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The federal government's innovation agenda is positioning Canada as a leader in the new economy and a global partner of choice. Investments in support of entrepreneurship and innovation are yielding results, and the prospects for Canada's future economic success have never been brighter. The commitments the government is making are building confidence among stakeholders and giving Canadians every reason for optimism. Notably, the government has continued to signal its commitment to inclusiveness, diversity and fairness as it works to create opportunity for all Canadians.



With those strong fundamentals in place, the task turns to building out the innovation strategy in a manner that generates significant gains in productivity and competitiveness and ensures that Canada provides well-paying employment for its citizens.

Immediate action is necessary. Research and innovation are key drivers of future prosperity, and Canada's research competitiveness has diminished in recent years; we have fallen off the list of the top 30 countries in terms of total research intensity. Ryerson University supports the recommendations of Canada's Fundamental Science Review (the Naylor report), endorsed by Universities Canada, that point to strengthening the foundations of Canadian research and innovation.

The key recommendations call for:

- A significant investment in independent, investigator-led research by frontline scientists and scholars. As the Naylor report found, independent science and scholarly inquiry have been underfunded for much of the last decade. The government should rapidly increase its investment in discovery research.
- Dedicated support for international research collaboration to capitalize on Canada's global opportunity and increasingly strong position as a partner of choice.
- Shifting the Canada Foundation for Innovation to a stable and predictable annual budget scaled at minimum to its recent annual capital commitment.

Ryerson is also supportive of the Naylor report's recommendation on digital research. The government should consolidate the current organizations that provide digital research infrastructure and provide the new organization with long-term funding and a mandate to lead in developing a national digital research strategy.

To address underfunding of the granting councils, an increase from approximately \$3.5 billion to \$4.8 billion would be, as noted by the Naylor report, "...among the very highest-yield investments in Canada's future than any government could make."

In response to broad economic and societal change, future-focused universities such as Ryerson are moving quickly and decisively to provide the knowledge, expertise, ideas, education and training that are preparing Canadians for the decades to come. Universities are well placed to facilitate the kind of transformative change necessary for prosperity in a technology-driven, knowledge economy. Ryerson, with its track record for supporting innovation and entrepreneurship, is particularly suited for this role. The university's evolving innovation ecosystem is generating significant start-up success and impact; its renowned DMZ incubator is establishing international partnerships creating global links and opportunities for entrepreneurs; the Centre for Urban Energy is an industry-academic partnership developing solutions to energy challenges facing cities, including energy storage, smart grids and net zero homes; and Ryerson's Zone Learning model is equipping students with the multidisciplinary skills needed for today's economy.

In support of the government's agenda and vision, Ryerson has specific, action-oriented recommendations for the next federal budget that will produce tangible results in three critical areas: immigration and settlement, labour market information, and start-up incubation.

1. Immigration and Settlement Research

Perhaps more than any other country, Canada is dependent on immigration. Without newcomers, Canada's population growth in the next 20 years will be close to zero, making all the more critical the need to better understand the conditions under which immigrants can thrive in the social, economic, political and cultural fabric of Canadian society.



While the federal government's 2016 national conversation with Canadians on immigration levels showed stakeholders were in favour of a measured increase, the government's own report notes public support "is based on appropriate settlement and integration supports." Successful immigration policies and programs will only be sustainable if they have as their foundation credible research, data and information.

Ryerson has developed an international reputation in immigration and settlement research and graduate training that can be utilized to shape effective policy and practise. Ryerson offered Canada's first advanced program in immigration and settlement studies; its faculty expertise helped launch the Ryerson Centre for Immigration and Settlement, a hub for the study of international migration, integration, refugees and diaspora; and the RBC Immigrant Diversity and Inclusion Project is a seven-year initiative focusing on immigrant employment and entrepreneurship, social engagement and mental health.

The university is committed to increasing the depth and breadth of its capacity in this area. The time is right to leverage Ryerson University's position as a thought and knowledge leader in the wide scope of areas related to immigration and settlement, which have never been more complex and dynamic. There is immense value to be gained by developing a greater understanding in the areas of immigrants as entrepreneurs and innovators; immigrant integration; and refugee resettlement in Canada.

a) Immigrants as entrepreneurs and innovators

Migration and immigrants are not problems to be solved, in fact evidence suggests that immigrants arrive highly motivated to be successful and become innovators and entrepreneurs, enhancing the competitiveness of the economy. The Conference Board of Canada makes the case for investor and entrepreneur immigrants to create economic growth. Ryerson proposes a study to identify optimal conditions for the growth of immigrant innovation and entrepreneurship. The results would inform future policy and practise.

b) Immigration and integration

Globally, there is a crucial need to better understand the process of migration, settlement and integration. Ryerson proposes an intense, community-engaged research program in migration and integration with the objective of fostering international collaborations, impacting policy and supporting Canada to realize the full potential of immigration for our society and economy. The program will produce research outcomes that respond to the challenges of contemporary migration and integration and inform development of more relevant programs and practise.

c) Refugee resettlement

How can we best ensure successful transitions for refugees to Canada? A 2012 study showed that government-assisted refugees fare significantly poorer than those who are supported by groups of private citizens or non-governmental organizations. Although the settlement needs of both types of refugees are similar, the study demonstrated that 49% of government-assisted

refugees who arrived in 2007 were receiving social assistance five years later, compared to 19% of privately sponsored refugees. The objectives of the proposed study are to map out the pathways to successful settlement in Canada.



2. Expand the successful Incubate-Innovate Network of Canada

Accelerating technology to market, developing skilled talent for our technology companies and connecting those companies to global networks for investment and market access are key to enhancing national productivity and competitiveness. Thanks to funding provided by the Canada Accelerator and Incubator Program, and founded by Ryerson University, Simon Fraser University and the University of Ontario Institute of Technology, the Incubate-Innovate Network of Canada (I-INC) is a pan-Canadian, internationally connected network that leverages the extensive resources of high-performance, university-linked accelerators and incubators as well as the research capacity of the institutions. I-INC creates an ecosystem for science and technology-enabled innovation, productivity and job creation.

I-INC's programs and services enhance the individual and collective impact of its member research universities and innovation organizations, strengthening Canada's innovation agenda and national competitiveness. Most importantly, participating innovators and companies are given access to a continuum of resources for research partnerships, talent access, market validation, scale up and international expansion, all of which maximize corporate growth trajectory and provide a platform on which to build world-class, innovative, technology-driven businesses that are made in Canada.

The network has already delivered impressive results. Over the past five years, supported companies have raised almost \$400 million in funding and created more than 2,300 jobs. In all, 300 companies are supported annually and, in 2016-17, I-INC assisted 59 companies in their international business development in markets in the U.S., China and Europe, with funding from NRC-IRAP. With the support of the Canada Accelerator and Incubator Program, the network has built the capacity to directly benefit clients and to deliver on the promise of Canada's innovation agenda.

Based on its strong performance and the reputation of its founding institutions' accelerator programs, as well as growing interest from additional Canadian universities and organizations, I-INC has an opportunity to expand. Expansion would increase the scope, reach and impact of the network and provide the scale to build a new generation of globally competitive businesses. Expansion would:

- Introduce a Canadian version of the successful U.S. National Science Foundation (NSF) I-Corps program to accelerate the time to market for science-based ventures, both SMEs and start-ups, bridging the commercialization gap by forming essential multidisciplinary teams.
- Establish the network as the gateway for industry in key sectors, such as advanced manufacturing, agri-food, cleantech, digital industries, health/medtech/biosciences and clean resources, to research and innovation collaborations, and talent development capacity, of leading Canadian academic institutions.
- Expand our networks for global investment and market development to scale ventures through access to international customers, growth resources and talent.



The expanded network would be a critical asset to the development of industry clusters and innovation platforms. The network simplifies access to research, incubation and talent across the country for the cluster members.

The network and suite of its proposed services would be an important catalyst for large, multidisciplinary, multi-institutional sector-based initiatives. It would provide an important complement to major investments in research such as those through NSERC strategic networks, CIHR and the Canada First Research Excellence Fund (CFREF). I-INC bridges the gap between these research investments to rapidly identify, validate and support opportunities where they can secure private investment or later-stage public programs such as NRC IRAP and SOTC, and then connect these resources to industry-led clusters.

3. Ryerson Institute for Labour Market Information, powered by Magnet

The increasing gap between labour market supply and employer demand represents a challenge for Canada's economic development and employment goals. The lack of timely and relevant labour market information (LMI) makes it difficult for governments to close the gap - compromising national productivity, limiting international competitiveness and affecting profitability for individual firms.

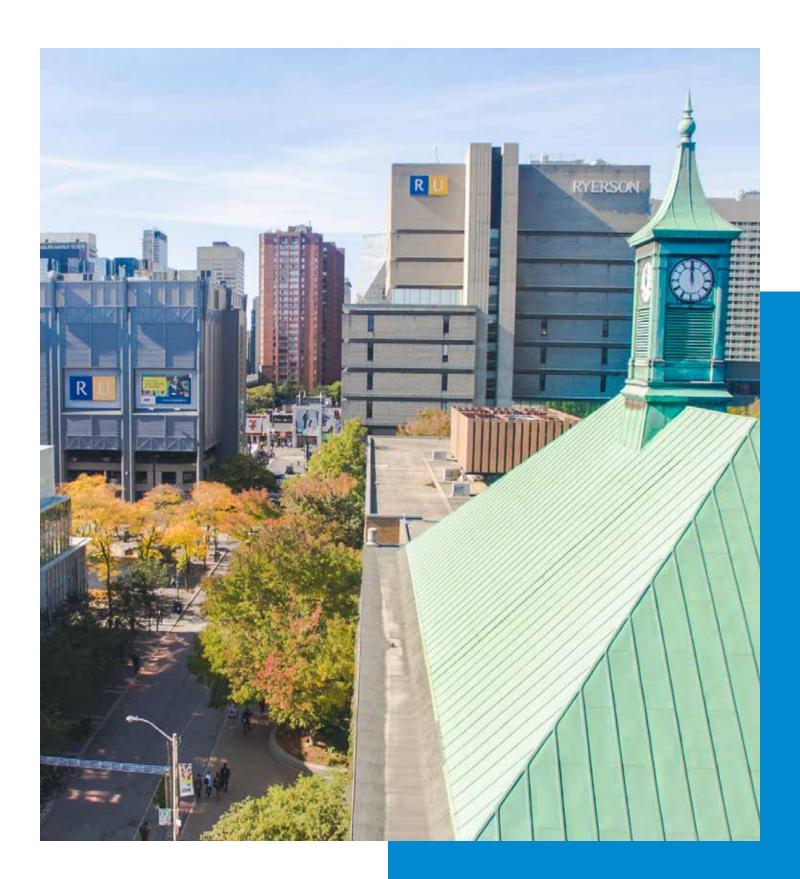
Through innovative technology at the Ryerson Institute for Labour Market Information (RILMI), the opportunity exists to close the gap. RILMI has the tools, expertise and experience to scale a national solution to the vexing issue of matching skills and competences of job seekers to the labour market.

RILMI incorporates a powerful technology-based solution to enhance outcomes for job seekers, students and graduates. The technology is powered by Magnet, an online platform that utilizes advanced job matching technology to pinpoint skills and competency gaps by geographic and educational background. RILMI will be an innovative hub of leading technology, tools, resources, career education programming and curated LMI to help students and job seekers succeed in the labour market. Real-time data will inform labour market analysis, policy training and employment programs. RILMI will generate the evidence needed to align Canada's talent more closely with demand.

A key feature built into the technology is support for diversity and inclusion. Users can privately and securely self-identify as a member of any equity group, facilitating equity hiring at a scale sufficient to address the underrepresentation of diversity hiring across Canada.

The real-time intelligence aggregated through RILMI provides robust evidence to inform diversity employment policies. It will deliver to the government timely and precise data to ensure policies and initiatives produce a more inclusive workforce. This innovative, productivity-building tool is available now, ready for deployment and can be scaled Canada-wide.

RECOMMENDATION: Support the Ryerson Institute for Labour Market Information and scale its innovative technology across Canada with an investment of \$9.5 million annually for three years.



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