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Subject: UBC submission - Towards a Western Growth Strategy consultation

Good afternoon,

Please find attached the University of British Columbia's written submission in response to WD's Towards a Western Growth Strategy consultation.

We thank you for the opportunity to provide input and would be pleased to continue to be involved as departmental officials develop the strategy.

Best,

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THE UNIVERSITY OF BRITISH COLUMBIA



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Submission to Western Economic Diversification Canada

Towards a Western Canada Growth Strategy Consultation



November 16, 2018

Introduction

The University of British Columbia welcomes the opportunity to participate in Western Economic Diversification Canada's (WD) *Towards a Western Growth Strategy* consultation.

As a global centre for learning, research and innovation, UBC is making significant contributions to a thriving economy and prosperous future for western Canada. The university, like post-secondary institutions across western Canada, plays a number of roles central to creating a strong and diverse economy. The university community creates new knowledge and technologies that underpin innovative new products and practices, trains new generations of graduates that form the core of western Canada's talented work force, and forges meaningful and respectful partnerships with communities and organizations that help advance their economic and social objectives.

For decades, WD has been a major partner to, and enabler of, UBC as it advances its academic mission and pursues these contributions to western Canada. UBC-led partnerships supported by WD span academic fields and social and economic sectors, with key examples being the Pan-Western Composites Research Network, the Survive and Thrive Applied Research initiative, BC wine industry research and development, numerous health and life sciences technology initiatives, quantum materials development, environmental research and protection, and clean technologies, among many others.

Drawing on this history of partnership with WD and on our role in western Canada, this submission addresses the five questions posed by WD in its consultation paper, with UBC's responses emphasizing the need to create a more equitable and inclusive economy, to support growth of a diversity of economic sectors while embracing risk with some new, larger-scale investments, and the need to engage and support Indigenous communities in economic and social development.

Question 1: What does a stronger western Canadian economy look like 10 years from now?

An inclusive economy

A stronger western Canadian economy will be one in which the benefits of economic growth and prosperity are shared equitably across society and geographic regions, and in which people's opportunities are not limited by their socio-economic status, ancestry or identity. There is a particularly strong imperative to improve the quality of life and the economic and social inclusion of Indigenous peoples across Canada, and it is our hope that over this ten-year time frame the whole of Canada will make enormous progress on reconciliation with Indigenous peoples.

An inclusive economy is more likely to be one in which a diversity of economic sectors and geographic regions are thriving and where strong trade relationships and international mobility are established with a diversity of countries and cultures. These forms of diversity are, of course, a central component of WD's mandate, and ones that are as worthy and relevant as ever.

Across western Canada, the strong economy of the future will include thriving regions both within and outside metropolitan areas. Support for innovation in traditional areas of the economy such as natural resources as well as in newer areas like high-value agriculture will ensure that western Canada's non-metropolitan areas are less susceptible to economic shocks.

As WD develops a Western Canada Growth Strategy UBC recommends it consider a broad range of methods and indicators for defining economic growth and measuring the success of WD programs. While GDP-related measures are central to assessing economic growth, other factors related to social

impact and social good, environmental health, and impacts on human health and well-being should be considered alongside other more traditional economic output measures such as employment growth, capital investment, intellectual property protection activity, and the formation, growth and retention of successful companies.

A knowledge-based economy

We are confident that a strong western Canadian economy will be an increasingly knowledge-based one. Continued prosperity and global competitiveness will require a society and an economy that advance knowledge and discovery and that can harness and apply that knowledge to solve social and industrial challenges locally and globally.

Knowledge and innovation come from all corners of society, from post-secondary institutions, research institutes, industry, governments, NGOs, communities, and individuals in every walk of life. An equitable, knowledge-based economy will support, encourage and embrace the participation of this diverse array of actors in building a stronger economy.

For UBC and other research-intensive post-secondary institutions, this means fostering even greater and deeper engagement and collaboration between the academy, industry, communities and governments. Such mutually beneficial relationships contribute to the growth of thriving communities, ensure the availability of a highly skilled and talented workforce, produce world-class research and are often the breeding grounds for new and innovative companies.

Technological change and adoption across economic sectors

Technology-driven innovation continues to transform virtually all economic and social sectors, and over the next ten years we anticipate that the technologies being developed or deployed today will result in major changes to existing industries, spawn new industries, and shift the skills and labour needs of the economy more toward roles involving critical thinking, problem-solving, team work and communications competencies. As evidenced in changes that are already occurring, technological and digital innovation will further revolutionize industries across the economic spectrum, from finance, to health care, biotechnology, natural resources extraction and processing, transportation, computing and software development, government services and education, among many others.

A strong western economy will see the successful and efficient development and adoption of new technologies across the economy, supported by a diverse and talented workforce that is well-positioned to both drive and adapt to these changes.

Question 2: What are the best ways to spur new growth in western Canada?

Maintain a diversity of investments while pursuing opportunities to focus on areas of strength

WD programs have supported important and impactful research and innovation collaborations between post-secondary institutions, industry and other partners that are aimed at commercializing research outputs or mobilizing knowledge that informs community economic and social development. The department also does important work supporting western Canadian firms to grow and supporting communities' economic development strategies.

In its research and innovation programs, WD currently strikes a balance between major project grants aimed at catalyzing or building industry segments, and providing funding broadly across a diversity of smaller, earlier stage and higher risk projects. This is a program balance that UBC recommends be maintained.

With new funding introduced in Budget 2018, however, there may be opportunities for WD to focus some of those new resources on supporting larger-scale endeavours that help catalyze regional

innovation ecosystems, and to invest in promising clusters of existing or emerging strength in the western Canadian economy. This blended approach for supporting innovation ecosystems in Canada is recommended by the Minister of Finance's Advisory Council on Economic Growth¹ as well as in a recent paper released by the Institute for Research on Public Policy.²

UBC recommends that WD invest more intensively in major projects that can serve the whole innovation ecosystem, as well as a small number of larger-scale, longer-term sector-specific major projects.

One key area in which WD could make a major impact on the effectiveness and productivity of western Canada's innovation economy is by supporting a large incubator and accelerator centre. The Vancouver region's technology ecosystem, in particular, lacks a major start-up incubator and accelerator of the type that help anchor and seed technology hubs in Toronto or Waterloo. The existing patchwork of small incubators play their specific roles well, however, like UBC's start-up incubator spaces, they are oversubscribed and disparately spread throughout the region. A large scale start-up incubator and accelerator will provide the types of spaces, resources, and community and networking effects created in the world's leading technology hubs.

Similarly, there are significant opportunities to invest in specific areas important to regional economic development at larger scales and over longer timeframes than WD has typically supported. Promising areas for investment in university-industry partnered initiatives include:

- Advanced manufacturing, such as UBC's Digital Learning Factory initiative;
- Forest bio-products, to create new high-value products and markets from western Canada's vast forest resources;
- Quantum computing, harnessing the real global leadership present in western Canada around quantum computing hardware and software development; and
- Clean technology, leveraging the strength of western Canada's diversity of leading clean technology research clusters and companies.

Investments in such endeavors would, of course, make major contributions to all of Canada's economic growth and the development of the national knowledge-based economy.

A program mix that supports a diversity of sectors and projects of various scales provides the best chance of helping develop new technologies in western Canada that can be marketed globally, encourages regional and community economic and social development, and contributes to training the diverse and talented young people who will go on to continue building western Canada's innovation economy.

Invest in first class knowledge infrastructure

A key factor of a strong economy is first class, accessible and sustainable infrastructure. Western Canada's innovation ecosystems need access to the underlying infrastructure that will support their development, competitiveness and growth. This includes digital connectivity and digital research infrastructure, institutes and spaces that facilitate collaboration and experimentation, and top quality laboratory instrumentation for academics and industry. Effective use of such infrastructure also requires the talented people needed to develop, operate and leverage the power of these physical tools.

The knowledge infrastructure envisioned in the Digital Learning Factory initiative offers an example of this. The project will merge full-scale production of complex aircraft parts with cutting-edge research

¹ Recommendations of the [Advisory Council on Economic Growth](#). 2017.

² Nicholson, Peter. [Facing the Facts: Reconsidering Business Innovation Policy in Canada](#). Institute for Research on Public Policy Oct. 2018.

and education, bringing together a broad range of western Canadian and global industry partners to take on the challenges in advanced manufacturing. By bridging the gaps between fundamental research, education and practice, the Digital Learning Factory will serve as a platform for new approaches in research and training, providing both university and college-level students unique work-integrated learning and training opportunities, and showcase the West as a competitive home for advanced manufacturing of composite materials, aeronautic parts and the development of digital simulation technology.

Leverage the value of our data, especially in health

Western Canada has an opportunity to be a world leader with respect to health data and innovation. This includes developing new technologies and applications in precision health, omics technologies, point of care testing and patients' ability to access their own data.

Western Canadian jurisdictions hold vast quantities of public health data that, properly managed, have very strong potential to underpin world-leading innovations in treatment and health practices. Initiatives that help unlock and leverage the value of health data have the ability to attract significant private sector investment and spur rapid growth in the health and life sciences sectors.

Leverage our position as an attractive destination for top talent

Western Canada has a real global advantage in attracting and retaining highly-skilled people, and the existing talented labour force is already a significant factor in attracting major global firms to the region and for companies to choose to start and grow here.

Maintaining Canada's open and efficient immigration system and continuing to promote and foster western Canada as an inclusive and welcoming society, including in its workplaces, will help further leverage western Canada's competitive advantage.

Question 3: What will help the Indigenous economy continue to grow?

A central and integral starting point for helping grow the Indigenous economy is meaningful engagement with Indigenous governments, communities and organizations on their vision and objectives for the development of their communities and economies. Through mutually respectful and beneficial consultations and partnerships, WD can play a significant role in advancing reconciliation and contributing to a thriving Indigenous economy.

With its two main campuses located on the traditional, ancestral, and unceded lands of the Musqueam people in Vancouver and of the Okanagan Nation Alliance in Kelowna, UBC is committed to lasting reconciliation with the Indigenous peoples of Canada. With these commitments, the university, like other western Canadian post-secondary institutions, is engaged in multiple initiatives with Indigenous communities to improve educational opportunities for Indigenous students, provide education about Indigenous issues, and conduct collaborative research.

One of the most important ways to support Indigenous peoples' economic and social development is through support for greater educational attainment and inclusion in institutions of higher learning. Over 1,700 students and over 30 faculty members who identify as Indigenous study and work at UBC. The university works to support access to post-secondary education, and the academic and personal success of Indigenous students through culturally relevant programs and services for First Nations, Métis and Inuit students.

UBC is also proud to offer academic programs on various aspects of Indigenous history and culture, including the First Nations and Endangered Languages program offered in partnership with the

Musqueam at the Vancouver campus. This program aims to build a community of people dedicated to learning, speaking, researching and teaching the First Nations languages of BC.

A primary new way in which UBC is supporting engagement with Indigenous communities on research and community development is the Indigenous Research Support Initiative (IRSI). Established in 2017, IRSI provides professional research support and services to Indigenous communities and university researchers across the institution to undertake collaborative projects based on community-led interests and grounded in principles of reciprocal accountability. An example of an IRSI project is the Heiltsuk Tiny Homes Project. To address an urgent housing shortage issue in Bella Bella, the Heiltsuk Nation partnered with the School of Architecture and Landscape Architecture and Faculty of Forestry at UBC, FPInnovations and Mitacs to develop culturally relevant housing designs and plan for their construction. This partnership will see eight Heiltsuk “tiny” homes built in 2018.

UBC’s Ch’nook program, an initiative founded by the Sauder School of Business at UBC, is another example of the university’s work to enhance educational opportunities for Indigenous students and promote Indigenous economic development. Established to address the needs of sustainable economic development in Indigenous communities, Ch’nook focuses on developing leadership and management skills needed for business success for Indigenous participants.

A final example is the RES’EAU-WaterNET project, an NSERC Strategic Network initiative. Led by UBC researchers in collaboration with many public and private organizations, the network delivers local solutions to drinking water issues faced by small, rural and Indigenous communities. This organization is also engaged in the development of policies in support of sustainable drinking water supply to deliver on social, economic and environmental goals.

With Indigenous partners, UBC is also exploring future initiatives aimed at advancing Indigenous self-governance and economic development. One such proposal under development is the establishment of a school of Indigenous forestry. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) states that “control by indigenous peoples over developments affecting them and their lands, territories and resources will enable them to maintain and strengthen their institutions, cultures and traditions, and to promote their development in accordance with their aspirations and needs”. Across Canada and in many parts of the world, the rights of Indigenous peoples to their traditional territories are being increasingly recognized, and ownership and management of those lands and resources are being transferred back to their traditional owners.

In western Canada, Indigenous communities are regaining management of large forested areas and resources and the sustainable use of these resources, following Indigenous management principles, will provide an important means of economic development for Indigenous communities and will help existing forest product industries maintain fibre supply. UBC’s Faculty of Forestry, the largest and most prominent in North America, has begun discussions with the Westbank First Nation in BC’s Okanagan region, the National Aboriginal Forestry Association and other partners about the creation of a school of Indigenous forestry. The program would provide a means to train Indigenous foresters, help create economic opportunities and sustainable prosperity for Indigenous communities, and meet industry demand for forestry professionals in BC and across Canada.

As articulated above, partnerships between communities, industries and post-secondary institutions are a key component of a strong economy. Post-secondary institutions, including UBC, are actively engaged with Indigenous communities to advance their priorities and exchange knowledge. Such partnerships provide numerous benefits to all involved including students, researchers and Indigenous communities. With sufficient support, these models of collaboration can play key roles in advancing and strengthening Indigenous economies across western Canada.

Question 4: How can we improve economic participation in the west of underrepresented groups, including women, youth and new immigrants?

There is clear evidence that inclusive workplaces with diverse teams make better decisions and deliver more innovative work, as those with different life experiences have varied world-views and approach challenges in unique ways.^{3,4} By extension, diverse and inclusive workplaces lead to more innovation on a broader scale and a stronger, resilient and adaptable economy.

UBC has made a firm commitment to equity and inclusion in the classroom, workplace and campus. UBC's new strategic plan, *Shaping UBC's Next Century*, strengthens this commitment with the incorporation of Inclusive Excellence, a system-wide approach to diversity, equity and inclusion, as a key university-wide strategy. The university welcomes WD's focus on improving economic participation of underrepresented groups and looks forward to working with the department to address the challenges and barriers to full inclusion that are faced by these groups.

One example of the way the university is working to support economic participation of underrepresented groups is through the Transitioning Youth with Disabilities and Employment (TYDE) project, led by the Centre for Inclusion and Citizenship. As working-age individuals with intellectual disabilities (ID) or Autism Spectrum Disorder (ASD) represent the most unemployed and underemployed citizens in Canada, the TYDE team is working to help prepare youth living with these disabilities to find meaningful employment later in life. The TYDE project is developing curriculum and interactive online resources to help those with ID and ASD increase their knowledge and improve their future employment outcomes.

To further promote the economic participation and success of underrepresented groups, UBC recommends that WD consider targeted programs or special calls for proposals focused on underrepresented groups, and that WD incorporate equity, diversity and inclusion (EDI) criteria into its project funding selection processes across its programs.

Depending on how such an approach is implemented, WD could mandate that projects include EDI plans within their project design and the department could consider providing additional support for projects that promise exceptional impact.

Further, requiring the development of EDI plans as a condition of receiving funding would compel organizations to consider how their work could advance equity and diversity objectives. The act of developing such a plan would encourage prospective funding recipients to consider how equity and diversity measures can be incorporated in each step of their proposed projects, from design to anticipated outcomes.

³ Rock, David & Heidi Grant, Why Diverse Teams are Smarter, Harvard Business Review, Nov. 4, 2016, <https://hbr.org/2016/11/why-diverse-teams-are-smarter>

⁴ Phillips, Katherine W., Katie A. Liljenquist, Margaret A. Neale, 2008, Is the Pain Worth the Gain? The Advantages and Liabilities of Agreeing with Socially Distinct Newcomers, Personality & Social Psychology Bulletin, Society for Personality and Social Psychology, Volume 35, issue 3, pp. 336-350, <http://journals.sagepub.com/doi/abs/10.1177/0146167208328062>

Question 5: How can governments, industry and western Canadians work together to grow the regional economy?

Our responses to the questions above have focused heavily on the value that comes from partnerships between academic institutions, industry, governments and western Canadian organizations and communities. With the overall frame that continued support of such partnerships and collaborations is vital to the growth of the western Canadian economy, we summarize our main observations and recommendations here.

Summary of UBC Recommendations

A strong western Canadian economy ten years from now

- A stronger western Canadian economy is an inclusive, diverse, knowledge-based economy. We must measure growth and prosperity with classical economic measures as well as other factors measuring social impact and social good, environmental health, and impacts on human health and well-being.
- Western Canadian companies, institutions and governments must embrace and adopt new technologies to ensure their effectiveness and competitiveness.

Spurring new growth in western Canada

- Maintain a balance between major WD project grants aimed at catalyzing or building industry segments, and providing funding broadly across a diversity of smaller, earlier stage and higher risk projects.
- With an expanded budget, support some larger-scale endeavours that help catalyze regional innovation ecosystems, and invest in promising clusters of existing or emerging strength in the western Canadian economy. These include targeted investments in industry-academic partnerships in:
 - A major start-up incubator and accelerator centre to anchor the Vancouver region's technology ecosystem
 - UBC's Digital Learning Factory for advanced manufacturing
 - Forest bio-products
 - Quantum computing
 - Clean technology
- Invest in first class, accessible and sustainable knowledge infrastructure. Effective use of such infrastructure also requires the talented people needed to develop, operate and leverage the power of these physical tools.
- Invest in initiatives that help the western Canadian economy realize the value of data, especially health data.
- To attract national and international talent, promote and foster western Canada as an inclusive and welcoming society.

Growing the Indigenous economy

- Engage meaningfully with Indigenous governments, communities and organizations on their vision and objectives for the development of their communities and economies.

- Support collaborative initiatives involving Indigenous governments and communities, post-secondary institutions, industry, NGOs and other orders of government aimed at advancing Indigenous economic development.
- Invest in innovative approaches to addressing clean water and housing challenges faced by Indigenous communities.
- Support promising initiatives, such as UBC's proposed School of Indigenous Forestry, that help enable Indigenous governments and communities to maximize the benefits of the lands and resources returned to their ownership and control.

Improving the economic participation of underrepresented groups

- Consider targeted programs or special calls for proposals focused on underrepresented groups.
- Incorporate equity, diversity and inclusion (EDI) criteria into project funding selection processes across WD programs.