

Written Submission for the Pre-Budget Consultations
in Advance of the 2020 Budget

Simon Fraser University
British Columbia

August 2, 2019

RECOMMENDATIONS

- Recommendation 1:** That the government fund a **national community resilience initiative** to support communities through climate change mitigation strategies and natural hazard detection, monitoring and response, with the support of all levels of government and academic expertise.
- Recommendation 2:** That the government support a new innovation funding model – a **Federal Post-Secondary Innovation Strategy** – that encourages and enables research universities and institutes to develop programs and infrastructure to turn ideas and discoveries into innovations.
- Recommendation 3:** That the government invest in a new Post-Secondary Strategic Infrastructure Fund to further accelerate strategic research and innovation **infrastructure activities at post-secondary institutions**.
- Recommendation 4:** That the government invest in the first Canadian **urban transit gondola** project as a reliable and sustainable transit solution that will reduce greenhouse gas (GHG) emissions, improve travel time, service reliability, and access for the growing population of students, staff, and faculty of Simon Fraser University (SFU) and residents of UniverCity's sustainable community.

For further information regarding this submission, please contact:

Joanne Curry, Vice-President External Relations
Simon Fraser University
joannec@sfu.ca | 778.782.5218

INTRODUCTION

SFU appreciates the opportunity to provide recommendations to the House of Commons Standing Committee on Finance ahead of its 2020 pre-budget consultation.

SFU's vision is to be the leading engaged university defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. Our goals are:

- to equip students with the knowledge, skills, and experiences that prepare them for life in an ever-changing and challenging world;
- to be a world leader in knowledge mobilization building on a strong foundation of fundamental research; and
- to be Canada's most community-engaged research university.

Our vision and goals provide the opportunity to contribute in meaningful ways to ensuring Canada's competitiveness and productivity in the face of a changing economic landscape.

In supporting and encouraging Canadians and their businesses to grow the economy, we fully support the recommendations of Universities Canada's submission¹ and its focus on expanding research investments for international research collaboration, reinvesting in state-of-the-art green post-secondary infrastructure, invest in a knowledge mobilization fund, invest in university cybersecurity, and enhance Indigenous student access and success at post-secondary institutions.

Building on these recommendations, we suggest *four* strategic recommendations for the Committee's consideration: 1) community resilience against climate change, 2) a post-secondary innovation strategy, 3) post-secondary infrastructure, and 4) sustainable transportation.

RECOMMENDATIONS

1. Community Resilience Against Climate Change

Community resilience speaks to the ability of our communities to continue to function through disruptive or even catastrophic events such as wild fires, floods, landslides, earthquakes and tsunamis. These events affect all Canadians, but often have a disproportionate impact on small and remote communities, and on First Nations communities. With ongoing climate change, community resilience is needed more than ever.

In 2016, Canada's Parliamentary Budget Officer projected federal assistance for extreme weather damage alone would cost approximately \$1 billion/year over a five-year period. As stated in Canada's Emergency Management Framework, "Whole-of-society partnerships based on effective collaboration, coordination and communication are key components of Federal, Provincial and Territorial emergency management systems."² The academic system has a significant role to play in this arena.

We recommend that the federal government fund a national community resilience initiative which would connect

¹ Universities Canada, *Investing in people, research and innovation for a greener Canada: Universities Canada's Budget 2020 submission to the House of Commons Standing Committee on Finance*, Ottawa 2019.

² Ministers Responsible for Emergency Management, *An Emergency Management Framework for Canada – Third Edition*, Emergency Policy and Outreach Directorate, Ottawa 2017, page 10.

communities and all levels of government to multi-disciplinary academic expertise in climate change mitigation and natural hazard detection, monitoring and response. The federal government has a unique and vital role to play in bridging gaps between research disciplines, between sectors, and between regions, in planning Canada's response to hazards. In addition to incenting community actors to coordinate and build resilient communities, the government has the opportunity to require a resilience lens be applied to distribution of federal funds and to the decision-making process of federal departments.

By partnering with Canada's researchers and experts, the Government of Canada can better respond to this 21st century challenge in proactive ways that will also enhance Canada's social, environmental and economic capabilities to lead and advance toward a resilient, sustainable economy. SFU is ready to engage with the federal government to support building resilient Canadian communities.

2. Post-Secondary Innovation Strategy

SFU endorses Universities Canada's recommendation for a new knowledge mobilization fund.

In Canada, we are privileged to have world-class research universities and institutes. However, Canada's shortcomings in innovation have drawn the attention of numerous industrial, academic, and government bodies who have reported on the limitations of our innovation ecosystem and offered a variety of solutions. Despite several decades of investment programs to build global scale companies, Canada's commercialization performance lags that of its competitors. Canada is the only country in the Organization for Economic Cooperation and Development that spends more to acquire other people's technology than the world buys from us; a problem that is exacerbated due to a lack of support for the commercialization of research and intellectual property from post-secondary institutions.

Recent federal investments in innovation, such as the supercluster program, have focussed on industry-led initiatives. This strategy has focused on selecting particular areas for innovation and growing partnerships and opportunities in an effort to produce improvements for specific, regional sectors. The extent to which the program will lead to a significant increase in innovative capacity remains uncertain. Other recent investments in fundamental research are welcome. These investments are required to spark new discoveries that feed the pipeline of innovation, and keep Canada at the forefront of science. The question is: how can we leverage maximum economic and social value from these investments? How can we best bridge the gulf between the production of knowledge and its commercial application?

The time is right for a federal post-secondary innovation strategy that encourages and enables research universities and institutes to develop programs and infrastructure to turn ideas and discoveries into innovations. Other countries already provide universities significant funding of this kind. The United Kingdom, Sweden, and Switzerland, for example, have dedicated programs, while the United States funds university innovation by providing 50-60 per cent of basic research funding for indirect costs together with initiatives such as the Small Business Technology Transfer Program.

Proven elements that should form as part of the strategy include:

- innovation hubs that bring university researchers together with representatives of industry to share ideas and to identify and develop research initiatives that have high commercial potential;
- accessible and shared university facilities and resources to support industrial R&D;
- lab-to-market programming that provides faculty and graduate student researchers with the knowledge and tools required to turn their research discoveries into commercially viable innovations;

- business incubators and accelerators that draw upon the university's research and programming strengths, and leverage its national and international relationships, to support scalable business development;
- programs to fund patenting and prototyping of innovations with high commercial value; and
- programs to foster multi-faceted institutional research and innovation partnerships with long-term commercial potential.

SFU recommends that the Federal Government look to support the development of a post-secondary innovation strategy to address the need to develop programs and infrastructure that supports the development of research and ideas into innovation and discoveries.

3. Post-Secondary Infrastructure

SFU endorses Universities Canada's recommendation to reinvest in state-of-the-art post-secondary infrastructure.

The Government of Canada's Post-Secondary Strategic Infrastructure Fund in Budget 2016 was a major catalyst for many institutions across Canada. SFU was awarded \$45 million, which allowed the University to gain matching support from the Government of BC to construct a \$126-million state-of-the-art Sustainable Energy and Environmental Engineering building in Surrey and leverage further funding from the province to launch a Sustainable Energy Engineering undergraduate and graduate program. The program will graduate over 100 new engineers each year to support high demand and low-carbon economic sectors such as cleantech, renewable energy, smart cities, sustainable manufacturing, clean power generation and utilization, and sustainable food and water solutions. In addition, over 20 new research faculty will be hired to increase Canadian research and innovation capacity in these areas.

We encourage the Federal Government to consider a new post-secondary infrastructure funding program. Major infrastructure issues remain at Canadian campuses, and there are still opportunities to boost innovation in Canada by improving the research and development infrastructure, which support existing and future researchers and students, and ensure a state-of-the-art and sustainable research environment.

SFU's top priority is a new **Life Sciences Building** to house programs that will support new discoveries in areas such as drug development, infection control, and management of our ecosystems. The facility will enable training of highly qualified professionals, support researchers and trainees at the leading edge of their fields, and serve to attract outstanding students, faculty, and industry partners.

4. Sustainable Transportation

SFU's students are among the highest percentage of public transit users in Canada due, in part, to the high number of part-time students accessing our flexible curriculum across three campuses in the Lower Mainland. SFU is one of the largest employers in the City of Burnaby. Located in Surrey, Burnaby, and Vancouver, SFU's campuses serve 50% of BC's population within an hour commute. Over 75% of SFU Burnaby students, staff, and faculty commute from outside of the City of Burnaby. Recent federal and provincial investments in public transit in Metro Vancouver were welcomed by our students, staff, and faculty who live throughout the region.

The main Burnaby campus is located on Burnaby Mountain alongside UniverCity—a sustainable community with a current population of 5,000, which is expected to grow to over 9,000 residents in several years. Per day, there are 25,000 rides to and from Burnaby Mountain, which is expected to rise to 40,000 by 2040. The bus route from Production Way—University Skytrain Station up Burnaby Mountain is ranked among the bottom 10% of TransLink-

rated routes on several performance measures, and wait times are compounded during times of heavy snow, which can impact classes and operations up to ten days per year.

An updated feasibility study prepared for TransLink in April 2018³ demonstrates a solid case for an urban gondola (or “Skybus”) that would allow twenty-six buses to be re-deployed throughout the region. A benefit-to-cost ratio of 1.8 was determined for the project before accounting for the full benefits of Greenhouse Gas reductions, air quality improvement, tourism and recreation benefits, and the facilitation of access to the employment hub on Burnaby Mountain. In addition, there is a substantial benefit to providing a second, reliable access route in case of snow storms or emergencies such as fires.

It is our recommendation for the government to invest in this project to ensure that the growing employment and educational hub on Burnaby Mountain is reliably connected to the Metro Vancouver region.

CONCLUSION

SFU is committed to supporting Canada’s competitiveness and productivity in all areas of our mission. We have embraced innovation and collaboration with other public institutions and partners across Canada’s industry sectors, and are confident we are creating and supporting Canada’s future entrepreneurs and innovators. Federal support for the programs identified by Universities Canada and the four priority areas outlined in this submission would be another strategic investment in ensuring Canada’s competitiveness and long-term productivity.

We thank the Committee for its consideration.

Word Count: 1907

³ CH2M Hill Canada Limited, *Burnaby Mountain Gondola Transit—Feasibility Study*, Burnaby 2018.