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U15 Budget 2017 Proposal: Building a Strong Foundation for the Innovation Agenda

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Group of Canadian Research Universities

Regroupement des universités de recherche du Canada

Fundamental Research: Building a Strong Foundation for the Innovation Agenda

World-class research universities are an essential part of a globally competitive innovation ecosystem. In addition to the intrinsic value of expanding human knowledge, research universities provide commercial and social innovators with an indispensable foundation, built upon an integrated learning and research environment. This environment, and the fundamental research at its core, generates a range of important social and economic benefits, including:

- creating a critical mass of knowledge workers by attracting and training highly qualified personnel;
- making discoveries that social and commercial innovators build upon;
- serving as a hub that connects their region to global knowledge flows; and
- providing expertise that businesses, non-profits and governments use to address their most difficult challenges.

As the federal government moves forward on its Innovation Agenda in Budget 2017, it is essential that it builds that Agenda upon a strong foundation of fundamental research and effective strategies that enable our innovators to turn new discoveries into social and commercial innovation quickly. This requires globally competitive investments in both fundamental science and associated research supports.

Investments in fundamental research are an essential component of any innovation ecosystem. These investments create the discoveries and train the highly qualified personnel upon whom social and commercial innovation is built. Worryingly, between 2006 and 2014, the percentage of GDP Canada invested in higher education research dropped to seventh from third among OECD countries (OECD, 2016). Ensuring that Canada continues to be a world-leading research nation will require that we increase our investments in higher education research to globally competitive levels.

To ensure those investments in research deliver their intended benefits, we also need to maintain underlying research supports. Research supports include regulatory compliance services, intellectual property management, hazardous material management, ethics reviews for studies involving humans, facility maintenance, and many other critical institutional functions. These supports, which are essential for any world-class research university, are generally estimated to cost about 50 percent of the direct costs of research¹ and are partially offset by the federal Research Support Fund (RSF). However, Canada's most research-intensive universities can receive as little as 17 percent of direct costs as a result of the RSF's funding levels and allocation formula. For U15 institutions alone this creates a gap of over \$380 million that needs to be funded from other sources. At the institutional level, funding this gap results in larger class sizes, in increased deferred maintenance and in reduced investment in a number of important student and research supports. Given that other leading countries fund the full costs of research; this gap hinders our ability to compete globally.

¹ CAUBO. "Indirect Costs of Research: Results of a joint survey administered by CAUBO/CAURA", 2013. P. 22

For Canada to be a leading innovation nation, we must ensure that our researchers are equipped to compete with the best in the world. Accordingly, The U15 recommends Budget 2017 strengthen the foundation of our research and innovation system by:

- establishing a national goal of moving into the ranks of the top three OECD countries in the percentage of GDP invested in higher education research;
- committing to a *minimum* increase of five percent per year, unfettered, to the federal granting councils until we have reached our GDP goal. In Budget 2017 that would represent a minimum increase of about \$127 million;
- committing to a *minimum* increase of 10 percent per year to the Research Support Fund until the full costs of research are funded and the largest research performers are no longer required to offset unfunded costs associated with federal grants. In Budget 2017 this would represent a minimum increase of about \$34 million; and
- committing to long-term sustainable and predictable funding for the Canada Foundation for Innovation.

This long-term commitment to being a leading international research nation will ensure that Canadian innovators have a strong foundation upon which to build.

Unleashing Innovation at the Frontiers of Knowledge

As we think about how to fuel innovation in Canada, it is critical that we recognize that a well-functioning innovation ecosystem requires different contributions from various sectors. For example, the contributions that fundamental research makes to an innovative country is different from, but equally essential to, the contributions a robust business R&D environment makes. If Canada is to be a leading innovation nation, we need to develop symbiotic relationships among all parts of the innovation ecosystem. Among other things, achieving this goal requires leveraging our investments in fundamental research to help our commercial and social innovators succeed.

Over the last number of years, U15 institutions, both individually and collectively, have been redoubling their efforts to create these symbiotic relationships. These efforts include expanding entrepreneurship supports, increasing federal decision-makers' access to experts, conducting more than \$650 million in research for businesses, conducting a further \$950 million in research for non-profits and undertaking a wide range of other activities. Although these activities have played an important role in helping fuel social and commercial innovation in Canada, a concerted effort across all sectors could increase benefits to Canada. Although U15 institutions have taken the lead in building many of these synergies and will continue to do so, we are always pleased to contribute to initiatives others are undertaking.

Conclusion

The U15 believes that Budget 2017 provides an exciting opportunity to push the frontiers of knowledge while simultaneously developing new ways to mobilize our research from discoveries into innovation. By recommitting ourselves to being a world-leading research nation, and then systematically leveraging those investments through both new and scaled-up knowledge mobilization initiatives, we will give our innovators a significant advantage.