



Newfoundland and Labrador
Environmental Industry Association

A New Business Innovation Agenda for Newfoundland & Labrador

A Submission from the
Newfoundland and Labrador
Environmental Industry Association
(NEIA)

January 18, 2017

Preface

This submission focuses on addressing barriers and identifying solutions for the innovation performance challenges facing our province, including: private sector investment in technology; business-led research and development (R&D) spending; and exports.

This is a collection of ideas to stimulate and demand innovative activities which are based on engagements with and between NEIA members over the past calendar year through info sessions, panel discussions, surveys, and individual interviews. They are divided by the themes identified by the Department of Business, Tourism, Culture, and Rural Development: business innovations skills; market opportunities; access to financial capital; access to talent; and innovation culture. It should be understood, however, that barriers and potential solutions are not necessarily restricted in application to one of these themes.

This submission is made from the perspective of firms operating in the green economy which have unique innovation support needs. It is increasingly recognized that robust clean tech innovation in an economy requires demand-side policies more so than other industries. The ability for the sector to engage aggressively in innovative activities requires market opportunity to **de-risk** and **enable** activity. Given this unique need for NEIA's members, many of the following ideas propose demand-side interventions.

While collecting and organizing these ideas, two major themes emerged which appear to be particularly important for innovation within the green economy in Newfoundland and Labrador. First, firms are indicating **a need for a more flexible and responsive support structure** to help them pursue innovative activities. Second, firms are indicating there is **a need for more clarity of government priorities** with respect to the environment and the green economy. A better understanding of established needs and areas of interest would help businesses invest resources accordingly. It would also allow for other innovation tools at the public's disposal (e.g. regulations, procurement, research) to be strategically aligned with stated priorities. The ideas explored in this document are perhaps more direct if viewed through the lens of these two themes.

This submission is also made recognizing the fiscal realities facing the province and its government. Effort was taken to ensure ideas being proposed were reasonable in this economic environment.

NEIA looks forward to continuing the discussion on innovation with the Government of Newfoundland and Labrador.

Business Innovation Skills

Barrier: Innovation Skill Sets

Potential Solution: De-Risk Innovation through an 'Innovation' Course

The delivery of innovation 'workshops' could be helpful for SMEs. A workshop specific to owners and managers can teach decision-makers how to enable and pursue innovation within their businesses (including a summary of available supports). On the other hand, a workshop specific to staff could teach what innovation means in the context of employment within a company, and how one can innovate in their everyday jobs. These workshops would help build the innovative capacity within the businesses community through a better understanding of what it actually is and how it can be pursued.

Barrier: Business Awareness of the Importance of Innovation

Potential Solution: Enable Innovation by Building Capacity of Public Sector to Communicate

It is also important to build a greater awareness within the provincial public service of what innovation is, why it is critical to the economic performance of an economy, and how it can be supported. This education internally will help when it comes time for private sector firms to engage the province for support. While this awareness is a given for those in business development roles, it is also important for those in other roles and departments to understand the importance of innovation (and its basic requirements from a public service perspective) as to not act as barriers to processes.

Barrier: Business Awareness of the Importance of Innovation

Potential Solution: Enable Innovation by Building Capacity of Ec.Dev. Groups to Communicate

Business groups like Boards of Trade and Industry Associations have close relationships with the private sector community which can be leveraged to connect individual firms with innovation information and supports. It is important, for all parties, to ensure that these relationships are leveraged to their maximum benefit. The provincial government can play a role in building the capacity of these business groups to work in an economic development context with their members by supporting training and helping in the strategic professional development of their staff. In cases where these groups receive provincial funding, such training could be mandated. Properly trained – and informed – business development officers can facilitate innovative initiatives between the public and private sectors.

Training Support

It should be recognized that the Canada – Newfoundland and Labrador Job Grant program has proven to be a good mechanism for NEIA and its members to acquire training for employees.

Market Opportunities

Though the pursuit of new international markets is important from the point of view of innovation, economic growth, and diversification, for the environmental sector the critical market can often be the domestic one. In order to reach international markets and succeed, firms are regularly asked about their work at their point of origin – a question when sidestepped causes confidence issues for potential global partners. It is important to find ways for the province to support green economy activities where they exist at home.

Barrier: Provincial Procurement

Potential Solution: Enable innovation through reform and commitment

The public sector's procurement framework can have a direct demand-side impact on the provision of clean tech products and services. RFPs, specs, etc. must be written (a) with an awareness of services available locally, and (b) in such a manner that allows for creative proposals. This work is underway with the reform of procurement legislation in the province, an initiative which NEIA members are full in support of. However, two points need to be reiterated as regulations are written. First, 'environmental impact' must be an explicit consideration for decision-makers in order to empower decision makers to attach value to more sustainable products and services. Second, there must a commitment to continuous improvement of the provincial procurement framework which includes regular conference with private sector leaders.

Barrier: Reference Projects

Potential Solution: De-Risk innovation through pilot projects

The notion of 'pilot' projects is an important one for clean technologies. Product and service developers in the environmental sector are often proposing something new. Without proven results, it is very difficult for firms to break through with a sale – whether that be domestic or in other markets. As environmental products and services are often consumed by provincial departments, municipalities, and public agencies the problem for firms is compounded through the public procurement process. Decision-makers must be given the authority to proactively pilot projects where the need is not urgent in nature. A firm's credibility is given a significant boost when it can list local governments as current or former clients. How can pilot projects be supported and implemented in to decision-making across departments?

Barrier: Regulatory Framework

Potential Solution: Enable Innovation by Using Regulations to Demand It

Clever design of regulations and standards – in activities large and singular or small and frequent – can create demand for products and services. Where no such solutions are prevalent, they create an incentive and clear commercial pathway for innovation. In the case of clean tech, the evidence is clear that environmental regulation does frequently induce innovation and that innovation does reduce the burden of the regulation in terms of costs to business. The adoption and implementation of rules to influence the behaviour of actors in the

economy – both private and public – can be an important mechanism in terms of the adoption of clean tech products and services. To maximize innovation potential, regulation should be: outcome oriented (not prescriptive); stringent to provide incentives; and long-term and goal oriented to give firms the opportunity to plan to develop solutions. Regulation can be designed to support areas of particular opportunity for the province's clean tech sector. NEIA members generally view current environmental regulation in the province as being dated.

International Business

The supports for private sector firms from the province to pursue international business activities have proven to be of great value and should be viewed as enabling innovation. However, there are some threats in this regard. As programs change, decision-makers should be cautious against implementing programs which are too stringent and draw hard lines around sectors, activities, and the sizes of firms that they will support. It has been the experience of NEIA members that international business development activities that have included firms of varying focus and size have helped create new and unpredictable partnerships – contributing to innovative activities. This speaks to the barrier of rigid funding mechanisms which will be explored further below.

Access to Financial Capital

Barrier: Awareness of Available Supports

Potential Solution: Enable Innovation by Simplifying Support Ecosystem

There is a wide variety of supports available for the purposes of 'innovation' between provincial, federal, and academic agencies. The issue is that many firms are unaware of them all, and those that are aware of them can be overwhelmed by the plethora of options. It is difficult, even for those working in a business development context, to keep track of the supports and to understand which support is applicable in what circumstance and at what stage of a business' evolution. This barrier could be addressed through the creation of a tool which would allow firms to more easily identify what supports are suitable for their purposes. This barrier also speaks to the importance of informed and capable development officers within business groups as described above.

Barrier: Rigidity of Funding Mechanisms

Possible Solution: Enable Innovation with a Flexible Support System

Innovation means a new ways of doing things. As a firm's new idea might not necessarily fit within an existing funding structure, it may not get the attention it deserves. To remove this structural barrier, the province could provide a greater degree of flexibility in the delivery of its supports and programming. If the idea is a good one and innovative, the discussion should focus on how it can be supported and how the province can be responsive to the need at hand. Tight guidelines accompanied by a long decision-making process stifle innovation; those with great ideas can be discouraged by cumbersome processes. A more flexible approach to support

delivery means the province's threshold for risk will have to be higher – but innovation is inherently risky and in if it is in our collective interest to pursue it 'we' will have to accept this.

Barrier: Rigidity of Funding Mechanisms

Possible Solution: Enable Innovation by Entertaining Smaller Projects

Flexibility could also be considered with project scopes. An innovative idea from a small firm may be a financial risk relative to that firm, but relative to the province's activities at-large the sum of investment required can render the risk minimal. Perhaps a portion of funding can be allotted for micro-support at a higher risk level. This approach to support delivery will require quick decisions possibly involving more projects of lower value, and thus a decision-making framework which can support to increased demands.

Barrier: Funding Percentages

Possible Solution: De-Risk Innovation with More Robust Funding

In the event that a flexible support system entertains too much risk, another approach to consider is increasing the percentages of funding available for innovative projects. The province can support (and incentivize) innovation by contributing a higher-percentage in project funding for innovative activities.

Barrier: Rigidity of Funding Mechanisms

Possible Solution: De-Risk Innovation for High Growth Potential Firms

Not all small businesses are cast in the same mould. The needs of community, locally focused businesses (such as convenience stores, trades professionals) are not the same as for aggressive entrepreneurs. There are also many SMEs who are not interested in growth and export. Providing enhanced innovative supports for all of the above may spread scarce public resources too thinly, result in providing supports for firms who do not intend to grow, and limit opportunities for those firms which could benefit the most. The province may consider tailoring a program exclusively for innovative high-growth potential firms. This program can assist appropriate businesses navigate R&D, commercialization, marketing, and other activities in a timely fashion while also providing the supports necessary to manage rapid growth. Though such a program would not guarantee success for firms, those that do achieve high-growth will provide great benefit to the province. Instead of spending time and resources trying to engage a wide swath of businesses – many who are not applicable – in an attempt to stir innovation, the province could focus on those which are already interested.

Access to Talent

Barrier: Cost of Hiring High-Level Staff

Possible Solution: De-Risk Innovation with Employment Supports

There are a wide variety of programs available to subsidize the cost of labour, however many of these support mechanisms are limited to hiring students, recent graduates, or those on unemployment insurance. Innovative firms may require highly technical, high-level, or specifically-talented staff to pursue their objectives. There are not many supports which will fund such a hire. The province could consider programming which addresses this significant gap for firms.

Barrier: Demographics

Possible Solution: Unknown

Young innovative talent is attracted by progressive societies. The demographics of Newfoundland and Labrador provide challenges in this regard. Our older population will continue to grow in relative size, and thus will continue to grow in relative decision-making authority within public sector, private sector, and democratic institutions. This will discourage change and new ideas which will not only affect our collective ability to innovate but also affect our ability to create communities and environments that attract top-tier creative talent. This is particularly true with respect to the environmental sector whose products and services are driven by the recognition of environmental challenges and openness to new ideas to address them. There is no 'solution' to this problem, but it is an issue we must be aware of.

Innovation Culture

Barrier: Creativity in Business

Potential Solution: Enable Innovation through Early Education

We must take a long-term view on the cultural change required to infuse our business activities with our creative strengths, and in that respect early education should be an important target. The entrepreneurial spirit must be fostered at a young age. The willingness to combine business with creativity will filter through the careers of the educated and lead to (a) an increased rate of entrepreneurship, and (b) increased intrapreneurship within existing firms.

Barrier: Cultural Awareness of the Importance of Innovation

Potential Solution: Enable Innovation through Awareness

With our future workforce addressed above, our current workforce needs to be influenced to any degree that it can in order to maximize the benefits of an innovative economy. We collectively need a better awareness of what innovation is and why it is important in our day to day lives. This could involve the collection of stories of local innovation and an aggressive campaign to share those stories with businesses and their employees. All those groups with a

stake in growing innovation in the province – from business groups, to community groups, to municipalities, to professional associations – can be leveraged in a coordinated (and inexpensive) campaign that highlights both successes and perhaps more importantly failures (sometimes we win, sometimes we learn).

Barrier: The Word ‘Innovation’

Potential Solution: Enable Innovation by Addressing Possible Stigma

It has been suggested that the word 'innovation' is a barrier in itself. Some of our members have indicated that it represents an elite and scientific notion which is not applicable in day-to-day business. A recent local campaign promoting the value of capitalizing on 'good ideas' was viewed as being simple and effective approach to open minds to new possibilities.

Barrier: Economic Development Capacity

Potential Solution: Enable Innovation by Installing Regional Economic Development Resources

Little economic development capacity exists within the province's regions. Many municipalities also lack economic development resources. This presents challenges for industry when looking to partner with a town or region on long-term economic development opportunities and even on one-time projects. Many times there is no one for industry to partner with, and conversely there is no-one on the inside to proactively engage industry on the interests of the region. Regions need trained economic development professionals in order to pursue innovative projects in collaboration with industry (e.g. pilot projects, projects which partner the quadruple helix). These professionals would understand the importance of innovation to their local economies and also be able to contribute a greater awareness of innovation amongst regional decision makers, businesses, and the general populace.

Barrier: Clarity of Policy and Priorities

Possible Solution: De-Risk Innovation with Clear Direction on Provincial Needs and Priorities

Uncertain demand from the market and uncertain return have been identified as being major obstacles to clean tech innovation. An awareness of established needs and demands is helpful to give creative minds direction and purpose. Clarity in and communication of government policy and priorities allows businesses and entrepreneurs to pursue and invest in ideas with a reasonable ability to anticipate future markets. Specific to the environmental sector, it has been a challenge to identify specific provincial priorities relating to the environment, climate change, and the green economy. Clear policy and priorities would not just be a signal for the private sector but would also inherently be factored in to the structure of other supports – e.g. R&D funding priorities, procurement strategy, regulation, etc. It is hoped that a new climate change strategy, currently in development by the province, will help establish clear opportunities and priorities for entrepreneurial individuals and firms to focus on.

Barrier: Clarity of Policy and Priorities

Possible Solution: De-Risk Innovation Through Pilot Project Competitions

A possible marriage between already-mentioned needs for employing pilot projects and providing clarity on priorities is the idea of a competition. The competition could focus on an

area of identified need where no existing in-province solution exists. Competitors would pitch their idea to test a potential solution to the need at hand. To facilitate an innovative process, projects could require involvement from the remainder of the 'quadruple helix' – communities and post-secondary institutions. The award would include evaluation and support in mobilizing the technology / service if warranted.

Barrier: Alternative Funding Mechanisms

Possible Solution: Enable Innovation by Allowing for Alternative Financing Instruments

The Community Economic Development Fund (CEDIF) is a financing instrument used in Nova Scotia which has a proven track record of facilitating innovative projects – particularly in the environmental and social sectors. A similar type of financing is used by business incubators in Ontario to attract and provide seed funding for new enterprises. In both cases, attracted funds are applied locally at an expected rate of return for investors. The province could move immediately to enable communities of all types to avail of such an innovative funding mechanism to contribute to innovative projects. Aside from the costs associated with developing the appropriate regulatory framework, this is an inexpensive pursuit which could yield some interesting projects.

Barrier: Reluctance to Collaborate and Share Knowledge

Possible Solution: Enable & De-Risk Innovation through Support of Co-Location and Incubation

One way to collaborate and share knowledge is to share office space and office assets. In this regard, incubating agents like the Genesis Centre and co-locating initiatives such as the Common Ground should be supported. These facilities encourage discussion and partnerships for entrepreneurs and employees within companies in their early stages, skills which will not be lost. But co-location need not be restricted to start-ups. Can the notion of co-location be incentivized for existing firms to promote collaboration and knowledge sharing within segments of the economy?

Barrier: Reluctance to Collaborate and Share Knowledge

Possible Solution: Enable Innovation through Mandatory Business Group Membership

Business groups like boards of trade, industry associations, and other economic development entities facilitate collaboration and knowledge within their membership. In other jurisdictions (such as Germany) businesses are required to join their local chamber of commerce. With professionally trained business development resources, such organizations could provide significant supports to their membership including the facilitation of innovative activities. Mandatory membership in a business development group would also help stakeholders more easily identify potential clusters, working groups, etc.

Barrier: Incentives for Research & Development

Possible Solution: De-Risk Innovation through Transferable Tax Measures

There are opportunities to entice innovative activities within the private sector through providing appropriate financial incentives. Fiscal incentives can be particularly effective in raising R&D spending in the private sector; evidence suggests that tax relief for private R&D can

be a stronger stimulus for businesses than direct government support. One such option is the implementation of tradeable tax credits for R&D. Firms who do spend on R&D gain tax credits which they can either use, carry forward, or sell on an open market to obtain financing. This would be particularly useful for early-stage firms who are investing in R&D but have little cash flow. Tax credits could be contingent on the R&D taking place locally.

Barrier: Incentives for Research & Development

Possible Solution: De-Risk Innovation through Reducing Tax Implications of Growth

Another tax policy to consider would be to incentivize growth by not taxing on it. As firms increase their sales and income, in order to sustain continuing growth they need to invest more in the business – from people and skills to capital. These firms could be assisted in these efforts by a reduction or elimination of tax on increases on income year over year. This would be available to all businesses in the province, but would only apply to growing ones. The benefit disappears once growth stagnates, at which point the firm will pay normal income taxes on their increased income. This would create a significant incentive for businesses of all kinds to innovate and grow. Such tax measures would also reward different approaches, processes, or 'good ideas' business engage to increase income – activities which would be difficult to support through specific innovation programs as they are not 'projects'.

Financing Innovation Initiatives

While not true for all of the ideas proposed above, the aggressive pursuit of innovation in Newfoundland and Labrador will require, to some degree, the dedication of financial resources.

With respect to clean technology, industry expects that revenues accrued from the province's new greenhouse gas legislation – and a future carbon pricing mechanism developed in partnership with the federal government – would be re-invested to help firms impacted adjust to new and more stringent environmental regulations. Some of the innovative measures proposed could be addressed in part through these revenues.