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Federal Science Review & Consultation - Points for Discussion

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From: Vivek Goel, Vice-President, Research & Innovation

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Re: Federal Science Review and Consultation - Points for Discussion

The 2016 Federal Budget included plans for a comprehensive review of all elements of federal support for fundamental science and the development of a new national Innovation Agenda. A memo highlighting the two processes was sent out in the provost's digest on June 17th, and included a link to the web site for input to the science review at http://www.sciencereview.ca. An expert Advisory Panel has been struck as an independent and non-partisan body whose mandate is to provide non-binding advice and recommendations to Minister Duncan by December. The Panel's full mandate and membership as well as questions and answers are available online.

There is now also a website for input to the innovation consultations. Over the summer, innovation leaders will be hosting roundtable discussions on six key areas of action to inform the innovation agenda. We encourage members of the University community to submit their innovative ideas.

Given the importance of federal research and innovation support for the University of Toronto community, we will be submitting an institutional response to both processes. We welcome input on the key institutional points we may highlight regarding these reviews. We also encourage members of the University community to provide their own input directly to the sites noted above, and to share their submission with us if possible at VP.Research@utoronto.ca .

Science Review – Points for discussion

We encourage members of the community to discuss the questions posed to the science review panel and to submit their views directly to the panel. To facilitate discussions we highlight some key themes that the University considers to be central. These themes will form the basis for our institutional submission and we welcome your thoughts to help form our final submission.

The University of Toronto welcomes the Federal Government independent review of fundamental science as a strategic opportunity to set an ambitious, coordinated and cohesive narrative for research in Canada. Research-intensive universities, such as the University of Toronto, are critical to the research and innovation national landscape. We share the government's vision to ensure that support for fundamental research is "coherent, effective and agile" and that researchers have "the tools, training, and support needed to excel globally".

Before outlining key points for our institutional input to the Advisory Panel, we wish to highlight our interpretation of the scope and definition of the term 'fundamental science'. Firstly, we consider that *fundamental science* is inclusive of the breadth of investigator-initiated research, and secondly, inclusive of research across the continuum from discovery and insight research to applied research and innovation. This definition of fundamental science reflects the range of funding provided by the Granting Councils, comprised of the CIHR (Canadian Institutes of Health Research), NSERC (Natural Sciences and Engineering Research Council), and SSHRC (Social

Sciences and Humanities Research Council) and other federally-supported programs. Thus it is important that all scholars at the University consider their research to be within scope of the mandate of the review, whether or not they themselves define their work as fundamental science.

We have identified five overarching principles/themes for consideration by the Advisory Panel:

Ø **Continued support of research excellence**

Research funding decisions should be grounded in the support of research excellence. High quality peer review processes are integral to excellence and must be inclusive of researchers with subject expertise and, depending on the research proposed, researchers with a broader range of knowledge and reviewers with experience in complex projects. Peer review processes should be well managed, and follow best practices.

Ø **Increased inter-agency communication and coordination, along with simplification of the funding landscape**

Over the past several decades, the federal research funding landscape has evolved to support very specific research areas, but this evolution has occurred in a piecemeal manner, with multiple programs being established. For example, University of Toronto researchers are funded through over 300 federal programs. Each of these programs can represent different timelines, mandates, accountability requirements, boards and selection processes. For researchers, especially early-career researchers, assessing the array of programs and requirements is a significant barrier that takes up valuable time and effort to navigate, reducing the time available to conduct research. We believe that fewer, more flexible, broadly-defined programs might better support research. As well, program funding could be streamlined so that funding envelopes and grant management are simplified and coordinated, similar to the partnership of the Canada Research Chairs and CFI John R. Evans Leadership Fund programs. All funders should continue to identify opportunities that support excellence while also reducing the administrative

burden on both applicants and reviewers.

Audit and reporting requirements have rightly become an integral part of research accountability. At the University of Toronto, in 2015 alone, we underwent 85 external audits, submitted 7,000 financial reports, and 100 post-approval reviews and visits, in addition to our own review of 1,750 ethics protocols. Many of the agencies conducting or receiving these reports required the same statements/background from the University. Our experience indicates that audit and accountability requirements and processes could be enhanced and streamlined if information could be shared and coordinated through inter-agency coordination and communication, including coordination at the inter-ministerial level.

Ø **Planning and coordination for big science and platform technologies**

The University of Toronto participates and supports several big science and platform technology initiatives, both across Canada, as well as partnering with international consortia that are important for the quality of Canadian science. Both require long-term planning horizons and multi-year funding commitments that are not currently coordinated nor consistently adjudicated through an arms-length process. Planning would also benefit from international discussions so that we are not creating new entities within Canada that would best be served by joining together with strong international institutions and consortia. Platform technologies would benefit from coordinated and scheduled review so as to ensure that such technologies and infrastructures are truly unique and specialized.

Ø **Reinvestment in Granting Councils and the Research Support Fund to drive growth in fundamental science**

The Granting Councils are the bedrock of Canadian fundamental science but their budgets have declined in real terms since the financial crisis in 2008. Funding announced in Budget 2016 are positive and welcome, however, in order to bring Canada back into the levels of top competitor nations' resourcing for research and innovation, granting agency funding should be

restored to at least 2007-08 inflation adjusted levels, as well as an increase of the Research Support Fund that assists in the institutional costs of world-class research. In terms of the latter, the University continues to advocate for coverage of the full costs of research.

Ø **Inclusive consultations to inform research policy and governance**

As funding agencies develop policies that govern research, it is essential that they engage in timely, open and transparent consultations

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