Creativity and Design Thinking at the Centre of an Inclusive Innovation Agenda

OCAD University Pre-Budget Submission to the House of Commons Finance Committee

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For more information:
Miriam Kramer
Manager, Government Relations
mkramer@ocadu.ca
416-977-6000, ext. 3028

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Introduction

Canada's long-term economic growth, job creation and fiscal health depend on the essential role of universities in driving innovation and entrepreneurship.

As Canada' University of the Imagination, Ontario College of Art and Design University (OCAD U) is well placed to contribute to the new Innovation Agenda which is at the core of government's economic agenda. In particular, OCAD U is leading the way in furthering the federal government's goals of promoting an entrepreneurial and creative society, competing in a digital world, building world-leading clusters and partnerships, and growing companies and accelerating clean growth.

Central to OCAD U's vision is the new Campus for the Connected World on Toronto's Waterfront, an expanded home for OCAD U's human-centred technology design, digital media, and green technology research and learning. This new campus would also house OCAD U's Imagination Catalyst incubator and a shared commercialization partnership with IBM Canada – situated in the heart of an emerging information and communications technology cluster with strong linkages across Canada and globally.

Summary of requests

- Invest in sustained and predictable support for diverse elements of the university research and innovation ecosystem, including research infrastructure, discovery research and support for small and specialized institutions like OCAD U. This investment, will lead to Canada's next transformative technological breakthroughs, support greater interdisciplinary and international linkages and provide more opportunities for Canada's next generation of top research talent.
- Support new programming that aligns university education with the skills and products of the future – including in entrepreneurship programming that is focused on immediate business impacts.
- Invest in targeted support to incubation and acceleration on university campuses, and to facilitate access to risk capital.
- Invest in institutions and technologies that produce innovation on a consistent basis, which have the potential to be scaled up further.
- Fund infrastructure for institutions that enable and strengthen clusters world-leading clusters.
- Commit to additional direct financial assistance for Indigenous students pursuing a university education.
- Invest in new scholarships to support more Indigenous students to pursue graduate and post-doctoral studies.
- Provide new support to scale up successful institutional-level programs and to create new programs – on- and off-campus – that support Indigenous student access, retention, and academic success at university.

Research and Innovation

OCAD U welcomed the federal government's strong support for universities as engines of economic growth, discovery and innovation in Budget 2016, through investments in basic research, innovation networks and clusters.

However, according to Universities Canada, the pace of these investments has slowed considerably over the past decade and we are falling behind other nations' contributions to research and development.

OCAD U recommends sustained and predictable support for all elements of the university research and innovation ecosystem, including research infrastructure, discovery research and support for small and specialized institutions like OCAD U. This investment, will lead to Canada's next transformative technological breakthroughs, support greater interdisciplinary and international linkages and provide more opportunities for Canada's next generation of top research talent.

Entrepreneurial and creative society

Canada needs to do more to ensure young Canadians acquire the 21st century skills they need, including global competencies, for our future entrepreneurs, researchers and innovators to engage in the global marketplace of ideas.

Thanks to generous support for the federal government's Strategic Infrastructure Fund, OCAD U is building the $10 million first phase of a new home to expand its digital learning, research, commercialization and incubation – the Campus for the Connected World on Toronto's Waterfront. The new campus will include cutting-edge studio spaces for experiential and interface design, prototyping, new materials manipulation, 3D printing, usability testing and data visualization.

Phase-1 of the Campus for the Connected World is a 13,000 square foot facility in the new Daniels Corporation City of the Arts, which will be complete by 2018. OCAD U is currently seeking $25 million in federal support towards the $50 million second phase, which will bring the full project to 68,000 square feet.

OCAD U requests that the federal budget support new programming that aligns university education with the skills and products of the future – including in entrepreneurship programming that is focused on immediate business impacts.

Growing companies and accelerating clean growth

Universities have proven themselves to be prolific generators of new ideas, but R&D assistance is needed in the development phase to bridge the capital and financing gap between the initial idea and venture capital stages of their development.

OCAD U's incubator, Imagination Catalyst, is a hub for creative and design entrepreneurship and innovation, supporting commercialization initiatives and bringing design skills to emergent companies. It supports up to 25 creative companies and social ventures each year, while leveraging OCAD U's investment in world-class technology, maker studios, research labs and specialized maker equipment such as 3D printers.

Since 2010, Imagination Catalyst has incubated over 75 companies, generating more than $5 million in investment and creating 150 jobs. In 2014, the Government of Ontario made an initial $1 million investment as Ontario's hub for creative entrepreneurship. Venture partnerships have grown the Imagination Catalyst Venture fund to $2.25 million.

The Campus for the Connected World will allow OCAD U to move and expand the Imagine Catalyst incubator from its current 3,000 square feet to a shared 10,000 square feet with IBM Canada, which will spur innovation in data-driven design, the Creative Industries Hub and ICT technologies adjacent to the new campus.

OCAD U requests that the federal budget invest in targeted support to incubation and acceleration on university campuses, and to facilitate access to risk capital.

Competing in a digital world

To contribute to a strong digital economy in Canada, Canadian universities are embracing digital technologies to support teaching, learning and research, and to provide 21st century facilities for students and researchers.

As the world transforms, OCAD U's faculty, students and alumni are leading change, building strong new competencies in human-centred technology design, strategic foresight, design thinking and Dig Data driven fields – visual analytics, wearable technology and the Internet of Things.

The new Campus for the Connected World will place design thinking, strategic foresight and digital media at the centre of emerging capabilities in Big Data, the Internet of Things, green and sustainable technology and cognitive computing. This will support industry-partnered research in biomaterials innovation, learning support technologies, inclusive design and digital media industries including animation, cross-platform and online media.

OCAD U requests that the federal government invest in institutions and technologies that produce innovation on a consistent basis, which have the potential to be scaled up further.

Building world-leading clusters and partnerships

Successful clusters require university participation, in addition to business and government partners. Just as government plays a role in evolving clusters, they can boost economic growth with support for new and emerging clusters – at the heart of which are true industry partnerships that drive new ideas, applications and collaboration.

Toronto is embracing an innovation economy and witnessing significant growth in its digital media and entertainment, data mining, analytics and visualization industries. In the midst of this creative, high-tech revolution, Toronto's Waterfront is being remodelled as a hub for the connected world. Waterfront Toronto, the public advocate and steward of the city's lakeshore revitalization, estimates that the waterfront communities will eventually be home to 40,000 new residents and 40,000 new jobs. The significant investments in ultra-high-speed networks, smart infrastructure and data capture/analytics in this precinct make it an ideal location for the Campus for the Connected World.

OCAD University will share its Campus for the Connected World with its project partner, IBM Canada, and will be well placed to develop additional partnerships with Cisco's Innovation Centre, Corus Entertainment and other industry neighbours.

As a fully integrated partner for the Campus for the Connected World, IBM Canada will provide researchers with support and access to a unique and globally expanding computing infrastructure to expand and accelerate research scope and outcomes. This collaborative research model will attract IBM R&D investment to Canada in cloud computing, analytics, mobile, security and social platforms.

OCAD U requests that the federal budget includes infrastructure funding for institutions that enable and strengthen clusters world-leading clusters.

Indigenous higher education

OCAD University welcomed the federal government's commitments in Budget 2016 to ensure "Indigenous peoples share in Canada's prosperity" and "Indigenous children get the education they need and deserve" through investments in primary and secondary education. The next urgent step will be to invest in aspirations for postsecondary education to further equip Indigenous youth for the future.

OCAD University has long supported the professional training of indigenous artists and designers. Highly regarded artists such as Tom Hill, Rebecca Belmore, Terrance Houle and Bonnie Devine have all studied here. In 2011, the university launched a Bachelor of Fine Arts in Indigenous Visual Culture (INVC), which complements existing minors as well as indigenous undergraduate and graduate core curriculum. The BFA delivers a unique approach to First Nations, Inuit and Métis knowledge and creative practices, and is supported by a national council comprising Canada's leading indigenous architects,

artists, curators, media makers and organizations. Its aim is to nurture individuals who will lead the creative economy in indigenous communities.

In 2015, OCAD University announced the Delaney Chair in Indigenous Visual Culture, funded by a private donation from the Delaney family. In 2016, OCAD University welcomed its first tier-one Canada Research Chair, Dr. Gerald McMaster, a world-renowned expert in indigenous visual culture and critical practice.

Greater federal financial aid to improve access to higher education and new support for university programs that boost retention and graduation rates are fundamental to unlocking the untapped potential of Indigenous youth. These initiatives will help build the next generation of Indigenous leaders, including a new cohort of Indigenous researchers and faculty who will enhance the integration of Indigenous knowledge and science in research, and help advance reconciliation efforts.

OCAD University supports Universities Canada's requests for the federal budget to:
- *Commit to additional direct financial assistance for Indigenous students pursuing a university education;*
- *Invest in new scholarships to support more Indigenous students to pursue graduate and post-doctoral studies; and*
- *Provide new support to scale up successful institutional-level programs and to create new programs – on- and off-campus – that support Indigenous student access, retention, and academic success at university.*

About OCAD University

OCAD University is a specialized, 140-year-old institution that produces and employs the country's leading artists, designers, digital media researchers and cultural thinkers. Its faculty members and students have long been on the leading edge of developments in art, design and digital media and technology innovation. From encaustic paint substrates to early anthropomorphic robotics applications, biomimicry to computer-driven music tools, OCAD University has never shied away from incorporating new ideas and processes into its studio-based learning. Central to OCAD University's constant evolution is the belief that creativity and imagination can improve the world, a conviction that drives the university's plans for the Campus for the Connected World, a research commons for multidisciplinary programs of study with an integrative spirit of entrepreneurial partnership.

OCAD University is located in the heart of downtown Toronto, and it has 4,600 students enrolled across 16 undergraduate and 7 graduate programs. The university produces and employs the country's leading artists, designers, digital media researchers, design thinkers, strategic foresight analysts and cultural thinkers, as well as research faculty who add breadth capability in ethnography, sociology, psychology, law, health care, engineering, computer science and the humanities. It also generates jobs; supports

entrepreneurship, cultural diversity and indigenous knowledge; and has a significant economic and social impact in Canada and beyond.

The university has also focused on attracting industry contract research from major companies such as IBM Canada, Cisco, *The Globe and Mail*, Microsoft and Uber, as well as extensive collaboration with small and medium-sized enterprises. OCAD University currently has three Canada Research Chairs: Indigenous Visual Culture and Curatorial Practice, Design for Health and Design for the Connected World (the Internet of Things).

Examples of OCAD University's leading research areas include:

- **Visual Analytics Lab**: This research partnership — with York University, University of Toronto, health-care institutions and major industry partners — is developing the next generation of data discovery, design and visualization techniques.

- **Strategic Innovation Lab**: This is a growing community of scholars, practitioners and business and policy professionals who employ a design-thinking and scenario approach to finding, framing and solving the complex dilemmas — financial, social, organizational and other — of 21st-century life.

- **Inclusive Design Research Centre**: This is the largest, most productive and connected applied research initiative of its kind, with 26 permanent research staff, more than 24 research assistants, several postdoctoral positions and more than 300 formal multi-sector partnerships globally.