

Answering the Call to Build Canada as a Global Centre of Innovation



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As the federal government embarks on a new innovation agenda, it is important to recognize how far Canada has come, especially over the last two decades, and the important role that universities can play in reaching the government's goal "to build Canada as a global centre of innovation."

There is no mistaking that Canada is already a world leader in research, but it isn't producing at the same level for innovation. This is where universities can contribute through new approaches and increased partnerships with

industry, community organizations and government.

Universities alone can't provide the solution to Canada's innovation woes. However, more and more they are partnering for innovation and moving away from an isolated 'silo approach' of scholarly research and creativity to become a valuable resource for building a nation with a stronger innovation ecosystem.

Looking at Ryerson University as an example, it has undergone rapid growth since opening in 1948. Today, it is on a transformative path to become Canada's leading comprehensive innovation university.

Much of Ryerson's growth has actually happened over the last 15 years. It has moved from being ranked as a primarily undergraduate university to now being recognized as a comprehensive university, and has increased its research income by nearly 400 per cent since 2001. A key part of its transformation can be attributed to new approaches taken in recent years for research activity and a focus on entrepreneurship and innovation.

For example, six years ago Ryerson opened the DMZ, which is now North America's top-ranked university business incubator, supporting more than 250 startups

that have created more than 2,400 jobs. With the success of the DMZ, Ryerson launched its program of "zone learning," which is open to the broader community as well as Ryerson faculty and students. The 10 innovation zones at Ryerson offer support to those who aim to bring ideas to market in a wide range of sectors including energy, social enterprises, biomedical and fashion.

At Ryerson, we believe in a broad and inclusive definition of research. We value basic and applied research while also placing importance on creative activities such as exhibitions, theatrical performances and other creative works. We are building on our research strengths and have formed multidisciplinary clusters to reflect the pressing issues faced in Canada and abroad that need to be addressed. These themes are: Digital Media and Technology; Energy and Sustainability; Health and Well Being; Technological and Industrial Innovation; City Building and Social Justice; Design, Culture and Creative Industries; Management, Entrepreneurship and Competitiveness; and Teaching and Learning for the New Economy.

This different approach is making an impact. As part of Ryerson's innovation strategy, it created the

Ryerson Centre for Cloud and Context-Aware Computing (RC4), an innovation hub bringing together dozens of Ryerson researchers working in numerous centres and labs to take advantage of our strengths in digital media, communications and design. With its partners, RC4 is helping to build expertise and support innovations in several areas including mobile computing, big data, digital media, Internet of Things and advanced manufacturing. It was created specifically to address new technologies and innovations across industry verticals including manufacturing, transportation, health informatics and consumer and public safety – to name a few.

Ryerson also prides itself on being a community-engaged university and a city builder, maintaining our original mission of serving societal need. Our researchers address real-world problems by responding and contributing to the technological, cultural, social and economic well-being of society. As Canada's first Ashoka Changemaker Campus, innovation is not confined to technological or economic goals at Ryerson. Social innovation and changemaking are integrated into our student curriculum across

campus in every discipline. Our social innovation work includes projects such as building capacity for food security in developing countries and here at home, addressing environmental issues such as climate change and invasive species in the Great Lakes, and integrating adaptive design into early childhood education to support children with special needs. We have also established the SocialVentures Zone, which is open to community members, faculty and students to grow and accelerate social enterprises.

The federal government's innovation action plan has identified world-leading clusters and partnerships as a priority. Just as we have created RC4 as a world-class cluster of digital media, design and advanced manufacturing expertise, Ryerson has also created the Institute for Biomedical Engineering, Science & Technology (iBEST) in partnership with St. Michael's Hospital. iBEST brings together Ryerson's engineering and science strengths with St. Michael's biomedical research and clinical expertise to translate research concepts into testable healthcare solutions and to train the next generation of researchers, innovators and entrepreneurs who will contribute to transforming healthcare in Canada.

Application and end-user adoption is also crucial to closing the innovation loop – it breaks down silos and brings us into our communities, where we see the real impact of our work as we continue to create knowledge and build solid relationships that strengthen our position as an engaged, innovative institution. The federally funded and Ryerson-led Incubate Innovate Network of Canada (I-INC), in partnership with Simon Fraser University and the University of Ontario Institute of Technology (UOIT), is a great example of a new approach to supporting Canada's enterprises in scaling up. In addition to being a network of interdisciplinary expertise, I-INC is also opening up multiple markets for adoption of research and innovation.

Universities are a key component of the nation's innovation ecosystem, but it must be a concerted effort, recognizing that innovation is not linear and doesn't happen in a vacuum. We need to adapt to how industry works, instead of industry conforming to traditional university research approaches. With this in mind, I know that Ryerson and other universities across the country can reach the goal of building Canada as a global centre of innovation.