

August 3, 2018

Honorable Wayne Easter, PC, MP (Malpeque)
Chair, House of Commons Standing Committee on Finance
House of Commons
Ottawa, Ontario
K1A 0A6

Written Submission for the Pre-Budget Consultations in Advance of the 2019 Budget

Dear Mr. Easter:

Science World British Columbia is a registered, not-for-profit society and one of the most iconic and well-known landmarks in British Columbia. For the past three decades, Science World's exhibits and programming have served and benefited the entire province, in particular our youth and future generations of science professionals.

Over 800,000 people visit Science World annually. In addition, we reach an additional 100,000 students in their own communities through the delivery of provincial outreach education programs, including interactive science demonstrations, hands-on classroom workshops and electronic delivery to engage minds of all ages about science and technology. Each year we also provide professional training to BC teachers, enhancing their skills so that their students benefit from science education year-round. Our vision is to provide leadership and science-based educational opportunities to British Columbians of all ages.

While we continue to develop and expand *Symbiosis*, the emerging cross-sector STEM learning ecosystem for BC, we are pursuing a formal funding request for the rehabilitation of our dome, including the marine pilings that support our structure. Through *Symbiosis*, Science World will develop and deploy new STEM educational programs, much like those currently supported through the CanCode program, to continue our work educating thousands of youth across BC. Computational thinking, coding and digital skills are high priority areas for our organization, and they will play an important role in *Symbiosis*. Science World is eager to continue our collaborative partnership with the Government of Canada pursuing our mutual priorities aimed at STEM learning within BC and indeed across the country.

We believe the need for digital skills is greater than ever to ensure Canada's competitiveness as high-tech innovations are rapidly transforming job requirements across British Columbia, Canada and internationally. Support from the Government of Canada is critical for both essential programming and reimagining our physical space to facilitate this growth.

Below are listed several key requests pertaining to Science World's important strategic initiatives. For the past year, we have been meeting with representatives from key federal ministries to discuss these

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President & CEO

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priorities and make adjustments in keeping with federal priorities, including initiatives to serve Indigenous communities and girls and young woman pursuing STEM literacy and careers.

Thank you in advance for your Committee's considerations of our recommendations. If you have any questions or require further information, do not hesitate to contact me. I look forward to keeping in touch with you, and will certainly reach out in advance of my next visit to Ottawa so that we can meet in-person.

Sincerely,



Scott D. Sampson, PhD
President and CEO

List of Key Recommendations/Requests

- **Recommendation 1: That the Government of Canada invest \$4 million over three years in Science World's "learning ecosystem" *Symbiosis* that will dramatically scale STEM literacy in BC and across the country.**

Approximately two-thirds of students entering elementary school today will be employed in jobs that do not currently exist. Of those new jobs, approximately 80% will require literacy in STEM yet STEM education in Canada is struggling. One study found that 60% of students who enter high school interested in STEM fields change their minds by graduation. Failing to prepare the next generation to be STEM literate threatens our youth, our economy, and the places we live.

Today, every major Canadian city hosts abundant organizations that engage children and youth in STEM learning. Yet these organizations exist largely in isolation and, to-date, we have failed to scale these learning opportunities evenly across both urban and rural regions. As a result, a huge proportion of Canadian youth, particularly in Indigenous and other low-income communities, do not receive quality STEM learning opportunities.

To address the urgent need for scaling quality STEM education, a BC-based collaborative is launching an innovative new learning ecosystem—*Symbiosis*. *Symbiosis* will focus on four deliverables: 1) targeted programs; 2) professional development for teachers and

other mentors; 3) an interwoven network of mentors and learning providers; and 4) a digital hub. Spanning cradle to career, this diverse suite of offerings will enable children, teens, and young adults throughout BC to discover and pursue pathways toward STEM literacy and careers.

Two sub-initiatives within Symbiosis will address at-risk groups: indigenous youth and girls. Indigenous communities in BC are currently at great risk, in part due to a dearth of quality education opportunities. We will establish an indigenous network aimed at dramatically increasing the numbers of indigenous youth pursuing STEM careers. Similarly, girls and young women are far less likely to develop an interest in STEM than their male counterparts. Through special events, programs, mentors, and a growing network, *Symbiosis* will tackle this challenge directly, beginning with girls in elementary school and continuing through post-secondary years.

Many organizations have expressed strong interest in partnering on Symbiosis—including in higher education (UBC, SFU, UNBC, BCIT), business (TELUS, SAP, EA), scientific research (Genome BC, TRIUMF), K-12 education (BC Science Teachers Association), and professional organizations (BC Technology Industry Association). Our goal is that, within five years, every child, adolescent, and young adult in BC will have access to a diverse range of quality STEM learning opportunities. Symbiosis is the first formally recognized STEM learning ecosystem anywhere outside the US, and is now poised to become a national model for Canada.

The \$4 million request, including \$1 million to catalyze the Indigenous sub-initiative, is part of a proposed \$10 million cost-share that includes the Province of BC, the City of Vancouver, private funds, and monies provided directly by Science World.

- **Recommendation 2: That the Government of Canada invest \$15 million in capital infrastructure funding in the iconic Science World BC dome to become a high-tech, green, multi-functional space that utilizes art, science, and technology to create a community convening hub accessible to all across BC.**

We propose to transform the iconic dome of Science World British Columbia into a national hub for science engagement. This hub will include a one-of-a kind theatre capable of hosting full-dome projections and an array of performances—from drama and music to town hall gatherings and lectures. Immediately adjacent to the theatre will be a convening space designed for fostering dialogue around pressing issues related to science and sustainability. Ultimately, this re-imagined facility will become a community destination for promoting science literacy and co-creating a thriving future for BC. We are actively engaging both federal and provincial government representatives, with plans to submit a proposal for funding this fall as part of the Phase II infrastructure implementation in BC.