regulations will not overcome public resistance to the development of natural resources such as shale gas.

The reputation of most companies in Nova Scotia in terms of operating in an environmentally responsible manner is perhaps underwhelming, demonstrating an area of opportunity. If the general public had a more positive opinion of the environmental practices of private businesses, there would be less resistance to the development of natural resources.

There is reasonably high level of recognition that the population in Nova Scotia needs to grow over the next decade, although there appears to be some resistance to immigration as a solution.

Nova Scotians generally agree that the population in Nova Scotia needs to grow. Nova Scotia grew the slowest of all provinces in the most recent census and is projected to see its population decline by 2030 if changes are not made. At the same time, Nova Scotians also recognize that the population is aging faster than elsewhere in Canada.

There is widespread recognition that better economic opportunities are the key to attracting people to the province. Nova Scotians appear to be very welcoming to newcomers from other parts of the Canada, but appear somewhat less welcoming to immigrants. This finding is confirmed by other research CRA has done on this topic. While few agree that immigrants take away jobs from other Nova Scotians, there is a segment of the population that believes this to be true. That is probably why there is only a moderate level of agreement at the current time supporting the increase in the number of immigrants to the province.

Finally, there is relatively weak agreement that the population is as diverse in terms of race and culture as most provinces in Canada, a reflection of the current reality. This would be especially true in the rural areas of the province.

There is broad recognition of the importance of every Nova Scotian adopting a “Can Do” attitude to help build a better economy.

There is nearly universal acceptance of the importance of every Nova Scotian adopting a “can do” attitude to build a better economy. Although there is recognition for this type of attitude, whether or not a “can do” attitude currently exists is another question.

Nova Scotians appear to be committed to living in Nova Scotia for the long term, although those in the youngest age group (those 18 to 34 years old) are significantly less committed. This is the very group the province needs to retain, as commitment to stay increases with age. Unfortunately, the majority of Nova Scotians do not currently see a good future for young people in the province.

It is both interesting and encouraging that there is significant agreement among those surveyed regarding the possibility of Nova Scotia becoming a “have” province one day. There is clear recognition of the need to become more entrepreneurial, but much less agreement that Nova Scotians need to become less reliant on government to build our economy. This is the cultural shift challenge that must take place and it will take considerable time and effort.

It is apparent that many Nova Scotians do not believe that they can contribute to solving our economic challenges, yet do not particularly feel strongly that Nova Scotians resist change more than those living elsewhere in Canada. Obviously, there is an opportunity to demonstrate how the average Nova Scotian can contribute to building the economy and at the same time, be more accepting of the changes needed to transform our economy.
Detailed Analysis

QUALITY OF LIFE AND THE FUTURE OF NOVA SCOTIA

While satisfaction with quality of life in Nova Scotia is moderately high, optimism for the future is not.

Generally speaking, Nova Scotians appear to be reasonably satisfied with the quality of life in the province (overall mean of 7.3 on a 10 point scale), with those living within the Halifax Regional Municipality being the most satisfied (mean of 7.5). Over one-half of residents can be considered to be highly satisfied with the overall quality of life in Nova Scotia. More specifically, on a scale of “1” to “10” where “1” is completely dissatisfied and “10” is completely satisfied, 36 percent of Nova Scotia residents offer a rating of “8”, “9”, or “10”. (Table 1)

Across the population, male residents report generally lower satisfaction with the quality of life in Nova Scotia compared to female residents. Likewise, those with greater household income also report higher satisfaction compared to those with lower households. Those living in urban communities (mean of 7.4) are as satisfied with their quality of life as those living in rural communities (mean of 7.3). This may dispel the notion that those in rural communities enjoy a higher quality of life.

While a majority of Nova Scotians are at least moderately optimistic about the economic future of the province, a significant minority are not. Nearly four in ten are at least moderately pessimistic. This is likely a reflection of the tough economic environment that currently exists in Nova Scotia and has for the past five years. (Table 2)

Across the region, optimism about the economic future of the province is significantly higher among those living in the Halifax Regional Municipality compared with other regions in the province. Across demographics, optimism increases with education levels and is significantly higher among females than males. Optimism is notably higher among those living in urban areas of the provinces than among those living in rural areas.

ATTITUDES TOWARDS ECONOMIC GROWTH

There is widespread recognition among Nova Scotians that economic growth is crucial to the province’s ability to deliver essential public services.

Reassuringly perhaps, Nova Scotians recognize that economic growth is important to keep pace with the costs of delivering essential public services. Unfortunately for Nova Scotia, the province has been dead last in economic growth as measured by GDP for much of the last twenty years. More than eight in ten
(85%) believe it is critically important that the growth in Nova Scotia’s economy keep pace with the rising costs of delivering essential public services. More specifically, on a scale of “1” to “10” where “1” is not at all important and “10” is critically important, 85 percent of Nova Scotia residents offer a rating of “8”, “9”, or “10”. (Table 3)

Residents across the province are equally likely to agree it is important that economic growth keep pace with the cost of service delivery. Across the population, residents with the lowest household income are least likely to consider economic growth to be important.

There is strong consensus among Nova Scotians, that without economic growth, many of those living in rural communities will have to go elsewhere for work (mean of 8.3 on a ten-point scale) and that a growing economy provides government with more money to spend on essential services like health and education (mean 8.1 on a ten-point scale). There is also a significant level of agreement that Nova Scotians must become better at selling goods and services to world markets (mean 7.7 on ten-point scale) and that Nova Scotia’s economy is not as globally competitive as it needs to be (mean 7.5).

There is significantly less agreement that the private sector can help solve the unemployment issues that exist in many rural communities in Nova Scotia (mean of 6.4 on ten-point scale of agreement) or that growing the economy is really the job of the private sector (mean of 5.1). This perhaps reinforces the need for Nova Scotians to better understand how the economy grows and the role that the private sector has in economic growth.

There is mixed opinion regarding whether or not it is practically possible to deliver the same level of government services to everyone in Nova Scotia (mean 5.4). This underscores the challenge for government in this regard. As well, there is only a modest level of agreement that Nova Scotians are too dependent on seasonal work (mean 6.2). (Tables 4a-f, h-i)

Those living in mainland Nova Scotia are more likely than others in the province to agree that without local economic growth, those living in rural communities may need to relocate for jobs elsewhere. Cape Breton residents are less likely to agree in this regard. Similarly, mainland residents are more likely than Cape Breton residents to agree that a growing economy provides the government with more money to spend on services, while those in Cape Breton are more likely than others to agree that Nova Scotians are too dependent on seasonal work.

ATTITUDES TOWARDS THE PRIVATE SECTOR

There is a relatively high level of recognition of the importance of increasing the number of business entrepreneurs in the province.

Nova Scotians appear to recognize the importance of increasing the number of business entrepreneurs (mean of 7.9 on ten-point agreement scale). Indeed, two-thirds (66%) of residents believe that it is critically important...
that the number of business entrepreneurs increase significantly in Nova Scotia, ratings of “8”, “9” and “10” on a scale of “1” to “10” where “1” is not at all important and “10” is critically important. (Table 5)

Interestingly, residents in the Halifax Regional Municipality are least likely to recognize the importance of increasing the number of business entrepreneurs compared to those living in Cape Breton and the rest of the mainland. This may be a result of a higher incidence of public sector employment in Halifax relative to the rest of the province. Across the population, importance ratings in this regard increase with an increase in income, age and education level. As well, those living in rural communities place higher importance on entrepreneurial initiatives than those living in urban centres.

There is a strong consensus among Nova Scotians that successful businesses are good for local economies in the province (mean of 9.1 on ten-point agreement scale) and that it is important to buy from local businesses (mean of 8.9). There is also reasonably high agreement that business entrepreneurism should be taught as a core subject in our school system (mean of 8.0). This is clearly one area that could be championed by the Commission.

There is also reasonably high agreement that Nova Scotians like to celebrate the success of other Nova Scotians (mean of 7.9). Cannot help but think that this may not necessarily apply to successful business entrepreneurs (Sydney Crosby probably, John Risley probably not).

There is only moderate agreement that businesses help create wealth for everyone (mean is 7.1) or that most businesses contribute to their local communities through their support of charitable causes (mean of 7.1). There is also moderate agreement that Nova Scotia is a good place to do business (mean 6.9) and most companies in Nova Scotia treat their employees well (mean 6.6). (Tables 6b-e, g. i-k)

Across the region, those from Cape Breton are more likely to agree that business entrepreneurism should be taught as a core subject in school, that Nova Scotia is a good place to do business and most Nova Scotia companies treat their employees well, compared with those from other regions. Those living in Cape Breton, however, are less likely to agree that Nova Scotians celebrate the success of other Nova Scotians and businesses create wealth for everyone. Residents from mainland Nova Scotia are more likely than others to agree business helps create wealth for everyone.

ATTITUDES TOWARDS THE USE OF NATURAL RESOURCES

There is general consensus of the importance of using Nova Scotia’s natural resources to generate wealth in the province, although environmental protection trumps job creation. Nova Scotians attribute a high level of importance to...
the use of Nova Scotia’s natural resources to generate wealth for the province (mean of 8.2). Indeed, when asked how important using the provinces natural resources is to the wealth of the province on a scale of “1” to “10” where “1” is not at all important and “10” is critically important, seven in ten (71%) Nova Scotians consider the use of the provinces natural resources to be critically important (“8”, “9”, or “10” on a 10-point scale). (Table 7)

Notably, those living in Cape Breton believe this to be more important than those living in the rest of the province. Mainland residents are least likely to believe this is an important issue. Across the population, middle income earners and those aged 35 years or older are more likely than others to assign importance to the development of natural resources to generate wealth in the province. Rural residents are somewhat more likely to consider the development of the province’s natural resources to be important.

Attitudes towards the harvesting of Nova Scotia’s natural resources underscore the challenges faced by both government and industry in the development of these resources.

There is relatively strong agreement that benefits related to the development of natural resources should be tied directly to the local community (mean of 8.2 on ten-point agreement scale), but also that the protection of the environment should take priority over the creation of jobs (mean of 8.0).

There is also general agreement that developing the province’s natural resources is essential to growing a prosperous economy (mean of 7.7) and that further development of our natural resources would create a lot of jobs in the province (mean of 7.5).

At the same time, there is moderate agreement that there are some natural resources that cannot be developed in an environmentally safe manner (mean of 7.2). There is even less agreement that Nova Scotians support the development of natural resources, including shale gas, as long as strict environmental regulations are enforced (mean of 6.2). This is similar to other recent research conducted by CRA in New Brunswick which indicated the same sentiment that a significant minority of residents were not prepared to support shale gas development even with the strictest regulations in place.

There is only a modest level of agreement that resource development is more important to the economy in rural areas than in urban areas of Nova Scotia (mean of 6.2) or that most companies in Nova Scotia operate in an environmentally responsible manner (mean of 6.1). (Tables 8a-g, j-k)

Differences of opinion are apparent across the region, with those in Cape Breton more likely than others to agree job creation will result from further development of natural resources and less likely to support the development of natural resources like shale gas even if environmental restrictions are met. Meanwhile, mainland residents are more likely to agree the economic benefits of natural resources should go to local communities compared with others in the province. Interestingly, rural residents are slightly less likely to agree that resource development is more important to rural areas than urban areas.

ATTITUDES REGARDING POPULATION GROWTH

There is reasonably high level of recognition that the population in Nova Scotia needs to grow over the next decade, although there appears to be some resistance to immigration as a solution.

Consistently across the province, Nova Scotians generally are in agreement that the population in Nova Scotia needs to grow over the next decade (mean of 7.8
on ten-point scale). In fact, when asked to rate the level of importance on population growth rates on a scale of “1” to “10” where “1” is not at all important and “10” is critically important, two-thirds (63%) of Nova Scotians believe that the population growth in Nova Scotia is critically important over the next decade (“8”, “9”, or “10” on a 10-point scale). (Table 9)

Residents across the region place similar importance on population growth rates in the province. Across demographics, those in the youngest age group (18 to 34 year olds) are significantly less likely to consider population growth to be important. Curiously, the longer someone has lived in a community, the more important population growth is perceived.

A high percentage of Nova Scotians consider better economic opportunities to be the key to attracting people to the province (mean of 8.5 on ten-point scale). There is also reasonably high levels of agreement that newcomers from other parts of Canada are welcomed in our communities (mean of 8.0) and that a growing population is good for our economy (mean 7.9). There is also reasonable consensus that immigration is good for Nova Scotia’s economy (mean of 7.6) and that the population in Nova Scotia is aging faster than elsewhere in Canada (mean of 7.5).

There is only moderate recognition that the population in Nova Scotia is not growing as it needs to be to grow our economy (mean of 7.1). There is somewhat lower agreement that immigrants are welcomed in Nova Scotia (mean of 7.2 versus 8.0 for newcomers from elsewhere in Canada) or that Nova Scotians support increasing the number of immigrants that come to Nova Scotia to grow our population (mean of 7.0). There is only a low level of agreement that Nova Scotia is as diverse in terms of race and culture as most provinces in Canada (mean of 6.3) Nova Scotians generally do not agree that immigrants take away job opportunities from other Nova Scotians, but there is clearly a segment of the population that do agree with this supposition (mean of 4.4, or 19% who answered either “8”, “9” or “10” on ten-point agreement scale). (Tables 10a-j)

There are differences in opinion across the region with those in Cape Breton less likely to agree that better economic opportunities are the key to attracting people to Nova Scotia and immigrants take jobs away from other Nova Scotians. Meanwhile, those living in the rest of mainland are more likely than others to agree opportunities in the region are key to attracting people to Nova Scotia and less likely to support immigration issues such as increasing the number of immigrants and agreement that immigration is good for the provincial economy. Rural residents appear to be less accepting of immigrants than their urban counterparts, at least in terms of increasing the number of immigrants and feeling that immigrants take away jobs from other Nova Scotians. Rural residents are likely also to have less exposure to immigrants than urban residents.

**ATTITUDES TOWARDS BUILDING A BETTER ECONOMY**

There is broad recognition of the importance of every Nova Scotian adopting a “Can Do” attitude to help build a better economy.
There is near universal acceptance of the importance of every Nova Scotian adopting a “can do” attitude to build a better economy. While Nova Scotians recognize the importance of having such a “Can Do” attitude, the question is whether or not that “can do” attitude currently exists. As an indicator of importance, when asked to rate the level of importance on adapting a “Can Do” attitude to build a better economy on a scale of “1” to “10” where “1” is not at all important and “10” is critically important, eight in ten (80%) rate this as critically important (“8”, “9”, or “10” on a 10-point scale). (Table 11)

Adaptation of a ‘Can Do’ attitude in relation to building a better economy is equally important across the region and across demographic groups.

Encouragingly, it appears that most of those surveyed are committed to living in Nova Scotia for the long term (mean of 8.2 on ten point scale). At the same time, there is a segment of the population (approximately 11% offer a “1”, “2”, or “3” on a 10-point scale) that strongly disagrees with this assertion and is presumably at risk. Of particular concern, this segment is more likely to be those in the youngest age group (those 18 to 34 years old) that are less likely as a group to live in Nova Scotia for the long term. This is perhaps one of the key challenges for Nova Scotia, finding ways to retain our young people.

There is moderately high levels of agreement that Nova Scotia has a reputation for being creative and innovative (mean of 7.6), that it is possible for Nova Scotia to one day be a have province (mean of 7.5) and that Nova Scotians need to become more entrepreneurial (mean of 7.6).

There is only modest agreement that the individual Nova Scotia can contribute to solving our economic challenges (mean of 6.8) or that Nova Scotians resist change more than those living elsewhere in Canada (mean of 6.5).

There is mixed agreement on whether or not Nova Scotians need to become less reliant on government to build our economy (mean of 5.8). Indeed, one in five Nova Scotians strongly disagree with this assertion (“1”, “2”, or “3” on a 10-point scale).

There is low agreement that there is a good future for young people in Nova Scotia (mean of 4.9). Indeed, 30% of those surveyed strongly disagreed with this statement (“1”, “2”, or “3” on a 10-point scale). Disagreement is strongest among those in the middle age group (35 to 54 years old), perhaps reflecting more concern about the future for their children in this province. (Tables 12a-h)

There are regional differences of opinion, with Cape Breton residents more likely than others to be committed to living in the province long term and less likely to agree the province needs to decrease reliance on government. Meanwhile, HRM residents are less optimistic about the province’s ability to become a ‘have’ province, while those living in the rest of mainland are more likely to agree that Nova Scotians should become more entrepreneurial and depend less on government and they can personally contribute to solving economic challenges in the region. This likely reflects the more conservative population base in mainland Nova Scotia relative to the other parts of the province.
Regressions

In order to better understand the importance Nova Scotians place upon various factors related to building the economy, several regression analyses were performed. The regressions sought to ascertain which attitudes and opinions bear the strongest associations with ratings of importance measures. In total, five different regression models were developed, using each of the five importance measures in the survey as dependent variables. Of interest, most of the regression models produced only weak models, suggesting that the specific attitudinal measures included in the survey are not particularly strongly associated with Nova Scotians’ ratings of the importance of various aspects of economic development. There were two regression models, however, that are worthy of note.

A strong model was developed for the stated importance of using Nova Scotia’s natural resources to generate wealth in the province. Results indicate that two drivers are significantly correlated with stated importance of natural resources, with an $R^2$ of 50 percent. Specifically, agreement that developing natural resources is essential to growing the economy is the strongest driver, followed closely by the belief that developing natural resources would create a lot of jobs in the province. Both are significantly correlated with perceived importance that NS natural resources should be used to generate wealth.

A strong regression model was also developed for the stated importance of the Nova Scotia population growing in numbers over the next decade. In this instance, four drivers are found to be significantly related to the importance of population growth, producing an $R^2$ of 51 percent. The strongest driver of the importance of population growth is the belief that a growing population is good for the economy. Other factors significantly associated with the importance of population growth are agreement that natural resources are essential for economic growth, agreement that the population is not growing as quickly as it needs to be to grow the economy, and the belief that the population of NS is aging faster than that of other provinces.
Demographics

The distribution of the sample relative by gender is reflective of the actual population distribution in Nova Scotia and consistent across the province. (Table A: Gender)

The age distribution of the sample is reflective of the actual age distribution in Nova Scotia based on Statistics Canada data. Younger residents are more likely to reside in HRM compared to other areas in the province. (Table B: Age)

Most residents have lived in their community for 20 years or more. Cape Breton residents tend to live in one community longer than others in the province. (Table 14)

Over one-half of residents work full-time. Less than ten percent of the population either work part-time or are unemployed, but actively looking for work. Three in ten residents are not actively looking for work. Nova Scotians living in Cape Breton are more likely than others not to be actively looking for work, while HRM residents are significantly more likely to be employed full-time. (Table 15)

Approximately two in ten residents of Nova Scotia either personally or have someone in their household that owns and operates a business. Cape Breton residents are more likely than others in the province to not own or operate a business. (Table 16)

Two in ten residents have parents who either currently run or did run a business. Residents across the province are equally likely to have parents who have or have run a business. (Table 16a)

The majority of residents hold a post-secondary education. Fewer Cape Breton residents have a post-secondary education compared with others in the province. (Table 17)

Household income varies across the province, with HRM residents reporting slightly higher income levels compared to others. (Table 18)
Q.14: How long have you lived in your community?

Q.15: What is your current employment status? Are you currently:

Q.16: Do you or anyone in your household currently own and operate a business?

Q.16a: Has, or currently does, either one of your parents run a business?

Q.17: What is the highest level of education you have completed?

Q.18: Which of the following broad income categories best describes your total household income before taxes in 2012?

Q.19: Would it be...:
Study Methodology

**QUESTIONNAIRE DESIGN**

The survey design for this study was undertaken by Corporate research Associates Inc., in consultation with representatives of the Nova Scotia Commission on Building Our New Economy. The questionnaire was field tested prior to the launch of the survey and modified accordingly.

**SAMPLE DESIGN AND SELECTION**

The sample for this study was drawn using systematic sampling procedures from a list of randomly-selected households compiled from listed telephone numbers in Nova Scotia drawn from a database that is updated quarterly. The sample was selected to match the geographical distribution of the population within the province and was designed to complete interviews with a representative sample of 400 adult residents 18 years of age and older of Nova Scotia.

**SURVEY ADMINISTRATION**

The surveys were conducted by telephone from July 29 to August 14, 2013. All interviewing was conducted by fully trained and supervised interviewers and a minimum of 10 percent of all completed interviews were monitored or subsequently verified. The average length of a completed interview was 15 minutes.

**COMPLETION RESULTS**

Among all eligible Nova Scotia residents contacted, the response rate was 11 percent. Response rate is calculated as the number of cooperative contacts (923) divided by the total number of eligible telephone numbers called (8,338).

The final disposition of all telephone numbers called is shown below according to the Marketing Research and Intelligence Association’s (MRIA) Standard Record of Contact Format.

**SAMPLE DISTRIBUTION**

The overall results are based on 402 interviews with individuals from the population of Nova Scotia. A sample of 402 respondents would be expected to provide results accurate to within plus or minus 4.9 percentage points in 95 out of 100 samples.

**SAMPLE SIZE AND TOLERANCES**

As margins of error for various sub-samples will vary based on sample size and proportion of the obtained result, a selection of sampling tolerances is presented in the following table:
## COMPLETION RESULTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Total Numbers Attempted</td>
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<tr>
<td>Not in Service/Blocked Number</td>
<td>1,372</td>
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<td>Fax/Modem</td>
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<tr>
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<td>Incorrect/Business Number</td>
<td>118</td>
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<tr>
<td>Duplicates</td>
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<td>B. Total Eligible Numbers</td>
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<tr>
<td>No Answer</td>
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<tr>
<td>Illness, Incapable</td>
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<tr>
<td>Language Barrier</td>
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<tr>
<td>Selected/Eligible Respondent Not Available/Callbacks</td>
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<tr>
<td>C. Total Asked</td>
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<tr>
<td>Never Call List</td>
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<td>Gatekeeper Refusal</td>
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<tr>
<td>Respondent Refusal</td>
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<tr>
<td>Terminated/Hang up</td>
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<tr>
<td>D. Co-operative Contacts</td>
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<tr>
<td>Disqualified/Quota Full/Terminate</td>
<td>521</td>
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## SAMPLE SIZE vs. PROPORTION

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</table>
Annotated Listing of ONE NS Submissions

Written submissions to the Nova Scotia Commission on Building Our New Economy are described in brief below. To obtain copies of the individual submissions, please contact Commission Director of Research and Communications Mark Austin at maustin@onens.ca. Permission for distribution and use will be obtained prior to release of any submission. After May 2014, please view the Commission’s legacy website for information about obtaining copies of submissions: www.onens.ca.

<table>
<thead>
<tr>
<th>Submitter</th>
<th>Length*</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ralph Surette</td>
<td>3 pages</td>
<td>Addresses issues of assets, prosperity and wealth creation.</td>
</tr>
<tr>
<td>Patrick McGrath on behalf of Research and Innovation CDHA/ IWK; NS Health Research Foundation, Faculties of Medicine, Health Professions, Dentistry and Science, Dalhousie University.</td>
<td>8</td>
<td>Outlines 5 different ways that health research contributes to the economy and provides 4 suggestions to the commission.</td>
</tr>
<tr>
<td>Dave Kerr, COO of Terra Firma Development Corp</td>
<td>4</td>
<td>Outlines Forest Lakes Country Club proposed resort facility and residential development near Windsor, NS.</td>
</tr>
<tr>
<td>Tamara Lorincz from Demilitarize.ca</td>
<td>3</td>
<td>Voices opposition to the NSPS ship building project and other forms of military-focused spending, suggesting instead a focus on renewable energy, healthcare and education.</td>
</tr>
<tr>
<td>Ecology Action Centre</td>
<td>8</td>
<td>Provides background on the Centre and its goals, and recommends ways NS can achieve a green, sustainable economy.</td>
</tr>
<tr>
<td>Tim Edwards on behalf of Nova Scotia Boatbuilders Assoc. (NSBA)</td>
<td>2</td>
<td>A view from the boatbuilding industry (vessels 24 m long or less) on their challenges and opportunities as a rural-based industry.</td>
</tr>
<tr>
<td>Pamela Parker on behalf of Atlantic Canada Fish Farmers Association</td>
<td>5</td>
<td>The aquaculture industry, notably salmon farming, and NS’s potential to be a global player.</td>
</tr>
<tr>
<td>IAP2’s Public Participation Spectrum</td>
<td>1</td>
<td>A graphic/text flow showing how the International Association for Public Participation interacts with the public, suggesting NS emulate.</td>
</tr>
<tr>
<td>Al Chaddock</td>
<td>7</td>
<td>“Nova Scotia Island Park and Marine Conservation Area” proposal focused on reclaiming our coastline.</td>
</tr>
<tr>
<td>Maritimes Energy Association</td>
<td>6</td>
<td>An overview of the existing situation in NS in terms of energy growth and development, looking at potential projects and unnecessary delays in getting projects underway.</td>
</tr>
<tr>
<td>Submitter</td>
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<tr>
<td>Envision NS</td>
<td>5</td>
<td>A review of the Envision NS position on economic development – concerns that a focus on economic growth without consideration for social, cultural and environmental issues will miss the big picture.</td>
</tr>
<tr>
<td>Steve Raftery, Community Development Coordinator, Bridgetown</td>
<td>2</td>
<td>Outlining how Bridgetown is taking advantage of its existing community assets in a positive way to develop its economy, suggesting that such action is needed province-wide</td>
</tr>
<tr>
<td>Steve Raftery, Community Development Coordinator, Bridgetown</td>
<td>9</td>
<td>Bridgetown redevelopment plan – using existing structures in new ways to promote growth and development.</td>
</tr>
<tr>
<td>Bridgetown Planner</td>
<td>9</td>
<td>Speaking notes from Jeffrey Reed at the Directors of Planning Conference regarding the “New dividends from old buildings” strategy that Bridgetown is using to encourage economic development in their area (related to the above 2 documents)</td>
</tr>
<tr>
<td>Thane Stevens, Stevens Group of Companies</td>
<td>2</td>
<td>Letter regarding the Stevens Group investment in aquaculture (salmon) and the potential for NS to be a world leader in land-based sea water fish farming.</td>
</tr>
<tr>
<td>Colin Fowlie, Creamery Square Project, Tatamagouche</td>
<td>1</td>
<td>Letter outlining the Creamery Square Project as a successful example of innovative rural development, offering documentation and experience as a case study that could be followed elsewhere in NS.</td>
</tr>
<tr>
<td>Gregory Heming</td>
<td>2</td>
<td>Expressing disagreement with the plan for establishing Regional Enterprise Networks (REns) and to the Commission’s overall mandate.</td>
</tr>
<tr>
<td>Gregory Heming</td>
<td>9</td>
<td>Gregory’s presentation to the House of Commons Standing Committee on Environment and Sustainable Development regarding what he refers to as “internal disaffection” and external exploitation of rural communities, and the Canadian Environmental Protection Act.</td>
</tr>
<tr>
<td>Creative NS Leadership Council in partnership with NS Department of Communities, Culture &amp; Heritage</td>
<td>58</td>
<td>Reviewed as part of the literature review process. Creative Economy Literature Review exploring how other jurisdictions around the world are developing their creative economy sector – summarizes four focus areas required for a successful creative economy and provides a gap analysis for NS based on its performance in those four areas.</td>
</tr>
<tr>
<td>ACOA - CFN Consultants &amp; Partner International</td>
<td>5</td>
<td>The Executive Summary for the study of the Ocean Technology sector in NS, particularly on the global value chain and implications for growth.</td>
</tr>
<tr>
<td>Daniel Costello</td>
<td>7</td>
<td>Daniel’s ideas and suggestions, based on his broad experience gained from his education and world travels.</td>
</tr>
<tr>
<td><strong>Submitter</strong></td>
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<tr>
<td>Feed Nova Scotia</td>
<td>2</td>
<td>Colchester-East Hants-Cumberland profile – facts and statistics on food bank use, economics &amp; hunger.</td>
</tr>
<tr>
<td>Feed Nova Scotia</td>
<td>4</td>
<td>Hunger Count 2012 – facts and statistics on food bank use throughout NS with recommendations to improve the situation.</td>
</tr>
<tr>
<td>Prof. Tom Webb - Economics and Democracy Council of Canadians</td>
<td>69 slides</td>
<td>Addresses issues of democracy and capitalism, and examines new theory of economic democracy using a cooperative model.</td>
</tr>
<tr>
<td>Prof. Tom Webb</td>
<td>7</td>
<td>Professor Webb’s thoughts and ideas on economic democracy and how to bring about development the cooperative model and credit unions.</td>
</tr>
<tr>
<td>CUPE NS</td>
<td>22</td>
<td>Outlines CUPE’s focus on strong national programs, impact of federal cuts, and the buy local “10% shift” movement instead of austerity measures.</td>
</tr>
<tr>
<td>Jane MacKay, citizen submission</td>
<td>4</td>
<td>Outlined her ideas on tourism, aquaculture, rural transportation, education, and improving NS economy in general to make it more consistent with other parts of Canada.</td>
</tr>
<tr>
<td>Stewart Lamont, Managing Director, Tangier Lobster Co. Ltd.</td>
<td>2</td>
<td>Thoughts on the small-scale fisheries of NS and how that industry can be developed, revitalized, and improved in order to support rural economic development</td>
</tr>
<tr>
<td>Jim Kimbrell, citizen submission</td>
<td>8</td>
<td>Supporting increased development of fish hatcheries in NS, particularly salt water, and providing links on information for other areas that have done similar work and how they have been successful.</td>
</tr>
<tr>
<td>Michael Hope-Simpson</td>
<td>2</td>
<td>Outlines NS’s unique capacity to act in a facilitation capacity.</td>
</tr>
<tr>
<td>Cumberland/Amherst/Parrsboro/Springhill/Oxford (CAPSO)</td>
<td>10 slides</td>
<td>Municipal presentation from ONE NS meeting outlining ways to improve prosperity.</td>
</tr>
<tr>
<td>Municipality of Guysborough Presentation</td>
<td>20 slides</td>
<td>Overview of economic development projects in the area with a set of recommendations on how to prioritize rural development.</td>
</tr>
<tr>
<td>Eastern Shore Proposals from Drs. Marike Finlay-de Monchy, Karin Cope &amp; Elisabeth Bigras</td>
<td>10</td>
<td>Outlines why the commission should address broader wellbeing and recommends how key Eastern Shore sectors can be improved.</td>
</tr>
<tr>
<td>Letters from Herschel Spector to Minister Belliveau about the Economics of Open Pen Salmon Farms</td>
<td>13</td>
<td>A series of letters opposing fish farming on land and highlighting various studies that point to negative consequences of such practices.</td>
</tr>
<tr>
<td>Letters from Herschel Spector to Minister Belliveau about the Economics of Open Pen Salmon Farms (revised)</td>
<td>34</td>
<td>Similar to the above item, a more complete series of letters opposing fish farming on land and highlighting various studies that point to negative consequences of such practices. Includes response to the group from Minister Belliveau.</td>
</tr>
<tr>
<td>Rachel Brighton</td>
<td>7</td>
<td>Ms. Brighton’s discusses our assets, examples to inspire wealth creation, and ideas on creating wealth and prosperity.</td>
</tr>
<tr>
<td>Submitter</td>
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<tr>
<td>Bill Black</td>
<td>3</td>
<td>Mr. Black provides six ideas on areas for improvement for NS, including resource industries, immigration, employment, communities, universities, and avoiding non viable businesses.</td>
</tr>
<tr>
<td>David Campbell</td>
<td>12</td>
<td>Mr. Campbell outlines ways Government can attract and support export-based entrepreneurs.</td>
</tr>
<tr>
<td>NS Small Schools Initiative</td>
<td>25</td>
<td>A proposal for regeneration of small communities by turning schools into community hubs which was presented to the Commission. Includes information on how schools that are transformed into hubs help the community and provides recommendations to the Commission on how NS can benefit from this practice.</td>
</tr>
<tr>
<td>Expert Panel on Yarmouth-US Ferry</td>
<td>83</td>
<td>A report on the matter of re-establishing the ferry service to the USA.</td>
</tr>
<tr>
<td>NS Alternative Provincial Budget</td>
<td>116</td>
<td>Reviewed as part of the literature review process. The alternative budget outlines how we can reallocate and/or raise additional public funds to create a community that is socially and economically just, as well as environmentally sustainable.</td>
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<tr>
<td>Twelve Things You Should Know about Nova Scotia’s Fiscal Situation</td>
<td>6</td>
<td>Reviewed as part of the literature review process. Provides 12 reasons to support the assertion that the current NS government’s means of addressing the deficit through austerity measures is misplaced.</td>
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<tr>
<td>Nova Scotia’s Vital Signs</td>
<td>50</td>
<td>Reviewed as part of the literature review process. A study of Nova Scotia society presenting how Nova Scotians are faring in terms of income, demographics, health, security, learning, environment, life satisfaction, and other indicators.</td>
</tr>
<tr>
<td>Rural and Coastal Communities Network Presentation to the Commission</td>
<td>3</td>
<td>Answers 5 questions on what’s working, barriers, assets, etc, with lots of ideas for increasing prosperity.</td>
</tr>
<tr>
<td>Geoff Brinston, disabled citizen submission</td>
<td>2</td>
<td>Mr. Brinston asserts that 90% of needed resources are in place to provide guaranteed employment for everyone.</td>
</tr>
<tr>
<td>Teresa MacNeil, Rural Communities Foundation of NS</td>
<td>3</td>
<td>Provides recommendations to the Commission on rural community issues.</td>
</tr>
<tr>
<td>Ross Haynes, QC, Citizen Submission</td>
<td>4</td>
<td>Mr. Haynes provides a wide range of suggestions on how to reduce the size of government and then move forward with economic building.</td>
</tr>
<tr>
<td>Gail Fowlow, Director, Penney Group &amp; Villages of Seven Lakes (2 submissions on same topic)</td>
<td>2 &amp; 8 pages</td>
<td>Offers an innovative solution to out-migration from rural communities in the form of a 614 unit low-impact conservation community in Porter’s Lake.</td>
</tr>
<tr>
<td>Mike Gushue, NS International Ferry Partnership</td>
<td>2</td>
<td>Supporting the resumption of ferry service between Yarmouth and the USA, contingent on 3 factors – improvement of US economy, the right ship, and effective marketing of the service.</td>
</tr>
<tr>
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<tr>
<td>Christopher Wright, Bay of Fundy Marine Transportation Assoc.</td>
<td>13</td>
<td>“Ferries and the Economy of SW Nova Scotia” – a paper on the history of ferry service in SW Nova Scotia and the current situation, giving data on loss in regional tourism revenue based on room night declines and also the impact on the ground fish industry in terms of trucking.</td>
</tr>
<tr>
<td>David Saxton &amp; David Arenburg, Yarmouth</td>
<td>10</td>
<td>Presentation on Yarmouth and surrounding area focused on issues with governance, economic development, medical services and transportation, giving current situation and recommendations for each topic.</td>
</tr>
<tr>
<td>Jack Kyte, Exec. Director, Pictou Regional Development Agency</td>
<td>42</td>
<td>Pictou County Business Attraction &amp; Investment Strategy – Commissioned report identifying strategies and priorities for growing and attracting businesses and business investment in the Pictou region, focused on 3 areas – economic gardening of high growth businesses, leveraging the power of the internet, and developing partnerships with Aboriginal and First Nations businesses.</td>
</tr>
<tr>
<td>Don Mills, Corporate Research Associates</td>
<td>1</td>
<td>Includes a map of the eight urban towns in NS with at least 5,000 population and recommends an urban town strategy rather than a rural strategy by focusing on the urban areas and their ability to support the rural areas.</td>
</tr>
<tr>
<td>Steve Sampson, Warden of Richmond County</td>
<td>2</td>
<td>Opposing the submission by the Strait of Canso SuperPort Corporation for Canada Port Authority status.</td>
</tr>
<tr>
<td>Craig Bower, citizen submission</td>
<td>8</td>
<td>Thoughts on governance and government involvement levels, the fishing industry, forestry, agriculture, manufacturing and tourism after having attended the Shelburne meeting.</td>
</tr>
<tr>
<td>John Pettipas, citizen submission</td>
<td>14</td>
<td>Reviews significant events and facts of NS history, mostly pointing to the need for immigrants and the urgent need to stop out-migration.</td>
</tr>
<tr>
<td>Mary Jess MacDonald, citizen submission</td>
<td>2</td>
<td>Raises issues around rural areas needing an “equal playing field” to urban areas and emphasizes need for infrastructure, a need to recognize rural Cape Breton apart from CBRM and a need to involve youth and help find employment opportunities for rural CB.</td>
</tr>
<tr>
<td>Greg Webster, citizen submission</td>
<td>1</td>
<td>Emphasizes need for 100% high speed internet and cellular coverage and addresses issues of agriculture, rural infrastructure, government “can’t do” attitude and EI access.</td>
</tr>
<tr>
<td>Mary Morrissey &amp; Phil Davison, Prior Learning Centre &amp; St. FXU</td>
<td>4</td>
<td>Providing detail on recent wide-scale social innovation activities undertaken by the Prior Learning Centre &amp; St. FX University, including research and development projects and other strategic initiatives.</td>
</tr>
<tr>
<td>Greg McLeod, Tompkins Institute</td>
<td>1</td>
<td>Recommendations including community-based investment company with a business research arm, decentralization of government offices to save costs, immigration program to recruit foreign business graduates and a competition inviting proposals from areas of high unemployment for not-for-profit groups.</td>
</tr>
<tr>
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<tr>
<td>“Top of the Island” communities of Cape Breton</td>
<td>8</td>
<td>Summary of a community meeting on how to engage with the Commission, outlining activities the communities themselves can undertake, and where they need government cooperation. Also includes a detailed analysis of local assets and issues.</td>
</tr>
<tr>
<td>“Top of the Island” submission (separate from the already listed one)</td>
<td>2</td>
<td>Recommendations to address local realities include creating a satellite economic and business development centre, implementing programs to strengthen community centres, recruiting medical staff, providing support for schools, increased CEDIF investment incentives and investment in youth.</td>
</tr>
<tr>
<td>“Top of the Island” Economic Development Committee</td>
<td>8</td>
<td>Summary of ways that the northern Cape Breton communities can engage with the new economy in order to ensure their future sustainability, including opportunities, issues and suggestions for the Commission.</td>
</tr>
<tr>
<td>Truro &amp; Colchester Chamber of Commerce</td>
<td>4</td>
<td>Sharing ideas from the Chamber of Commerce – a growing urban region but lagging rural areas, concerns about red tape deterring businesses from setting up in NS, need to compete with HRM for businesses, concerns about provincial department regulation enforcement, and emphasis on nurturing the creative economy.</td>
</tr>
<tr>
<td>Tourism Industry Association of NS (TIANS)</td>
<td>1</td>
<td>Recommendations for making rural NS more competitive – 12 recommendations in point form.</td>
</tr>
<tr>
<td>Tourism Industry Association of NS (TIANS)</td>
<td>28</td>
<td>Report on the impact of tourism on rural economies in NS, reviewing the role of tourism and its economic impact, the benefits to rural economies, comparisons with rural tourism in other provinces and countries, and opportunities for creating success.</td>
</tr>
<tr>
<td>Tourism Industry Association of NS (TIANS)</td>
<td>22 slides</td>
<td>Presentation to Commission from March 27, with basic facts on the tourism industry, economic impacts, trends, constraints and future ideas, as well as recommendations on making rural NS more competitive.</td>
</tr>
<tr>
<td>Nova Scotia Economic and Rural Development and Tourism</td>
<td>5</td>
<td>Nova Scotia Tourism Industry Facts – includes topics such as economic impact, why people choose to visit NS, accommodation facts, etc. Charts &amp; statistics.</td>
</tr>
<tr>
<td>Susan Myers-Levy, citizen submission</td>
<td>1</td>
<td>Email to the Commission regarding meeting with the Sheet Harbour Chamber of Commerce, and concerns that this is not representative of the Sheet Harbour or Eastern Shore communities – general disappointment that Eastern Shore is being left out of the process. Grassroots community revitalization needed.</td>
</tr>
<tr>
<td>Municipality of Clare</td>
<td>69</td>
<td>“Securing the Future: The Clare Economic Development Master Plan” – a plan developed through resident interview input, as well as input from industry, education and community leaders, and government representatives. Submitted in response to the Church Point session.</td>
</tr>
<tr>
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<tr>
<td>The KLOG Centre</td>
<td>8</td>
<td>Presentation to the Commission – emphasizing that the economy isn’t the only thing we need to improve – all aspects of life must be considered. We lack a vision of where we want to go. Provides recommendations on future success.</td>
</tr>
<tr>
<td>Mark Surette (Knightsbridge Robertson Surette)</td>
<td>2</td>
<td>A summary of concerns focused on the fact that NS doesn’t support success, and instead success breeds jealousy, contempt and perceived corruption. Focus on developing a culture of success.</td>
</tr>
<tr>
<td>Kyle Buott on behalf of CCPA-NS</td>
<td>5</td>
<td>Twelve Things You Should Know about Nova Scotia's Fiscal Situation – Background for the NS Alternative Budget.</td>
</tr>
<tr>
<td>Kyle Buott on behalf of CCPA-NS</td>
<td>38</td>
<td>Labour Standards Reform in Nova Scotia: Reversing the War Against Workers. Urges reform to the Labour Standards Code, which applies to workers not covered by union collective agreements, in order to improve the lives of families.</td>
</tr>
<tr>
<td>Kyle Buott on behalf of CCPA-NS</td>
<td>34</td>
<td>The Cost of Poverty in Nova Scotia – report demonstrating the high cost to society of continuing to treat only the effects of poverty rather than poverty itself, and to point out the savings that will accrue if there is concerted effort to tack the root causes of poverty, along with recommendations to government regarding where a focused effort could be made.</td>
</tr>
<tr>
<td>Sean Kirby on behalf of Mining Association of NS.</td>
<td>2</td>
<td>Providing recommendations specifically around the issues of the fuel tax rebate and the 12% land protection mechanism and their impact on mining, as well as recommended solutions to address these concerns.</td>
</tr>
<tr>
<td>John Wesley Chisholm, citizen submission</td>
<td>19</td>
<td>Focuses on our capacity for effort, government, prosperity, and education.</td>
</tr>
<tr>
<td>Rob Fennell, citizen submission</td>
<td>2</td>
<td>Suggestions for local tourism tax credit, local purchasing, and local investing.</td>
</tr>
<tr>
<td>Dale Smith, citizen submission</td>
<td>17</td>
<td>Various commentaries and suggestions pertaining to the proposed Parks and Protected Areas System Plan</td>
</tr>
<tr>
<td>Irvin Besen, citizen submission</td>
<td>1</td>
<td>Use universities to seed science and technology “business parks” for entrepreneurs. Fund industries in expansion phase and use “business park” system to identify them early.</td>
</tr>
<tr>
<td>Paul Pross, citizen submission</td>
<td>8</td>
<td>Nova Scotia’s Seniors: A Problem? A Challenge? An Opportunity? A challenge to what was perceived as a message in the Commission’s Interim Report that seniors are an impediment to the province’s economic well-being. Alternative views and opportunities are outlined in relation to labour contributions, tourism, culture, and volunteerism.</td>
</tr>
<tr>
<td>Laura Lee Langley on behalf of Communities, Culture &amp; Heritage</td>
<td>4</td>
<td>Encouraging use of a broader definition for culture to incorporate all creative industries and see them as an integral component of a modern sustainable economy and successful society.</td>
</tr>
<tr>
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<tr>
<td>Aquaculture Association of NS</td>
<td>6</td>
<td>Ideas about the encouragement of a successful and sustainable development of the aquaculture industry in Nova Scotia. Includes specific recommendation on how the provincial government can support aquaculture and provide tools for its development.</td>
</tr>
<tr>
<td>Dr. Colin Wightman, citizen</td>
<td>16</td>
<td>Recommendations on how to meet the workforce challenge by increasing support for “local jobs, remote employers” strategies, allowing NS to export minds and import people, and also providing additional opportunities for rural development.</td>
</tr>
<tr>
<td>Luke Batdorf, citizen submission</td>
<td>5</td>
<td>Recommendations on how the commission’s report should be received by government and how it should be implemented, as well as suggestions for societal reform, restoration of the Voluntary Economic Planning Agency, and suggestions for improving university program delivery.</td>
</tr>
<tr>
<td>Ron Bourgeois on behalf of CNSLC</td>
<td>16</td>
<td>Recommendations on creative culture, including investment in a creative core, creative businesses and industries, creative clusters, promotion of creative places, and strategies for growth of the above.</td>
</tr>
<tr>
<td>Helen Lanthier on behalf of Council of Canadians, South Shore Chapter</td>
<td>3</td>
<td>Recommendations on community improvements such as green, rural infrastructure, rural “hubs” for entrepreneurs, community-led initiatives, incentive and micro-loan programs for rural entrepreneurs, local purchasing initiatives, training programs, and other suggestions for community and entrepreneurial development.</td>
</tr>
<tr>
<td>John Odenthal, NS Environment</td>
<td>1</td>
<td>Ideas about increasing energy and resource efficiency through greening the economy, promotion of regulatory certainty, and addressing “red tape” issues for small business.</td>
</tr>
<tr>
<td>Iaian Archibald, Archibald Consulting</td>
<td>2</td>
<td>Nine recommendations aiming for long-term sustainability. These include ideas on: credit card use and retailers, food producer/inspection practices, increasing IT in curriculum from grades 7-12, allowing municipalities to geographically shift business tax rates to encourage movement to downtown cores, building IT/marine clusters, changes to fishing license practices, encouraging value-added forest products, supporting rural artisans and improving tourism.</td>
</tr>
<tr>
<td>Kent Williams, citizen submission</td>
<td>2</td>
<td>Concern regarding low participation rate in commission’s mandate and arguing that more stakeholders are needed to engage in the voice of NS, especially those across different age ranges, economic profiles, and other demographic sectors.</td>
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<tr>
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<tr>
<td>John Wesley Chisolm, citizen submission</td>
<td></td>
<td>On the audacity of imagining more for Nova Scotia when we have so much, the need for true argument, for greater effort, struggle against mediocrity, leadocracy to replace bureaucracy, new routes to wealth, wise use of capital and taxation, true education, the idea of a NS Youth Corp is outlined, more inspiring cities, housing/space and small business, citizen voice in change, creativity and boldness.</td>
</tr>
<tr>
<td>Sheila Stevenson, citizen submission</td>
<td>3</td>
<td>Recommendations on engaging citizens who want to build collaboration to engage others, thereby targeting attitude. Encourages a learning culture, adding value to non-profits and volunteers to nurture and grow the sector and building the local food economy and increasing food security.</td>
</tr>
<tr>
<td>Ian Cavanagh, Ambir Solutions</td>
<td>15 pages and verbal presentation</td>
<td>Halifax Scenarios 2025 uses scenario methodology to chart to possible courses for the city and, by implication, Nova Scotia: Sinking Ship vs. Scotia Built.</td>
</tr>
<tr>
<td>Dr. Colin W. Wightman, citizen submission</td>
<td>16 slides</td>
<td>Outlines rural development strategy that leverages technology to connect rural labour to remote employers.</td>
</tr>
<tr>
<td>Sue Elliott and Steve England, Industry Working Group on Outmigration</td>
<td>1 slide</td>
<td>Table outlining ways in which Government and Industry can work together to address labour/skills and outmigration challenges.</td>
</tr>
<tr>
<td>Kristen S. Williams, President &amp; CEO, Junior Achievement of Nova Scotia</td>
<td>4</td>
<td>Describes the mission and work of JA NS and explores possibilities of an expanded role in preparing students for new economy entrepreneurship.</td>
</tr>
<tr>
<td>David Levy, citizen submission</td>
<td>3</td>
<td>Addresses opportunities in technology, agriculture and aquaculture to grow the economy. Also provides research on global IT trends.</td>
</tr>
<tr>
<td>R. Richard Potter, citizen submission</td>
<td>4</td>
<td>Importance of ‘can-do attitude’. Lengthy list of development project rejections in NS.</td>
</tr>
<tr>
<td>Soulafa Al-Abbasi, Vice-Chair of Fusion Halifax</td>
<td>3</td>
<td>Provides an overview of the professional organization’s work.</td>
</tr>
<tr>
<td>John Sollows, citizen submission</td>
<td>1</td>
<td>On the importance of community-sponsored immigration and sustainable development.</td>
</tr>
<tr>
<td>Julia Sable for GoverNEXT</td>
<td>PowerPoint presentation</td>
<td>Piloting a Co-Lab in Nova Scotia: A neutral space (arm’s length from government) that brings key players in the system together to reframe a complex problem and develop actionable solutions. CO-labs are creative solution tools on issues such as red-tape reduction, homelessness.</td>
</tr>
<tr>
<td>Linda Best, FarmWorks CEDIF</td>
<td>1</td>
<td>Outlines FarmWorks’ activities and the importance of CEDIF programs to community development. Attached FarmWorks’ newsletter.</td>
</tr>
<tr>
<td>Sean Kirby, Mining Association of Nova Scotia</td>
<td>38 pages 54 slides</td>
<td>Details the economic impact of, and opportunities in, Nova Scotia’s mining industry.</td>
</tr>
<tr>
<td>Submitter</td>
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<tr>
<td>John MacDonald, Nova Scotians for Equalization Fairness</td>
<td>2 pages &amp; 2 spreadsheets</td>
<td>Notes that the disparity in both taxation levels and the rates of taxation could be addressed through a more equitable municipal equalization funding scheme. Two spreadsheets attached outlining municipal taxation rates and 2012-13 equalization grant data.</td>
</tr>
<tr>
<td>Paul McGinn, Division of Continuing Education, Saint Mary's University</td>
<td>3</td>
<td>Description of SEEN, the Silver Economy Engagement Network, as well as a comprehensive and collaborative Management and Leadership initiative.</td>
</tr>
<tr>
<td>Dr. Jillian Foster</td>
<td>7</td>
<td>A passionate plea to Shift Nova Scotia with local food at the centre of a new economy. Specifics are given on the opportunity to return to beef self-sufficiency and food sovereignty via investment in grass fed beef ventures.</td>
</tr>
</tbody>
</table>
As the Commission visited various communities across the province in the fall of 2013, each public session ended with a call for participants to relate what they saw as outstanding assets and achievements Nova Scotia has in place to build our new economy. To celebrate our place and inspire even more creative economy, we asked Nova Scotia artist Michael de Adder (can you find his signature?) to sketch a map of Nova Scotia's awesomeness from our crowd-sourced ideas. A copy of the map is available for download at www.onens.ca and is free for distribution and non-commercial use.