



Queen's University Pre-Budget Submission

August 2016



The Honourable Wayne Easter, MP
Chair, Standing Committee on Finance
House of Commons
Parliament Buildings
Ottawa, ON K1A 0A6

Dear Mr. Easter,

On behalf of Queen's University, I would like to express my thanks to the members of the Standing Committee on Finance for the opportunity to participate in the pre-budget consultations. Queen's is very pleased to contribute to the development of the 2017 federal budget. We would also like to express our thanks to the government for its support of post-secondary education, research and innovation. In particular, we appreciate the commitment to research and innovation infrastructure demonstrated through the Post-Secondary Institutions Strategic Investment Fund.

Established in 1841 by Royal Charter of Queen's Victoria, Queen's University is renowned for its outstanding student experience and outcomes; its professional faculties in business, medicine, law, education and engineering; its top programs in arts and science; and for its internationally recognized researchers and research programs. The Queen's student body is diverse, with seven per cent of students coming from abroad and 15 per cent from outside of Ontario. It is also one of the most engaged in Canada, where 56 per cent of students have held a formal leadership position in a student organization or group. Queen's delivers a transformative student experience that is enhanced by its standing as one of Canada's most research-intensive universities.

2015, in particular, marked a banner year for research at Queen's. Chief among the many successes, Professor Emeritus Arthur McDonald won both the Nobel Prize in Physics (shared with Japanese physicist Takaaki Kajita) and the Breakthrough Prize in Fundamental Physics, which was awarded at the NASA Ames Research Centre in Moffett Field, California.

This Nobel Prize is especially important for Canada and Queen's: it is the first Nobel in two decades awarded to a Canadian working in a STEM field, for research largely funded and completed in Canada. Coupled with Stephen Smith's transformative \$50-million

donation to the Smith School of Business and Alfred and Isabel Bader's remarkable donation of a Rembrandt painting, valued at \$65 million (the third Rembrandt donated to Queen's by the couple), the Nobel Prize has contributed to tremendous momentum at Queen's. In addition, Queen's recently celebrated the conclusion of the largest fundraising campaign in its history, the Initiative Campaign, which saw more than \$640 million raised in support of a number of priorities, including research, innovation and the student learning experience. As Queen's celebrates its 175th Anniversary in 2016-17, these remarkable milestones, along with many other significant accomplishments, position the university for continued leadership in Canadian higher education.

Queen's is proud of the accomplishments of our students and graduates. In fact, the university's graduate outcomes are among the best in the country and its alumni are highly sought by employers. According to the 2013 Ontario University Graduate Survey, 92 per cent of graduates from Queen's undergraduate programs are employed within six months of graduation. In addition, according to the National Baccalaureate Graduate Outcomes Survey, a sample of Queen's graduates from across all programs have a median annual income that is higher than the Canadian university average. From mining and natural resources, to banking and health care, Queen's alumni make significant contributions to Canada's economy, society and global competitiveness.

The university is integral to the economic and community development of Kingston and the Eastern Ontario region. We work successfully with community business partners to provide students with an array of experiential learning opportunities, some of which are discussed in detail below. Queen's is also able and willing to contribute research and policy expertise to help the government address priority issues, and we are extremely interested in helping the federal and provincial government answer complex policy questions and develop ideas to address issues. The university is equipped with a breadth of expertise to provide critical insight on policy and research decision making.

Queen's looks forward to working with the government. Queen's also works with both the U15 Group of Canadian Research Universities and Universities Canada to advance post-secondary policy in Canada. Queen's provides this submission to echo these groups' advocacy efforts, and to provide additional recommendations to the federal government as it examines priorities for Budget 2017.

Universities Canada's Recommendations

Universities Canada proposes that the Government of Canada:

- Establish a target for investments in fundamental research and science, based on international peer countries (e.g. have a HERD/GDP ratio that is in the top three among OECD countries) and commit to a multi-year plan to achieve that target. These funding increases would help address a number of existing challenges in Canada's research funding system.
- Establish, as a principle, that federal research grants cover the full costs of funded research, including indirect costs, and commit to a multi-year plan to close the indirect cost funding gap.
- Expand Canada's International Education Strategy to increase the promotion of Canada as an attractive destination for top international students to study in. Canada would do this, in part, by building on the recommendations in the Chakma report and increasing its focus on the retention and success of international students post-graduation.
- Develop the policies and invest in the systems necessary for employers, including universities, to bring international talent to Canada, on either a permanent or temporary basis, more quickly and easily than any other OECD country, while maintaining appropriate security measures.
- Creating three funding streams that a cluster's innovation partners (made up of businesses, post-secondary institutions, non-profits, and other levels of government) could jointly apply for:
 - Cluster capacity-building fund. This fund would provide relatively small investments to support operations of a small cluster coordinating office. Applicants would need to demonstrate they are, or have reasonable prospects, of becoming a globally competitive innovation cluster and are building on regional strengths.

- Cluster project fund. This fund would make investments in projects that respond to a cluster's unique challenges and opportunities. The cluster's innovation partners would develop proposals, which could take a wide variety of forms (e.g. facility upgrades, international trade missions, training or mentorship programs, work-integrated learning initiatives, etc.) and the proposals would be assessed competitively. All funded projects would need to publish a post-project report on best practices and lessons learned, to help other clusters accelerate their own growth.
- Scientific advancement fund. This fund would invest in specific research areas that innovation partnership councils identify as a major, widely experienced 'next generation' R&D challenge. Proposals would be competitively assessed, would require the cluster's innovation partners to be invested in the project and would require agreement about how project IP would be managed.
- Establishing mechanisms to collect and publish data that can benchmark the performance of globally competitive innovation clusters.

Queen's University's Recommendations

Queen's is a world-leading research institution and ranked 11th among Canadian universities for research intensity, according to the 2014 Infosource rankings. While leading in several sectors including fuel cells, geotechnical engineering, nuclear materials, cancer trails and cardiopulmonary therapeutics, Queen's supports world-renowned research in fundamental physics, and supports ongoing research activity with links to SNOLAB and TRIUMF. This focus, in conjunction with cluster development in the region, provides expertise to advance nuclear technologies and alternative energy sources.

In particular, Queen's is recognized as having one of the leading particle astrophysics research programs in the world. It is the scientific home of Dr. Art McDonald, co-winner of the 2015 Nobel Prize in Physics, and aims to be a world leader in the next generation of globally important particle astrophysics experiments. Further to this, Queen's has applied for funding under the Canada First Research Excellence Fund to make its

Department of Physics, Engineering Physics and Astronomy the location for a newly established Canadian Particle Astrophysics Research Centre (CPARC).

In addition to the recommendations made by U15, Queen's would like to advocate for continued transformational investment in research and innovation, such as in Kingston's clean tech, energy and sustainable communities cluster.

Environment and energy are key thematic areas of clustered innovation at Queen's and in Eastern Ontario. The university's establishment of innovative programming to support the growth of entrepreneurs and SMEs in the sector has been remarkably successful.

Queen's is also a partner, along with Invest Ottawa and Wesley Clover, in the Eastern Ontario Campus Accelerator and Incubator Program. Together they support the advancement of faculty and student discoveries through growth accelerators.

Queen's is keen to play an active role in working with the municipal government and local business partners to foster a stronger research and innovation environment and build on regional economic development.

In what follows, we will provide the Ministry of Finance with examples of investments and projects the university has already taken that clearly show alignment with the government's objectives and priorities.

Queen's Innovation Park

Queen's recognizes that innovation is a key driver of the local, Canadian and global economies and has made a strong commitment to grow innovation and entrepreneurship in its Strategic Mandate Agreement with the Government of Ontario. Further to this, in 2008 Queen's launched Innovation Park to provide opportunities for academics, industry, government and not-for-profits to work together to cultivate ideas, identify important technological discoveries, and propel innovations into the marketplace.

The ongoing work at the Queen's Innovation Park is integral to supporting the broader cluster of innovation in Kingston. The role of Innovation Park is to foster interaction among the participants in the research and innovation system and thus stimulate

commercialization and economic development in the South Eastern Ontario region. With support from the provincial government, announced in the 2007 budget, and with Queen's University as the catalyst, Innovation Park has emerged as a technology development hub and an important vehicle that is helping to foster university-industry interaction, create vibrant research and innovation forums, drive and accelerate technology entrepreneurs and startups, and facilitate business retention, growth and attraction.

Queen's Innovation Connector

To support innovation on campus, Queen's developed the umbrella organization – The Queen's Innovation Connector (QIC) – which provides programs, services and resources to students to support their innovation and entrepreneurship activities. QIC's flagship program, the Queen's Innovation Connector Summer Initiative (QICSI) is a 17-week paid summer internship for students from all Queen's faculties and programs as well as St. Lawrence College and Loyalist College. Participants have the opportunity to start their own businesses while being paid and receiving seed funding. SparQ Studios, Canada's first on-campus makerspace and design studio, supports students and their startups by providing them with the tools, skills and knowledge needed to develop their next big idea.

To date, 26 companies incubated through the QIC program are still in operation, 11 of which are located in Kingston. A total of 72 jobs have been created by these companies in sectors such as medical devices, advanced manufacturing, fashion, food and beverage. Beyond preparing students to contribute meaningfully to the workforce, we are helping students discover and create to help build and strengthen Ontario's and Canada's economy.

Conclusion

Young and new Canadians seeking to successfully launch their adult lives and contribute to a prosperous and innovative economy, require meaningful and impactful educational opportunities. Queen's provides a transformative student experience that forms a

foundation for success, from the beginning of graduates' careers to life-long learning and innovation throughout their lives.

To remain on the cutting edge of innovation, support from a variety of partners is necessary, including the federal government. Should the government identify further funding to support innovation, Queen's is well-positioned to help the government deliver on its innovation agenda as we continue to work with municipal, community and business partners, including in the advancement of the clean-tech sector in Eastern Ontario.

We would like to thank the government for the opportunity to provide input for Budget 2017. During the budget process, we would be pleased to discuss this letter and other ways Queen's can contribute to the government's plan. For more information, or should you have any other questions or comments, please contact University Relations at 613-533-6000 ext. 33410 or vpuniversityrelations@queensu.ca

Sincerely,

A handwritten signature in blue ink, appearing to read 'Michael Fraser', with a long horizontal flourish extending to the right.

Michael Fraser
Vice Principal, University Relations